PE NUMBER: 0603430F
PE TITLE: Advanced (EHF MILSATCOM (Space)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2005

BUDGET ACTIVITY: 04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE: 0603430F Advanced (EHF MILSATCOM (Space)

	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	775.841	606.659	665.257	631.991	430.040	233.839	93.775	82.188	Continuing	TBD
4050	Advanced MILSATCOM	775.841	606.659	665.257	631.991	430.040	233.839	93.775	82.188	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Develop and acquire Advanced Extremely High Frequency (AEHF) Military Satellite Communications (MILSATCOM) satellites, mission control segment and cryptography for survivable, anti-jam, worldwide, secure communications for the strategic and tactical warfighter. AEHF satellites will replenish the existing EHF system (Milstar) at much higher capacity and data rate capabilities. On 10 October 2001, a Milestone B decision was approved by the Defense Acquisition Executive to enter the System Development and Demonstration (SDD) phase. The SDD letter contract was awarded in Nov 01 and was definitized in Aug 02. The program is a sole source acquisition to a contractor team comprised of Lockheed Martin (prime/integrator) and Northrop-Grumman (provider of satellite payload). The follow-on buy for Satellite Vehicle 3 was approved in Jun 04. Satellites 1 and 2 are funded with RDT&E funds and satellite 3 is funded with procurement funds. An Interim Program Review was held 22 Oct 04 to decide if a fourth AEHF satellite would be added to the program in the FY06 President's Budget to meet Full Operational Capability (FOC). At this time, the Milestone Decision Authority (MDA) decided to maintain the AEHF and Transformational Satellite Communications System (TSAT) baselines, achieving AEHF FOC-equivalency with the first TSAT. AEHF is a cooperative program that includes International Partners (Canada, the United Kingdom, and The Netherlands) and is part of the DoD bid to provide NATO with a protected SATCOM capability.

This program is in Budget Activity 4, Advanced Component Development and Prototypes, since it funds Advanced EHF technology validation and modeling.

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

		FY 2004	FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	802.341	612.049	409.972	316.777
(U)	Current PBR/President's Budget	775.841	606.659	665.257	631.991
(U)	Total Adjustments	-26.500	-5.390		
(U)	Congressional Program Reductions		-5.390		
	Congressional Rescissions				
	Congressional Increases				
	Reprogrammings	1.500			
	SBIR/STTR Transfer	-28.000			

(U) Significant Program Changes:

FY06/07: Development of new, complex information assurance (IA) products, concurrently with other AEHF subsystems, has been a technically challenging high-risk area for the program. In spite of risk reduction actions, delayed delivery of National Security Agency (NSA) IA products is preventing the government from delivering them to the AEHF prime contractor, Lockheed Martin, on-schedule. Late receipt of this Government Furnished Equipment will prevent on-time completion of AEHF system integration and test, and has resulted in a one-year launch delay to each of the three satellites, from Apr 07-09 to Apr 08-10. Additionally, the AEHF program incurred cost growth in the replacement of existing critical electronic components and unplanned payload component testing.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2005

BUDGET ACTIVITY: 04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE: 0603430F Advanced (EHF MILSATCOM (Space)

PROJECT NUMBER AND TITLE: 4050 Advanced MILSATCOM

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
4050 Advanced MILSATCOM	775.841	606.659	665.257	631.991	430.040	233.839	93.775	82.188	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Develop and acquire Advanced Extremely High Frequency (AEHF) Military Satellite Communications (MILSATCOM) satellites, mission control segment and cryptography for survivable, anti-jam, worldwide, secure communications for the strategic and tactical warfighter. AEHF satellites will replenish the existing EHF system (Milstar) at much higher capacity and data rate capabilities. On 10 October 2001, a Milestone B decision was approved by the Defense Acquisition Executive to enter the System Development and Demonstration (SDD) phase. The SDD letter contract was awarded in Nov 01 and was definitized in Aug 02. The program is a sole source acquisition to a contractor team comprised of Lockheed Martin (prime/integrator) and Northrop-Grumman (provider of satellite payload). The follow-on buy for Satellite Vehicle 3 was approved in Jun 04. Satellites 1 and 2 are funded with RDT&E funds and satellite 3 is funded with procurement funds. An Interim Program Review was held 22 Oct 04 to decide if a fourth AEHF satellite would be added to the program in the FY06 President's Budget to meet Full Operational Capability (FOC). At this time, the Milestone Decision Authority (MDA) decided to maintain the AEHF and Transformational Satellite Communications System (TSAT) baselines, achieving AEHF FOC-equivalency with the first TSAT. AEHF is a cooperative program that includes International Partners (Canada, the United Kingdom, and The Netherlands) and is part of the DoD bid to provide NATO with a protected SATCOM capability.

This program is in Budget Activity 4, Advanced Component Development and Prototypes, since it funds Advanced EHF technology validation and modeling.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007
(U) Continue SDD of the AEHF satellites and MCS, continue build of Satellite 1 and 2 flight hardware, and intermediate software increments for bus, payload and MCS	685.441	515.359	604.590	574.387
(U) Continue satellite cryptographic development	36.200	36.300	9.400	6.900
(U) Continue qualification and productization of radiation-hardened components for USAF/DOD space programs	19.000	21.000	20.000	21.000
(U) Continue Program Office and related support activities	35.200	34.000	31.267	29.704
(U) Total Cost	775.841	606.659	665.257	631.991

(U) C. Other Program Funding Summary ($ 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 Cost
(U) Related Proc:										
(U) MPAF, PE 0303604F, Advanced EHF, P-17/18		78.293	528.978	0.000	12.057	15.508	16.441	17.427	0.000	668.704
(U) RDT&E, PE 0603854F, Wideband MILSATCOM	35.621	20.119	3.917	7.010	5.742	6.392	6.485	6.555	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE: February 2005
BUDGET ACTIVITY: 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE: 0603430F Advanced (EHF MILSATCOM (Space)	PROJECT NUMBER AND TITLE: 4050 Advanced MILSATCOM

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

	(Space), Project #644870, CCS-C, R-52 OPAF, PE 03033600F										
(U)	Wideband Gapfiller System, Project #836780, CCS-C RDT&E, PE 0303601F,	8.203	1.664	0.290	0.000	0.000	0.000			0.000	15.477
(U)	MILSATCOM Terminals, BA-7, R-175	159.647	264.795	273.974	273.782	191.087	220.734	198.158	194.439	Continuing	TBD

(U) D. Acquisition Strategy

The Advanced MILSATCOM, also known as Advanced EHF (AEHF), program is a sole source acquisition to a contractor team comprised of Lockheed Martin (prime/integrator) and Northrop-Grumman (provider of the satellite payload). This team will perform the Advanced Component Development and Prototypes (ACD&P) and SDD of three satellites and associated mission command and control ground capabilities under Cost Plus Award Fee line items on the contract. AEHF will incorporate lessons learned and improvements from Milstar and commercial SATCOM practices into the next generation EHF secure, anti-jam military communications satellite system.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2005**

BUDGET ACTIVITY: **04 Advanced Component Development and Prototypes (ACD&P)**

PE NUMBER AND TITLE: **0603430F Advanced (EHF MILSATCOM (Space)**

PROJECT NUMBER AND TITLE: **4050 Advanced MILSATCOM**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2004 Cost	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
NSA	MIPR	Camden, NJ	104.582	36.200	Oct-03	36.300	Oct-04	9.400	Nov-05	6.900	Nov-06	0.000	193.382	
JTEO	PR	San Diego, CA	15.491									0.000	15.491	
MIT/LL	MIPR	Hanscom AFB, MA	4.988									0.000	4.988	
Hughes	CPFF	El Segundo, CA	67.175									0.000	67.175	
TRW	CPFF	Redondo Beach, CA	62.083									0.000	62.083	
Various	Various		66.659									0.000	66.659	
Lockheed Martin (Pre-EMD)	FFP	Sunnyvale, CA	225.011									0.000	225.011	
Hughes	FFP	El Segundo, CA										0.000	0.000	
SDD Contractor (Lockheed Martin)	CPAF		1,103.484	685.441	Oct-03	515.359	Oct-04	604.590	Nov-05	574.387	Nov-06	Continuing	TBD	
Radiation Hardened parts developers	Various		19.000	19.000		21.000		20.000		21.000		84.205	184.205	
None													0.000	
Subtotal Product Development			1,668.473	740.641		572.659		633.990		602.287		Continuing	TBD	0.000
Remarks:														
(U) Support														
Various	Various		88.496	35.200	Oct-03	34.000	Oct-04	31.267	Nov-05	29.704	Nov-06	Continuing	TBD	
None													0.000	
Subtotal Support			88.496	35.200		34.000		31.267		29.704		Continuing	TBD	0.000
Remarks:														
(U) Test & Evaluation														
AFOTEC			0.000									Continuing	TBD	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		Continuing	TBD	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			1,756.969	775.841		606.659		665.257		631.991		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2005
BUDGET ACTIVITY: 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE: 0603430F Advanced (EHF MILSATCOM (Space)	PROJECT NUMBER AND TITLE: 4050 Advanced MILSATCOM

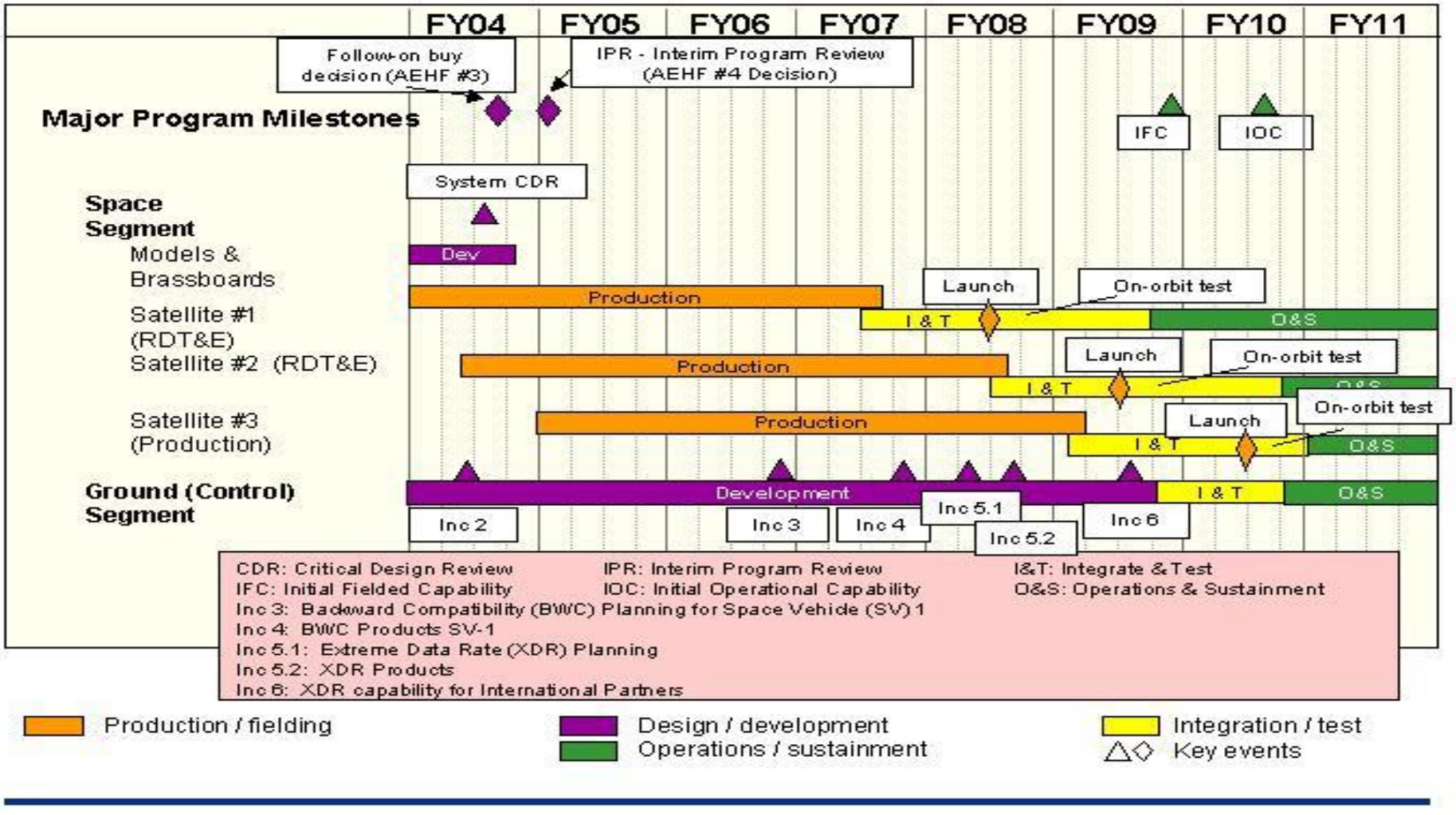

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2005
BUDGET ACTIVITY **04 Advanced Component Development and Prototypes (ACD&P)**	PE NUMBER AND TITLE **0603430F Advanced (EHF MILSATCOM (Space)**	PROJECT NUMBER AND TITLE **4050 Advanced MILSATCOM**

(U) Schedule Profile	FY 2004	FY 2005	FY 2006	FY 2007
(U) System Critical Design Review (CDR)	3Q			
(U) Follow-On Buy Decision (previously referred to as Milestone C)	3Q			
(U) Interim Program Review		1Q		
(U) Complete Ground Segment Software Increment 3 (Backwards Compatibility w/Milstar II) Planning for Space Vehicle (SV)-1			1Q	
(U) Initiate Ground Segment Software Increment 5 (eXtreme Data Rate (XDR)) Planning and Products			3Q	
(U) Complete Ground Segment Software Increment 4 (Backwards Compatibility w/ Milstar II) Products for SV-1				4Q
(U) Program Mangement Review			1-4Q	1-4Q