

UNCLASSIFIED

PE NUMBER: 0207163F

PE TITLE: Advanced Medium Range Air-to-Air Missile

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 0207163F Advanced Medium Range Air-to-Air Missile
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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	31.803	43.253	36.838	45.879	40.326	40.695	23.002	12.882	Continuing	TBD
3777 AMRAAM	31.803	43.253	36.838	45.879	40.326	40.695	23.002	12.882	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Air Force and Navy developed the baseline Advanced Medium Range Air-to-Air Missile (AMRAAM) as a high performance, all weather missile to counter existing air vehicle threats operating at high or low altitude having advanced Electronic Protection (EP) capabilities. The AMRAAM Pre-Planned Product Improvement (P3I) program provides for a continuing, Joint Air Force/Navy research and development program which enables AMRAAM to: (1) be compatible with advanced fighters, (2) enhance AMRAAM capability and operational flexibility against 2005 and beyond threats, (3) incorporate high payoff technology developments, and (4) investigate new variants and/or alternate missions which may use many baseline missile attributes.

Improvements under the P3I program include enhanced EP capabilities and improved weapon effectiveness through improved fuzing, guidance, and increased kinematics. A follow-on program to the three-phase P3I program referred to as AMRAAM Phase 4 is currently underway. The Phase 4 effort will lead to introduction of the AIM-120D, delivering improved AMRAAM performance via GPS-aided navigation, a two-way datalink capability for enhanced aircrew survivability and improved network compatibility, and incorporating new guidance software which will improve AMRAAM's kinematic and weapon effectiveness performance. AMRAAM is a joint Air Force/Navy, Acquisition Category (ACAT) IC program with Air Force as lead service.

This program is in budget activity 7 - Operational System Development, providing upgrades to the AIM-120C missile currently in production.

Funding begins in FY08 for studies as part of the Joint Dual Role Air Dominance Missile (JDRADM), a potential missile system intended as a follow-on to the AMRAAM.

(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	32.788	43.417	37.441	38.497
(U) Current PBR/President's Budget	31.803	43.253	36.838	45.879
(U) Total Adjustments	-0.985	-0.164		
(U) Congressional Program Reductions				
Congressional Rescissions	-0.001	-0.164		
Congressional Increases				
Reprogrammings	-0.081			
SBIR/STTR Transfer	-0.903			

(U) Significant Program Changes:

None.

Exhibit R-2a, RDT&E Project Justification

DATE
February 2007

BUDGET ACTIVITY 07 Operational System Development					PE NUMBER AND TITLE 0207163F Advanced Medium Range Air-to-Air Missile			PROJECT NUMBER AND TITLE 3777 AMRAAM		
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
3777 AMRAAM	31.803	43.253	36.838	45.879	40.326	40.695	23.002	12.882	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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This program is in budget activity 7 - Operational System Development, providing upgrades to the AIM-120C missile currently in production.

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

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Continue effort to complete qualification of the Phase 4 missile design	19.234	20.650	11.000	5.000
(U) Continue to provide software upgrades/system improvement program (SIP)	0.000	2.000	2.000	6.000
(U) Continue mission support: Provide program management to execute Phase 4 program	1.495	1.770	1.629	1.611
(U) Continue test and evaluation: Provide support to DT and OT	2.839	3.522	6.561	10.647
(U) Aircraft Integration - Integrate Phase 4 on multiple aircraft platforms	3.319	10.681	12.448	15.621
(U) Develop AMRAAM field reprogrammer	4.916	4.630	0.000	0.000
(U) Joint Dual Role Air Dominance Missile (JDRADM)	0.000	0.000	3.200	7.000
(U) Total Cost	31.803	43.253	36.838	45.879

Exhibit R-2a, RDT&E Project Justification

DATE

February 2007

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0207163F Advanced Medium Range
Air-to-Air Missile

PROJECT NUMBER AND TITLE

3777 AMRAAM

(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) Missile Procurement, Budget Activity #2, PE 0207163F, P-1 Line Item, AMRAAM	103.068	115.409	224.577	275.710	285.373	303.821	309.728	316.346	0.000	7,814.786
(U) Replenishment Spares, BP25 and Missile Replacement Equipment	0.193	0.201	0.205	0.212	0.217	0.222	0.226	0.231	0.000	61.876
(U) Initial Spares, BP26	0.072	0.075	0.075	0.078	0.079	0.082	0.084	0.086	0.000	63.483
(U) AMRAAM Field Reprogrammer, BP 22	0.000	0.000	5.784	5.784	5.385	0.000	0.000	0.000	0.000	16.487

(U) **D. Acquisition Strategy**

The AMRAAM P3I program takes advantage of emerging technologies to update and expand the system capabilities to meet new user requirements. The Phase 3 Cost Plus Award Fee EMD contract was completed 30 Mar 04. This missile is currently in OT testing with projected fielding date of 4QFY07. The AIM-120D SDD contract, awarded in Dec 03, is intended to meet the requirement to evolve the AMRAAM for improved performance. Initial limited production of the AIM-120D missile began in FY06. The formal production cut-in decision for the AIM-120D will be in FY08. The AIM-120D Missile Performance Specification (MPS) and Interface Control Document (ICD) define the requirement to integrate the Phase 4 AMRAAM onto the F-15, F-16, and F-22A.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis

DATE
February 2007

BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207163F Advanced Medium Range Air-to-Air Missile	PROJECT NUMBER AND TITLE 3777 AMRAAM
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(U) <u>Cost Categories</u> (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>														
Misc. Contracts	SS/FFP											0.000	0.000	15.987
F08635-90-C-0201 Hughes	SS/FFP	Hughes										0.000	0.000	5.200
F08626-91-C-0034 Hughes	SS/CPIF	Hughes										0.000	0.000	93.506
F08626-93-C-0044 (Phase 2) Hughes	SS/CPAF	Hughes										0.000	0.000	117.558
Phase 3 Risk Reduction	SS/CPAF	Raytheon, Tucson, AZ										0.000	0.000	24.484
Phase 3 Improved Fuzing Capability	SS/CPAF	Raytheon, Tucson, AZ										0.000	0.000	3.937
Phase 3 Improved Seeker and Advanced EP. Raytheon F08626-98-C-0027	SS/CPAF	Raytheon, Tucson, AZ										0.000	0.000	207.755
Software Upgrade/System Improvement Program (SIP)	SS/CPFF	Raytheon, Tucson, AZ				2.000		2.000		6.000		0.000	10.000	12.000
Phase 4 Contract FA8675-04-C-0001	SS/CPFF	Raytheon, Tucson, AZ		19.234	Dec-05	20.650	Dec-06	11.000	Dec-07			0.000	50.884	118.016
Phase 4 Follow-On Contract	SS/CPFF	Raytheon, Tucson, AZ								5.000		53.600	58.600	77.311
Aircraft Integration	MIPR	Wright-Patterson AFB, OH		3.319	Dec-05	10.681	Dec-06	12.448	Dec-07	15.621	Dec-08	38.300	80.369	85.300
AMRAAM Field Reprogrammer		Raytheon, Tucson, AZ		4.916	Jan-06	4.630	Jan-07					0.000	9.546	14.000
Joint Dual Role Air Dominance Missile (JDRADM)								3.200		7.000		0.000	10.200	10.200
Subtotal Product Development			0.000	27.469		37.961		28.648		33.621		91.900	219.599	785.254
Remarks:														
(U) <u>Support</u>														
COEA	PO/MIPR											0.000	0.000	3.358
Contractor Support	REO/PR			0.817		1.021		0.950		0.892		4.232	7.912	26.136
JSPO Operations	PR/IMPAC			0.678		0.749		0.679		0.719		3.078	5.903	25.840
Subtotal Support			0.000	1.495		1.770		1.629		1.611		7.310	13.815	55.334
Remarks:														
(U) <u>Test & Evaluation</u>														
Government Test	REO/MIPR			2.839		3.522		6.561		10.647		0.000	23.569	47.229
TM/ECM Pods	REO/MIPR											0.000	0.000	2.818

R-1 Line Item No. 136

Page-4 of 7

Project 3777

Exhibit R-3 (PE 0207163F)

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis

DATE

February 2007

BUDGET ACTIVITY			PE NUMBER AND TITLE			PROJECT NUMBER AND TITLE		
07 Operational System Development			0207163F Advanced Medium Range Air-to-Air Missile			3777 AMRAAM		
Subtotal Test & Evaluation	0.000	2.839	3.522	6.561	10.647	0.000	23.569	50.047
Remarks:							0.000	
(U) <u>Management</u>							0.000	
Subtotal Management	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Remarks:								
(U) Total Cost	0.000	31.803	43.253	36.838	45.879	99.210	256.983	890.635

Exhibit R-4, RDT&E Schedule Profile

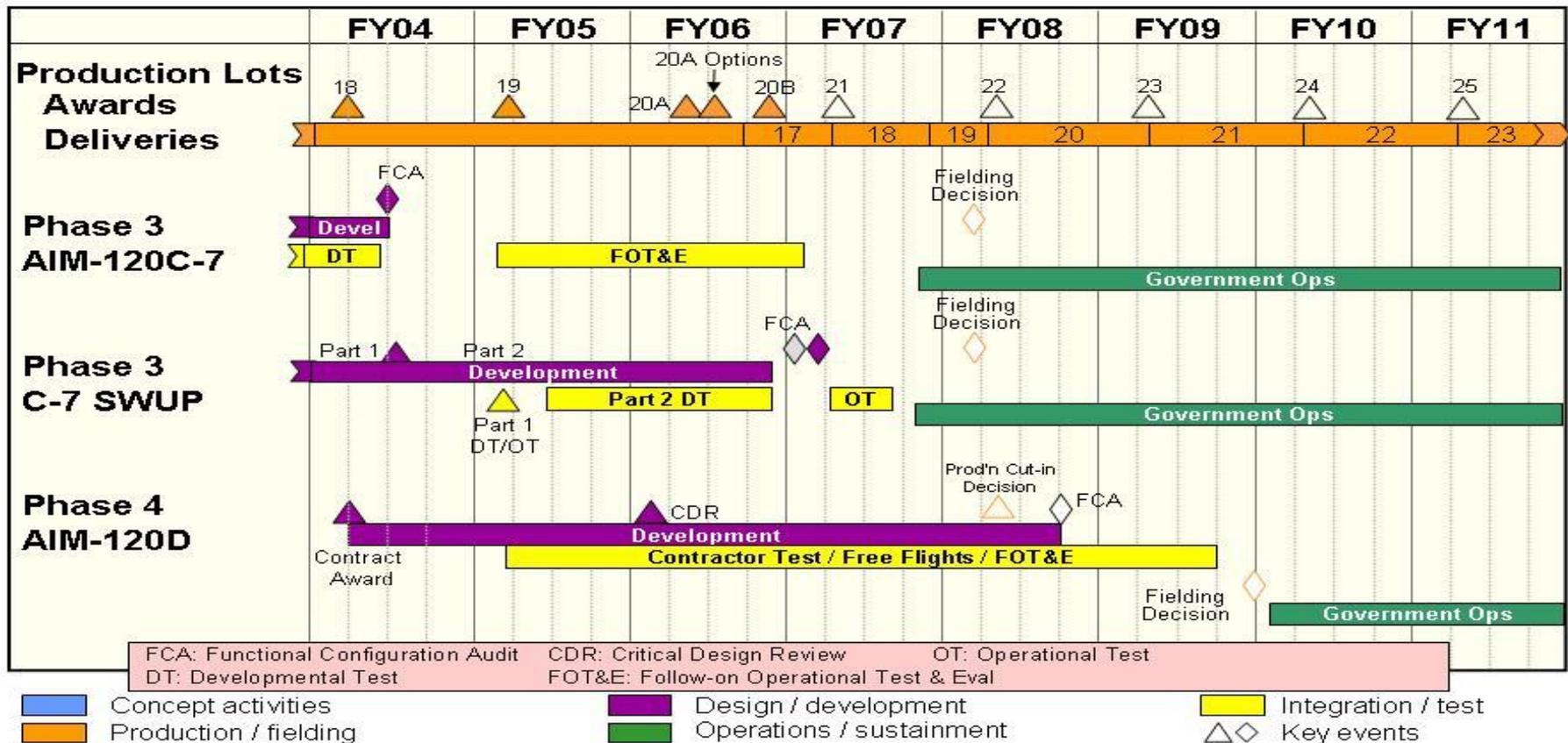
DATE
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BUDGET ACTIVITY
07 Operational System Development

PE NUMBER AND TITLE
0207163F Advanced Medium Range
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PROJECT NUMBER AND TITLE
3777 AMRAAM

AMRAAM Schedule



UNCLASSIFIED

Exhibit R-4a, RDT&E Schedule Detail	DATE February 2007
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BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207163F Advanced Medium Range Air-to-Air Missile	PROJECT NUMBER AND TITLE 3777 AMRAAM
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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) AIM-120D SDD Critical Design Review (CDR)	1Q			
(U) Initial AIM-120D Production Contract Award (3 Increments, 1st, 2nd, 4th qtrs of FY06)	4Q			
(U) First Captive Carriage F/A-18E/F	3Q			
(U) First Captive Carriage F-15 C/D		2Q		
(U) First Live Launch (from F/A-18 E/F)		3Q		
(U) Functional Configuration Audit (FCA)			3Q	