ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2004

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0303142A - SATCOM Ground Environment (SPACE)

COST (In Thousands)		FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost		67716	86389	51959	58566	95101	55253	57620	Continuing	Continuing
253	DSCS-DCS (PHASE II)	11416	13396	9339	13673	12627	9318	9493	Continuing	Continuing
384	SMART-T	16307	25912	16189	1874	0	0	0	0	95330
456	MILSATCOM SYSTEM ENGINEERING	39993	47081	12578	11379	10751	10674	10603	Continuing	Continuing
562	MBAND INT SAT TERM MIST	0	0	13853	31640	71723	35261	37524	Continuing	Continuing

A. Mission Description and Budget Item Justification: Military Satellite Communication (MILSATCOM) systems are joint program/project efforts to satisfy ground mobile requirements for each Service, the Joint Chiefs of Staff (JCS), the National Command Authority, the combatant commanders, the National Security Agency, the Office of the Secretary of Defense, and other governmental, non-DoD users. The worldwide MILSATCOM systems are: Ultra High Frequency (UHF) Follow-On Satellite System; Air Force Satellite (FLTSAT/AFSAT) system; the Mobile User Objective System (MUOS); the Super High Frequency (SHF) Defense Satellite Communications System (DSCS); the Wideband Gapfiller System (WGS), the Extremely High Frequency (EHF) and Advanced Extremely High Frequency (AEHF) MILSTAR system; the MILSTAR Communication Planning Tool-integrated (MCPT-I); the Joint SATCOM Planning and Tools; and the Transformation Communication System (TCS), all of these systems are required to support legacy, interim and emerging communication space architectures and Objective Force requirements. The Army is responsible for developing and procuring satellite terminals, satellite control subsystems, communication subsystems, and all related equipment. This responsibility also includes maintaining the life cycle logistics support required to achieve end-to-end connectivity and interoperability, satisfying JCS Command, Control, Communications and Intelligence (C3I) in support of the President, JCS, combatant commanders, Military Departments, Department of State, and other government Departments and Agencies.

This program is designated as a DoD Space Program.

B. Program Change Summary	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY 2004)	68915	87352	64538
Current Budget (FY 2005 PB)	67716	86389	51959
Total Adjustments	-1199	-963	-12579
Congressional program reductions		-822	
Congressional rescissions			
Congressional increases			
Reprogrammings	-1199	-141	
SBIR/STTR Transfer			
Adjustments to Budget Years			-12579

FY05 funds realigned 12.579M to higher priority Army requirements.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0303142A - SATCOM Ground Environment (SPACE)**	**253**

COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
253 DSCS-DCS (PHASE II)	11416	13396	9339	13673	12627	9318	9493	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project provides funds to develop strategic and tactical Ground Subsystem equipment in support of Joint Chiefs of Staff (JCS) validated Command, Control, Communications and Intelligence (C3I) requirements for the worldwide Super High Frequency (SHF) Defense Satellite Communications System (DSCS), Wideband Gapfiller System (WGS), and the Transformational Communications (TC) SATCOM programs. Continuing upgrades for the DSCS, WGS, and TC SATCOM are vital to support the emerging power projection and rapid deployment role of the Armed Forces. DSCS, WGS, and TC SATCOM provide warfighters multiple channels of tactical connectivity as well as interfaces with strategic networks and national decision-makers. This system supports the current to future transition path of the Transformation Campaign Plan (TCP). No Defense Emergency Response Funds (DERF) were provided to this project.

Accomplishments/Planned Program	FY 2003	FY 2004	FY 2005
Continue the development of the DSCS Integrated Management System (DIMS) Interface Software program	3975	4692	3588
Continue the development of the Common Network Planning Software (CNPS) program	5117	5750	3133
Transformational Communications - Control	0	191	180
Continue SATCOM Engineering Lab (SEL), PM Admin, and Systems Engineering Technical Assistance (SETA) efforts	2324	2396	2438
Small Business Innovative Research / Small Business Technology Transfer Programs	0	367	0
Totals	11416	13396	9339

B. Other Program Funding Summary	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
DSCS Other Procurement Army	93516	98163	99775	55381	51587	85242	95499	Continuing	Continuing

C. Acquisition Strategy: The DSCS Integrated Management System (DIMS) and Common Network Planning Software (CNPS) are software programs and will not have follow-on production programs. DIMS provides the capability to electronically disseminate network plans to the monitoring and controlling DSCS Operations Control System (DOCS) subsystems, and retrieve and display subsystem monitoring data. It also provides a comprehensive view of network operations at DSCS Operations Centers and DISA management sites. CNPS will plan strategic and Ground Mobile Forces (GMF) satellite communication networks for DSCS, Wideband Gapfiller, and commercial satellites. DIMS and CNPS will be installed at DSCS Operations Centers and DISA Management Sites at worldwide locations. Development of Transformational Communications (TC) SATCOM equipment will be accomplished in accordance with a TC SATCOM architecture.

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0303142A - SATCOM Ground Environment (SPACE)

PROJECT
253

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . DIMS Software	C / CPFF	JHU/APL, Laurel, MD	15838	3672	2Q	4138	2Q	3038	1-2Q	Continue	Continue	Continue
b . CNPS	C / FFP	Logicon, Winter Park, FL	14418	4276	2Q	5025	2Q	2043	1-2Q	Continue	25762	Continue
Subtotal:			30256	7948		9163		5081		Continue	Continue	Continue

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Matrix Support	MIPR	Fort Monmouth, NJ	2279	869	1-2Q	1069	1-2Q	1124	1-2Q	Continue	Continue	Continue
b . SETA Support	C / CPFF	Fort Monmouth, NJ	774	330	1-2Q	760	1-2Q	715	1-2Q	Continue	Continue	Continue
c . Engineering Support	C / CPFF	JHU/APL, Laurel, MD	100	100	1-2Q	150	1-2Q	150	1-2Q	Continue	Continue	Continue
d . Core Support	Various	Fort Monmouth, NJ	1404	542	1-4Q	563	1-4Q	569	1-4Q	Continue	Continue	Continue
Subtotal:			4557	1841		2542		2558		Continue	Continue	Continue

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0303142A - SATCOM Ground Environment (SPACE)

PROJECT
253

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . SEL	MIPR	Fort Monmouth, NJ	3241	1027	2Q	1091	2Q	1100	2Q	Continue	Continue	Continue
Subtotal:			3241	1027		1091		1100		Continue	Continue	Continue

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . PM Admin	Various	Fort Monmouth, NJ	2384	600	1-4Q	600	1-4Q	600	1-4Q	Continue	Continue	Continue
Subtotal:			2384	600		600		600		Continue	Continue	Continue
Project Total Cost:			40438	11416		13396		9339		Continue	Continue	Continue

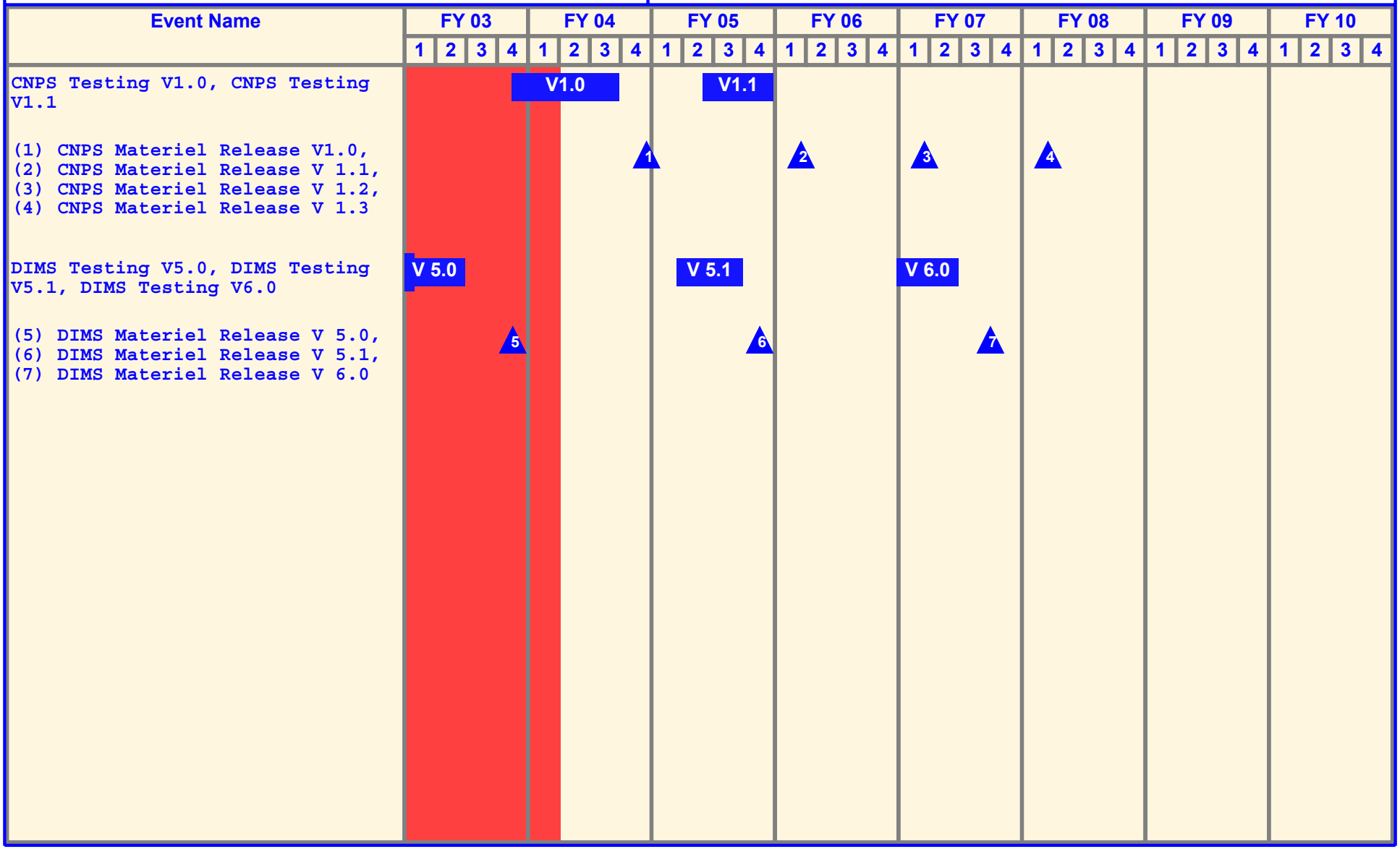
Schedule Profile (R4 Exhibit)

February 2004

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0303142A - SATCOM Ground Environment (SPACE)

PROJECT
253



Schedule Detail (R4a Exhibit)

February 2004

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0303142A - SATCOM Ground Environment (SPACE)

PROJECT
253

Schedule Detail	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Start CNPS V1.0 Testing	4Q						
Complete CNPS V1.0 Testing		3Q					
CNPS V1.0 Materiel Release		4Q					
DIMS Version 5.0 Software Testing - Ending	2Q						
DIMS Version 5.0 Materiel Release	4Q						
DIMS Version 5.1 Software Testing - Beginning			1Q				
DIMS Version 5.1 Software Testing - Ending			3Q				
DIMS Version 5.1 Materiel Release			4Q				
DIMS Version 6.0 Software Testing - Beginning				4Q			
DIMS Version 6.0 Software Testing - Ending					2Q		
DIMS Version 6.0 Materiel Release					3Q		
CNPS V1.1 Testing - Beginning			2Q				
CNPS V1.1 Testing - Ending			4Q				
CNPS V1.1 Materiel Release				1Q			
CNPS V1.2 Materiel Release					1Q		
CNPS V1.3 Materiel Release						1Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0303142A - SATCOM Ground Environment (SPACE)**	**384**

COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
384 SMART-T	16307	25912	16189	1874	0	0	0	0	95330

A. Mission Description and Budget Item Justification: The Secure Mobile Anti-Jam Reliable Tactical Terminal (SMART-T) provides a range extension capability for the Army's Mobile Subscriber Equipment (MSE) and emerging Warfighter Information Network - Tactical. Specifically, the SMART-T provides a satellite interface to permit uninterrupted communications as our advancing forces move beyond the line-of-sight of terrestrial systems. The SMART-T communicates at both low and medium data rates (LDR/MDR) over the MILSTAR satellite constellation. It is compatible with the UHF Follow-On (UFO), the Navy Fleet SATCOM EHF satellite packages, and MIL-STD-1582C compatible payloads. SMART-T provides the security, mobility, and anti-jam capability required to defeat the threat to assured communications and satisfy the critical need for robust, secure, beyond line of sight communications. The SMART-T provides Low Probability of Interception and Low Probability of Detection (LPI/LPD), avoiding being targeted for destruction, jamming, or intercept. The prime mover is a High Mobility Multi-Purpose Wheeled Vehicle (HMMWV) configured with all the electronics and the self-erectable antenna.

This program is the developmental effort to allow SMART-T to operate over the Advanced Extremely High Frequency (AEHF) satellite constellation. The AEHF upgrade modification is under development. The upgrade provides a four-fold increase in communication capacity over the current SMART-T. Three satellite payload simulators are being developed to support the AEHF RDTE activities. A simulator will also be developed to facilitate the training mission. This system supports the Current transition path of the Transformation Campaign Plan (TCP).

Accomplishments/Planned Program	FY 2003	FY 2004	FY 2005
Payload specification change development	505	1073	476
Development of AEHF satellite payload simulators	2095	2119	562
AEHF development efforts	13707	21970	15151
SBIR/STTR	0	750	0
Totals	16307	25912	16189

B. Other Program Funding Summary	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
BC4002 - SMART-T	11935	52624	73354	69857	49193	51058	5079	Continuing	Continuing
BS9720 - Spares	14	1025	2939	4618	5655	10283	7095	Continuing	Continuing

C. Acquisition Strategy: The SMART-T terminal is currently being upgraded to be compatible with the emerging Advanced EHF (AEHF) satellites being developed by the Air Force. The SMART-T AEHF terminal development effort is synchronized with the Air Force satellite development effort to insure that AEHF terminals are available when the AEHF satellites are operationally available. As part of the AEHF upgrade effort, satellite simulators are being developed for testing of the AEHF waveform and terminal integration efforts. A total of 210 SMART-T terminals (129 Army, 29 Air Force, 36 Marines, 4 JCSE and 12 other DoD) have been procured to date. A Follow-on Production contract is currently in place to procure the remaining Army and other Service requirements. Contract options can be exercised through FY06. All SMART-T terminals currently being procured will be upgraded to provide the AEHF capability following completion of the development effort.

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0303142A - SATCOM Ground Environment (SPACE)

PROJECT
384

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Dual Development Contracts	C / CPIF	Rockwell - Richardson, TX / Raytheon - Marlborough, MA	117173	0		0		0		0	117173	0
b . Baseline Mods	SS / CPFF	Raytheon - Marlborough, MA	85255	13795	2Q	21260	1Q	11610	1Q	0	131920	0
c . Transmitter Development	SS / CPFF	Raytheon - Marlborough, MA	0	0		2074	1Q	2719	1Q	0	4793	0
d . Govt Support	MIPR	Various	14321	159	2Q	168	1Q	184	1Q	Continue	Continue	0
e . GFE	MIPR	Various	149	0		0		0		0	149	0
Subtotal:			216898	13954		23502		14513		Continue	Continue	0

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0303142A - SATCOM Ground Environment (SPACE)

PROJECT
384

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Other Contracts	MIPR	Various	11290	0		0		0		0	11290	0
b . Core Support	N/A	PM WIN-T - Fort Monmouth, NJ	5347	111	1Q	109	1Q	122	1Q	Continue	Continue	0
c . Lab Activities	MIPR	Various	7340	202	2Q	228	1Q	249	1Q	Continue	Continue	0
Subtotal:			23977	313		337		371		Continue	Continue	0

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Simulator Development	MIPR	MIT Lincoln Labs - Lexington, MA	20775	2040	1Q	2073	1Q	544	1Q	0	25432	0
b . DT&OT Test Support	MIPR	Various	6700	0		0		761	1Q	Continue	Continue	0
c . Test Bed Development	MIPR	MIT Lincoln Labs Lexington, MA	2980	0		0		0		0	2980	0
Subtotal:			30455	2040		2073		1305		Continue	Continue	0

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0303142A - SATCOM Ground Environment (SPACE)

PROJECT
384

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Tech Support of SMART-T Development	MIPR	MIT Lincoln Labs Lexington, MA	7900	0		0		0		0	7900	0
Subtotal:			7900	0		0		0		0	7900	0
Project Total Cost:			279230	16307		25912		16189		Continue	Continue	0

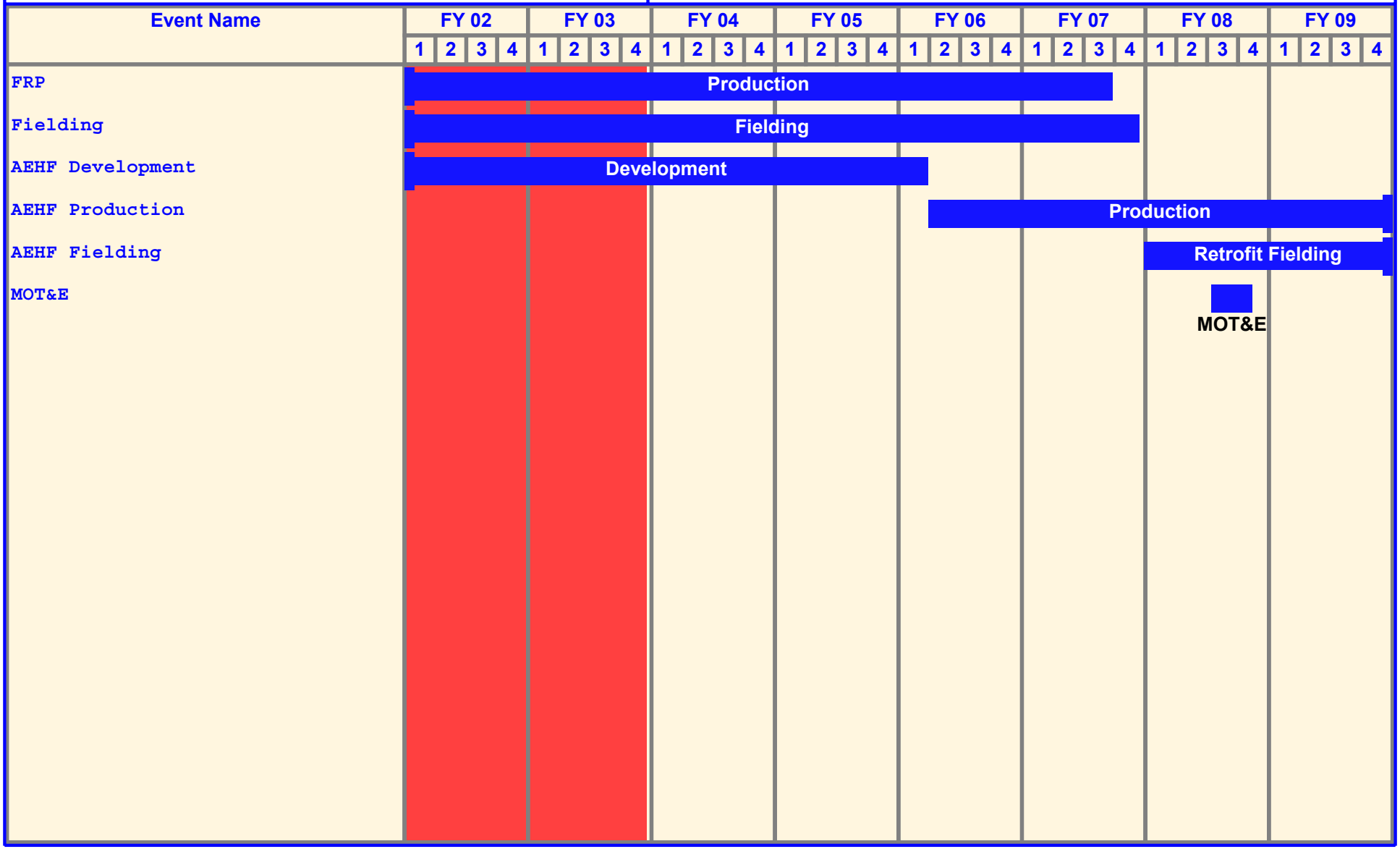
Schedule Profile (R4 Exhibit)

February 2004

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0303142A - SATCOM Ground Environment (SPACE)

PROJECT
384



Schedule Detail (R4a Exhibit)

February 2004

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0303142A - SATCOM Ground Environment (SPACE)**	**384**

Schedule Detail	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Continue AEHF Simulator Development	1-4Q	1-3Q					
AEHF Simulator Development Completed		4Q					
Continue AEHF Development	1-4Q	1-4Q	1-4Q				
AEHF Development Completed				1Q			
Developmental Testing Completed				1Q			
Award Production AEHF Mod Contract				2Q			
Interoperability Testing Events				1-4Q	1-4Q		
Fielding of AEHF Retrofit Kits						1-4Q	1-4Q
Multi Service Operational Test & Evaluation (MOT&E)						3-4Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0303142A - SATCOM Ground Environment (SPACE)**	**456**

COST (In Thousands)		FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
456	MILSATCOM SYSTEM ENGINEERING	39993	47081	12578	11379	10751	10674	10603	Continuing	Continuing

A. Mission Description and Budget Item Justification: MIL SYS ENG provides centralized funding for advanced systems engineering, product support and analysis, experimentation of new and emerging communication / network architectures and technologies. Contributes to the development of Capability Requirements Documents (CRDs), system and technical requirements definitions for Army's Future force and to ensure joint interoperability.

MIL SYS ENG supports the end to end system engineering and technology assessment efforts associated with the integration of network systems (WIN-T/FCS) with the SATCOM Roadmap in support of Transformational Communications for the Joint Warfighter. Supporting documentation and requirements are SATCOM CRD, GIG CRD, TC CDD / TRDs and the WIN-T/FCS ORDs. This system supports the Current transistion path of the Transformation Campaign Plan(TCP)

Accomplishments/Planned Program	FY 2003	FY 2004	FY 2005
Conduct various developmental efforts or analysis and trades to provide enhanced system/network capability and joint interoperability in support of Transformational Communications and Joint Interoperability	3184	4334	3355
System Engineering in support of technology assessment and transistion for WIN-T network / communication systems	2037	1581	1348
Experimentation and prototyping of critical technologies	1752	3283	2800
AEHF and WGS System Engineering in support of network system / terminal acquisition and joint interoperability	1932	2932	2575
Army technology development IAW DoD Transformation Communication System (TCS)	5000	13000	0
Development of SHF Ka band augmentation (KaSAT)	15800	9600	2500
Development of an integrated Ka band capability for Army SHF terminals	9000	11000	0
ABCS System Engineering and Integration Efforts (SE&I)	1288	0	0
Small Business Innovative Research / Small Business Technology Transfer Programs (SBIR/STTR)	0	1351	0
Totals	39993	47081	12578

B. Other Program Funding Summary	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
BB8417 - MOD OF IN-SVC (TAC SAT)	16203	10589	198	199	200	200	0	0	38979
BA9350 - SHF TERM	77093	17362	30621	22059	19227	0	0	0	175902
BC4002 - SMART-T	11935	52624	73354	69857	49193	51058	5079	Continuing	Continuing

C. Acquisition Strategy: This project funds advanced systems engineering, research, development, test and evaluation of new and emerging technologies to optimize terminal performance and communications control. Once the technologies are mature and deemed feasible, funding and management responsibility for implementation of the technology will transition to cognizant WIN-T SATCOM programs.

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0303142A - SATCOM Ground Environment (SPACE)

PROJECT
456

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Terminal Upgrades	Various	Various	1524	0		0		0		0	1524	0
b . Ka Band Integration	Various	L-3 Communications - West - Salt Lake City, UT	0	9000	2Q	11000	2Q	0		0	20000	0
c . Ka Band Augmentation	SS/CPAF	Titan Corporation - San Diego, CA	5300	15800	2Q	8600	2Q	2000	2Q	0	31700	0
d . Advanced Wideband/TCS	Various	Various	0	5000	2Q	14351	2Q	0		0	19351	0
e . ABCS SE&I	MIPR	Various	0	1288	2Q	0		0		0	1288	0
Subtotal:			6824	31088		33951		2000		0	73863	0

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0303142A - SATCOM Ground Environment (SPACE)

PROJECT
456

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Engineering (In-House)	MIPR	Various	6467	2052	2Q	2459	2Q	1400	2Q	Continue	Continue	0
b . Engineering (Contract)	Various	Various	6561	2119	2Q	2821	2Q	3107	2Q	Continue	Continue	0
c . System Architecture & Analysis	Various	MIT Lincoln Labs, Lexington, MA; MITRE	900	2442	2Q	3200	2Q	2121	2Q	Continue	Continue	0
Subtotal:			13928	6613		8480		6628		Continue	Continue	0

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Test Support	MIPR	MIT Lincoln Labs, Lexington, MA	2669	500	1Q	0		700	2Q	Continue	Continue	0
b . Test Support	Various	Various	2194	1292	2Q	4000	1Q	1400	1Q	Continue	Continue	0
Subtotal:			4863	1792		4000		2100		Continue	Continue	0

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0303142A - SATCOM Ground Environment (SPACE)

PROJECT
456

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Advanced EHF & Architecture	MIPR	MIT Lincoln Labs Lexington, MA	6190	0		0		500	1Q	Continue	Continue	0
b . Advanced Wideband System Architecture	MIPR	Various	500	500	2Q	650	2Q	1350	1Q	Continue	Continue	0
Subtotal:			6690	500		650		1850		Continue	Continue	0
Project Total Cost:			32305	39993		47081		12578		Continue	Continue	0

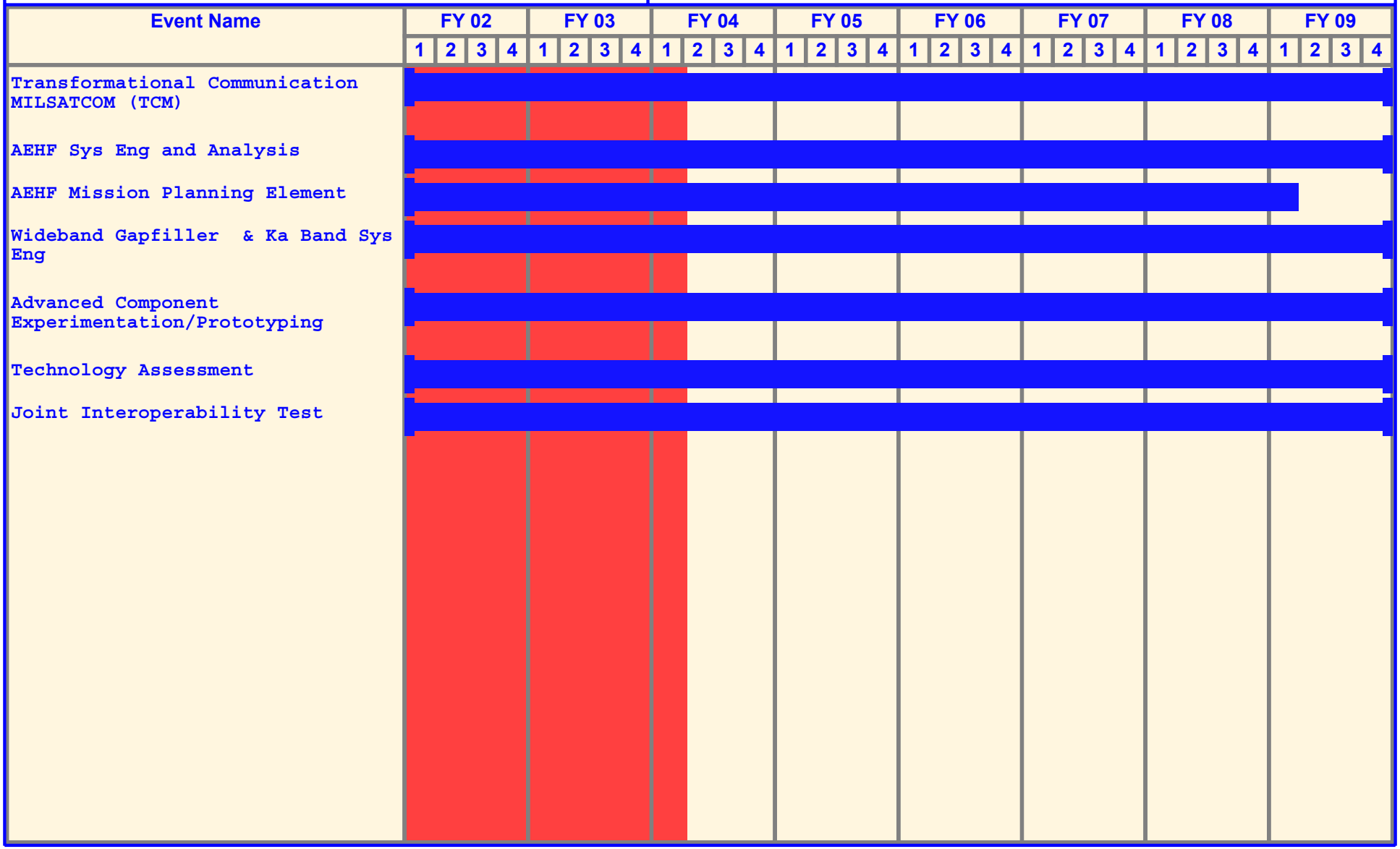
Schedule Profile (R4 Exhibit)

February 2004

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0303142A - SATCOM Ground Environment (SPACE)

PROJECT
456



Schedule Detail (R4a Exhibit)

February 2004

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0303142A - SATCOM Ground Environment (SPACE)

PROJECT
456

Schedule Detail	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Transformational Communication MILSATCOM (TCM)	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
AEHF System Engineering and Analysis	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
AEHF Mission Planning Element (AMPE)	1-4Q	1-4Q	1-4Q	1-3Q	1-4Q	1-4Q	
Wideband Gapfiller and Ka Band System Engineering	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Advanced Component Experimentation / prototyping	3-4Q						
Technology Assessment /MUOS	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Joint Interoperability Tests	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Support MPE Upgrade for AEHF					2-4Q		
Support AEHF AEST 8000 (System Test)					1Q		
Conduct Transformation Communication (TC) System Engineering Studies/Analysis	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
TC Technical Requirement Document / Interface Control Document Development	1-4Q	1-4Q	1-4Q	1-4Q			
TC Design Review SDR / PDR / CDR	1-4Q	1-4Q	3Q	2Q	4Q		
Network Plan / Integration			1-4Q	1-4Q	1-4Q	1-4Q	1-4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)

February 2004

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0303142A - SATCOM Ground Environment (SPACE)**	**562**

COST (In Thousands)		FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
562	MBAND INT SAT TERM MIST	0	0	13853	31640	71723	35261	37524	Continuing	Continuing

A. Mission Description and Budget Item Justification: Multi-band Integrated Satellite Terminal (MIST) high capacity communications capability efforts were initiated in FY03/04 under the PE/Proj 0303142A/D456 MILSATCOM System Engineering line, using funds identified for DoD Transformational Communication MILSATCOM (TCM). The vision for TCM is to build and operate a network of networks which inter-connect at selected points in space and on the ground to improve interoperability and redundancy while still protecting sensitive classified information that flows in portions of the system.

MIST will develop the high capacity communications capability for the Future Force and will be pervasively integrated into the Army's Future Force communication architecture, as well as the other service's and joint communication architectures. The high capacity communications capability is fully synchronized with the Warfighter Information Network-Tactical (WIN-T), Future Combat System (FCS) and Transformational Communications MILSATCOM/Architecture (TCM/TCA). The high capacity communications capability is envisioned to be integrated into a family of tactical Multi-band communications terminals that will provide inter-network and reach back communications services across the Army's Future Force tactical networks while on the move and on the quick halt. It will also provide low, near zero, probability of detection, interception (LPD/LPI) and exploitation. The high capacity communications capability family consists of a Mobile embedded terminal that will provide Communications-on-the-Move (COTM), as well as Communications-on-the-Quick-Halt (COTQH) and Transportable configurations. The terminals will be multi-band and network (IP) capable and will be compliant with JTRS Software Communication Architectures (SCA) requirements.

The high capacity communications capability System Development and Demonstration (SDD) phase will commence in FY06. Prior to the start of SDD, various studies will be initiated that will ensure the tri-service community is well poised to execute a cost effective and streamlined acquisition program that is properly integrated within emerging communication frameworks. The program will be structured to allow for block enhancements, and to introduce enhanced capabilities and configurations that will support these evolving architectures. This system supports the Future transition path of the Transformation Campaign Plan (TCP).

Accomplishments/Planned Program	FY 2003	FY 2004	FY 2005
Competitive high capacity communications capability studies that include Waveform definitions for Multi-band SCA compliant terminals and Modeling and Simulation	0	0	3750
Antenna and Architecture design efforts	0	0	4353
Milestone B preparation and PRE-SDD contract efforts to include RFP and SSEB	0	0	5750

Accomplishments/Planned Program (continued)	FY 2003	FY 2004	FY 2005
Totals	0	0	13853

B. Other Program Funding Summary	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
0303142A D456 - MILSATCOM SYSTEM ENG	39993	47081	12578	11379	10751	10674	10603	Continuing	Continuing
BC4150 - MIST	0	0	0	0	0	40000	74990	Continuing	Continuing

Multi-band Integrated Satellite Terminal (MIST) high capacity communications capability efforts were initiated in FY03/04 under the PE/Proj 0303142A/D456 MILSATCOM System Engineering line, using funds identified for DoD Transformational Communication MILSATCOM (TCM).

C. Acquisition Strategy: A competitive high capacity communications capability SDD contract will be awarded in FY06, following competitive studies that will be performed by a minimum of 2 contractors in FY04/05. The SDD phase will be structured to maximize competitive opportunities throughout Low Rate Initial Production and Full Rate Production. The SDD phase will also ensure synchronization with the Transformational Communications MILSATCOM (TCM), the Future Force based, Future Combat System (FCS) and Warfighter Information Network-Tactical (WIN-T).

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0303142A - SATCOM Ground Environment (SPACE)

PROJECT
562

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . System Development	MIPR	MIT Lincoln Labs, Lexington MA	0	0		0		2623	1Q	Continue	2623	0
b . Contracts	CPFF	TBD	0	0		0		5020	1Q	Continue	Continue	0
c . Government Engineering Support	Various	PM WIN-T, Fort Monmouth, NJ	0	0		0		910	1-2Q	Continue	Continue	0
Subtotal:			0	0		0		8553		Continue	Continue	0

Remarks: In FY05, various high capacity communications capability studies will continue that will ensure the Army is well poised to execute a cost effective and streamlined acquisition program that is properly integrated within emerging communication frameworks.

II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Core Support	N/A	PM WIN-T, Fort Monmouth, NJ	0	0		0		970	1-2Q	Continue	Continue	0
b . Other Contracts	Various	Various	0	0		0		1740	1-2Q	Continue	Continue	0
Subtotal:			0	0		0		2710		Continue	Continue	0

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0303142A - SATCOM Ground Environment (SPACE)

PROJECT
562

III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Engineering (In-House)	N/A	PM WIN-T, Fort Monmouth, NJ	0	0		0		270	1-2Q	Continue	Continue	0
Subtotal:			0	0		0		270		Continue	Continue	0

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Government Program Support	N/A	PM WIN-T, Fort Monmouth, NJ	0	0		0		2320	1-2Q	Continue	Continue	0
Subtotal:			0	0		0		2320		Continue	Continue	0
Project Total Cost:			0	0		0		13853		Continue	Continue	0

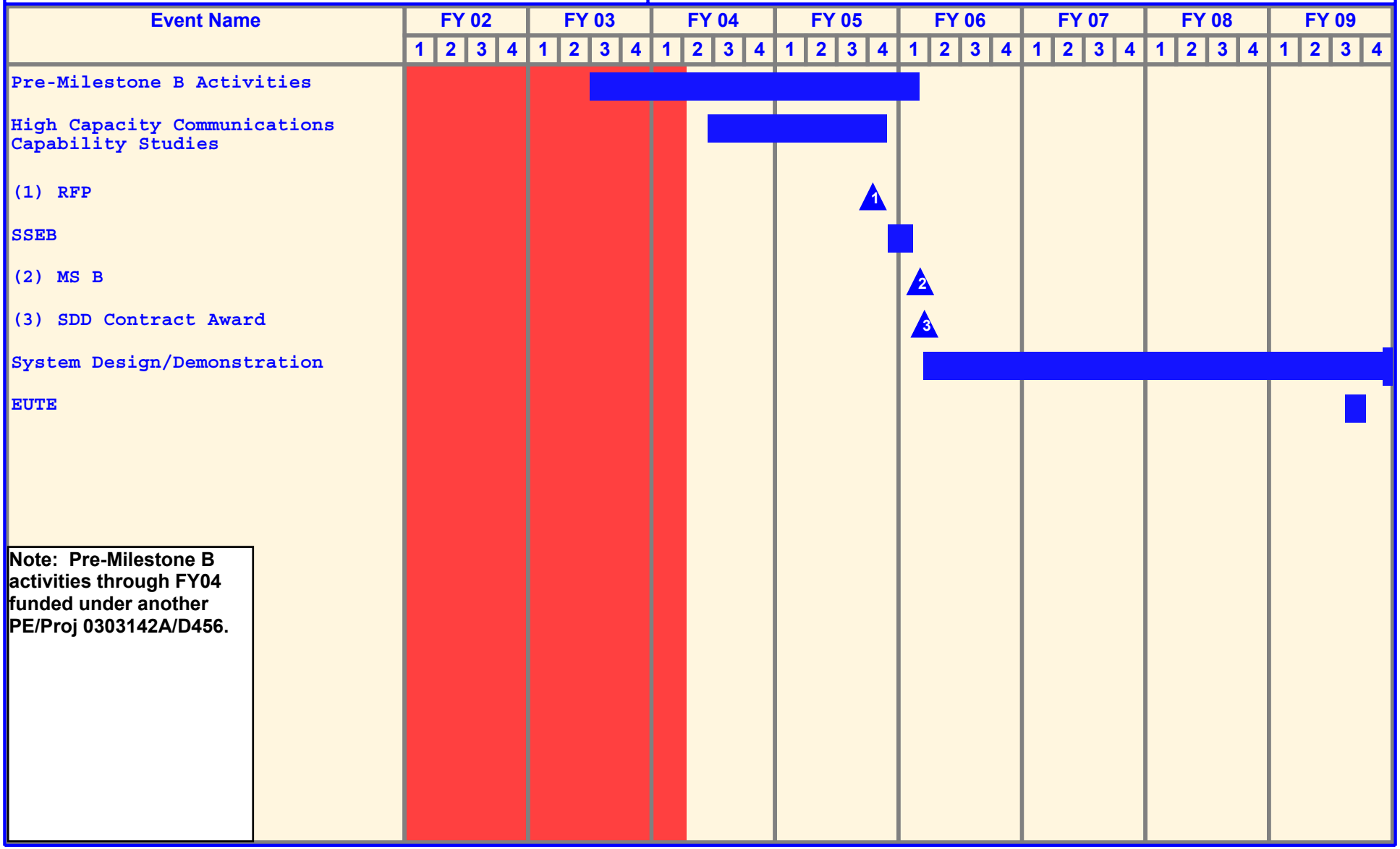
Schedule Profile (R4 Exhibit)

February 2004

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0303142A - SATCOM Ground Environment (SPACE)

PROJECT
562



Note: Pre-Milestone B activities through FY04 funded under another PE/Proj 0303142A/D456.

Schedule Detail (R4a Exhibit)

February 2004

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0303142A - SATCOM Ground Environment (SPACE)**	**562**

Schedule Detail	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
High capacity communications capability studies		2-4Q	1-4Q				
Pre-Milestone B Activities	3-4Q	1-4Q	1-4Q	1Q			
SDD RFP Release			4Q				
Milestone B				1Q			
SDD Contract Award				1Q			
SDD Phase				1-4Q	1-4Q	1-4Q	1-4Q
SDD EUTE							3-4Q

Pre Milestone B activities thru FY04, and FY04 study efforts are funded under PE/Proj 0303142A/D456.