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<tr><td colspan="2">RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)</td><td>DATE
June 2001</td></tr>
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BUDGET ACTIVITY **05 - Engineering and Manufacturing Development**	PE NUMBER AND TITLE **0604479F MILSTAR LDR/MDR Sat Comm**	PROJECT **5010**

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
5010 Milstar Sat Comm Sys	345,590	235,164	232,084	110,363	1,424	1,421	0	0	0	9,682,272
Quantity of RDT&E Articles	0	2	1	0	0	0	0	0	0	6

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

Milstar is a joint service program to develop and acquire extremely high frequency (EHF) satellites; a satellite mission control segment; and new or modified Army, Navy, and Air Force communication terminals for survivable, jam-resistant, worldwide, secure communications to strategic and tactical war fighters. Milstar I Satellites 1 and 2 have a low data rate (LDR) payload that supports strategic and tactical forces with emphasis on highly survivable, minimum essential communications. Milstar II Satellites 3 through 6 have both LDR and medium data rate (MDR) payloads with increased tactical capabilities, including higher data rates to mobile forces and nulling that will neutralize close-in enemy jammers.   Satellite 3 did not reach its proper orbit and the satellite was placed in its final non-interference orbit and shutdown. Advanced EHF (AEHF) is the follow-on system to Milstar. OSD approved a new AEHF acquisition strategy in May 2000 (see PE 63430F) to mitigate constellation risk due to the loss of the Milstar 3 satellite. Milstar satellite 4 was launched sucessfully on 27 February 2001. Milstar satellites 5 and 6 will launch in FY02 and FY03. Milstar Terminals are funded under Program Element 0303601F.

(U)	FY 2000 ($ in Thousands)	
(U)	$270,441	Milstar II
(U)	$0	Continued preparation of Satellite 4 for delivery
(U)	$0	Continued Satellite 4 integration and test
(U)	$0	Continued Satellite 5 integration and test
(U)	$0	Continued Satellite 6 LDR and MDR payload integration and test, and start of satellite integration and test
(U)	$27,052	Milstar I/II Satellite Engineering
(U)	$0	Continued Satellites 1 and 2 on-orbit operations support
(U)	$0	Provided Satellite 4 pre-launch support
(U)	$0	Continued LDR and MDR technical support
(U)	$21,009	Automated Communications Management System (ACMS)
(U)	$0	Continued software Build 2 incremental development
(U)	$0	Continued maintenance of fielded software Build 1

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE June 2001

BUDGET ACTIVITY 05 - Engineering and Manufacturing Development	PE NUMBER AND TITLE 0604479F MILSTAR LDR/MDR Sat Comm	PROJECT 5010

(U)   **A. Mission Description Continued**

(U)   FY 2000 ($ in Thousands) Continued
(U) $0   Developed web based data distribution product
(U) $27,088   Basic Program Office support
(U) $345,590   Total

(U)   FY 2001 ($ in Thousands)
(U) $168,224   Milstar II
(U) $0   Deliver, launch and perform on-orbit checkout and testing for Satellite 4
(U) $0   Satellite 5 integration, test and delivery
(U) $0   Satellite 6 integration and test
(U) $0   Implement ECPs as needed based on operational requirements
(U) $34,200   Milstar I/II Satellite Engineering
(U) $0   Satellites 4 and 5 technical launch and pre-launch support
(U) $0   Continue Satellites 1, 2 and 4 on-orbit operations support
(U) $0   Continue LDR and MDR technical support
(U) $18,730   Communications Planning Element
(U) $0   Continue ACMS software Build 2 incremental development
(U) $0   Continue maintenance of fielded communications planning software
(U) $0   Develop proposed web-based new technology system
(U) $14,010   Basic Program Office support
(U) $235,164   Total
          The following net transactions are not reflected in th FY01 Program Total: BTR = +$3,000K and SBIR = - $13,573K. These transactions are not reflected in other sections of the R-Docs where an FY01 total is shown.

(U)   FY 2002 ($ in Thousands)
(U) $171,198   Milstar II contract effort includes Satellites 5and 6 launch and on-orbit checkout and testing. Also continue component integration support (including Mission Control System service life extension) and implementation of ECPs as operationally required.
(U) $43,330   Milstar I/II Satellite Engineering contract effort includes launch and pre-launch technical support for Satellites 5 and 6 and continued on-orbit operations support for Satellites 1, 2 and 4, as well as continued LDR and MDR technical support.
(U) $7,955   Communications Planning Element includes software development and maintenance.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE June 2001	
BUDGET ACTIVITY **05 - Engineering and Manufacturing Development**	PE NUMBER AND TITLE **0604479F MILSTAR LDR/MDR Sat Comm**	PROJECT **5010**

(U)　**A. Mission Description Continued**

(U)　FY 2002 ($ in Thousands) Continued
(U)　$9,601　　　　　　　Basic Program Office support
(U)　$232,084　　　　　　Total

(U)　**B. Budget Activity Justification**
　　This program is in Budget Activity 5, Engineering and Manufacturing Development since it funds Milstar II development.

(U)　**C. Program Change Summary ($ in Thousands)**

	FY 2000	FY 2001	FY 2002	Total Cost
(U)　Previous President's Budget (FY 2001 PBR)	357,235	236,841	135,781	9,562,236
(U)　Appropriated Value	362,808	237,341		
(U)　Adjustments to Appropriated Value				
a. Congressional/General Reductions	-3,151	-1,661		
b. Small Business Innovative Research	-13,100			
c. Omnibus or Other Above Threshold Reprogram				
d. Below Threshold Reprogram	452			
e. Rescissions	-1,419	-516		
(U)　Adjustments to Budget Years Since FY 2001 PBR			96,303	
(U)　Current Budget Submit/FY 2002 PBR	345,590	235,164	232,084	9,682,273

　　Significant Program Changes:

(U)　Significant Program Changes:
　　The FY02 adjustment funds increased contract costs due to cumulative slips from FY98 through FY01 in the Titan IV B launch schedule. Flight 3 failure caused a Acquisition Program Baseline schedule breach for MDR IOT&E and IOC II, and a performance breach of FOC. Program Deviation Report was sent to the Defense Acquisition Executive and final Acquisition Program Baseline update is being coordinated.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE June 2001

BUDGET ACTIVITY 05 - Engineering and Manufacturing Development	PE NUMBER AND TITLE 0604479F MILSTAR LDR/MDR Sat Comm	PROJECT 5010

(U)   D. Other Program Funding Summary ($ 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
(U) Other APPN OPAF Wideband Procurement (CCS-C)	0	0	5,429	5,635	8,402	2,222			0	21,688
(U) Related RDT&E:										
(U) RDT&E-AF Wideband 3600, PE 0603854F, BPAC 836780 (CCS-C), BA-4, R-49	0	11,394	22,619	31,186	49,019	25,838			0	140,056
(U) PE 0303601F, MILSATCOM Terminals, BA-7, R-164										
(U) PE 0603430F, Advanced EHF MILSATCOM, BA-4, R-39	89,824	244,135	548,398	516,866	345,019	274,653	161,493	72,095	68,001	2,495,588
(U) PE 0603432F, Polar Satellite Communications Program (Polar Adjunct), BA-4, R-40	37,555	25,829	18,724	9,588	5,724	981			0	277,039

(U)   E. Acquisition Strategy

Lockheed Martin was awarded a sole source contract to develop 6 Milstar protected communication satellites. The first two LDR satellites were launched in FY94 and FY95. Satellite 3 launch in FY99 was to provide the first LDR/MDR on-orbit capability, but the satellite did not reach its proper orbit due to a Centaur upper stage failure. Satellite 4 was launched sucessfully on 27 February 2001. The last 2 LDR/MDR satellites 5 and 6 will be launched in FY02 and FY03.

(U)   F. Schedule Profile

	FY 2000	FY 2001	FY 2002

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BUDGET ACTIVITY 05 - Engineering and Manufacturing Development	PE NUMBER AND TITLE 0604479F MILSTAR LDR/MDR Sat Comm	PROJECT 5010

(U)   F. Schedule Profile Continued

		FY 2000				FY 2001				FY 2002			
		1	2	3	4	1	2	3	4	1	2	3	4
(U)	Milstar II (LDR/MDR)												
(U)	Deliver ACMS Build 1, Inc 3			*									
(U)	Deliver ACMS Build 2, Inc 1						*						
(U)	Deliver ACMS Build 2, Inc 2									X			
(U)	Satellite 4 Launch						*						
(U)	MDR IOT&E (TBD)												
(U)	IOC II (TBD)												
(U)	Satellite 5 Launch									X			
(U)	Satellite 6 Launch 1QFY03												
(U)	FOC (TBD)												

*=completed event

x=planned event

 Note: MDR IOT&E, IOC II, and FOC milestones are under review as a result of failure of satellite #3 to achieve operational orbit.

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)	DATE June 2001

BUDGET ACTIVITY 05 - Engineering and Manufacturing Development	PE NUMBER AND TITLE 0604479F MILSTAR LDR/MDR Sat Comm	PROJECT 5010

(U) **A. Project Cost Breakdown ($ in Thousands)**

	FY 2000	FY 2001	FY 2002
(U) Milstar II	270,441	168,224	171,198
(U) Milstar I/II Satellite Engineering	27,052	34,200	43,330
(U) Automated Communications Management System	21,009	18,730	7,955
(U) Basic Program Office Support	27,088	14,010	9,601
(U) Total	345,590	235,164	232,084

(U) **B. Budget Acquisition History and Planning Information ($ in Thousands)**

(U) **Performing Organizations:**

Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY 2000	Budget FY 2000	Budget FY 2001	Budget FY 2002	Budget to Complete	Total Program
Product Development Organizations										
LMSC (Milstar I) Sats 1,2,3L]	C/CPAF	Jun 83	2,181,587	2,181,587	4,727,752	0	0		0	4,727,752
LMSC (Milstar II) [Sats 3M, 4, 5, 6]	SS/CPAF	Oct 92/Nov 94	3,789,166	3,789,166	3,289,971	247,462	151,967	156,984	51,945	3,898,329
LMSC (Satellite Engineering)	SS/CPAF	Sep 97	213,396	213,396	55,208	27,052	34,200	43,330	45,950	205,740
SPAWAR(ACMS)	SS/MIPR	Various			105,648	21,009	18,730	7,955	571	153,913
LINCOM	SS/CPAF	Various			25,938	4,084	1,514	1,597	1,536	34,669
Lincoln Lab	SS/MIPR	Various			27,169	2,550	1,518	2,050	1,750	35,037
Miscellaneous	Various	Various			217,994	16,345	13,225	10,567	2,415	260,546
Support and Management Organizations										
Aerospace	SS/CPFF/AF	Various			155,387	20,339	10,378	8,463	8,320	202,887
Miscellaneous	Various	Various			151,159	6,749	3,632	1,138	721	163,399
Test and Evaluation Organizations										
None.										

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)	DATE June 2001

BUDGET ACTIVITY 05 - Engineering and Manufacturing Development	PE NUMBER AND TITLE 0604479F MILSTAR LDR/MDR Sat Comm	PROJECT 5010

(U) **Government Furnished Property:**

Item Description	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Delivery Date		Total Prior to FY 2000	Budget FY 2000	Budget FY 2001	Budget FY 2002	Budget to Complete	Total Program
Product Development Property										
None.										
Support and Management Property										
None.										
Test and Evaluation Property										
None.										
Subtotals					Total Prior to FY 2000	Budget FY 2000	Budget FY 2001	Budget FY 2002	Budget to Complete	Total Program
Subtotal Product Development					8,449,680	318,502	221,154	222,483	104,167	9,315,986
Subtotal Support and Management					306,546	27,088	14,010	9,601	9,041	366,286
Subtotal Test and Evaluation										
Total Project					8,756,226	345,590	235,164	232,084	113,208	9,682,272