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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 & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>				PE 0604604F: <i>Submunitions</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	1.777	1.622	2.427	-	2.427	2.562	2.564	2.559	2.605	Continuing	Continuing
653166: <i>Joint Smart Munitions Test and Evaluation</i>	1.777	1.622	2.427	-	2.427	2.562	2.564	2.559	2.605	Continuing	Continuing

A. Mission Description and Budget Item Justification

Project Chicken Little provides best value research, development, test and evaluation (RDT&E) support to developmental smart munitions and related emerging weapons technologies employed against a wide variety of vehicle targets, theater air defense units, and other foreign ground-based systems. Combat systems exhibit physical characteristics (i.e., signatures), as well as certain vulnerabilities, which may be exploited by smart weapons in order to eliminate or incapacitate these systems. Chicken Little collects physical and functional attributes of actual foreign threat systems to construct high-fidelity models for use in vulnerability assessments (i.e. evaluating the effectiveness of munitions against system vulnerabilities). Chicken Little also collects signature data with a variety of sensors on new and existing foreign targets, (attained, sustained, and maintained to be signature representative), both with and without the presence of countermeasures or camouflage; the resulting highly reliable, realistic performance data is used to support smart munitions' development by defining lethality and sensor requirements to aid in acquisition decision points. The project serves as a major focal point for joint target signature collection and dissemination for development and exploitation purposes. Customers include: the major Defense and Service Intelligence Centers, all Services, the Joint Technical Coordinating Group (JTTCG) who develop the Joint Munitions Effectiveness Manuals (JMEMs), Combatant Commands, US Air Force Weapons School curriculum support, and others. Current projects include, but not limited to: target signature exploitation, target geometric modeling (for identifying vulnerabilities), improving air capabilities against protected structures (specifically hard and deeply buried targets), and testing of multiple seekers and sensors against realistic targets in various environments.

This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	1.784	1.622	1.641	-	1.641
Current President's Budget	1.777	1.622	2.427	-	2.427
Total Adjustments	-0.007	-	0.786	-	0.786
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.007	-	0.786	-	0.786

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<u>Change Summary Explanation</u> FY12 adjustment of \$0.786M for representative sustainment of threat vehicles and acquisition of exploitation assets.		

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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			
3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)				PE 0604604F: Submunitions				653166: Joint Smart Munitions Test and Evaluation			
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
653166: Joint Smart Munitions Test and Evaluation	1.777	1.622	2.427	-	2.427	2.562	2.564	2.559	2.605	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Project Chicken Little provides best value research, development, test and evaluation (RDT&E) support to developmental smart munitions and related emerging weapons technologies employed against a wide variety of vehicle targets, theater air defense units, and other foreign ground-based systems. Combat systems exhibit physical characteristics (i.e., signatures), as well as certain vulnerabilities, which may be exploited by smart weapons in order to eliminate or incapacitate these systems. Chicken Little collects physical and functional attributes of actual foreign threat systems to construct high-fidelity models for use in vulnerability assessments (i.e. evaluating the effectiveness of munitions against system vulnerabilities). Chicken Little also collects signature data with a variety of sensors on new and existing foreign targets, (attained, sustained, and maintained to be signature representative), both with and without the presence of countermeasures or camouflage; the resulting highly reliable, realistic performance data is used to support smart munitions' development by defining lethality and sensor requirements to aid in acquisition decision points. The project serves as a major focal point for joint target signature collection and dissemination for development and exploitation purposes. Customers include: the major Defense and Service Intelligence Centers, all Services, the Joint Technical Coordinating Group (JTTCG) who develop the Joint Munitions Effectiveness Manuals (JMEMs), Combatant Commands, US Air Force Weapons School curriculum support, and others. Current projects include, but not limited to: target signature exploitation, target geometric modeling (for identifying vulnerabilities), improving air capabilities against protected structures (specifically hard and deeply buried targets), and testing of multiple seekers and sensors against realistic targets in various environments.

This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.

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

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Predictive Tool Development	0.103	0.250	-	-	-
Description: Continue to develop predictive tools for weapon/target interactions in order to support improvements to mission planning and bomb damage assessment.					
FY 2010 Accomplishments: Studied the response of high strength and ultra-high strength concrete. Evaluated the ability to inflict damage through higher impact velocity or larger warheads and produce a list of recommended test events and suggested model improvements.					
FY 2011 Plans:					

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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Conduct additional sub-scale and full scale test events with high strength and ultra-high strength concrete; use test results to improve damage models. FY 2012 Base Plans: FY 2012 OCO Plans:							
Title: Model Development and Vulnerability Analysis Description: Develop, validate, and accredit improved models for target vulnerability and weapons effectiveness in support of Combatant Commands' (CoCOMs) requirements. FY 2010 Accomplishments: Construct at least two more geometric models based on CoCOMs' requirements. FY 2011 Plans: Construct at least two more geometric models based on CoCOMs' requirements. FY 2012 Base Plans: Construct at least two more geometric models based on CoCOMs' requirements. FY 2012 OCO Plans:			0.280	0.325	0.365	-	0.365
Title: System Exploitation Description: Provide the DoD community accurate multi-spectral signatures obtained from high-value, signature representative modern threat systems using advanced collection technologies. FY 2010 Accomplishments: Exploit 3-4 high value threat systems. Provide signature data from multiple threat systems in various environments using advanced and developmental seeker/sensor technologies. FY 2011 Plans: Exploit 3-4 high value threat systems. Provide signature data from multiple threat systems in various environments using advanced and developmental seeker/sensor technologies. FY 2012 Base Plans: Exploit 3-4 high value			1.337	0.900	1.026	-	1.026

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
threat systems. Provide signature data from multiple threat systems in various environments using advanced and developmental seeker/sensor technologies FY 2012 OCO Plans:						
Title: ISR Exploitation Description: Plan and conduct captive carry flight tests and signature collection for seeker/sensor technology evaluations. FY 2010 Accomplishments: Develop ISR calibration capability for purpose of reducing average measurement uncertainty by 50% and reducing data turnaround by 75%. FY 2011 Plans: Investigate some or all of the following technologies for utility in ISR activities: Hyperspectral Imagery (HIS), shortwave IR and Polarmetric Imaging. FY 2012 Base Plans: Investigate some or all of the following technologies for utility in ISR activities: Hyper Spectral Imagery (HSI), shortwave IR and Polarmetric Imaging. FY 2012 OCO Plans:		0.057	0.147	0.250	-	0.250
Title: Fleet Relevance Description: Attain new emerging threat assets and/or decoys. Sustain and maintain existing foreign threat assets to be signature representative.		-	-	0.786	-	0.786

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<i>FY 2010 Accomplishments:</i> <i>FY 2011 Plans:</i> <i>FY 2012 Base Plans:</i> (Note: Not a new start, previously addressed within System Exploitation, delineated here for improved traceability.) Attain new emerging threat assets and/or decoys. Sustain and maintain existing foreign threat assets to ensure proper "signature representative" nature for systems development and testing. <i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	1.777	1.622	2.427	-	2.427

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

D. Acquisition Strategy
Funds are executed organically in support of test and evaluation activities including studies, analyses, flight tests, model building and simulation. Almost all of the work is performed in-house by the 46th Test Wing.

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		
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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
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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
46th Test Wing	PO	Keeping Fleet Relevant:,	4.000	-		0.786		-		0.786	Continuing	Continuing	0.000
Subtotal			4.000	-		0.786		-		0.786			0.000

Remarks
Fleet relevance addresses the acquisition of new and emerging threat vehicles, acquisition of high fidelity decoys, and sustainment of fleet signature quality.

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
46th Test Wing (46 OG and 46 TW)	TBD	Conducting Tests and Analysis:Eglin AFB, FL	95.662	1.572		1.591		-		1.591	Continuing	Continuing	TBD
Subtotal			95.662	1.572		1.591		-		1.591			

Remarks
46th Test Wing is the Program Office which conducts inhouse testing.

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
46 Test Wing (46 OG)	TBD	TBD:TBD,	7.466	0.050		0.050		-		0.050	Continuing	Continuing	TBD
Subtotal			7.466	0.050		0.050		-		0.050			

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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
Remarks 46th Test Wing is the Program Office which conducts inhouse testing.													
			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			107.128	1.622		2.427		-		2.427			
Remarks													

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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 & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604604F: <i>Submunitions</i>	PROJECT 653166: <i>Joint Smart Munitions Test and Evaluation</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Target/warhead evaluation/analysis, signature test, captive carry flight tests.	1	2010	4	2012