

UNCLASSIFIED

PE NUMBER: 0207131F
 PE TITLE: A-10 SQUADRONS

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2004
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BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207131F A-10 SQUADRONS
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Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	10.960	29.476	22.590	9.054	9.222	0.000	0.000	Continuing	TBD
4809 A-10 Squadrons	10.960	29.476	22.590	9.054	9.222	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

** NOTE: The \$14M Congressional add to purchase Litening pods for the Air National Guard has been moved to the Precision Attack program element.

The A/OA-10 is the USAF's primary aircraft for Close Air Support (CAS) and Forward Air Control (FAC) supporting the ground battle including special forces, with a secondary mission of Combat Search and Rescue (CSAR) and the capability to perform interdiction under certain circumstances. Currently, all RDT&E funding supports the Precision Engagement (PE) Program (MN-9805). The PE program is a spiral development program installing a Digital Stores Management System (DSMS), integrated capabilities for smart weapons delivery, targeting pod integration, increased DC power system and joint-service battlefield interface via digital data links. The result of PE is increased tactical effectiveness (more targets destroyed), greater survivability, and decreased chance of fratricide. These modifications are mandatory for the A/OA-10 to adhere to the regional CINC's requirement for a CAS platform.

Spiral #1 of the PE modification integrates 1760 BUS, Joint Direct Attack Munition (JDAM), Wind Corrected Munitions Dispenser (WCMD), LITENING and SNIPER targeting pods, increases the current DC power system by 100% and creates a Digital Stores Management System (DSMS) for the A-10. The DSMS replaces the current Armament Control Panel (ACP) and the Interstation Control Unit (ICU) and adds two Multi-Function Color Displays (MFCD) to replace the existing ACP and Television Monitor and replaces the current stick and throttle with improved Hands on Throttle and Stick Capable controls reducing 'heads down' time in the cockpit. During spiral #1, the ICU will be replaced with a new processor: the Central Interface Control Unit (CICU). This program does not purchase JDAM/WCMD munitions, targeting pods or their associated support equipment.

Spiral #2 of the PE modification is Digital Data Link (DDL) MN-37120. Funding control for the DDL was transferred from the A-10 System Program Office (SPO) to the Tactical Data Links (TDL) SPO for an enterprise management approach to data links however, it is still part of the PE modification. OSD has directed the integration of the Army Joint Tactical Radio Set (JTRS) radio onto the A-10 as part of the PE modification. Spiral #2 of this modification integrates tests and fields the JTRS radio with the Enhanced Position Location Reporting System (EPLRS) waveform into the PE program. The EPLRS waveform provides connectivity to the digital battlefield to ensure joint forces communication, reduced fratricide and interoperability with forward C2 platform centers.

Spiral #3 of the A-10 modernization program may include: a moving map, BRU-57, Small Diameter Bomb (SDB), and additional data link waveforms. Improvements will enhance situational awareness, enable the A-10 to carry two smart weapons on a single parent station, and expand combat data link capability. Through a spiral development approach, the PE program will ultimately improve survivability and tactical affectivity, decrease fratricide, and continue to play a major role as one of the USAF's primary Close Air Support and Forward Air Control weapon systems.

* Note: The decision to make PE a spiral program was based on differing PE and JTRS IOC schedules. Although JTRS will be part of the PE program, it will be flight

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tested and fielded as a separate spiral. Spiral #1 is PE without JTRS, Spiral # 2 is PE with JTRS. Initial aircraft will have JTRS installed as a field level TCTO, the remaining aircraft will come out of the modification line with JTRS.

The A/OA-10 RDT&E program is in budget activity 7 - Operational System Development because it supports an operational system.

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Previous President's Budget	7.503	29.729	22.649
(U) Current PBR/President's Budget	10.960	29.476	22.590
(U) Total Adjustments	3.457	-0.253	
(U) Congressional Program Reductions			
Congressional Rescissions		-0.253	
Congressional Increases			
Reprogrammings	3.678		
SBIR/STTR Transfer	-0.221		

(U) Significant Program Changes:

(U) OSD directed JTRS integration onto A-10 as part of the PE modification; due to this change PE modification is now a Spiral development program. Spiral #1 PE w/o JTRS. Spiral #2 PE with JTRS.

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Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total	
4809 A-10 Squadrons	10.960	29.476	22.590	9.054	9.222	0.000	0.000	Continuing	TBD	
Quantity of RDT&E Articles	0	0	0	0	0	0	0			

(U) A. Mission Description and Budget Item Justification

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remaining aircraft will come out of the modification line with JTRS.

The A/OA-10 RDT&E program is in budget activity 7 - Operational System Development because it supports an operational system.

(U) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Accomplishments/Planned Program	0.000	0.000	
(U) Accelerating development/integration of Precision Engagement (PE). Initial integration design of JDAM/WCMD, Targeting Pod, DSMS, DC Power and 1760 Bus.	10.960		
(U) Continuing development/integration tasks for PE. Spiral #1 efforts include Critical Design Review, hardware design and test, software coding and test, initial Group A design and build, aircraft trail installation aircraft instrumentation and initial developmental flight test.		29.476	
(U) Spiral #2 efforts include Critical Design Review, integration of prototype Joint Tactial Radio Set (JTRS) into the systems integration lab, software PVI design/build and early developmental model testing of JTRS radios.			22.590
(U) Total Cost	10.960	29.476	22.590

(U) <u>C. Other Program Funding Summary (\$ in Millions)</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) AF RDT&E	10.960	29.476	22.590	9.054	9.222			Continuing	TBD
(U) Other APPN									
(U) Aircraft Procurement, BP-11 (PE 27131F)	25.490	20.334	48.223	45.237	74.530	80.806	52.151	Continuing	TBD

(U) **D. Acquisition Strategy**
Precision Engagement and Digital Data Link (now under PE 0207445F) development will be conducted under the A-10 Prime Contract which was awarded in Dec 1997 on a full-and-open basis. Cost Plus Award Fee (CPAF) contract awarded for specific modernization efforts.

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Exhibit R-3, RDT&E Project Cost Analysis

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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</u> Prior to FY 2003 Cost	<u>FY</u> 2003 Cost	<u>FY</u> 2003 Award Date	<u>FY</u> 2004 Cost	<u>FY</u> 2004 Award Date	<u>FY</u> 2005 Cost	<u>FY</u> 2005 Award Date	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
<u>(U) Product Development</u>												
Precision Engagement Development	SS/CPFF	Lockheed Martin Systems Integration--Owego NY	0.000	10.960	Dec-02	21.400	Jan-04	17.574	Jan-04	Continuing	TBD	
Precision Engagement Spiral 3	CPFF	Lockheed Martin Systems Integration--Owego NY	0.000							Continuing	TBD	
Subtotal Product Development			0.000	10.960		21.400		17.574		Continuing	TBD	0.000
Remarks:												
<u>(U) Support</u>												
USAF (Multiple)						5.956	Apr-04	3.059	Jan-05	1.101	10.116	
Navy						0.120	Jan-04				0.120	
Subtotal Support			0.000	0.000		6.076		3.059		1.101	10.236	0.000
Remarks:												
<u>(U) Test & Evaluation</u>												
USAF (40th FTS)						2.000	Dec-03	1.957	Jan-05	0.461	4.418	3.601
Subtotal Test & Evaluation			0.000	0.000		2.000		1.957		0.461	4.418	3.601
Remarks:												
<u>(U) Management</u>												
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
<u>(U) Total Cost</u>			0.000	10.960		29.476		22.590		Continuing	TBD	3.601

Exhibit R-4, RDT&E Schedule Profile

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Precision Engagement



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Schedule - by FY

	Calendar	2002	2003	2004	2005	2006	2007	2008	2009
CRT S	06/02	▲							
PDR	03/03		▲						
CDR	10/03			▲					
SIL Demo	05/04				▲				
DT&E	09/04-10/05				▲	▲			
NOT&E	06/05-10/05				▲	▲			
IOC	06/06					▲			
Production	04/05-06/05					▲			▲
Installation	04/05-05/05					▲			▲

Today

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Exhibit R-4a, RDT&E Schedule Detail

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PROJECT NUMBER AND TITLE

4809 A-10 Squadrons

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) <u>Schedule Profile</u>			
(U) Precision Engagement Preliminary Design Review (PDR)	2Q		
(U) Precision Engagement Critical Design Review (CDR)		1Q	
(U) Systems Integration Lab Demo.		3Q	
(U) Precision Engagement Developmental Test		3-4Q	
(U) Precision Engagement Initial Operation Test and Evaluation			1-4Q
(U) Production			3-4Q
(U) Installation			3-4Q