

UNCLASSIFIED

PE NUMBER: 0604618F

PE TITLE: Joint Direct Attack Munition

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2005

BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604618F Joint Direct Attack Munition

Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	35.984	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	410.414
3890 Joint Direct Attack Munitions	35.984	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	410.414

(U) **A. Mission Description and Budget Item Justification**

The Joint Direct Attack Munition (JDAM) is a joint Air Force/Navy program with the Air Force as the lead service. Designated ACAT 1C, this program upgrades the existing inventory of general purpose bombs (MK-84, BLU-109, MK-83/BLU-110 and MK-82/BLU-111) by integrating the bombs with a guidance kit consisting of a Global Positioning System aided Inertial Navigation System (GPS/INS). JDAM provides an accurate, adverse weather capability. JDAM is integrated with the B-52H, B-2A, B-1B, F-15E, F-16C/D, F-14B/D, and F/A-18C/D/E/F aircraft. Follow-on integration with the F/A-22, F-117A, A/OA-10, AV-8B, F-35 are in progress. Follow-on integration efforts are planned for MQ-9 (Predator), and X-45C (J-UCAS). JDAM Low Rate Initial Production (LRIP) began in FY97 and Full Rate Production (MK-84 and BLU-109) began in FY01. The development effort to integrate the JDAM guidance kits on the MK-82 completed in Dec 03 with production beginning in FY03. The JDAM GPS Selective Availability Anti-Spoofing Module (SAASM) development program with an integrated Anti-Jam capability (SAASM/AJ) began in Feb 03. SAASM capability is scheduled to be delivered in FY06 with Lot 9 tailkits. A redesign effort for the Joint Programmable Fuze (JPF) began Mar 01 to improve high altitude bomber capability. This fuze is a multi-function unitary fuze developed for JDAM and other conventional inventory weapons. An alternate fuze risk reduction effort started in FY03 to meet JDAM Operational Requirements Document (ORD) fuze requirements, as a backup to the JPF development program.

This program is funded in Budget Activity 5, SDD, due to its focus on devising an affordable design and manufacturing process.

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	35.159			
(U) Current PBR/President's Budget	35.984	0.000		
(U) Total Adjustments	0.825	0.000		
(U) Congressional Program Reductions				
Congressional Rescissions				
Congressional Increases				
Reprogrammings	1.887			
SBIR/STTR Transfer	-1.062			
(U) <u>Significant Program Changes:</u>				

Exhibit R-2a, RDT&E Project Justification

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BUDGET ACTIVITY					PE NUMBER AND TITLE			PROJECT NUMBER AND TITLE		
05 System Development and Demonstration (SDD)					0604618F Joint Direct Attack Munition			3890 Joint Direct Attack Munitions		
Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
3890 Joint Direct Attack Munitions	35.984	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	410.414
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) **A. Mission Description and Budget Item Justification**

The Joint Direct Attack Munition (JDAM) is a joint Air Force/Navy program with the Air Force as the lead service. Designated ACAT 1C, this program upgrades the existing inventory of general purpose bombs (MK-84, BLU-109, MK-83/BLU-110 and MK-82/BLU-111) by integrating the bombs with a guidance kit consisting of a Global Positioning System aided Inertial Navigation System (GPS/INS). JDAM provides an accurate, adverse weather capability. JDAM is integrated with the B-52H, B-2A, B-1B, F-15E, F-16C/D, F-14B/D, and F/A-18C/D/E/F aircraft. Follow-on integration with the F/A-22, F-117A, A/OA-10, AV-8B, F-35 are in progress. Follow-on integration efforts are planned for MQ-9 (Predator), and X-45C (J-UCAS). JDAM Low Rate Initial Production (LRIP) began in FY97 and Full Rate Production (MK-84 and BLU-109) began in FY01. The development effort to integrate the JDAM guidance kits on the MK-82 completed in Dec 03 with production beginning in FY03. The JDAM GPS Selective Availability Anti-Spoofing Module (SAASM) development program with an integrated Anti-Jam capability (SAASM/AJ) began in Feb 03. SAASM capability is scheduled to be delivered in FY06 with Lot 9 tailkits. A redesign effort for the Joint Programmable Fuze (JPF) began Mar 01 to improve high altitude bomber capability. This fuze is a multi-function unitary fuze developed for JDAM and other conventional inventory weapons. An alternate fuze risk reduction effort started in FY03 to meet JDAM Operational Requirements Document (ORD) fuze requirements, as a backup to the JPF development program.

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Perform test effort on JDAM with integrated SAASM and anti-jam capabilities for the JDAM receiver.	6.637			
(U) Provide support and management tasks to coordinate the program activities of the prime contractor and various organizations.	1.811			
(U) JDAM software and hardware development to support SAASM integration effort and anti-jam development and integration. Also includes operational analysis and testing to evaluate future JDAM enhancements.	27.536			
(U) Total Cost	35.984	0.000	0.000	0.000

(U) **C. Other Program Funding Summary (\$ in Millions)**

	<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>FY 2010</u>	<u>FY 2011</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>Estimate</u>	<u>Complete</u>	
(U) Procurement of Ammunition, Air Force, JDAM, Appn. 3011, PE 0207583F	424.389	514.786	223.285	229.103	218.475	267.031	137.667	104.963	Continuing	TBD
(U) (U) Procurement of Project 3890	0.143	0.000	0.000	0.105	0.000	0.000			Continuing	TBD

R-1 Shopping List - Item No. 83-2 of 83-7

Exhibit R-2a (PE 0604618F)

Exhibit R-2a, RDT&E Project Justification

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(U) **C. Other Program Funding Summary (\$ in Millions)**

Ammunition, Air Force, Seek
 Eagle, Appn. 3011, PE
 0207590F

(U) **D. Acquisition Strategy**

The contract for the JDAM MK-82 effort is Cost Plus Award Fee (CPAF). The JPF effort is a fixed price incentive fee (FPIF) contract. The SAASM/Anti-Jam effort was awarded as a Cost Plus Award Fee (CPAF) contract. The Alternate Fuze risk reduction effort is a Cost Plus Fixed Fee (CPFF) contract.

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Exhibit R-3, RDT&E Project Cost Analysis

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(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2004 Cost</u>	<u>FY 2004 Cost</u>	<u>FY 2004 Award Date</u>	<u>FY 2005 Cost</u>	<u>FY 2005 Award Date</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u>														
Prime Contractors Boeing and Lockheed Martin FY94/95 Only (Baseline JDAM, Mk-82, SAASM/Anti-Jam, Alternate Fuze)	C/CPAF/C PFF	Boeing (St Louis MO) and Lockheed Martin FY94/95 Only	226.016	27.536	Nov-03	0.000						0.000	253.552	253.552
Joint Programmable Fuze/Misc	FPIF	Dayron/Kam an (Orlando, FL)	8.229										8.229	8.229
Conceptual Studies	Various		22.428									0.000	22.428	22.428
Subtotal Product Development			256.673	27.536		0.000		0.000		0.000		0.000	284.209	284.209
Remarks:														
(U) <u>Support</u>														
Engineering Support	CPAF	Eglin AFB, FL	15.057	0.881	Nov-03							0.000	15.938	15.938
TAMS Contractor	CPAF	Eglin AFB, FL	5.190									0.000	5.190	5.190
Program Office	Various	Eglin AFB, FL	18.415	0.930								0.000	19.345	19.345
Subtotal Support			38.662	1.811		0.000		0.000		0.000		0.000	40.473	40.473
Remarks:														
(U) <u>Test & Evaluation</u>														
Aircraft SPO Support	Various	Eglin AFB, FL	13.905									0.000	13.905	13.905
Flight Testing	Various	Eglin AFB, FL/Edwards AFB and China Lake, CA/Hill AFB, UT	42.552	6.637								0.000	49.189	49.189
Ground Testing	Various	Eglin AFB, FL/China Lake, CA	14.983									0.000	14.983	14.983
JPF Wind Tunnel Testing	TBD	Arnold Engineering Development Center, TN	3.320										3.320	3.320
Government Furnished Equipment (GFE)	Various	N/A	4.335										4.335	4.335
Subtotal Test & Evaluation			79.095	6.637		0.000		0.000		0.000		0.000	85.732	85.732

Project 3890

R-1 Shopping List - Item No. 83-4 of 83-7

Exhibit R-3 (PE 0604618F)

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Exhibit R-4, RDT&E Schedule Profile

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R-1 Shopping List - Item No. 83-6 of 83-7

Exhibit R-4 (PE 0604618F)

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Exhibit R-4a, RDT&E Schedule Detail

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(U) Schedule ProfileFY 2004FY 2005FY 2006FY 2007

(U) MK-82 Developmental Test (DT) Flight Test Finish

1Q

(U) JPF Redesign/Testing Finish

2Q

(U) SAASM/Anti-Jam Flight Test Start

3Q

(U) Alternate Fuze Risk Reduction Effort Complete

3Q

(U) AF MK-82 OT Flight Test Complete

4Q