

## UNCLASSIFIED

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

DATE

June 2001

BUDGET ACTIVITY

**07 - Operational System Development**

PE NUMBER AND TITLE

**0303601F MILSATCOM Terminals**

PROJECT

**2487**

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
2487 MILSATCOM Terminals	7,572	17,634	41,763	57,601	98,275	81,748	68,438	30,738	25,500	2,324,552
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0

NOTE: This administration has not addressed FY 2003-2007 requirements. All FY 2003-2007 budget estimates included in this book are notional only and subject to change.

(U) **A. Mission Description**

The MILSATCOM Terminals program develops equipment enabling users to communicate via Milstar, Advanced Extremely High Frequency (AEHF), Ultra High Frequency (UHF), Wideband Gapfiller System (WGS), Defense Satellite Communication System (DSCS), and other military satellites, as well as commercial satellites, to support tactical Aerospace Expeditionary Force requirements and maintain essential strategic connectivity for nuclear forces. Program RDT&E currently supports the following efforts:

- 1) Concept development work to ensure high-capacity connectivity for tactical and strategic air forces and ground command and control components -- primarily assessment of commercial/military technological alternatives and development of an Air Force terminals roadmap
- 2) Ground Multiband Terminal (GMT) development. GMT will replace Air Force Ground Mobile Force terminals with higher-capacity military communications to provide tactical ground forces with connectivity via the Ka-band Wideband Gapfiller System, DSCS, and commercial C- and Ku-band satellites to significantly increase throughput for inter- and intra-theater tactical force information such as air tasking orders, battle damage assessments, and reconnaissance data.
- 3) Family of Advanced Beyond-Line-of-Sight Terminals (FAB-T) development. The Airborne Wideband Terminal (AWT) and Command Post Terminal Replacement (CPTR) programs have been accelerated and combined into one program that will develop robust, secure, survivable EHF voice and data satellite communications terminals for nuclear and conventional force users. FAB-T variants will provide ground and airborne command posts and other aircraft with connectivity to the Milstar, AEHF, and WGS systems; EHF payloads on polar-orbiting and UHF Follow-on (UFO) satellites; and Global Broadcast Service payloads on certain UFO satellites.

(U) **FY 2000 (\$ in Thousands)**

- |             |   |
|-------------|---|
| (U) \$1,579 | Continued MILSATCOM terminals support activities                            |
| (U) \$2,980 | Continued contractor test and operations support                            |
| (U) \$3,013 | Continued concept/prototype demo/MILSATCOM Terminals roadmap/SATCOM testing |
| (U) \$7,572 | Total   |

The following net transaction is not reflected in the FY 2000 program total: BTR=-\$45K. This transaction is not reflected in other sections of this document where an FY 2000 total is shown.

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**07 - Operational System Development****0303601F MILSATCOM Terminals****2487**(U) **A. Mission Description Continued**(U) FY 2001 (\$ in Thousands)

(U)	\$2,279	Continue MILSATCOM terminals support activities
(U)	\$1,563	Continue contractor test and operations support
(U)	\$5,192	Continue concept/prototype demo/MILSATCOM Terminals roadmap/SATCOM testing
(U)	\$5,600	Begin Ground Multiband Terminal (GMT) development
(U)	\$3,000	Begin Airborne Wideband Terminal (AWT) risk reduction
(U)	\$17,634	Total

The following net transactions are not reflected in the FY 2001 program total: SBIR=-\$1162K and BTR=-\$455K. These transactions are not reflected in other sections of this document where an FY 2001 total is shown.

(U) FY 2002 (\$ in Thousands)

(U)	\$3,664	Continue concept/prototype demo/MILSATCOM Terminals roadmap/SATCOM testing
(U)	\$17,255	Continue Ground Multiband Terminal (GMT) development
(U)	\$20,844	Begin Family of Advanced Beyond-line-of-sight Terminals (FAB-T) development
(U)	\$41,763	Total

(U) **B. Budget Activity Justification**

This effort is funded in Budget Activity 7, Operational System Development, because some of its programs have completed Milestone III reviews and are in production.

(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)	6,923	17,797	24,416	2,297,542
(U) Appropriated Value	7,026	17,797		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions	-65	-125		
b. Small Business Innovative Research	-255			
c. Omnibus or Other Above Threshold Reprogram				
d. Below Threshold Reprogram	893			
e. Rescissions	-27	-38		
(U) Adjustments to Budget Years Since FY 2001 PBR			17,347	

Project 2487

Page 2 of 6 Pages

Exhibit R-2 (PE 0303601F)

1446

UNCLASSIFIED

## UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)							DATE <b>June 2001</b>																																													
BUDGET ACTIVITY <b>07 - Operational System Development</b>				PE NUMBER AND TITLE <b>0303601F MILSATCOM Terminals</b>			PROJECT <b>2487</b>																																													
<p>(U) <b><u>C. Program Change Summary (\$ in Thousands) Continued</u></b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>FY 2000</u></th> <th style="text-align: center;"><u>FY 2001</u></th> <th style="text-align: center;"><u>FY 2002</u></th> <th style="text-align: center;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>(U) Current Budget Submit/FY 2002 PBR</td> <td style="text-align: center;">7,572</td> <td style="text-align: center;">17,634</td> <td style="text-align: center;">41,763</td> <td style="text-align: center;">2,324,552</td> </tr> </tbody> </table> <p>(U) <b><u>Significant Program Changes:</u></b>  FY 2000: Reprogram for additional support for advanced development studies assessing EHF options for the B-2.  FY 2002 and outyear adjustments fully fund GMT development, including Engineering Development Models; accelerate AWT development by one year to accelerate B-2 EHF connectivity; and accelerate CPTR development by two years to provide payload command and control for the second AEHF satellite launch.</p>										<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Total Cost</u>	(U) Current Budget Submit/FY 2002 PBR	7,572	17,634	41,763	2,324,552																																		
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	<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>																																										
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<p>(U) <b><u>E. Acquisition Strategy</u></b>  Future programs will be competitive acquisitions.</p>																																																				

Project 2487
Page 3 of 6 Pages
Exhibit R-2 (PE 0303601F)

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0303601F MILSATCOM Terminals

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(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) GMT Development**							*	X	X	X	X	X
(U) AWT Risk Reduction					*	*	*	X				
(U) FAB-T Development									X	X	X	X
* Completed event												
X Planned event												

\*\*Development now begins in 3QFY2001, vice 1QFY2001 as noted in last year's exhibit, because the system's requirements were refined to encompass operations with more than just the Wideband Gapfiller System.

## UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE June 2001				
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT			
07 - Operational System Development				0303601F MILSATCOM Terminals				2487			
(U) A. Project Cost Breakdown (\$ in Thousands)											
				FY 2000		FY 2001		FY 2002			
(U)	MILSATCOM terminals support activities			1,579		2,279		0			
(U)	Contractor test and operations support			2,980		1,563		0			
(U)	Concept/Prototype Demo/MILSATCOM Terminals Roadmap/SATCOM testing			3,013		5,192		3,664			
(U)	Ground Multiband Terminal (GMT)			0		5,600		17,255			
(U)	Airborne Wideband Terminal risk reduction			0		3,000		0			
(U)	Family of Advanced Beyond-line-of-sight Terminals (FAB-T) development			0		0		20,844			
(U)	Total			7,572		17,634		41,763			
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)											
(U) Performing Organizations:											
<u>Contractor or Government</u>		<u>Contract Method/Type</u>	<u>Award or Obligation</u>	<u>Performing Activity</u>	<u>Project Office</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>											
Raytheon*		FPIF/FFP	Jun 85	888,552	888,552	884,773	2,216	1,563	0	0	888,552
Rockwell		CPIF	Aug 93	43,068	43,068	43,068	0	0	0	0	43,068
ViaSat		C/FFP	Oct 95	3,076	3,076	3,076	0	0	0	0	3,076
Harris**		CPAF	Jun 01	24,538	24,538	0	0	5,600	14,605	4,333	24,538
TBD (FAB-T contract)**		CPAF	Jan 02	TBD	TBD	0	0	0	15,344	311,314	326,658
Miscellaneous		Various	Various	N/A	N/A	651,580	0	2,837	1,564	0	655,981
*FY 2002 funds were erroneously listed in this line in last year's budget item justification sheet.											
**These funds were included in the 'Miscellaneous' line in last year's budget item justification sheet.											
<u>Support and Management Organizations</u>											
MITRE		CPAF	Various	N/A	N/A	105,678	2,317	2,939	6,650	27,576	145,160
Support Contractors - System		Various	Various	N/A	N/A	157,741	1,549	1,854	1,500	14,852	177,496
Engineering & Technical Assistance											
Project 2487											
Page 5 of 6 Pages											
Exhibit R-3 (PE 0303601F)											

## UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE June 2001		
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT		
07 - Operational System Development				0303601F MILSATCOM Terminals				2487		
(U) <b>Performing Organizations Continued:</b>										
*FY 2002 funds were erroneously listed in this line in last year's budget item justification sheet.										
**These funds were included in the 'Miscellaneous' line in last year's budget item justification sheet.										
<u>Support and Management Organizations</u>										
Tecolote	Various	Various	N/A	N/A	1,998	310	705	800	0	3,813
Miscellaneous	Various	Various	N/A	N/A	19,759	180	636	300	4,225	25,100
<u>Test and Evaluation Organizations</u>										
Wright-Labs	AF-616	N/A	N/A	N/A	22,103	1,000	1,500	1,000	0	25,603
Miscellaneous	Various	N/A	N/A	N/A	5,507	0	0	0	0	5,507
					<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					1,582,497	2,216	10,000	31,513	315,647	1,941,873
Subtotal Support and Management					285,176	4,356	6,134	9,250	46,653	351,569
Subtotal Test and Evaluation					27,610	1,000	1,500	1,000	0	31,110
Total Project					1,895,283	7,572	17,634	41,763	362,300	2,324,552

Project 2487

Page 6 of 6 Pages

Exhibit R-3 (PE 0303601F)