

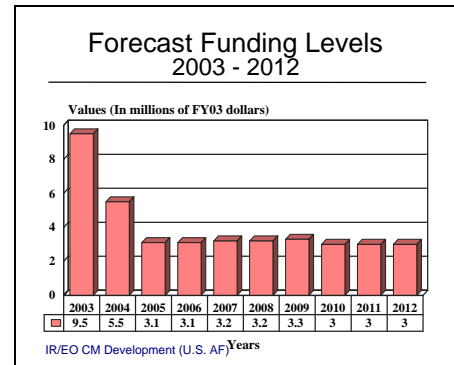
ARCHIVED REPORT

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IR/EO CM Development (Air Force) - Archived 12/2004

Outlook

- Program active throughout forecast period
- Funding will change as programs transition to next phase
- Projects change over time



Orientation

Description. PE#0604270F, Project 3891, funds the development of IR/EO countermeasures.

Sponsor

U.S. Air Force
Air Force Materiel Command
Aeronautical Systems Center
Wright-Patterson AFB, Ohio (OH)
USA
Web site: <http://www.wpafb.af.mil>

Contractors

Contractors change as projects develop.

Status. Technology base development.

Total Produced. This is a technology development program only.

Application. The program element consolidates all engineering development efforts related to Air Force electronic warfare requirements, including IR/EO CM.

Price Range. Indeterminate

Contractors

The contractors change as projects develop.

Technical Data

The overall program element consolidates Air Force engineering development efforts related to electronic warfare requirements and transitions advanced development technologies to installed operational capabilities

via engineering and manufacturing development (EMD) programs. Infrared (IR) and electro-optical (EO) development programs were consolidated under Project 3891 in FY96.

Variants/Upgrades

This program develops technology that can be used to upgrade existing systems.

Program Review

Background. Information is based on the latest Program Descriptive Summary.

PE#0604270F – EW Development; Project 3891, Advanced IR Countermeasures (AIRCM). The AIRCM project contains related aircraft self-protection efforts aimed at increasing aircraft survivability against the increasing threat of sophisticated surface-to-air and air-to-air missiles, which may employ such features as next-generation electro-optics or dual IR and radio frequency seekers. AIRCM currently consists of three efforts: the USAF/USN Advanced Strategic and Tactical IR Expendables (ASTE) program, USAF/USN AAR-47 software development, and Loitering Electronic Warfare Killer (LEWK) ACTD (Advanced Concepts Technology Demonstration).

ASTE will provide advanced IR expendable countermeasures that will be functionally compatible with existing ALE-40(V), ALE-45(V), and ALE-47(V) dispenser systems and will be employed across multiple USAF weapon systems and the F/A-18E/F. In addition, ASTE involves development of the Comet Pod which will dispense covert infrared countermeasures. This explicitly includes any/all flare and decoy development that may be demanded or needed in current operations supporting the war on terrorism regardless of aircraft platform. Notably, these activities may also be paid for under platform specific funding.

The AAR-47(V) software development effort supports two configurations of software intended to decrease the

AAR-47(V) false alarm rate and improve threat detection for all large-body aircraft.

The LEWK ACTD will demonstrate a long-endurance UAV for jamming and payload delivery. This ACTD was approved in FY01 and the USAF has been designated the lead service.

In FY02 US\$991,000 was allocated for AAR-47(V) software development. This entire funding line was moved from PE#06053945F to this PE as an administrative correction to the database.

The FY03 plan includes US\$5.195 million for LEWK ACTD, with a congressional add of US\$3.2 million. US\$2.203 million was allocated to continue ASTE flare development, and US\$1.5 million was reprogrammed to continue Comet pod development. US\$594,000 was earmarked for AAR-47(V) software development.

The FY04 plan budgets US\$2.481 million for LEWK ACTD, US\$2.011 million for ASTE flare development, and US\$961,000 for AAR-47(V) software development.

The acquisition strategy is for the ASTE effort to be “competitive cost-plus,” with AAR-47(V) a time and materials contracted activity. Comet pod testing is being done under a fixed-price contract, while LEWK is, as indicated above, an ACTD under the Office of the Secretary of Defense (OSD). Transition to the USAF will be determined based on a Military Utility Assessment in FY04.

Funding

	<u>U.S. FUNDING</u>							
	<u>FY02</u>		<u>FY03</u>		<u>FY04 (Req)</u>		<u>FY05 (Req)</u>	
	<u>QTY</u>	<u>AMT</u>	<u>QTY</u>	<u>AMT</u>	<u>QTY</u>	<u>AMT</u>	<u>QTY</u>	<u>AMT</u>
RDT&E (USAF)								
PE#0604270F EW Development								
3891 AIRCM	-	1.0	-	9.5	-	5.5	-	3.1
	<u>FY06 (Req)</u>		<u>FY07 (Req)</u>		<u>FY08 (Req)</u>		<u>FY09 (Req)</u>	
	<u>QTY</u>	<u>AMT</u>	<u>QTY</u>	<u>AMT</u>	<u>QTY</u>	<u>AMT</u>	<u>QTY</u>	<u>AMT</u>
RDT&E (USAF)								
Proj. 3891	-	3.1	-	3.2	-	3.2	-	3.3

All US\$ are in millions.

Recent Contracts

No recent contracts over US\$5 million identified.

Timetable

<u>Month</u>	<u>Year</u>	<u>Major Development</u>
	FY94	ASTE Tactical Roundtable, internal demos and Acquisition Strategy Panel
2Q	FY95	ASTE Acquisition Strategy Panel
3Q	FY95	ASTE RFP release, Milestone II decision
3Q	FY95	CMWS Milestone II decision
4Q	FY95	EMD contract award
1Q	FY96	ASTE EMD contract award
2Q	FY96	CMWS System Design Review
3Q	FY96	CMWS PDR
4Q	FY96	ASTE PDR – Covert
1Q	FY97	ASTE PDR – Fighter; CMWS CDR started
2Q	FY97	CMWS CDR completed
3Q	FY97	ASTE CDR – Fighter; CMWS platform integration completed
4Q	FY97	ASTE CDR – Covert and Fighter
2Q	FY98	ASTE DT&E – Covert and Fighter completed
4Q	FY98	ASTE DT&E – Covert
	FY99	LAIRCM started
1Q	FY99	ASTE OT&E – Covert and Fighter completed, ASTE PDR – B1B, CMWS platform integration
2Q	FY99	ASTE OT&E – Covert, ASTE PDR – Transport, AAR-47(V) upgrade contract, AAR-47(V) collection/validation of false alarm data
3Q	FY99	ASTE Milestone III – Covert, ASTE CDR – Transport
1Q	FY00	ASTE CDR – Transport, AAR-47(V) software upgrade contract
2Q	FY00	ASTE Milestone III – Covert
3Q	FY00	CMWS DT&E
4Q	FY00	ASTE DT&E – Fighter
1Q	FY01	CMWS IOT&E
2Q	FY01	ASTE OT&E – Fighter, LAIRCM RFP, AAR-47(V) V22 software development contract
3Q	FY01	AAR-47(V) collection/validation of data
2Q	FY01	ASTE CDR – Transport
3Q	FY02	ASTE MS III – Fighter, AAR-47(V) upgrade contract
4Q	FY02	AAR-47(V) analyze data, collect/validate data
2Q	FY03	AAR-47(V) modeling/simulation, collect/validate data
3Q	FY03	AAR-47(V) algorithm development, LEWK ACTD retractable wing development, LEWK ACTD vehicle jammer downselect
4Q	FY03	ASTE DT&E/OT&E (transport)
2Q	FY04	ASTE Milestone III (transport), AAR-47(V) algorithm development
3Q	FY04	ASTE DT&E/OT&E follow-on solution, AAR-47(V) hardware testing

Worldwide Distribution

The **United States** and the **United Kingdom** have joined the Nemesis-directed IRCM development effort.

Forecast Rationale

Because of the new threat environment, there is great interest in infrared and electro-optical techniques/ systems and the development of defensive systems for next-generation low-observable aircraft. Hardware that

can be retrofitted into current tactical fleets is needed to counter heat and electro-optical seekers and trackers, the major dangers faced by today's aircraft. Congress continues to be interested in electronic/EO countermeasures.

This effort now focuses on the AIRCM IR countermeasures development and AAR-47(V) software upgrades, and support of LEWK. Changes in the

forecast line reflect the movement of programs in and out of the program element. In the outyears, some new developments can be expected to translate into upgrades of fielded equipment in next-generation aircraft, taking advantage of advancing technology. Moreover, the PE might be revised in the outyears, and some of the projected work moved to other programs. If this happens, the remaining funding for that work will transfer as well.

Ten-Year Outlook

ESTIMATED CALENDAR YEAR FUNDING (\$ in millions)													
Designation	Application	Thru 02	High Confidence Level			Good Confidence Level			Speculative			Total 03-12	
			03	04	05	06	07	08	09	10	11		12
IR/EO CM DEVELOPMENT (AF)	(USAF)	276.500	9.500	5.500	3.100	3.100	3.200	3.200	3.300	3.000	3.000	3.000	39.900