

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)

DATE
June 2001

BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT	
07 - Operational System Development			0401115F C-130 AIRLIFT SQUADRONS							4726	
COST (\$ in Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost	
4726 Avionics Modernization Program (AMP)	8,561	59,941	80,533	159,402	100,890	88,415	66,733	27,990	315,935	908,400	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	8	15	

Note: FY03-07 budget numbers do not reflect the DoD strategic review results. Following contract award, the C-130 AMP RDT&E and procurement funding profile (FY04-07) will be re-aligned to accurately reflect the winning contractor's funding requirements.

(U) A. Mission Description

The C-130 Avionics Modernization Program (AMP) consolidates and installs the mandated DOD Navigation/Safety mods, the Global Air Traffic Management (GATM) systems and the C-130 Broad Area Review requirements on the AF's 519 C/AC/EC/HC/LC/MC-130s that are not being replaced with new C/EC/WC-130Js. These mandated mods are incorporated in conjunction with various other Reliability, Maintainability, and Sustainability (RM&S) upgrades to include: TCAS, TAWS, replacement of APN-59 & APQ-175 radars, N-1/C-12 compass, dual autopilots, dual flight management systems and HF/UHF/VHF datalink to constitute C-130 AMP. AMP will give the AF's 519 C/AC/EC/HC/LC/MC-130s complete access to the GATM-controlled international air space.

The USAF C-130 fleet consists of 15 different mission design series (MDS) to be modified by the AMP. Within each of these MDSs are multiple variants (C-130H2, etc.) to be modified by AMP. These multiple different models and cockpit configurations create significant logistics support and aircrew training inefficiencies. Also, these differences greatly complicate unit/aircraft interoperability at forward operating locations. C-130 AMP standardizes the cockpit configurations and avionics for these different variants by installing a core avionics package and a single cockpit configuration, eliminating many of these significant logistics, interoperability and training problems. (Note: The new C/EC/WC-130J aircraft are not included in this C-130 AMP program).

The AMP program is fully funded through FY09 and modifies the majority of the fleet (519 programmed) during this period. Additional funds will be required in FY10 and beyond. The funding shown here and in the C-130 AMP procurement documentation is for AMP and those portions of USSOCOM's Common Avionics Architecture for Penetration (CAAP) which are incorporated into AMP. SOCOM's CAAP-unique portion is funded with MFP-11 funds which are not shown here.

The Boeing Company won this competition in June 01. Anticipate contract award in Jul/Aug 01. Their baseline program provides the NRE for all the C-130 variants and modifies the majority of the fleet. Each variant or group of variants will require a specific kit development and test. Then, each will proceed through development and production serially. This waterfall approach will result in an orderly development and production sequencing for the 15 different kits required for the C-130 fleet.

Boeing will conduct a Training System Requirements Analysis (TSRA), beginning in FY01. From this TSRA, an AF-fleetwide training system will be developed for the AMP/CAAP-modified fleet. This will include upgrading all the AC/C/EC/HC/LC/MC-130 Weapons Systems Trainers (WSTs) to incorporate the AMP/CAAP modifications.

Development activities in FY01-02 will focus on two areas: AMP architecture and kit development for the first Combat Delivery aircraft (C-130H2) and the first special mission aircraft (MC-130H), as well as software development of the Common Avionics Architecture for Penetration (CAAP) capabilities, which will be

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE
		June 2001
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
07 - Operational System Development	0401115F C-130 AIRLIFT SQUADRONS	4726
<p>(U) <u>A. Mission Description Continued</u> integrated into the special mission aircraft concurrent with AMP. Live-fire testing will encompass a number of systems which may include the related AMP avionics being installed under this mod, external fuel tank, engine and nacelle, etc.</p>		
<p>(U) <u>FY 2000 (\$ in Thousands)</u></p>		
(U) \$1,667	AC-130 Leading Edge funding added by Congress.	
(U) \$6,894	Program office support (A&AS, SPO, TDY, training and supplies).	
(U) \$8,561	Total	
<p>* Note: Planned AMP contract date was Mar 00. Contract award slipped to FY01 because user changed ORD requirements and OSD designated AMP an ACAT-ID program. These additional ORD requirements (e.g., removing the navigator from Combat Delivery aircraft) and the increased ACAT-1D reporting requirements, forced a program schedule slip. Result: AMP didn't go on contract in FY00 and Congress rescinded \$30M from the FY00 3600 AMP line in the FY01 Appropriations Act.</p>		
<p>(U) <u>FY 2001 (\$ in Thousands)</u></p>		
(U) \$52,441	Award EMD contract. Begin design and software development. This includes beginning detailed group A & B design series, hardware/software development of crew station modules/computer simulation, initiate design of system integration lab (SIL), begin the TSRA and begin CAAP's Risk Mitigation testing.	
(U) \$7,500	Program office support (A&AS, SPO, TDY, SETA contract support, training and supplies).	
(U) \$59,941	Total	
<p>Note: The following net transactions are not reflected in the FY01 program total shown above: BTR= -\$6501K, and SBIR= -\$1,840K. These transactions are not reflected in other sections of the R-docs where an FY01 total is shown.</p>		
<p>(U) <u>FY 2002 (\$ in Thousands)</u></p>		
(U) \$73,033	Continue design and software development. This includes continuing detailed group A & B design series, hardware/software development of crew station modules/computer simulation, design of system integration lab (SIL), development of training system, and continue CAAP Risk Mitigation testing.	
(U) \$7,500	Program office support (A&AS, SPO, TDY, SETA contract support, training and supplies).	
(U) \$80,533	Total	
<p>(U) <u>B. Budget Activity Justification</u> C-130 Avionics Modernization Program (AMP): This project is in Budget Activity 7, Operational Systems Development as it is an upgrade to an existing weapon system.</p>		
Project 4726	Page 2 of 6 Pages	Exhibit R-2 (PE 0401115F)

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)							DATE				
							June 2001				
BUDGET ACTIVITY				PE NUMBER AND TITLE			PROJECT				
07 - Operational System Development				0401115F C-130 AIRLIFT SQUADRONS			4726				
(U) C. Program Change Summary (\$ in Thousands)											
		<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Total Cost</u>						
(U)	Previous President's Budget (FY 2001 PBR)	40,123	60,496	80,252	908,400						
(U)	Appropriated Value	40,123	60,496								
(U)	Adjustments to Appropriated Value										
	a. Congressional/General Reductions										
	b. Small Business Innovative Research										
	c. Omnibus or Other Above Threshold Reprogram										
	d. Below Threshold Reprogram										
	e. Rescissions	-30,159	-555								
(U)	Adjustments to Budget Years Since FY 2001 PBR	-1,403		281							
(U)	Current Budget Submit/FY 2002 PBR	8,561	59,941	80,533	908,400						
(U)	Significant Program Changes:										
	While requirements were being finalized in late 1999, AMP was officially designated an ACAT ID program. The revised ORD requirements (e.g., removing the navigator) and increased ACAT ID reporting requirements forced a slip in the schedule. Hence, the total funding provided for FY 00 was not required, so \$30M of the FY 00 RDT&E funds were rescinded by the Appropriations Conference in the FY01 Appropriations Act.										
(U) D. Other Program Funding Summary (\$ in Thousands)											
		<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</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)	AF RDT&E	1,667									1,667
(U)	SPO Support	6,894	7,500	7,500	7,000	7,000	7,000	7,000	7,000	Continuing	Continuing
(U)	Product Development/ ECOs/ T&E/ GFE		52,573	72,737	154,632	93,117	80,648	59,089	20,689	Continuing	Continuing
(U)	Other APPN									Continuing	Continuing
(U)	PE 41115F, AMP, BP1100				100,117	87,648	66,089	27,689		Continuing	Continuing
	Note: \$1.667M, shown above in FY00, was a Congressional add for AC-130 Leading Edge research, which is not part of AMP.										
(U) E. Acquisition Strategy											
	The EMD contract will be a competitively awarded Cost Plus Award Fee contract to develop AMP kits for the 15 MDS within the AF AC/C/EC/HC/LC/MC-130 fleet. A training system will be an option under the AMP contract.										
Project 4726				Page 3 of 6 Pages				Exhibit R-2 (PE 0401115F)			

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)										DATE June 2001				
BUDGET ACTIVITY 07 - Operational System Development					PE NUMBER AND TITLE 0401115F C-130 AIRLIFT SQUADRONS					PROJECT 4726				
(U) F. Schedule Profile														
		<u>FY 2000</u>					<u>FY 2001</u>					<u>FY 2002</u>		
		1	2	3	4	1	2	3	4	1	2	3	4	
(U)	C-130 AMP Contract Award								X					
(U)	C-130 Systems Requirements Review									X				
(U)	C-130 Preliminary Design Review													
(U)	C-130 CAAP PDR													
	C-130 PDR scheduled for 2nd Qtr of FY03; C-130 CAAP PDR scheduled for 3rd Qtr FY03													

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE June 2001			
BUDGET ACTIVITY 07 - Operational System Development					PE NUMBER AND TITLE 0401115F C-130 AIRLIFT SQUADRONS			PROJECT 4726		
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>										
					<u>FY 2000</u>		<u>FY 2001</u>		<u>FY 2002</u>	
(U)	C-130 AMP EMD (see note below)				1,667		52,441		73,033	
(U)	Program Office Support				6,894		7,500		7,500	
(U)	GFE									
(U)	Test									
(U)	ECOs									
(U)	Total				8,561		59,941		80,533	
Note: \$1.667M in FY00 EMD was Congressionally-added for AC-130 Leading Edge. This is not part of AMP.										
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>										
(U) <u>Performing Organizations:</u>										
<u>Contractor or Government Performing Activity</u>	<u>Contract Method/Type or Funding Vehicle</u>	<u>Award or Obligation Date</u>	<u>Performing Activity EAC</u>	<u>Project Office EAC</u>	<u>Total Prior to FY 2000</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</u>	<u>Budget FY 2002</u>	<u>Budget to Complete</u>	<u>Total Program</u>
<u>Product Development Organizations</u>										
Prime Contractor	CPAF	FY01/02				1,667	52,441	73,033	703,365	830,506
Note: The Boeing Company won the competition for this program,; however, the contract has not yet been signed \$1.667M in FY00 is Congressional add for AC-130 Leading Edge, not AMP.										
<u>Support and Management Organizations</u>										
Program Support Office	N/A	N/A				6,894	7,500	7,500	56,000	77,894
<u>Test and Evaluation Organizations</u>										
TBD										
(U) <u>Government Furnished Property:</u>										
<u>Item Description</u>	<u>Contract Method/Type or Funding Vehicle</u>	<u>Award or Obligation Date</u>	<u>Delivery Date</u>		<u>Total Prior to FY 2000</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</u>	<u>Budget FY 2002</u>	<u>Budget to Complete</u>	<u>Total Program</u>

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE June 2001		
BUDGET ACTIVITY 07 - Operational System Development				PE NUMBER AND TITLE 0401115F C-130 AIRLIFT SQUADRONS			PROJECT 4726		
(U) Government Furnished Property Continued:									
	<u>Contract</u>								
	<u>Method/Type</u>	<u>Award or</u>							
<u>Item</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Delivery</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>	<u>to FY 2000</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Property</u>									
TBD									
<u>Support and Management Property</u>									
N/A									
<u>Test and Evaluation Property</u>									
TBD									
				<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Subtotals</u>				<u>to FY 2000</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development					1,667	52,441	73,033	703,365	830,506
Subtotal Support and Management					6,894	7,500	7,500	56,000	77,894
Subtotal Test and Evaluation									
Total Project					8,561	59,941	80,533	759,365	908,400
Note: The \$1.667M, shown in FY00 Product Development is for AC-130 Leading Edge research, which is not C-130 AMP.									