

UNCLASSIFIED

PE NUMBER: 0305116F
 PE TITLE: AERIAL TARGETS

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
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BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305116F AERIAL TARGETS
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Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	5.388	5.183	7.376	26.603	35.607	44.263	22.739	17.481	Continuing	TBD
5136 Target Systems Development	5.388	5.183	7.376	26.603	35.607	44.263	22.739	17.481	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Full-scale and subscale targets assure warfighters that weapon systems will perform effectively against real-world enemy fighters and cruise missiles. Aerial targets help adherence to public law Title 10, Section 2366, which requires major systems and munitions programs to conduct survivability and lethality testing before full-rate production. The Aerial Targets program provides drones to satisfy "Live Fire/Lethality" developmental/operational test requirements. Target drones are used to validate operational missile/weapon system effectiveness and fighter operational flight program (OFP) updates. Target drones are also essential for developmental/operational testing for all air-to-air and ground-to-air missiles, and for the F-22A, F-16, F-15, etc., aircraft. The objective is to provide realistic targets for missile testing to enable the development of air defense systems capable of defeating changing airborne threats. This funding improves/updates aerial target systems to ensure aerial targets represent enemy threat airborne systems. This program element also funds development of full-scale/subscale aerial targets and target control systems. Specialized target payload subsystems are developed for requirements such as: missile scoring, electronic attack and infrared (IR) countermeasures, radar and IR signature augmentation, and chaff and flare dispensing systems. In FY08, the Air Force Subscale Aerial Target (AFSAT) program will continue to evaluate and develop product improvements to improve reliability, reduce cost and provide needed enhancements to the performance, payload capability, and payload capacity to support growth initiatives that will continue throughout the Future Years Defense Program (FYDP). FY08 funding will support trade studies and acquisition planning activities (to include prototyping, as required) to begin the development effort for the Air Superiority Target leading to a planned production effort in approximately FY14.

This program is in budget activity 7 - RDT&E Operational System Development because it provides aerial targets, target payloads, and target control systems in support of operational and RDT&E testing.

(U) B. Program Change Summary (\$ in Millions)

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	6.547	5.203	5.297	5.348
(U) Current PBR/President's Budget	5.388	5.183	7.376	26.603
(U) Total Adjustments	-1.159	-0.020		
(U) Congressional Program Reductions				
Congressional Rescissions		-0.020		
Congressional Increases				
Reprogrammings	-1.032			
SBIR/STTR Transfer	-0.127			

(U) Significant Program Changes:

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The increase of 2.079M in FY08 and 21.255M in FY09 are due to the start of the Air Superiority Target Program, a full scale follow-on to the QF-4.

Exhibit R-2a, RDT&E Project Justification

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BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT NUMBER AND TITLE		
07 Operational System Development				0305116F AERIAL TARGETS				5136 Target Systems Development		
Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5136 Target Systems Development	5.388	5.183	7.376	26.603	35.607	44.263	22.739	17.481	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Full-scale and subscale targets assure warfighters that weapon systems will perform effectively against real-world enemy fighters and cruise missiles. Aerial targets help adherence to public law Title 10, Section 2366, which requires major systems and munitions programs to conduct survivability and lethality testing before full-rate production. The Aerial Targets program provides drones to satisfy "Live Fire/Lethality" developmental/operational test requirements. Target drones are used to validate operational missile/weapon system effectiveness and fighter operational flight program (OFP) updates. Target drones are also essential for developmental/operational testing for all air-to-air and ground-to-air missiles, and for the F-22A, F-16, F-15, etc., aircraft. The objective is to provide realistic targets for missile testing to enable the development of air defense systems capable of defeating changing airborne threats. This funding improves/updates aerial target systems to ensure aerial targets represent enemy threat airborne systems. This program element also funds development of full-scale/subscale aerial targets and target control systems. Specialized target payload subsystems are developed for requirements such as: missile scoring, electronic attack and infrared (IR) countermeasures, radar and IR signature augmentation, and chaff and flare dispensing systems. In FY08, the Air Force Subscale Aerial Target (AFSAT) program will continue to evaluate and develop product improvements to improve reliability, reduce cost and provide needed enhancements to the performance, payload capability, and payload capacity to support growth initiatives that will continue throughout the Future Years Defense Program (FYDP). FY08 funding will support trade studies and acquisition planning activities (to include prototyping, as required) to begin the development effort for the Air Superiority Target leading to a planned production effort in approximately FY14.

This program is in budget activity 7 - RDT&E Operational System Development because it provides aerial targets, target payloads, and target control systems in support of operational and RDT&E testing.

(U) B. Accomplishments/Planned Program (\$ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue Aerial Targets basic operating support.	2.402	0.453	1.000	1.000
(U) Continue system acquisition and engineering support to include studies, upgrades for the target control system, the weapon scoring system, payload systems and other aerial targets support systems	0.100	0.100	0.100	0.100
(U) Complete Air Superiority Target analysis of alternatives	2.338	0.811	0.000	0.000
(U) Initiate acquisition planning activities and trade studies to support development program for the new Air Superiority Target (AST).	0.000	0.000	2.000	20.455
(U) Continue product improvement program for the Air Force Subscale Aerial Target (AFSAT) program to include payload and propulsion improvements, radar augmentation, and other objective requirements/enhancements	0.548	3.819	4.276	5.048
(U) Total Cost	5.388	5.183	7.376	26.603

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5136 Target Systems Development

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

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Complete</u>							
(U) PE35116F: Appn: Aircraft Procurement, AF(APAF), Program Title: Aerial Targets	78.582	81.743	85.604	90.349	92.412	93.457	95.290	151.549	Continuing	TBD
(U) Initial Spares	0.471	0.384	0.509	0.524	0.537	0.543	0.554	0.565	Continuing	TBD
(U) Munitions	3.569	3.819	3.999	4.147	4.248	4.304	4.389	4.477	Continuing	TBD
(U) Electronic Attack Pods	4.926	5.063	5.575	5.199	5.433	5.607	5.717	5.831	Continuing	TBD

(U) **D. Acquisition Strategy**

The acquisition strategy is competitive, with cost plus, fixed price and time and materials contracts.

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Exhibit R-3, RDT&E Project Cost Analysis

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(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2006 Cost</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>	
(U) <u>Product Development</u> AFSAT P3I Efforts	FFP, T&M, CPIF	Composite Engineering Inc., Sacramento CA		0.548	Apr-06	3.819	Feb-07	4.276	Jan-08	5.048	Jan-09		13.691		
AST Risk Reduction., Trade Studies and Development	FFP, T&M, CPXX	TBD						2.000		20.455			22.455		
Subtotal Product Development			0.000	0.548		3.819		6.276		25.503		0.000	36.146	0.000	
Remarks:	Pre-planned product improvements for the AFSAT Subscale Aerial Target and New Full Scale Aerial Target (Air Superiority Target - AST) Development														
(U) <u>Support</u> Mission Support	Various	Various		2.402		0.453		1.000		1.000			4.855		
Subtotal Support			0.000	2.402		0.453		1.000		1.000		0.000	4.855	0.000	
Remarks:															
(U) <u>Test & Evaluation</u> Continue system acquisition and engineering support to include studies, upgrades for the target control system, the weapon scoring system, payload systems and other aerial targets support systems			0.100	0.100		0.100		0.100		0.100			0.500		
Subtotal Test & Evaluation			0.100	0.100		0.100		0.100		0.100		0.000	0.500	0.000	
Remarks:															
(U) <u>Management</u> System Acq and Engineering Support	Various	Various		2.338		0.811							3.149		
Subtotal Management			0.000	2.338		0.811		0.000		0.000		0.000	3.149	0.000	
Remarks:	AST AoA effort														
(U) Total Cost			0.100	5.388		5.183		7.376		26.603		0.000	44.650	0.000	

Exhibit R-4, RDT&E Schedule Profile

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AFSAT Contract Efforts



	FY 07	FY08	FY09	FY10	FY11	FY12	FY13
AFSAT Future Efforts to evaluate and develop product improvements to provide enhancements, improve reliability and reduce costs.	[Red arrow spanning from FY07 to FY13]						
FY07-09 Planned Efforts							
Recovery Systems Improvements	[Red arrow from FY07 to FY09]						
Design Reliability Improvements	[Red arrow from FY07 to FY09]						
Launch Improvements	[Red arrow from FY07 to FY09]						
Radar Augmentation		[Red arrow from FY08 to FY09]					
Alternate Launch Methods		[Red arrow from FY08 to FY09]					

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Exhibit R-4, RDT&E Schedule Profile

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AST Planned Development Schedule



2007				2008				2009				2010			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
AoA		▲ AFROCC Brief													
								Trades/Risk Reduction							
CDD Dev't															
		Industry Day #1		▲											
MS B Program Documentation															

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Exhibit R-4a, RDT&E Schedule Detail

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(U) <u>Schedule Profile</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Recovery System Study		3Q		
(U) Design Reliability Assessment		3Q	1Q	
(U) Launch Improvement Study		3Q		
(U) Radar Augmentation			2Q	
(U) Combo IR/RCS Pod				2Q
(U) Alternate Launch Method Study			2Q	
(U) AST Risk Reduction, Trade Studies and and Development			2Q	