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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 7: <i>Operational Systems Development</i>				PE 0207136F: <i>Manned Destructive Suppression</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	9.707	12.937	13.253	-	13.253	13.803	14.189	14.636	14.937	Continuing	Continuing
674595: <i>F-16 HARM Targeting System</i>	9.707	12.937	13.253	-	13.253	13.803	14.189	14.636	14.937	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Manned Destructive Suppression (MDS) program element funds the development, procurement, and sustainment of the Air Force's Suppression of Enemy Air Defenses (SEAD) and Destruction of Enemy Air Defenses (DEAD) capabilities. The F-16 HARM Targeting System (HTS) is currently the only programmed reactive SEAD capability and enables targeting the HARM missile in its most lethal 'range known' mode. The program provides F-16 Block 50/52 aircraft with the ability to employ the AN/ASQ-213 Pod. With the introduction of HTS Revision 7 (HTS R7) in 2007, the AN/ASQ-213 Pod now has a precision geo-location capability to target Precision Guided Munitions (PGMs) to destroy fixed and mobile enemy air defense elements. Additionally, by relocating the AN/ASQ-213 HTS R7 Pod to the aircraft's left inlet hard point, the F-16 can simultaneously carry the HTS R7 Pod and an Advanced Targeting Pod (ATP). HTS R7 fielding is complete and represents the Air Force's near-term solution for reactive time critical targeting for DEAD until this mission can be transferred to F-35 or a yet to be defined system. HTS R7 derived precision targeting data can be provided to all Joint Forces via Link-16. This RDTE effort continues preplanned product improvements (P3I) for the HTS and applies technologies similar to those demonstrated in the Advanced Tactical Targeting Technologies (AT3) program and HTS R7 development.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	9.748	12.937	13.374	-	13.374
Current President's Budget	9.707	12.937	13.253	-	13.253
Total Adjustments	-0.041	-	-0.121	-	-0.121
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.041	-	-0.121	-	-0.121

Change Summary Explanation

No significant 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 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0207136F: Manned Destructive Suppression				PROJECT 674595: F-16 HARM Targeting System			
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
674595: F-16 HARM Targeting System	9.707	12.937	13.253	-	13.253	13.803	14.189	14.636	14.937	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
Note The program funding includes reductions for Overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$.077M in FY12.											
A. Mission Description and Budget Item Justification The Manned Destructive Suppression (MDS) program element funds the development, procurement, and sustainment of the Air Force's Suppression of Enemy Air Defenses (SEAD) and Destruction of Enemy Air Defenses (DEAD) capabilities. The F-16 HARM Targeting System (HTS) is currently the only programmed reactive SEAD capability and enables targeting the HARM missile in its most lethal 'range known' mode. The program provides F-16 Block 50/52 aircraft with the ability to employ the AN/ASQ-213 Pod. With the introduction of HTS Revision 7 (HTS R7) in 2007, the AN/ASQ-213 Pod now has a precision geo-location capability to target Precision Guided Munitions (PGMs) to destroy fixed and mobile enemy air defense elements. Additionally, by relocating the AN/ASQ-213 HTS R7 Pod to the aircraft's left inlet hard point, the F-16 can simultaneously carry the HTS R7 Pod and an Advanced Targeting Pod (ATP). HTS R7 fielding is complete and represents the Air Force's near-term solution for reactive time critical targeting for DEAD until this mission can be transferred to F-35 or a yet to be defined system. HTS R7 derived precision targeting data can be provided to all Joint Forces via Link-16. This RDTE effort continues preplanned product improvements (P3I) for the HTS and applies technologies similar to those demonstrated in the Advanced Tactical Targeting Technologies (AT3) program and HTS R7 development. This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.											
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: P3I R7 SWUP							7.912	10.264	9.490	-	9.490
Description: P3I R7 Software Upgrade (SWUP)											
FY 2010 Accomplishments: HTS R7.7 SWUP flight testing began and study efforts on capability upgrades continued. R7.7 SWUP initial software build and ground test was completed in time for release to flight testing this year. A series of flight test planning activities to include scheduling of needed resources continued through this year leading up to the beginning of initial flight testing with associated data analysis of recorded test data to capture required baseline											

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B. Accomplishments/Planned Programs (\$ in Millions)						
		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
data. Also, this effort included release of updated and tested software for subsequent flight test missions. As a precursor to the next follow-on upgrade effort, studies continued to define candidates and mitigate risks to ensure a successful, sustainable HTS P3I program. This major thrust included continued mission support, i.e., program management activities. FY 2011 Plans: HTS R7.7 SWUP flight testing support and additional software releases for flight testing continues. Studies continue on risk reduction efforts for future P3I phase(s). HTS R7.7 SWUP flight testing continues to include completing all data baseline activities, initial formal developmental flight testing and all associated data analysis, and release of upgraded software for subsequent flight testing. Studies include candidate selection process activities and risk reduction efforts for follow-on upgrades. Mission support, i.e., program management for administrative and technical support activities continue. The major thrusts of this year would be preparation and support of continued flight testing activities and risk reduction candidate selection activities for the follow-on P3I effort. This P3I R7 study effort for future phase(s) is a continuation of the HTS P3I effort. FY 2012 Base Plans: HTS R7.7 SWUP flight testing support and additional software releases for flight testing continues, culminating in the release of R7.7 SWUP software. Studies continue on risk reduction efforts for future P3I phase(s). HTS R7.7 SWUP formal developmental flight testing and all associated data analysis and release of upgraded software will be completed. Risk reduction activities and candidate selection study efforts for follow-on upgrades continue. Also, final steps would be completed to potentially award the R7.8 SWUP development. The major pushes of this year would be releasing R7.7 SWUP software to the field, continued risk reduction candidate selection activities for follow-on P3I efforts, and planned award of the R7.8 SWUP development. FY 2012 OCO Plans:						
Title: Flight Test Description: Flight Test FY 2010 Accomplishments: Began government support (responsible test organization at Edwards AFB, CA) of test planning activities and provide scheduling support for needed resources and required configurations to ensure a successful start of HTS R7.7 SWUP flight test program. Ground testing, such as anechoic chamber testing, included as needed. The test organization conducted the flight testing missions to include F-16 test aircraft operations, threat		0.977	1.838	2.969	-	2.969

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APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development		R-1 ITEM NOMENCLATURE PE 0207136F: Manned Destructive Suppression		PROJECT 674595: F-16 HARM Targeting System	
B. Accomplishments/Planned Programs (\$ in Millions)					
	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
ranges and associated support, air re-fueling, and range control support. Post-mission flight test support was accomplished.					
FY 2011 Plans: Government flight test operations continue to include test planning and execution activities for HTS R7.7 SWUP CT&E and DT&E efforts, scheduling support for all needed resources and required configurations for each flight test mission. Ground testing continues via anechoic chamber testing, as needed. The test organization will continue to conduct each mission to include F-16 test aircraft operations, threat ranges and associated support, air re-fueling, and range control support. Post-mission flight test support for each mission also continues. Initial flight test planning for HTS R7.8 SWUP begins.					
FY 2012 Base Plans: Government flight test operations continue to include test planning and execution activities for final HTS R7.7 SWUP DT&E efforts, scheduling support for all needed resources and required configurations for each flight test mission. Ground testing continues via anechoic chamber testing, as needed. The test organization will continue to conduct each mission to include F-16 test aircraft operations, threat ranges and associated support, air re-fueling, and range control support. Post-mission flight test support for each mission also continues. Initial test planning for HTS R7.8 SWUP continues.					
FY 2012 OCO Plans:					
Title: Mission Planning					
Description: Joint Mission Planning System (JMPS) (Formerly Air Force Mission Support System (AFMSS))					
FY 2010 Accomplishments: Began HTS mission planning module upgrade effort to release upgraded mission planning software to support HTS R7.7 SWUP flight testing. This effort will build the first engineering release of HTS R7.7 SWUP mission planning software to be released to support formal HTS R7.7 SWUP development flight testing.					
FY 2011 Plans: Continue mission planning software upgrade effort to include correcting deficiencies, additional engineering software releases and preparations for formal fielding with HTS R7.7 SWUP					
FY 2012 Base Plans:					
	0.818	0.835	0.794	-	0.794

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force				DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0207136F: <i>Manned Destructive Suppression</i>		PROJECT 674595: <i>F-16 HARM Targeting System</i>	

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continue mission planning software upgrade effort to include correcting deficiencies, additional engineering software releases and formal fielding in conjunction with HTS R7.7 SWUP software release.					
<i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	9.707	12.937	13.253	-	13.253

C. Other Program Funding Summary (\$ in Millions)										
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete
• N/A: <i>No other investment funding</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing
										Continuing

D. Acquisition Strategy
The HTS R7 improvement strategy includes accomplishment of risk reduction studies and selection of appropriate contracting strategies for P3I and upgrade of HTS inventory.

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 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0207136F: Manned Destructive Suppression				PROJECT 674595: F-16 HARM Targeting System						
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	
HTS R7 SWUP/P3I	SS/CPIF	Raytheon Systems Co.:Tucson, AZ	13.277	10.264	Feb 2011	9.490	Jan 2012	-		9.490	Continuing	Continuing	0.000	
JMPS (Formerly AFMSS)	SS/Various	Multiple:Multiple,	0.818	0.835	Mar 2011	0.794	Dec 2011	-		0.794	Continuing	Continuing	0.000	
Subtotal			14.095	11.099		10.284		-		10.284			0.000	
Remarks HTS R7 SWUP/P3I began in FY09.														
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	
Government Test	PO	412 TW:Edwards AFB, CA	1.007	1.838	Mar 2011	2.969	Jan 2012	-		2.969	Continuing	Continuing	0.000	
Subtotal			1.007	1.838		2.969		-		2.969			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	
Subtotal			-	-		-		-		-	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				15.102	12.937		13.253		-		13.253			0.000

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 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207136F: <i>Manned Destructive Suppression</i>	PROJECT 674595: <i>F-16 HARM Targeting System</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207136F: <i>Manned Destructive Suppression</i>	PROJECT 674595: <i>F-16 HARM Targeting System</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
R7.7 SWUP Flight Test (DT&E)	4	2010	2	2012
HTS P3I Risk Reduction for Next Phase Contract	2	2011	4	2012
R7.8 SWUP Contract Award	3	2012	3	2012
R7.8SWUP Flight test (CT&E/DT&E)	1	2014	4	2015
P3I RR (R8)	2	2012	2	2014
P3I R8 PDR	3	2013	3	2013
P3I R8 MS B	4	2013	4	2013
P3I R8 EMD Contract Award	2	2014	2	2014
P3I R8 CDR	3	2014	3	2014
P3I R8 Flight Test (CT&E/DT&E)	4	2016	4	2016

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