

UNCLASSIFIED

PE NUMBER: 0207134F
 PE TITLE: F-15E SQUADRONS

Exhibit R-2, RDT&E Budget Item Justification	DATE May 2009
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BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207134F F-15E SQUADRONS
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Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	114.865	198.872	311.167	0.000	0.000	0.000	0.000	0.000	0.000	TBD
0131 Initial Operational Test and Evaluation	114.865	198.872	311.167	0.000	0.000	0.000	0.000	0.000	0.000	TBD

The F-15 program has one FY 2010 new start: F-15C/D Infrared Search and Track (IRST) develops and procures a new air-to-air sensor.

(U) A. Mission Description and Budget Item Justification

The F-15 is the most versatile fighter in the world today. The F-15A-D continues to provide air superiority with an undefeated and unmatched aerial combat record. The F-15E retains this air superiority capability and adds systems, such as advanced imaging and targeting systems, to meet the requirement for all-weather, deep penetration, and night/under-the-weather, air-to-surface attack. Configured with conformal fuel tanks (CFTs), the F-15E deploys worldwide with minimal tanker support and arrives combat-ready. A mainstay in the War on Terror both domestically and abroad, upgrades to the F-15 (avionics, armament, airframe, and engines) are critical to maintaining combat viability (lethality, survivability, and supportability).

Projected to remain in service past 2030, avionics modernization is key to long-term weapon system viability. This modernization is built on a foundation of technical studies (both internal to the Air Force and through outside contractors), forestalling obsolescence, exploiting proven technological advances, and leveraging new technology. Major avionics upgrades center around radar modernization (both hardware and software upgrades) and the exploitation of enhanced capability via wideband radome, precision timing, data delivery and processing technology, precision registration systems, cockpit Head Up Display (HUD) and instrumentation digitization and modernization, central computer processing power increases, and digital mission event recording systems. Funds are also used, as required, to resolve Diminishing Manufacturing Sources and Material Shortage (DMSMS) issues.

The proliferation of fourth generation enemy aircraft and sophisticated "double-digit" anti-aircraft missile systems pose a significant threat to F-15 survivability. A fully integrated electronic warfare suite holds the promise of providing survivability as well as expanded electronic attack capability.

Nearly all improvements are linked to an aircraft operational flight program update schedule that works to integrate new capabilities with the airframe. These updates are a responsive way to increase the offensive and defensive capability and survivability of the F-15. Given the comprehensiveness of these changes, significant flight test will be required. Incorporation of corresponding spiral and/or phased technology/equipment improvements that include support equipment, mission planning systems, and training device upgrades will improve performance, supportability, and line replaceable unit (LRU) throughput.

The F-15E program, PE 0207134F, is assigned budget activity (BA) code 07 because this developmental work upgrades an existing weapons system.

Exhibit R-2, RDT&E Budget Item Justification

DATE

May 2009

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0207134F F-15E SQUADRONS

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

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Previous President's Budget	114.519	184.213	278.588
(U) Current PBR/President's Budget	114.865	198.872	311.167
(U) Total Adjustments	0.346	14.659	
(U) Congressional Program Reductions			
Congressional Rescissions		-0.541	
Congressional Increases		15.200	
Reprogrammings	3.500		
SBIR/STTR Transfer	-3.154		

(U) **Significant Program Changes:**

In FY 2008 the Air Force reprogrammed \$3.5 million for Operational Flight Program (OFP) Suite 6 cost increases.

In FY 2009 Congress added \$12.0 million for an APG-63(V)3 classified demonstration, and \$3.1 million to continue the ANG effort to identify a digital off-the-shelf replacement for the ALR-56C radar warning receiver.

The increase in FY 2009 was due to \$77.6 million to begin development of the F-15E Radar Modernization Program (RMP). In FY 2010, RMP development will receive \$148.3 million, and development will start for IRST. The F-15C/D IRST program is allocated \$35.0 million in FY 2010 to develop an infrared spectrum air-to-air search and track capability to complement the existing radar.

CPMP development of an upgraded mission computer for the F-15E started in FY 2009 as part of the RMP program. In FY 2010, CPMP has been separated from RMP and is a stand-alone development program. CPMP will be used by other systems and weapons in addition to RMP, and this separation will allow the Air Force to field CPMP faster.

Exhibit R-2a, RDT&E Project Justification

DATE

May 2009

BUDGET ACTIVITY		PE NUMBER AND TITLE						PROJECT NUMBER AND TITLE		
07 Operational System Development		0207134F F-15E SQUADRONS						0131 Initial Operational Test and Evaluation		
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0131 Initial Operational Test and Evaluation	114.865	198.872	311.167	0.000	0.000	0.000	0.000	0.000	0.000	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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(U) **B. Accomplishments/Planned Program (\$ in Millions)**

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Operational Flight Program (OFP) Development Efforts	63.727	74.350	78.723
(U) Flight testing of improvements initiated in prior years.	11.087	19.211	19.679
(U) Development of Tactical Electronic Warfare System (TEWS) Intermediate Support System (TISS) Technology Insertion Program (TTIP)	2.273	2.339	2.217
(U) Mode 5 Development Efforts	11.669	4.268	
(U) F-15C/D APG-63(V)3 Radar Block Upgrade	8.117	11.694	
(U) F-15E Radar Modernization Program (RMP)	9.556	74.136	148.269

R-1 Line Item No. 132

Page-3 of 9

Project 0131

Exhibit R-2a (PE 0207134F)

UNCLASSIFIED

Exhibit R-2a, RDT&E Project Justification	DATE May 2009
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BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207134F F-15E SQUADRONS	PROJECT NUMBER AND TITLE 0131 Initial Operational Test and Evaluation
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(U) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) F-15 RWR Upgrade	5.411	3.065	
(U) F-15C/D IRST			34.517
(U) F-15E CPMP (previously ADCP II, part of RMP)		3.500	21.598
(U) Mission Support, Other Government Cost	3.025	3.909	6.164
(U) Flight Data Recorder		2.400	
(U) Total Cost	114.865	198.872	311.167

(U) <u>C. Other Program Funding Summary (\$ in Millions)</u>		<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>						
		<u>Actual</u>	<u>Estimate</u>							
(U) Other APPN:										
(U) Aircraft Procurement										
F-15A-E (PEs 0207130F and 0207134F) [BP 11]	186.972	53.672	91.939							
(U) Aircraft Procurement F-15E (PE 0809731F) Training Support to Units [BP11]			0.982							
(U) Total BP 11	186.972	53.672	92.921							
(U) Aircraft Replacement F-15E (PEs 0207130F and 0207134F) Support Equipment [BP 12]	11.473	13.165	12.769							
(U) Total BP 12	11.473	13.165	12.769							
(U) Aircraft Procurement F-15A-E (PE 0207134F) [BP 13]	5.577	20.134	15.744							
(U) Total BP 13	5.577	20.134	15.744							
(U) Aircraft Procurement F-15E (PEs 0207130F and 0207134F) Initial Mod Spares [BP 16]	1.473	2.235	1.881							
(U) Total BP 16	1.473	2.235	1.881							

R-1 Line Item No. 132

Page-4 of 9

Project 0131

Exhibit R-2a (PE 0207134F)

Exhibit R-2a, RDT&E Project Justification

DATE

May 2009

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0207134F F-15E SQUADRONS

PROJECT NUMBER AND TITLE

0131 Initial Operational Test and
Evaluation(U) **D. Acquisition Strategy**

Program is a continuation of effort which includes the development of all F-15 models. Funds are executed organically in support of equipment improvement, study, analysis, and test.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis

DATE

May 2009

BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT NUMBER AND TITLE				
07 Operational System Development				0207134F F-15E SQUADRONS				0131 Initial Operational Test and Evaluation				
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2008 Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) <u>Product Development</u>												
OFP Suite 4/5/6/7/8 Development and Test	CPAF	Boeing, St Louis	63.158	63.727	Dec-07	74.350	Dec-08	78.723	Dec-09		279.958	
TISS TTIP	CPFF	Boeing, St. Louis	2.273	2.273	Jan-08	2.339	Dec-08	2.217	Dec-09		9.102	
F-15C/D APG-63(V)3 Radar Block Upgrade	CPFF	Boeing, St Louis	8.117	8.117	Mar-08	11.694	Mar-09				27.928	
F-15E RMP	CPOIF	Boeing, St Louis	9.556	9.556	Sep-08	74.136	Oct-08	148.269	Oct-09		241.517	
Mode 5	CPAF	Boeing, St. Louis	11.669	11.669	Dec-07	4.268	Dec-08				27.606	
F-15 RWR Upgrade	CPFF	Boeing St. Louis	0.000	5.411	Oct-08	3.065	Feb-09				8.476	
F-15C/D IRST	CPFF	Boeing St. Louis						34.517	Dec-09		34.517	
F-15E CPMP (formerly ADCP II, part of RMP)	CPFF	Boeing St. Louis				3.500	Oct-08	21.598	Dec-09		25.098	
F-15 Flight Data Recorder	CPFF	Boeing St. Louis				2.400	Oct-09				2.400	
Subtotal Product Development			94.773	100.753		175.752		285.324		0.000	656.602	0.000
Remarks:												
(U) <u>Support</u> (Msn Spt) Misc.		Wright-Patters on AFB, OH	3.025	3.025	Feb-08	3.909	Feb-09	6.164	Feb-10		16.123	
Subtotal Support			3.025	3.025		3.909		6.164		0.000	16.123	0.000
Remarks:												
(U) <u>Test & Evaluation</u>												
Boeing (Contractor Test Team)	CPFF	Boeing, St Louis	9.685	9.387	Dec-07	14.211	Dec-08	13.679	Dec-09		46.962	
Edwards	PO	Edwards AFB, CA	0.000								0.000	
Eglin (Flt Test)	PO	Eglin AFB, FL	1.158	1.700	Jun-08	5.000	Jun-09	6.000	Jun-10		13.858	
Subtotal Test & Evaluation			10.843	11.087		19.211		19.679		0.000	60.820	0.000
Remarks:												
(U) <u>Management</u>												
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			108.641	114.865		198.872		311.167		0.000	733.545	0.000

R-1 Line Item No. 132

Page-6 of 9

Project 0131

Exhibit R-3 (PE 0207134F)

Exhibit R-4, RDT&E Schedule Profile

DATE

May 2009

BUDGET ACTIVITY
07 Operational System Development

PE NUMBER AND TITLE
0207134F F-15E SQUADRONS

PROJECT NUMBER AND TITLE
0131 Initial Operational Test and Evaluation



U.S. AIR FORCE

F-15C/D Modifications



Dominant Air Power: Design For Tomorrow... Deliver Today

Program	Prior	FY2008	FY2009	FY2010	Quantity
ACU		Development		Production	232
APG-63(V)3		Development		15 Installation	158
Mode 5				Production	250
IRST				Development	Gp A:100 Pods:55
DVR				Production	238
Secondary Pwr System			Development	Production	176
MSOGS			Development	Production	176
Flight Data Recorder			Development	Production	238
		Development		Production	Installation

Exhibit R-4, RDT&E Schedule Profile

DATE

May 2009

BUDGET ACTIVITY
07 Operational System Development

PE NUMBER AND TITLE
0207134F F-15E SQUADRONS

PROJECT NUMBER AND TITLE
0131 Initial Operational Test and Evaluation



F-15E Modifications



U.S. AIR FORCE

Dominant Air Power: Design For Tomorrow... Deliver Today

Program	Prior	FY2008	FY2009				FY2010	Quantity	
F-15E RMP (AESA Radar)								224	
TISS TIP	29	6						36	
ACU								198	
ADCP	90	81	14	16	15	5	3	224	
JHMCS - Front Seat				29	27	24	72	164	
Mode 5								224	
BLOS/SLOS SATCOM								180	
CPMP								224	
DVRS							112	224	
Secondary Pwr System								224	
Flight Data Recorder								224	
			Development			Production		Installation	

R-1 Line Item No. 132

Page-8 of 9

Project 0131

Exhibit R-4 (PE 0207134F)

UNCLASSIFIED

Exhibit R-4a, RDT&E Schedule Detail

DATE

May 2009

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0207134F F-15E SQUADRONS

PROJECT NUMBER AND TITLE

0131 Initial Operational Test and Evaluation

(U) <u>Schedule Profile</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) OFP Suite 6 Phase II - Complete			1Q
(U) OFP Suite 6 Phase II Flight Test - Start	1Q		
(U) OFP Suite 6 Phase II Flight Test - Complete			1Q
(U) Mode 5 - Complete			1Q
(U) ACU - Complete		4Q	
(U) F-15 RMP SDD - Start		1Q	
(U) OFP Suite 7E Phase 1 / Phase II - Start		2Q	
(U) F-15C/D IRST Start			1Q

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