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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force											Date: February 2015	
Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 0207136F / <i>Manned Destructive Suppression</i>							
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	-	10.724	14.831	14.860	-	14.860	14.921	15.208	15.495	15.772	Continuing	Continuing
674595: <i>F-16 HARM Targeting System</i>	-	10.724	14.831	14.860	-	14.860	14.921	15.208	15.495	15.772	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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 and Block 40/42 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 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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	11.022	14.831	14.959	-	14.959
Current President's Budget	10.724	14.831	14.860	-	14.860
Total Adjustments	-0.298	-	-0.099	-	-0.099
• Congressional General Reductions	-	-	-	-	-
• Congressional Directed Reductions	-	-	-	-	-
• Congressional Rescissions	-	-	-	-	-
• Congressional Adds	-	-	-	-	-
• Congressional Directed Transfers	-	-	-	-	-
• Reprogrammings	-	-	-	-	-
• SBIR/STTR Transfer	-0.298	-	-	-	-
• Other Adjustments	-	-	-0.099	-	-0.099

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<u>Change Summary Explanation</u> No significant program changes.				
<u>C. Accomplishments/Planned Programs (\$ in Millions)</u>		FY 2014	FY 2015	FY 2016
<i>Title:</i> P3I R7 Software Upgrade (SWUP)		9.589	12.048	11.660
<i>Description:</i> P3I R7 Software Upgrade (SWUP)				
<i>FY 2014 Accomplishments:</i> HTS R7.8 SWUP continued software development. Studies continued on risk reduction efforts for future P3I phase(s). Mission support (i.e., program management for administrative and technical support) continued. The major thrusts of this past year were R7.8 SWUP design, code, and preparation for baseline flight testing.				
<i>FY 2015 Plans:</i> HTS R7.8 SWUP continues software development and commences baseline flight testing, test data analysis, software fixes, and release of updated software for iterative flight testing. Studies continue on risk reduction efforts for future P3I phase(s). Mission support (i.e., program management for administrative and technical support) continues. The major thrusts of this year are R7.8 SWUP baseline flight testing and preparation for formal development flight testing.				
<i>FY 2016 Plans:</i> HTS R7.8 SWUP continues software development and baseline flight testing, test data analysis, software fixes, and release of updated software for iterative flight testing. Studies continue on risk reduction efforts for future P3I phase(s). Risk reduction includes a minor software update (maintenance release) in support of F-16 OFP 7.2+. Mission support (i.e., program management for administrative and technical support) continues. The major thrusts of this year are R7.8 SWUP for formal development flight testing and the start of risk reduction activities for subsequent SWUP upgrades.				
<i>Title:</i> Flight Test		0.500	1.983	2.300
<i>Description:</i> Flight Test				
<i>FY 2014 Accomplishments:</i> Government flight test operations continued test planning and risk mitigation plans to address scarcity of resources (i.e., aircraft and ranges). This funding also included test data analysis support and baselining of requirements from actual test data results during HTS SWUP R7.7 flight tests.				
<i>FY 2015 Plans:</i> Government flight test operations completes planning phase and enters into baseline flight testing of R7.8 SWUP software capabilities. This funding also includes test data analysis support and baselining requirements from actual test data results during flight testing. Ground testing such as anechoic chamber testing will be conducted, as needed. The test organization will conduct				

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2014	FY 2015	FY 2016
each mission to include F-16 test aircraft operations, threat/test ranges and associated support, air re-fueling, and range control support. Post-mission support for each mission is planned. FY 2016 Plans: Government flight test operations continue in formal development flight testing of R7.8 SWUP software capabilities. This funding also includes test data analysis support and baselining requirements from actual test data results during flight testing. Ground testing such as anechoic chamber testing will be conducted, as needed. The test organization will conduct each mission to include F-16 test aircraft operations, threat/test ranges and associated support, air re-fueling, and range control support. Post-mission support for each mission is planned.			
Title: Mission Planning Description: Joint Mission Planning System (JMPS) (Formerly Air Force Mission Support System (AFMSS)) FY 2014 Accomplishments: Continued mission planning in conjunction with HTS R7.8 software upgrade. This effort included development and testing of candidate upgrades and initial engineering releases in support of fielding. FY 2015 Plans: Continue mission planning in conjunction with HTS R7.8 software upgrade. This effort will include continued development and testing of candidate upgrades and incremental engineering releases in support of fielding. FY 2016 Plans: Continue mission planning in conjunction with HTS R7.8 software upgrade. This effort will include continued development and testing of candidate upgrades and incremental engineering releases in support of fielding.	0.635	0.800	0.900
Accomplishments/Planned Programs Subtotals	10.724	14.831	14.860

D. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u> <u>Base</u>	<u>FY 2016</u> <u>OCO</u>	<u>FY 2016</u> <u>Total</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• No other investment funding: N/A	-	-	-	-	-	-	-	-	-	-	-
Remarks											

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

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F. 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 2016 Air Force **Date:** February 2015

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207136F / <i>Manned Destructive Suppression</i>	Project (Number/Name) 674595 / <i>F-16 HARM Targeting System</i>
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Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
HTS R7 SWUP/P3I	SS/CPPIF	Raytheon Systems Co. : Tucson, AZ	-	8.729	May 2014	11.151	May 2015	10.731	May 2016	-		10.731	Continuing	Continuing	-
JMPS (Formerly AFMSS)	MIPR	Multiple : Multiple,	-	0.635	Jan 2014	0.800	Jan 2015	0.900	Jan 2016	-		0.900	Continuing	Continuing	-
Subtotal			-	9.364		11.951		11.631		-		11.631	-	-	-

Remarks
HTS R7.8 SWUP risk reduction completed in May 2013. HTS R7.8 development began in May 2013 and is projected to continue until 2017.

Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-		-	-	-	-

Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government Test	PO	412 TW : Edwards AFB, CA	-	0.500	Jun 2014	1.983	Jan 2015	2.300	Jan 2016	-		2.300	Continuing	Continuing	-
Subtotal			-	0.500		1.983		2.300		-		2.300	-	-	-

Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Administration	C/Various	Multiple : Eglin AFB, FL	-	0.860	Oct 2013	0.897	Jan 2015	0.929	Oct 2015	-		0.929	Continuing	Continuing	-
Subtotal			-	0.860		0.897		0.929		-		0.929	-	-	-

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0207136F / <i>Manned Destructive Suppression</i>	Project (Number/Name) 674595 / <i>F-16 HARM Targeting System</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
R7.8 SWUP Contract	1	2014	2	2017
R7.8 SWUP Flight test (CT&E/DT&E)	2	2015	1	2017
R7.8 Software Release	3	2017	3	2017
R7.9 SWUP (R7.8X MNX Update) Risk Reduction	2	2015	2	2018
R7.8X MNX Update Release	4	2018	4	2018
R7.9 SWUP Contract	1	2017	1	2020
R7.9 SWUP (CT&E/DT&E)	4	2017	1	2020
R7.9 Software Release	3	2020	3	2020