

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
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BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401115F C-130 AIRLIFT SQUADRONS
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Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	232.342	230.709	188.069	137.692	87.886	25.240	9.707	9.389	Continuing	TBD
4885 Avionics Modernization Program (AMP)	232.342	227.427	188.069	137.692	87.886	25.240	9.707	9.389	Continuing	TBD
5243 C-130 Initiatives	0.000	3.282	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

(U) A. Mission Description and Budget Item Justification

The C-130 Avionics Modernization Program (AMP) consolidates and installs the mandated AF Navigation/Safety mods, the Global Air Traffic Management (GATM) systems [now referred to as Communications Navigation Surveillance/Air Traffic Management [CNS/ATM]] and the C-130 Broad Area Review requirements on the AF's 434 C/AC/EC/HC/LC/MC-130s that are not being replaced with new C/EC/WC-130Js. These mandated mods are incorporated with various other Reliability, Maintainability, and Sustainability (RM&S) upgrades to include: replacement of the radars, compasses, dual autopilots, dual flight management systems and HF/UHF/VHF data links. AMP will allow the AF's 434 C/AC/EC/HC/LC/MC-130s complete access to the CNS/ATM international air space. Also, AMP and USSOCOM's Common Avionics Architecture for Penetration (CAAP) have been combined to eliminate any duplication of effort in these avionics programs.

USAF's C-130 fleet consists of 14 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 different models and cockpit configurations create significant logistics support and aircrew training inefficiencies. Also, these differences greatly complicate aircrew and aircraft interoperability at forward operating locations. C-130 AMP standardizes the cockpit configurations and avionics suites for these different variants into a single cockpit configuration by installing a core avionics package, thus eliminating many of these significant logistics, interoperability, and training problems. (Note: C/EC/WC-130J are not included in AMP program).

Shown here are RDT&E funds for C-130 AMP. SOCOM's AC/MC-130s will have additional CAAP equipment installed that will be funded in MFP-11. These SOCOM funds are not shown here.

The Boeing Company was awarded the AMP contract on 30 July 01. Each C-130 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 14 different C-130 MDSs.

Development activities continue to focus on two areas: AMP's 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 SOF AMP and Common Avionics Architecture for Penetration (CAAP) capabilities.

A Restructure Engineering Change Proposal (ECP) 1302 was awarded to Boeing 20 Aug 03. The ECP rebaselined the program due to funding reductions in FYs 03/04 which resulted in delays in System Development and Demonstration program for up to 2 years.

C-130 Avionics Modernization Program (AMP): This project is in Budget Activity 7, Operational Systems Development as it is a major avionics and cockpit configuration modernization to the AF's C/AC /EC/HC/ LC/MC-130 fleets of aircraft.

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BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0401115F C-130 AIRLIFT SQUADRONS

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

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	233.028	217.602		
(U) Current PBR/President's Budget	232.342	230.709	188.069	137.692
(U) Total Adjustments	-0.686			
(U) Congressional Program Reductions				
Congressional Rescissions				
Congressional Increases	-0.686			
Reprogrammings				
SBIR/STTR Transfer				
(U) <u>Significant Program Changes:</u>				
None				

Exhibit R-2a, RDT&E Project Justification

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BUDGET ACTIVITY 07 Operational System Development		PE NUMBER AND TITLE 0401115F C-130 AIRLIFT SQUADRONS						PROJECT NUMBER AND TITLE 4885 Avionics Modernization Program (AMP)			
Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total	
4885 Avionics Modernization Program (AMP)	232.342	227.427	188.069	137.692	87.886	25.240	9.707	9.389	Continuing	TBD	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0			

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

The C-130 Avionics Modernization Program (AMP) consolidates and installs the mandated AF Navigation/Safety mods, the Global Air Traffic Management (GATM) systems [now referred to as Communications Navigation Surveillance/Air Traffic Management [CNS/ATM]] and the C-130 Broad Area Review requirements on 268 of the AF's C-130s. These mandated mods are incorporated with various other Reliability, Maintainability, and Sustainability (RM&S) upgrades to include: replacement of the radars, compasses, dual autopilots, dual flight management systems and HF/UHF/VHF data links. AMP will allow the AF's C-130s complete access to the CNS/ATM international air space.

USAF's C-130 fleet consists of 4 different mission design series (MDS) to be modified by the AMP (H1, H2, H2.5, and H3). Within each of these MDSs are multiple variants that will be modified by AMP. Today, these different models and cockpit configurations create significant logistics support and aircrew training inefficiencies. Also, these differences greatly complicate aircrew and aircraft interoperability at forward operating locations. C-130 AMP standardizes the cockpit configurations and avionics suites for these different variants into a single cockpit configuration by installing a core avionics package and a common cockpit layout, thus eliminating many of these significant logistics, interoperability, and training problems. (Note: C/EC/WC-130J are not included in AMP program). Shown here are RDT&E funds for C-130 AMP. USSOCOM's Common Avionics Architecture for Penetration (CAAP) program has been segregated from the AMP program. Funding for CAAP was not included in this program documentation, but was found in USSOCOM's funding lines.

The Boeing Company was awarded the AMP contract on 30 July 01. Each C-130 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 4 different C-130 MDSs.

Current development activities focus on completing the Core/Defensive Systems software and the Group A (wiring and equipment racks) & Group B (radios, instruments, etc); testing of the H2 aircraft which achieved first flight in October 06, and completion of the trial install on the H2.5. .

A Restructure Engineering Change Proposal (ECP) 1302 was awarded to Boeing 20 Aug 03. The ECP rebaselined the program due to funding reductions in FYs 03/04 which resulted in delays in System Development and Demonstration program for up to 2 years. Funding shortfalls experienced in FY05 resulted in another need to Rebaseline the program; this activity is on-going and a Contract Modification award is anticipated to occur in the 1st Quarter of FY08.

C-130 Avionics Modernization Program (AMP): This project is in Budget Activity 7, Operational Systems Development as it is a major avionics and cockpit configuration modernization to the AF's C-130 fleets of aircraft.

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BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401115F C-130 AIRLIFT SQUADRONS	PROJECT NUMBER AND TITLE 4885 Avionics Modernization Program (AMP)
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(U) B. Accomplishments/Planned Program (\$ in Millions)	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Detailed design work continues for both Group A(wiring, racks, etc) and B (computers, instrumentation, etc.) equipment for the C/AC/EC/HC/LC/MC-130 fleets. Coding and unit testing for the software integration facility continues.	201.505	148.364	118.829	91.538
(U) Engineering Change Orders (ECO), Govt Furnished Parts and Information (GFP/GFI), and Award Fee.	10.506	30.926	23.619	11.456
(U) Developmental Test and Evaluation.	4.333	12.538	13.734	12.645
(U) Training System development upgrades.	6.000	19.900	20.108	11.993
(U) Program office support (A&AS, TDY, training and supplies).	9.998	14.100	11.779	10.060
(U) Total Cost	232.342	225.828	188.069	137.692

(U) C. Other Program Funding Summary (\$ in Millions)	<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>FY 2012</u>	<u>FY 2013</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Complete</u>							
(U) AF RDT&E										
(U) Other APPN										
(U) PE 0401115F, 3010, C-130 AMP, BP1100	0.000	0.000	113.332	351.888	265.535	260.779	281.867	287.986	2,699.853	4,261.240

(U) **D. Acquisition Strategy**
 The C-130 AMP contract was awarded 30 July 2001. This is a Cost-Plus Award Fee contract to develop and install AMP kits for the development aircraft and conduct development flight test. Kit installation for the majority of the 268 aircraft will be competitively bid at a future date.

Revisions to the AF training system began in July 2006 under the AMP contract. This effort will modify the various Training Programs and Weapons Systems Trainers to the AMP configuration.

A Restructure Engineering Change Proposal (ECP) 1302 was awarded to Boeing 20 Aug 2003. The ECP rebaselines the program due to funding reductions in FYs 03/04 which resulted in delays in System Development and Demonstration program by up to 2 years.

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Exhibit R-3, RDT&E Project Cost Analysis

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BUDGET ACTIVITY			PE NUMBER AND TITLE									PROJECT NUMBER AND TITLE		
07 Operational System Development			0401115F C-130 AIRLIFT SQUADRONS									4885 Avionics Modernization Program (AMP)		
<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 Prior to FY 2006 Cost</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
<u>(U) Product Development</u>														
Boeing, Long Beach, CA	CPAF		638.530	212.690	Dec-05	198.739	Dec-06	162.556	Dec-07	114.987	Dec-08	108.251	1,435.753	0.000
Subtotal Product Development			638.530	212.690		198.739		162.556		114.987		108.251	1,435.753	0.000
Remarks:	Note: Funds shown here contain System Design & Development, ECO, Training System Upgrades and the Award Fee.													
<u>(U) Support</u>														
Program Support Office	N/A		52.106	15.319		14.550		11.779		10.060		14.884	118.698	0.000
Subtotal Support			52.106	15.319		14.550		11.779		10.060		14.884	118.698	0.000
Remarks:	Award Dates vary throughout the year depending on activity (TDY, Training, Contractor Support)													
<u>(U) Test & Evaluation</u>														
Various			16.648	4.333	Jan-06	12.538	Jan-07	13.734	Jan-08	12.645	Jan-09	9.088	68.986	0.000
Subtotal Test & Evaluation			16.648	4.333		12.538		13.734		12.645		9.088	68.986	0.000
Remarks:														
<u>(U) Management</u>														
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
<u>(U) Total Cost</u>			707.284	232.342		225.827		188.069		137.692		132.223	1,623.437	0.000

Exhibit R-4, RDT&E Schedule Profile

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BUDGET ACTIVITY
07 Operational System Development

PE NUMBER AND TITLE
0401115F C-130 AIRLIFT
SQUADRONS

PROJECT NUMBER AND TITLE
4885 Avionics Modernization
Program (AMP)



C-130 AMP Program Office Schedule

(As briefed to OSD on 9 Nov)



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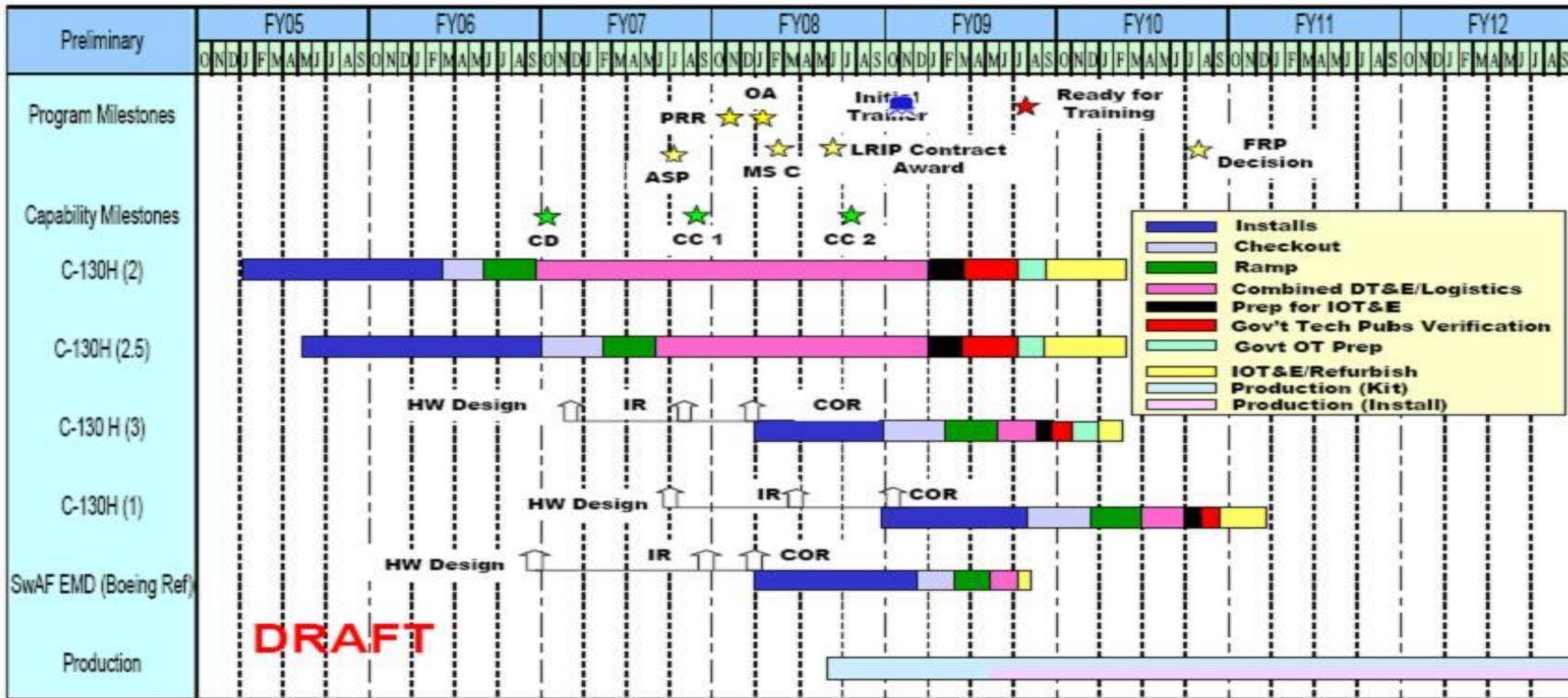


Exhibit R-4a, RDT&E Schedule Detail

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BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0401115F C-130 AIRLIFT
SQUADRONS

PROJECT NUMBER AND TITLE

4885 Avionics Modernization
Program (AMP)

(U) **Schedule Profile**

- (U) C-130H2.5 First Flight
- (U) Software: Core Complete 1
- (U) M/SC/LRIP Decision
- (U) Software: Core Complete 2

FY 2006

FY 2007

FY 2008

FY 2009

3Q

4Q

2Q

4Q

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BUDGET ACTIVITY 07 Operational System Development					PE NUMBER AND TITLE 0401115F C-130 AIRLIFT SQUADRONS			PROJECT NUMBER AND TITLE 5243 C-130 Initiatives		
Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5243 C-130 Initiatives	0.000	3.282	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U)				
(U)				
(U)				
(U) Total Cost	0.000	0.000	0.000	0.000

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

	<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>FY 2012</u>	<u>FY 2013</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Complete</u>							
(U)										

(U) D. Acquisition Strategy

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Exhibit R-3, RDT&E Project Cost Analysis

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BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401115F C-130 AIRLIFT SQUADRONS	PROJECT NUMBER AND TITLE 5243 C-130 Initiatives
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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 Prior to FY 2006 Cost</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
<u>(U) Product Development</u>														
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
<u>(U) Support</u>														
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
<u>(U) Test & Evaluation</u>														
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
<u>(U) Management</u>														
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
<u>(U) Total Cost</u>			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000

Exhibit R-4, RDT&E Schedule Profile

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PE NUMBER AND TITLE

0401115F C-130 AIRLIFT
SQUADRONS

PROJECT NUMBER AND TITLE

5243 C-130 Initiatives

Exhibit R-4a, RDT&E Schedule Detail

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PE NUMBER AND TITLE

0401115F C-130 AIRLIFT
SQUADRONS

PROJECT NUMBER AND TITLE

5243 C-130 Initiatives

(U) Schedule Profile

FY 2006

FY 2007

FY 2008

FY 2009

(U)