

UNCLASSIFIED

PE NUMBER: 0603845F
 PE TITLE: Transformational SATCOM (TSAT)

Exhibit R-2, RDT&E Budget Item Justification	DATE May 2009
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BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0603845F Transformational SATCOM (TSAT)
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Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	776.505	761.285	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3,533.301
4944 ADVANCED WIDEBAND SYSTEM	776.505	761.285	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3,533.301

In FY2010, Project #4944, Advanced Wideband System, was terminated.

(U) A. Mission Description and Budget Item Justification

Fiscal constraints have led the Department of Defense to terminate the Transformational Satellite Communications System (TSAT) program beginning FY10. The TSAT program office will conduct a controlled contract ramp down; focusing contractor on close-out tasks relevant to MILSATCOM future prior to contract termination. The measured contract close-out and termination activities will allow for a smoother transition for the industrial base and ensure vital artifact transfer from the contractors to the government.

Funds are in Budget Activity 4, Advanced Component Development and Prototypes, since it funds TSAT technology development and engineering design activities including risk reduction and system definition.

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

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Previous President's Budget	804.739	842.974	985.113
(U) Current PBR/President's Budget	776.505	761.285	0.000
(U) Total Adjustments	-28.234	-81.689	
(U) Congressional Program Reductions		-79.620	
Congressional Rescissions		-2.069	
Congressional Increases			
Reprogrammings	-10.000		
SBIR/STTR Transfer	-18.234		

(U) Significant Program Changes:

The Department terminated the TSAT program beginning FY10. While not reflected above, Congress approved sourcing \$152M FY09 and \$45M FY08 in an Omnibus reprogramming action

Exhibit R-2a, RDT&E Project Justification

DATE
May 2009

BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)				PE NUMBER AND TITLE 0603845F Transformational SATCOM (TSAT)				PROJECT NUMBER AND TITLE 4944 ADVANCED WIDEBAND SYSTEM			
Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total	
4944 ADVANCED WIDEBAND SYSTEM	776.505	761.285	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3,533.301	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0			

In FY2010, Project #4944, Advanced Wideband System, was terminated.

(U) A. Mission Description and Budget Item Justification

Fiscal constraints have led the Department of Defense to terminate the Transformational Satellite Communications System (TSAT) program beginning FY10. The TSAT program office will conduct a controlled contract ramp down; focusing contractor on close-out tasks relevant to MILSATCOM future prior to contract termination. The measured contract close-out and termination activities will allow for a smoother transition for the industrial base and ensure vital artifact transfer from the contractors to the government.

Funds are in Budget Activity 4, Advanced Component Development and Prototypes, since it funds TSAT technology development and engineering design activities including risk reduction and system definition.

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

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Continue TSAT Mission Operations System ground segment and network management/operations management software	134.524	112.256	
(U) Continue systems engineering and integration support	70.102	69.681	
(U) Continue engineering design activities including risk reduction, and focused system design for the first TSAT satellite	352.218	274.375	
(U) Award space segment contract and begin preliminary design development			
(U) Continue System Definition and technology development for key areas to include satellite simulator, critical government furnished property, independent laboratory testing, antenna design, encryption technologies, dynamic bandwidth and resource allocation, bandwidth efficient modulation, network operations, and networking protocols; conduct Integration/Concept of Operations (CONOPS) demonstrations	81.445	49.001	
(U) Continue Technical Support	59.779	60.254	
(U) Continue Program Support and related activities	12.384	21.476	
(U) Continue qualification and production of radiation-hardened components for USAF/DOD space programs	21.053	22.242	
(U) Reprogram for higher priorities (approved by Congress in Omnibus action)	45.000	152.000	
(U) Total Cost	776.505	761.285	0.000

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Exhibit R-2a, RDT&E Project Justification

DATE

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BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE

0603845F Transformational SATCOM (TSAT)

PROJECT NUMBER AND TITLE

4944 ADVANCED WIDEBAND SYSTEM

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

	<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>FY 2014</u>	<u>FY 2015</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Complete</u>							
(U) RDT&E, PE 0603854F, Project 644870, CCS-C	20.992	12.343	18.321						Continuing	TBD
(U) MPAF, PE 0303600F, WGS	312.335	21.628	264.051						Continuing	TBD
(U) RDT&E, PE 0603854F, Project 644811, WGS	0.000	0.000	52.635						Continuing	TBD
(U) OPAF, PE 0303600F, CCS-C	8.335	0.000	0.000						Continuing	TBD
(U) OPAF, PE 0303600F, WGS	0.000	0.000	1.677						Continuing	TBD
(U) MILCON, PE 0303602F, TSAT	0.000	0.000	0.000						0.000	0.000
(U) OPAF, PE 0303602F, TSAT	0.000	0.000	0.000						0.000	0.000

(U) D. Acquisition Strategy

N/A

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Exhibit R-3, RDT&E Project Cost Analysis

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BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0603845F Transformational SATCOM (TSAT)	PROJECT NUMBER AND TITLE 4944 ADVANCED WIDEBAND SYSTEM
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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</u> <u>Prior to FY</u> <u>2008</u> <u>Cost</u>	<u>FY 2008</u> <u>Cost</u>	<u>FY 2008</u> <u>Award</u> <u>Date</u>	<u>FY 2009</u> <u>Cost</u>	<u>FY 2009</u> <u>Award</u> <u>Date</u>	<u>FY 2010</u> <u>Cost</u>	<u>FY 2010</u> <u>Award</u> <u>Date</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>	<u>Target Value</u> <u>of Contract</u>
<u>(U) Product Development</u>												
Architecture Studies	CPAF	Various	14.900								14.900	
Lockheed Martin: Technology Maturation/Risk Reduction & Program System Definition	CPFF	Sunnyvale, CA	461.899	176.109	Dec-07	137.188	Dec-08				775.196	
Boeing: Technology Maturation/Risk Reduction & Program System Definition	CPFF	El Segundo, CA	461.899	176.109	Dec-07	137.188	Dec-08				775.196	
Booz Allen Hamilton: System Engineering & Integration / SE&I Follow-on Contractor TBD	Time & Materials w/ IF	El Segundo, CA	152.373	70.102	Dec-07	69.681	Dec-08				292.156	
TMOS PRDAs	FFP	Various	55.139								55.139	
TMOS: Lockheed Martin Integrated Systems and Solutions	CPAF	San Jose, CA	179.142	134.524	Dec-07	112.256	Dec-08				425.922	
Risk Reduction: Technology Maturation	Various	Various	422.225	81.445	Dec-07	49.001	Dec-08				552.671	
Risk Reduction: Technology Maturation (Space Segment) Lockheed Martin	CPFF	Sunnyvale, CA	27.651								27.651	
Risk Reduction: Technology Maturation (Space Segment) Boeing	CPFF	El Segundo, CA	27.651								27.651	
Space Segment Development	TBD	TBD	0.000								0.000	
Radiation Hardened Parts Developers	Various	Various	0.000	21.053		22.242	Dec-08				43.295	
Subtotal Product Development			1,802.879	659.342		527.555		0.000		0.000	2,989.777	0.000
Remarks:												
<u>(U) Support</u>												
Technical Support	Various		157.663	59.779	Dec-07	60.254	Dec-08				277.696	
Program Support	Various		34.968	12.384	Dec-07	21.476	Dec-08	0.000			68.828	
Subtotal Support			192.631	72.163		81.730		0.000		0.000	346.524	0.000
Remarks:												
<u>(U) Test & Evaluation</u>												
None											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
<u>(U) Management</u>												
Reprogram for higher Air Force priorities				45.000		152.000					197.000	
Subtotal Management			0.000	45.000		152.000		0.000		0.000	197.000	0.000
Remarks:												
<u>(U) Total Cost</u>			1,995.510	776.505		761.285		0.000		0.000	3,533.301	0.000

Exhibit R-4, RDT&E Schedule Profile

DATE

May 2009

BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE

**0603845F Transformational SATCOM
(TSAT)**

PROJECT NUMBER AND TITLE

**4944 ADVANCED WIDEBAND
SYSTEM**

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Exhibit R-4a, RDT&E Schedule Detail	DATE May 2009
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BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0603845F Transformational SATCOM (TSAT)	PROJECT NUMBER AND TITLE 4944 ADVANCED WIDEBAND SYSTEM
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(U) <u>Schedule Profile</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U)			

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TERMINATION OF INVESTMENT-RELATED PROGRAMS
FY 2010 President's Budget
(Dollars in Millions)

PE	BPAC	APPN	FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015	
			COST	QTY														
0603845F	644944	3600	776.505	0	761.285	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0	0.000	0

Effort Title

Transformational Satellite Communications System (TSAT)

Program Description

The TSAT will provide worldwide, secure satellite communications to U.S. strategic and tactical forces during all levels of conflict. It will sustain the Military Satellite Communications (MILSATCOM) architecture by providing connectivity across the spectrum of mission areas, to include land, air and naval warfare; special operations; strategic nuclear operations; strategic defense; homeland security; theater operations; and space operations and intelligence.

Status to Date

The TSAT program was initiated in FY03. In October 2003, a Systems Engineering and Integration contract was awarded. In January 2006, a single TSAT Mission Operations System (TMOS) contract was awarded. In January 2004, the TSAT program entered Phase B, Risk Reduction and Design Development. Phase B Risk Reduction and System Definition contracts were awarded to two contractors in late January 2004. However, in June 2006, the Milestone Decision Authority rescinded Key Decision Point B approval in order to appropriately align TSAT program activity with revised National Security Space Acquisition Policy (NSS 03-01). A successful System Design Review was completed in 2007. On 6 April 2009, the SECDEF deemed the TSAT program unaffordable and recommended its termination. Measured contract close-out and termination activities have begun.

Rationale for Termination

Fiscal constraints led the Department of Defense to cancel the TSAT program beginning FY10.

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