

UNCLASSIFIED

PE NUMBER: 0401134F

PE TITLE: Large Aircraft InfraRed Counter Measures (LAIRCM)

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 0401134F Large Aircraft InfraRed Counter Measures (LAIRCM)
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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	49.951	40.463	19.324	26.369	6.189	7.189	7.328	7.478	Continuing	TBD
4942 Large Aircraft Infrared Counter Measures (LAIRCM)	49.951	40.463	19.324	26.369	6.189	7.189	7.328	7.478	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Large Aircraft Infrared Countermeasures System (LAIRCM) provides significantly improved defensive systems capability for the AF's airlift and tanker aircraft to counter the infrared (IR) Man-Portable Air-Defense Systems (MANPADS) missile threat.

The current LAIRCM system configuration [AN/AAQ-24V(13)] consists of an ultra-violet missile-warning sensor (MWS), a missile-tracking system, multi-band laser jammers, control interface unit and processors to detect, track, jam and counter incoming IR missiles. The number of turrets per aircraft is determined by the size and signature of the aircraft. This system is fully automatic following system power-up. LAIRCM requirements are documented in the multi-command Operational Requirements Document (ORD) - LAIRCM ORD 314-92, validated on 3 Aug 98. LAIRCM satisfies AMC's Urgent and Compelling Need for protection of selected AMC aircraft. The system was first fielded in May 03 on the C-17 aircraft.

The AF plans to equip a minimum of 444 aircraft with LAIRCM across a range of platform types (C-17s, C-130s, C-5s, C-40s, C-37s, C-130Js). Aircraft quantities are based on the "Study Report on Current and Future Threats to Mobility Aircraft" directed by the AF's FY06-11 Annual Planning and Program Guidance.

LAIRCM is two phased evolutionary acquisition.

Phase I installs today's LAIRCM small laser turret assembly (SLTA), ultra-violet MWS, processor, Control Interface Unit (CIU) on C-17s and C-130 aircraft to meet AMC's urgent and compelling need for advanced IR countermeasures.

Phase II covers development of the Next Generation Missile Warning System (NexGen MWS) and a Guardian Laser Tracking Assembly (GLTA) which replaces the Phase I MWS and SLTA respectively. Phase II developments increase the effectiveness and affordability of the LAIRCM system. Phase I equipment (SLTAs and MWS) on C-17s will be retrofitted with Phase II equipment (GLTA and NexGen MWS) as Phase II equipment becomes available. Phase II initial procurement of the GLTA and NexGen MWS is planned for FY07. The SLTAs removed from C-17s will be placed on C-130s.

LAIRCM is Budget Activity 7, Operational Systems Development as it is an electronic countermeasures systems upgrade to existing weapons systems.

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(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	55.743	34.916	26.893	26.042
(U) Current PBR/President's Budget	49.951	40.463	19.324	26.369
(U) Total Adjustments	-5.792			
(U) Congressional Program Reductions	-1.179	-0.153		
Congressional Rescissions	-0.257			
Congressional Increases	3.700	5.700		
Reprogrammings	-8.056			
SBIR/STTR Transfer				
(U) <u>Significant Program Changes:</u>				
The reduction in FY08 may impact planned C-130J integration.				

Exhibit R-2a, RDT&E Project Justification

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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	
4942 Large Aircraft Infrared Counter Measures (LAIRCM)	49.951	40.463	19.324	26.369	6.189	7.189	7.328	7.478	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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LAIRCM is Budget Activity 7, Operational Systems Development as it is an electronic countermeasures systems upgrade to existing weapons systems.

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

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Group A Contracts	13.123	22.393	9.561	19.127
(U) Nex Gen MWS Contracts	16.929	4.734		
(U) Guardian Laser Turret Assembly (GLTA) Program	13.394	3.292		
(U) Test	0.422			
(U) PMA	4.161	5.350	4.365	0.200

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Exhibit R-2a (PE 0401134F)

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(U) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) OGC	1.922	4.694	5.398	7.042
(U) Total Cost	49.951	40.463	19.324	26.369

(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) PE 54343F - C-130 (AFR) Procurement (BP1100)		3.956	35.500	55.691	1.065	1.057	1.078	1.100		99.447
(U) PE 41134F, C-17 Procurement (BP1100)	83.340	137.348	105.571	154.592	240.563	47.745	31.464	181.181		981.804
(U) PE 41134F, C-130 Procurement (BP1100)	7.236	15.475	38.216	4.439	1.385					66.751
(U) PE 41134F, C-5B Procurement (BP1100)		28.844	48.749	46.107	34.753	5.315	5.407	5.500		174.675
(U) PE 41134F, C-130J Procurement (BP1100)					39.637	15.195	8.699	8.872		72.403

(U) **D. Acquisition Strategy**

Integration of the LAIRCM subsystems is accomplished by Northrop Grumman (Group B developer) and Group A integrators. The LAIRCM contract was awarded on 28 Sep 01 as a CPAF contract. Boeing Aerospace was awarded the C-17 LAIRCM integration contract on 18 Jan 02 as the Group A integrator working with Northrop Grumman. The C-130 LAIRCM integration contract was awarded to Northrop Grumman as a modification to the current contract on 7 Jun 02. The C-5B contract was awarded to Lockheed Martin, Feb 2006. The LAIRCM integration contract for C-130J will be awarded in FY07.

The Next Generation Missile Warning System (Nex Gen MWS) contracts for a System Design and Development (SDD) competition were awarded to Northrop Grumman and Lockheed Martin in Jun 04. Both contractors have developed NexGen MWS prototypes during the SDD competition. A NexGen MWS production contractor will be selected during a competitive selection in mid FY07 with production buys following milestone C. Integration of the NexGen MWS will be accomplished with the NexGen MWS production contractor and the platform Group A integrator for the various LAIRCM equipped platforms.

The GLTA is a Phase II development effort which delivers a smaller, more reliable, and cheaper replacement to the SLTA. The GLTA SDD contract was awarded to Northrop Grumman in Feb 05 as a sole source contract. GLTA goes into production in FY07 and will be integrated on designated platforms by the Group A integrator with Northrop Grumman integration support.

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Exhibit R-3, RDT&E Project Cost Analysis											DATE February 2007			
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(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) <u>Product Development</u> Congressional Add	CPFF	AC-130 Integration, rolling Meadows, IL		3.700	Mar-07	5.700							9.400	TBD
Northrop Grumman/2093	CPAF/FF P	NexGen Integration, Rolling Meadows, IL		4.702		0.834							5.536	
Northrop Grumman	CPFF	NexGen MWS Development, Rolling Meadows, IL		6.794		3.368							10.162	TBD
Lockheed Martin	CPFF	NexGen MWS Development, Orlando, FL		5.433		0.532							5.965	TBD
Northrop	CPFF	Mini-turret Development, Rolling Meadows, IL		13.394		3.292							16.686	TBD
Lockheed	CPFF	C-5B Development & Integration		9.423		13.506							22.929	TBD
TBD	TBD	C-130J Development & Integration		0.000		3.187	May-07	9.561		19.127			31.875	TBD
Subtotal Product Development			0.000	43.446		30.419		9.561		19.127		0.000	102.553	TBD
Remarks:														
(U) <u>Support</u> 654 AESS				4.161		5.350		4.365		0.200		0.800	14.876	TBD
OGC				1.922		4.694		5.398		7.042		27.384	46.440	TBD
Subtotal Support			0.000	6.083		10.044		9.763		7.242		28.184	61.316	TBD
Remarks:														
(U) <u>Test & Evaluation</u> Various Gov't Test Organizations	Various			0.422								0.000	0.422	TBD
Subtotal Test & Evaluation			0.000	0.422		0.000		0.000		0.000		0.000	0.422	TBD

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Exhibit R-3 (PE 0401134F)

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4942 Large Aircraft Infrared Counter Measures (LAIRCM)

Remarks:

(U) Total System Cost

(U) Total Cost	0.000	49.951	40.463	19.324	26.369	28.184	164.291	TBD
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Remarks:

Exhibit R-4, RDT&E Schedule Profile

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LAIRCM

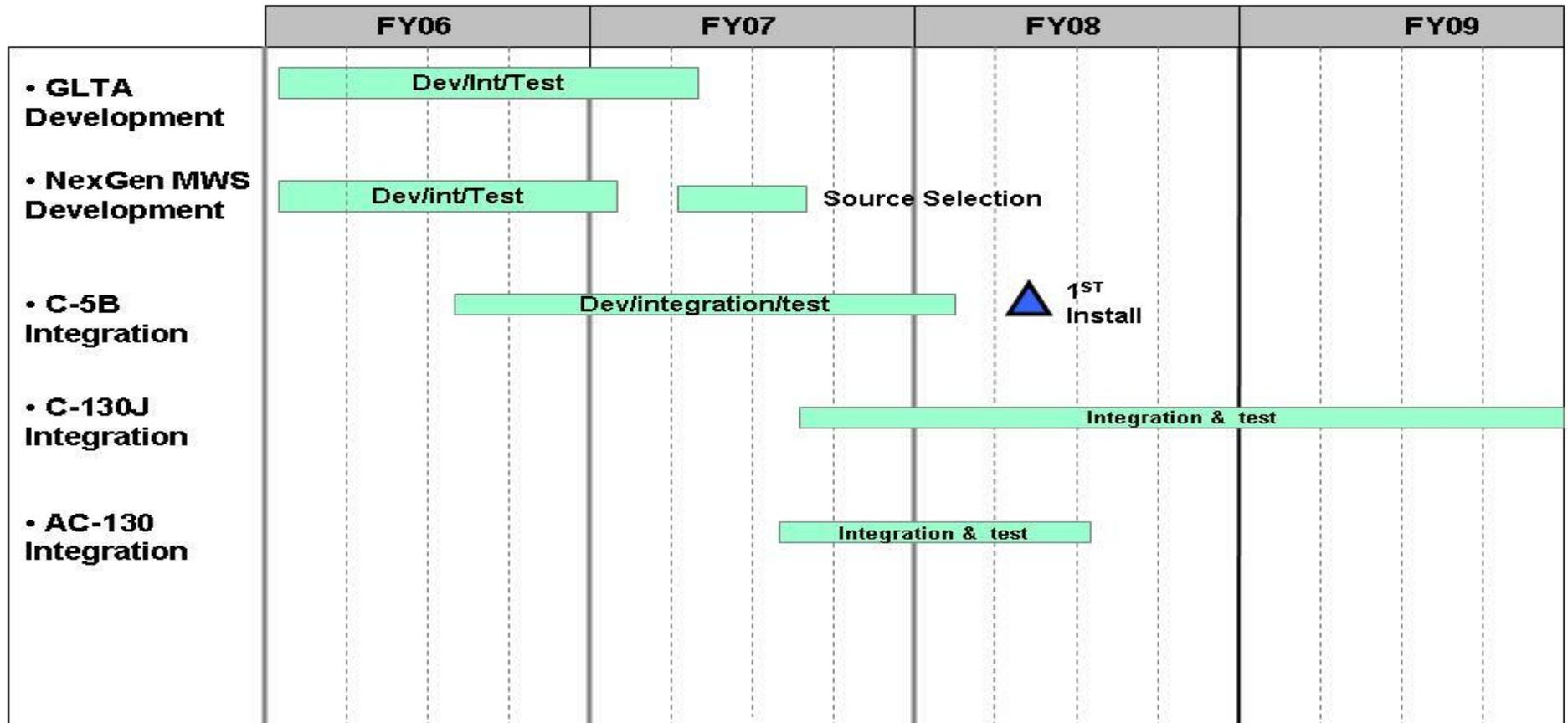


Exhibit R-4a, RDT&E Schedule Detail

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(U) Schedule Profile

(U) GLTA Development

(U) Next Generation Missile Warning System Development

(U) C-5B Integration

(U) C-130J Integration

(U) AC-130 Integration

FY 2006

FY 2007

FY 2008

FY 2009

1-4Q

1-2Q

1-4Q

1Q

3-4Q

1-4Q

1Q

3-4Q

1-4Q

1-4Q

3-4Q

1-3Q