

UNCLASSIFIED

PE NUMBER: 0401132F
 PE TITLE: C-130J PROGRAM

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 0401132F C-130J PROGRAM
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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	1.890	13.436	36.305	13.545	56.506	27.420	71.221	0.000	217.755
5061 C-130J	1.890	13.436	36.305	13.545	56.506	27.420	71.221	0.000	217.755

(U) A. Mission Description and Budget Item Justification

C-130J program RDT&E funding provides for:

- 1) Participation in the international Co-operative Systems and Software Upgrade Requirements Management (COSSURM). COSSURM participants include the United Kingdom, Australia, Italy, Denmark, and the United States. COSSURM provides a mechanism to jointly identify, collect, define, analyze and price requirements. By combining requirements and resources under COSSURM, each participating country will save in aircraft upgrade costs.

- 2) The development, integration, and testing of International Civil Aviation Organization (ICAO), Federal Aviation Administration (FAA), and DOD-mandated Global Air Traffic Management (GATM) and navigation safety (nav safety) capabilities for the C-130J weapon system.

- 3) The development, integration, and testing of aircraft modifications necessary to correct deficiencies identified in qualification and operational testing of this platform.

- 4) The development, integration, and testing of C-130J enhancements identified by Air Mobility Command (AMC), which is the USAF lead operating command for the C-130J weapon system.

The C-130J is a medium-size transport aircraft capable of performing a variety of combat delivery (tactical airlift) operations across a broad range of mission environments. The C-130J-30 aircraft, with its extended (by 15 ft) fuselage, provides additional cargo carrying capacity for the USAF combat delivery mission. Special mission variants of the C-130J conduct airborne psychological operations (EC-130J) and weather reconnaissance (WC-130J). These aircraft must be capable of worldwide operations.

USAF C-130J aircraft, in their present Block 5.3 configuration, are partially GATM/nav safety compliant. Capabilities provided in the Block 5.3 configuration include Required Navigation Performance (RNP)-10 (miles), RNP-5, Basic Area Navigation (BRNAV), Traffic Alert and Collision Avoidance System (TCAS) Version 7.0, FM immunity for Instrument Landing System (aka protected ILS), and the aircraft communications system software necessary to operate VHF communications radios with 8.33 MHz frequency separation.

These RDT&E funds will enable development, integration, and testing of the remaining GATM/nav safety requirements needed on USAF C-130J aircraft. These capabilities include RNP-4, RNP-1, Terrain Approach Warning System (TAWS), Selective Availability Anti-Spoofing Module (SAASM) Global Positioning System (GPS), Local Area Augmentation System (LAAS), Wide Area Augmentation System (WAAS), Mode Select (Mode S) Beacon Transponder System with data link capability and growth to Mode 5, Automatic Dependent Surveillance-Address (ADS-A), Automatic Dependent Surveillance-Broadcast (ADS-B), satellite communications (SATCOM) voice and data link capability, high frequency data link (HFDL), Controller-Pilot Data Link Communications (CPDLC), and AMC Mobility 2000 (M2K)

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communications.

The current C-130J Operational Requirements Document (ORD), validated 17 Apr 99, identifies the GATM/nav safety requirements for the C-130J. Supplemental guidance for the various GATM/nav safety requirements is provided via numerous ICAO, FAA, and DOD standards. Where possible, the C-130J GATM/nav safety solution set will be common with other USAF/AMC weapon systems performing similar GATM/nav safety upgrades.

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Previous President's Budget	9.300	13.551	37.800
(U) Current PBR/President's Budget	1.890	13.436	36.305
(U) Total Adjustments	-7.410	-0.115	
(U) Congressional Program Reductions			
Congressional Rescissions	-0.199	-0.115	
Congressional Increases			
Reprogrammings	-6.928		
SBIR/STTR Transfer	-0.283		
(U) <u>Significant Program Changes:</u>			
None			

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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	
5061 C-130J	1.890	13.436	36.305	13.545	56.506	27.420	71.221	0.000	217.755	
Quantity of RDT&E Articles	0	0	0	0	0	0	0			

(U) A. Mission Description and Budget Item Justification

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- 2) The development, integration, and testing of International Civil Aviation Organization (ICAO), Federal Aviation Administration (FAA), and DOD-mandated Global Air Traffic Management (GATM) and navigation safety (nav safety) capabilities for the C-130J weapon system.
- 3) The development, integration, and testing of aircraft modifications necessary to correct deficiencies identified in qualification and operational testing of this platform.
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(U) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) COSSURM payment	1.890	0.000	1.441
(U) Initiate non-recurring engineering design and software development for GATM/nav safety requirements and aircraft deficiencies/product improvements.		13.436	
(U) Continue non-recurring engineering design and software development. Conduct laboratory testing of GATM/nav safety hardware and software modifications. Procure and install hardware on flight test aircraft and one C-130J weapon system trainer.			34.864
(U) Total Cost	1.890	13.436	36.305

(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) Other APPN									
(U) PE 0401132F, C-130J									
(U) Procurement (BP1100)									
(U) Mod MN-_1701 Blk 6.0			9.800	21.573	29.551	18.419	2.000	0.000	81.343
(U) Mod MN-_6298 Blk 7.0					7.000	18.751	43.875	45.725	115.351
(U) Mod MN-_5222 Blk 8.0							15.223	154.925	170.148

(U) **D. Acquisition Strategy**
C-130J aircraft will be modified using a 'block upgrade' strategy. The full GATM/nav safety requirement will be met in four block upgrades: Block 6.0, which begins with FY04 RDT&E funding and continues with FY05 RDT&E funding, Block 7.0, which will start in FY06, Block 8.0, which will start in FY08, and Block 9.0, which will start in FY10. The proportion of GATM/nav safety requirements allocated to Blocks 6.0 thru 9.0 was determined via a design trade study conducted by Lockheed Martin (the C-130J prime contractor) and verified by the C-130J system program office and AMC.

Lockheed Martin will be the prime contractor for these efforts, perform the non-recurring engineering and, following the successful conclusion of flight testing and certification of each block upgrade, will provide production retrofit kits on USAF C-130J aircraft. Installation will be performed by contractor, depot, and Air Force personnel.

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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> <u>Prior to FY</u> <u>2003</u> <u>Cost</u>	<u>FY</u> <u>2003</u> <u>Cost</u>	<u>FY</u> <u>2003</u> <u>Award</u> <u>Date</u>	<u>FY</u> <u>2004</u> <u>Cost</u>	<u>FY</u> <u>2004</u> <u>Award</u> <u>Date</u>	<u>FY</u> <u>2005</u> <u>Cost</u>	<u>FY</u> <u>2005</u> <u>Award</u> <u>Date</u>	<u>Cost to</u> <u>Complete</u>	<u>Total</u> <u>Cost</u>	<u>Target</u> <u>Value of</u> <u>Contract</u>
<u>(U) Product Development</u>												
Aeronautical Systems Center (AFMC), WPAFB, OH	CPFF	Lockheed Martin Aeronautics, Marietta GA				13.436	Mar-04	31.864	Nov-04		45.300	
Subtotal Product Development			0.000	0.000		13.436		31.864		0.000	45.300	0.000
Remarks:												
<u>(U) Support</u>												
TBD											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
<u>(U) Test & Evaluation</u>												
Air Force Materiel Command (DT&E)								3.000	Mar-05		3.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		3.000		0.000	3.000	0.000
Remarks:												
<u>(U) Management</u>												
COSSURM				1.890				1.441	Nov-04		3.331	
Subtotal Management			0.000	1.890		0.000		1.441		0.000	3.331	0.000
Remarks:												
<u>(U) Lockheed Martin Aeronautics, Marietta, GA</u>												
<u>(U) Total Cost</u>			0.000	1.890		13.436		36.305		0.000	51.631	0.000
Remarks:												

Exhibit R-4, RDT&E Schedule Profile

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Requirements / Contracting

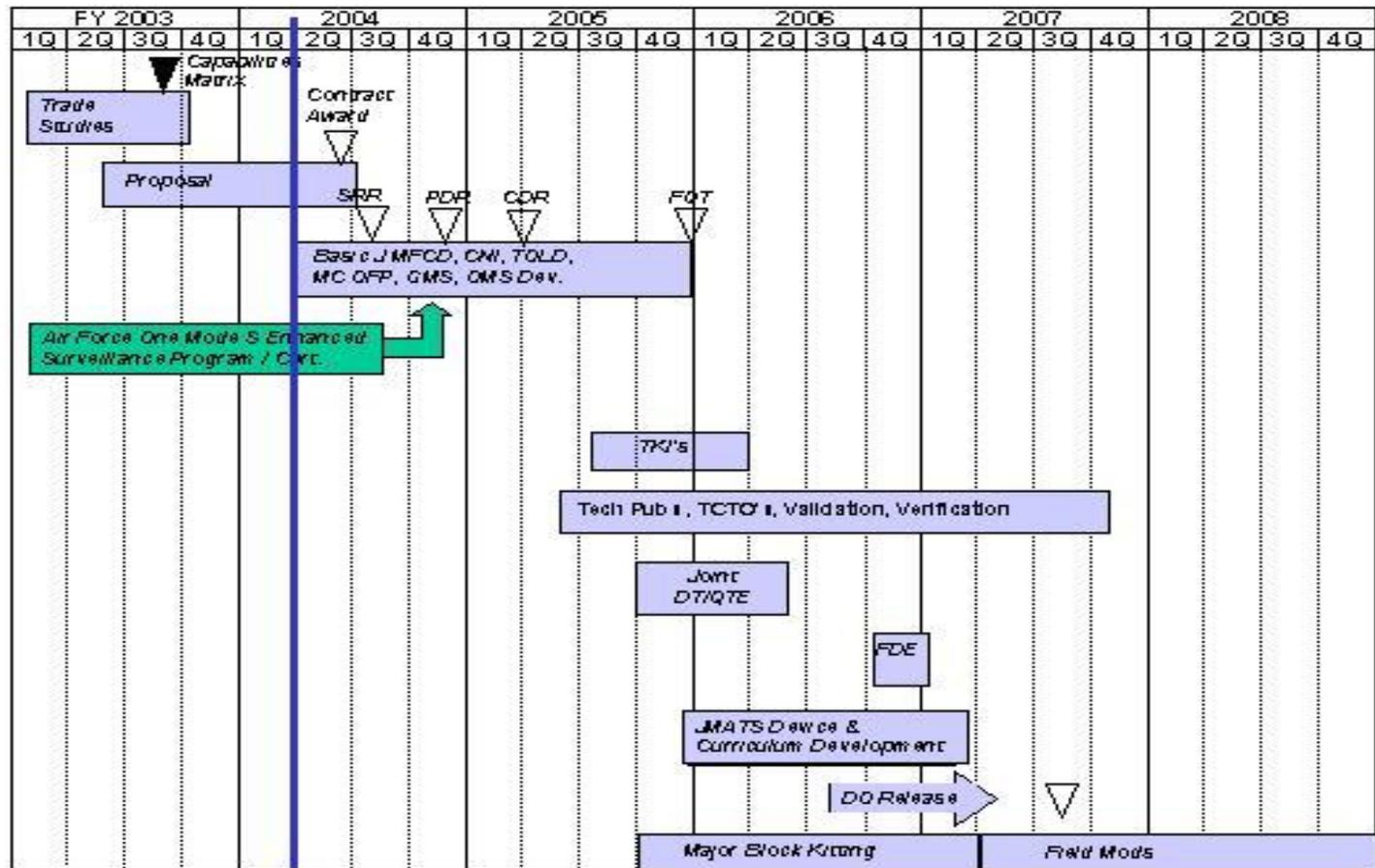
Design / Development

Publications

Testing

Training

Fielding



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Exhibit R-4a, RDT&E Schedule Detail	DATE February 2004
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	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) <u>Schedule Profile</u>			
(U) Block 6.0 FY04 contract award		2Q	
(U) Block 6.0 FY05 contract award			1Q
(U) Block 6.0 DT&E payment to AFFTC			2Q
(U) Start of Block 6.0 DT&E			4Q