CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification | DATE: **February 2006**

APPROPRIATION/BUDGET ACTIVITY
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA 7

R-1 ITEM NOMENCLATURE
0303109N Satellite Communications (Space)

COST ($ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost		**447.061**	**539.489**	**748.662**	**711.916**	**588.057**	**365.335**	**121.103**
0728 EHF SATCOM Terminals		**47.914**	**50.020**	**82.719**	**91.639**	**105.891**	**72.000**	**17.067**
0731 Fleet Satellite Comm		**0.683**	**0.621**	**0.685**	**1.766**	**1.785**	**1.779**	**1.820**
2472 Mobile User Objective System		**375.209**	**462.661**	**665.258**	**618.511**	**473.906**	**218.710**	**52.187**
9122 Advanced Wideband System/Transformational Comm.		**17.567**	**20.187**	**0.000**	**0.000**	**6.475**	**72.846**	**50.029**
9999 Congressional Adds		**5.688**	**6.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
Quantity of RDT&E Articles		**2**	**2**	**21**	**1**	**0**	**4**	**0**

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(U) Navy Extremely High Frequency (EHF) Satellite Communications (SATCOM) Program provides for the development and production of terminals to provide anti-jam (A/J), low probability of intercept (LPI)/detection communications capability for Command and Control of the fleet. The terminals will provide physical and electromagnetically survivable, worldwide communications in the current and projected electromagnetic and nuclear threat environments. Navy EHF terminals are interoperable with Army and Air Force terminals and will operate with Milstar as well as EHF packages on-board Ultra High Frequency (UHF) Follow-On (UFO) Satellites 4 through 11 and FLTSATCOM Satellites 7 and 8. The increased capability provided by EHF terminals is accomplished by use of the wider bandwidths available at extremely high frequencies, narrow antenna bandwidths, spread spectrum techniques, on-board satellite processing, and advanced signal processing technology. The EHF Medium Data Rate (MDR) upgrade program is complete and provides increased bandwidth by providing higher data rates [4.8 kilobits per second (Kbps) – 1.544 megabits per second (Mbps)] when communicating with Milstar II satellites.

(U) The Navy EHF Communications Controller (NECC) provides automated, netted tactical data information exchange over jam resistant EHF Low Data Rate (LDR) satellite links. The NECC will provide for load and channel sharing, resource management, communications management and planning, network control and monitoring, and packet switching.

(U) The Navy Super High Frequency (SHF) Satellite Communications (SATCOM) program provides for the development and production of terminals to provide high capacity, reliable, low probability of intercept (LPI), secure, and jam resistant communications to Joint and Allied Forces. SHF SATCOM operates with the Defense Satellite Communication System (DSCS), DSCS Service Life Extension Program (SLEP), and Wideband Gapfiller Satellite (WGS) System satellites. The SHF SATCOM system is comprised of satellites, ground stations, and aircraft, ship and ground terminals to provide assured worldwide access to services such as Defense Information Systems Network (DISN), Global Command and Control System (GCCS), Plain Old Telephone Service (POTS), Secure Telephone Unit III (STU III) Secure Communications Service, Internet Protocol Routed Networks, and other digital services. The satellite systems SHF SATCOM operate over transitioned from old technology DSCS III satellites to the more advanced DSCS SLEP and WGS satellites beginning in FY 1999 and continuing through FY 2005. The population of Navy SHF SATCOM terminals is also growing at a rapid pace. In order to meet the communication requirements of Navy users, advanced communication technologies for SHF SATCOM terminals must be developed to take full advantage of the capabilities of the new satellites in an efficient manner.

(U) The EHF Time Division Multiple Access (TDMA) Interface Processor (TIP) will support wide area network (WAN) implementation through reliable, efficient, netted data exchange using MDR services. The MDR TIP combines support for general-purpose internet protocol (IP) data delivery and high speed, rapid delivery of tactical data within a single system architecture. TIP supports single-beam, multi-beam, and multi-satellite networks.

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA 7**		R-1 ITEM NOMENCLATURE 0303109N Satellite Communications (Space)

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(U) The Sensitive Compartmented Information Networks (SCI Networks), is an evolutionary acquisition program designed to provide enabling technology necessary for Intelligence, Cryptologic, and Information Warfare Systems with protected and reliable delivery of SI/SCI data through a secure, controllable network interface with the ADNS architecture. Specifically, SCI Networks shall ensure the availability of networks in defiance of hostile Information Warfare (IW). Technical, physical, and procedural security will be used to control access, protect Department of Navy (DoN) information technology resources, and ensure continuous operation of the system within an accredited security posture. This network connectivity will greatly expand the capability of cryptologic and intelligence personnel to fully interact with shore based nodes to provide expanding support to their commanders, including situational awareness, indications and warning (I&W), enemy force intentions, intelligence preparation for the battlefield, and battle damage assessment (BDA). The SCI Networks will provide real time indications and warning support to joint and component commanders through reliable high-speed transfer of sensor data and intelligence information. Enhanced interoperability with other services, agencies, and allies will permit a level of integration of SI operations not achievable with current systems.

(U) The Mobile User Objective System (MUOS) program provides for the development of the next generation DoD advanced narrowband communications satellite constellation. The current UHF Follow-On (UFO) constellation is projected to degrade below acceptable availability parameters in 2009. The MUOS program is baselined to the joint warfighter requirements stipulated in the July 2001 ORD as modified by the 2003 JROC-M and will be designed to provide increased capacity and availability to the mobile warfighter.

(U) This MUOS RDT&E effort supports a USecAF approved IOC in 2010 and FOC in 2014. A MUOS Risk Reduction & Design Development (RRDD) contract was awarded in September 2004 to Lockheed Martin after Key Decision Point (KDP) B. The approval at KDP-B in September 2004 officially designated the MUOS Program as a Department of Defense Space Major Defense Acquisition Program. FY05-FY07 MUOS efforts are focused on Preliminary Design Review (PDR) and Critical Design Review (CDR). The funding for FY07 also includes software development for UFO TT&C Terminal upgrades due to parts obsolescence, advanced planning, and engineering for the terminal installation.

(U) The Navy Transformational Communications Integrated Terminal Satellite Communications (SATCOM) program provides for the development and production of terminals to provide high capacity reliable, low probability of intercept (LPI), Anti-Jam (AJ), communications capability to the fleet. Terminals will support multiple data streams over Q-band, Ka-band, and X-band. The terminals will also support mesh networking without the need for gateway terminals. Development will focus on a LAN to Antenna capability, including quality of service required for Navy unique missions. AWS/TC Program draft acquisition strategy consists of terminal suite development and environmental qualification, on-orbit testing, platform integration and test, software enhancements and regression testing throughout the life of the program.

(U) The Joint Integrated System Technology for Advanced Networking Systems (JIST-NET) project is an ongoing effort to integrate, develop, and support SATCOM (Military and Commercial) multi-spectrum communications planning, management, and control capabilities that interface with many mono-spectral planning and management tools and with advanced planning tools. This project has extremely high visibility within the DoD and United States Congress. The project was realigned to PEO C4I & Space from the United States Air Force starting in FY04 to meet the requirements and funding priorities established for the project.

(U) This project includes conducting JIST-NET software development and engineering analysis. The project is currently in the system and software engineering phase. The contractor will design, implement, and test the next JIST-NET prototype. Also, comprehensive studies of the actual usage of satellite resources in a given Area Of Responsibility (AOR) for a specified period of time will be performed. Support will include all requirements analysis, development, and interface definition. The project will define requirements and interface/integrate with existing and under developed SATCOM mission management tools. The contractor will update the JIST-NET Software Design for the next JIST-NET prototype using the results of a Software Requirements Analyses. The Software Design Update will build upon the current JIST-NET V1S3 prototype software. The project team will provide all the necessary tools, software, documentation, and support necessary to accomplish the required analysis and integration. The long-term goal is to provide dynamic real time or near real time apportionment, allocation, and adjudication of satellite resources for the warfighters based on priorities and requirements as assigned by the Operational Commanders.

(U) Covert Communications required for operational utilization.

(U) JUSTIFICATION FOR BUDGET ACTIVITY:
This program is funded under operational systems development because it encompasses engineering and manufacturing development for upgrade of existing operational systems.

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY /** **BA 7**	0303109N Satellite Communications (Space)	

PROGRAM CHANGE SUMMARY:

(U) Funding:	FY 2005	FY 2006	FY 2007
FY06 President's Budget	463.476	541.980	795.855
FY07 President's Budget	447.061	539.489	748.662
Total Adjustments	-16.415	-2.491	-47.193
Summary of Adjustments			
FORCEnet Transformational Communications (TC)			-10.000
Technical Adjustment to Nuclear Alterations			-0.055
Additional LCS Mission Modules			0.055
Contract Support Reduction			-6.212
Transformational Communications Delay			-6.400
NWCF Civpers Efficiencies			-0.160
UHF SATCOM Integrated Waveform OSD Offset			-1.900
Small Business Innovation Research (SBIR) Tax	-11.587		
MUOS Ground Station Construction			-26.180
Federal Technology Transfer Tax	-0.064		
Nuclear Physical Security (OSD-09)	0.004		
Inflation			3.461
Civpers Raise Rate Change			0.198
Sec. 8026(f): Federally Funded Research and Development Centers		-0.356	
Sec. 8125: Revised Economic Assumptions		-2.467	
Congressional Adds		6.000	
Congressional Action 1% Reduction		-5.668	
Department of Energy Transfer	-0.356		
Misc Navy Adjustments	-4.412		
Subtotal	-16.415	-2.491	-47.193

(U) Schedule:

EHF SATCOM Terminals (project 0728) - SDD contract award Oct 2003. Required Acquisition Strategy Report (ASR) approved June 2002, and ASR Update approved July 2003. Schedule Development effort to support the additional SCA scope and cost are incorporated into the program baseline. NMT funding profile adjustment requires the prototype phase to be extended an additional 6 months. Competitive down select currently scheduled for May 2007.

Fleet Satellite Comm. (project 0731) - MS III (Submarine) and Submarine/BCT DT removed per MDA ADM decision of 2 Sep 2004 to grandfather Submarine/BCA variants under 4 OCT 2001 SCI Networks MS III ADM. 148E and 148D schedules shifted to the right due to delayed contract award. MS III, now know as MS C, shifted to the left and updated to reflect decision by PM to field 148E and 148D as a maintenance modification. 148E and 148D schedule shifted further to the right due to delayed contract award. 148E and 148D will have an Observation of Operational Capability (OOC) in conjunction with their respective Developmental Tests. As a result, 148E and 148D will not have an FOT&E, and as such, that was deleted from the schedule.

Advanced Wideband System/Transformational Communications (project 9122). Program Office began Acquisition Strategy development and refinement in FY04. Milestone B is currently project in FY10.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification — DATE: **February 2006**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	0728 EHF SATCOM Terminals

COST ($ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost		47.914	50.020	82.719	91.639	105.891	72.000	17.067
RDT&E Articles Qty				20				

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(U) Navy Extremely High Frequency (EHF) Satellite Communications (SATCOM) Program provides for the development and production of terminals to provide anti-jam (A/J), low probability of intercept (LPI)/detection communications capability for Command and Control of the fleet. The terminals will provide physical and electromagnetically survivable, worldwide communications in the current and projected electromagnetic and nuclear threat environments. Navy EHF terminals are interoperable with Army and Air Force terminals and will operate with Milstar as well as EHF packages on-board Ultra High Frequency (UHF) Follow-On (UFO) Satellites 4 through 11 and FLTSATCOM Satellites 7 and 8. The increased capability provided by EHF terminals is accomplished by use of the wider bandwidths available at extremely high frequencies, narrow antenna bandwidths, spread spectrum techniques, on-board satellite processing, and advanced signal processing technology. The EHF Medium Data Rate (MDR) upgrade program is complete and provides increased bandwidth by providing higher data rates [4.8 kilobits per second (Kbps) – 1.544 megabits per second (Mbps)] when communicating with Milstar II satellites.

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CLASSIFICATION:		
EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	0728 EHF SATCOM Terminals

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION (continued):

(U) The Navy Multiband Terminal (NMT) Program is the required Navy component to the Advanced EHF Program for enhancing protected and survivable satellite communications to Naval forces. The NMT system provides an increase in single service capability from 1.5 Mbps to 8 Mbps, increases the number of coverage areas and retains A/J, LPI protection characteristics. It is compatible with today's Navy LDR/MDR terminals and will sustain the 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, theater missile defense, and space operations and intelligence. The NMT system will replenish and improve on Navy terminal capabilities of the Milstar, DSCS, WGS and GBS systems. The new system will equip the warfighters with the assured, jam resistant, secure communications as described in the joint AEHF Satellite Communications System ORD. Mission requirements specific to Navy operations, including threat levels and scenarios, are contained in the ORD. The NMT will provide multiband SATCOM capability for ship, submarine, and shore platforms.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	0728 EHF SATCOM Terminals

(U) B. Accomplishments/Planned Program

		FY 05	FY 06	FY 07
AN/WSC-6 WGS Terminal Upgrades		0.650	0.000	0.000
RDT&E Articles Quantity				

(U) **FY05**: Completed Operational testing of advanced modem system and terminal upgrades.

		FY 05	FY 06	FY 07
NMT Development, First & Second Phases		46.514	49.520	82.719
RDT&E Articles Quantity				20

(U) First and second phases of NMT development for System Design and Development (SDD) for ship, shore and submarine platforms.
(U) **FY05:** Continued NMT hardware and software development of 8 SCA compliant prototype terminals. Continued high level test plan. Additional Software Development required to ensure legacy equipment, utilized by NMT program, will meet AEHF Satellite System requirements.
(U) **FY06:** Continue NMT hardware and software development of 8 SCA compliant prototype terminals. Continue high level test plan. Additional Software Development required to ensure legacy equipment, utilized by NMT program, will meet AEHF Satellite System requirements.
(U) **FY07**: Complete terminal hardware and software development for 8 SCA compliant NMT prototypes. Perform over-the-air testing of NMT prototypes and conduct vendor down-select. Commence design and development of 20 Q/Ka capable EDMs and added X-band for submarine platforms. EDM test sets are required at the following sites: one set at contractor facility for testing, one set shared between East/West coast government facilities for program and joint interoperability testing, and one set for operational assessment on platforms. Each set is composed of two ship, one sub, and one shore terminal configurations. In addition, eight EDMs are planned as 1st of class platform installations for unique environmental testing and production phase risk reduction.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	0728 EHF SATCOM Terminals

(U) B. Accomplishments/Planned Program

		FY 05	FY 06	FY 07
EHF Polar		0.750	0.500	0.000
RDT&E Articles Quantity				

(U) EHF POLAR / UFO-11 software development and systems engineering.

(U) **FY05:** Continued development of Tracking, Telemetry and Control subsystems and end-to-end system testing for Polar 2/3 system.
(U) **FY06**: Continue development of Tracking, Telemetry and Control subsystems and end-to-end system testing for Polar 2/3 system.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	0728 EHF SATCOM Terminals

(U) C. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
321500 - OPN Ship and Shore*	38.537	21.106	-	-	-	84.367	182.732

* FY05 and FY06 OPN are NESP funds

(U) Related RDT&E:

(U) PE 0303603F, Milstar

(U) PE 0303601F, Air Force Satellite Communications

(U) D. ACQUISITION STRATEGY:

(U) Navy Multiband Terminal (NMT) Concept Exploration contracts were awarded in FY 2001. Two System Development and Demonstration (SDD) contracts were competively awarded in FY 2004 for the development and demonstration of four prototype terminals per vendor (eight total). In FY 2007, a down select to one vendor will occur for the development, demonstration and procurement of twenty Engineering Developmental Models (EDMs) which will incorporate integrated multi-band capabilities for Q/Ka band, Submarine X-Band, and Ship X/Ka frequency band communication requirements.

(U) E. MAJOR PERFORMERS:

Harris Corp., Melbourne, FL - NMT SDD Vendor; contract awarded Oct. 03
Raytheon, Marlborough, MA - NMT SDD Vendor; contract awarded Oct. 03
Naval Undersea Warfare Center (NUWC), Newport, RI - NMT Technical Director; annual WX document

(U) F. METRICS:

Earned Value Management (EVM) is used for metrics reporting and risk management.

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)

DATE: **February 2006**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	0728 EHF SATCOM Terminals

Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Hardware Development	CPAF	Various	58.436	39.260	10/04	39.701	11/05	53.647	11/06	Continuing	Continuing	
Hardware Development	C/FFP	Harris (Melbourne, FL)	5.901	0.650	10/04					Continuing	Continuing	
Hardware Development	TBD	TBD						21.430	10/06			
Hardware Development	WR	SSC SD (San Diego, CA)	1.077									
Ancillary Hardware Development	CPAF	Raytheon (Marlborough, MA)	57.790									
Software Development	WR	NUWC (Newport, RI)	8.017	0.693	10/04	0.500	10/05			Continuing	Continuing	
Software Development	CPAF	Raytheon (Marlborough, MA)		1.000	04/04	3.700	12/05			Continuing	Continuing	
Systems Engineering	WR	SSC SD (San Diego, CA)	14.169							Continuing	Continuing	
Systems Engineering	WR	NUWC (Newport, RI)	4.974	0.709	10/04	1.994	10/05	1.924	10/06	Continuing	Continuing	
Systems Engineering	Various	Various	9.852	0.423	10/04	0.703	10/05	0.706	10/06	Continuing	Continuing	
GFE	Various	Various	8.158	1.500	10/04	0.300	10/05	0.150	10/06	Continuing	Continuing	
Subtotal Product Development			168.374	44.235		46.899		77.856		Continuing	Continuing	

Remarks:

Development Support	WR	SSC SD (San Diego, CA)	7.504							Continuing	Continuing	
Studies & Analysis	WR	Various	5.536			0.500	10/05	0.500	10/06			
Information Assurance	Various	Various	0.586	0.488	10/04	0.335	10/05	0.340	10/06	Continuing	Continuing	
Subtotal Support			13.626	0.488		0.835		0.840		Continuing	Continuing	

Remarks:

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)

DATE: **February 2006**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E, N / BA-7**

PROGRAM ELEMENT: 0303109N Satellite Communications (Space)

PROJECT NUMBER AND NAME: 0728 EHF SATCOM Terminals

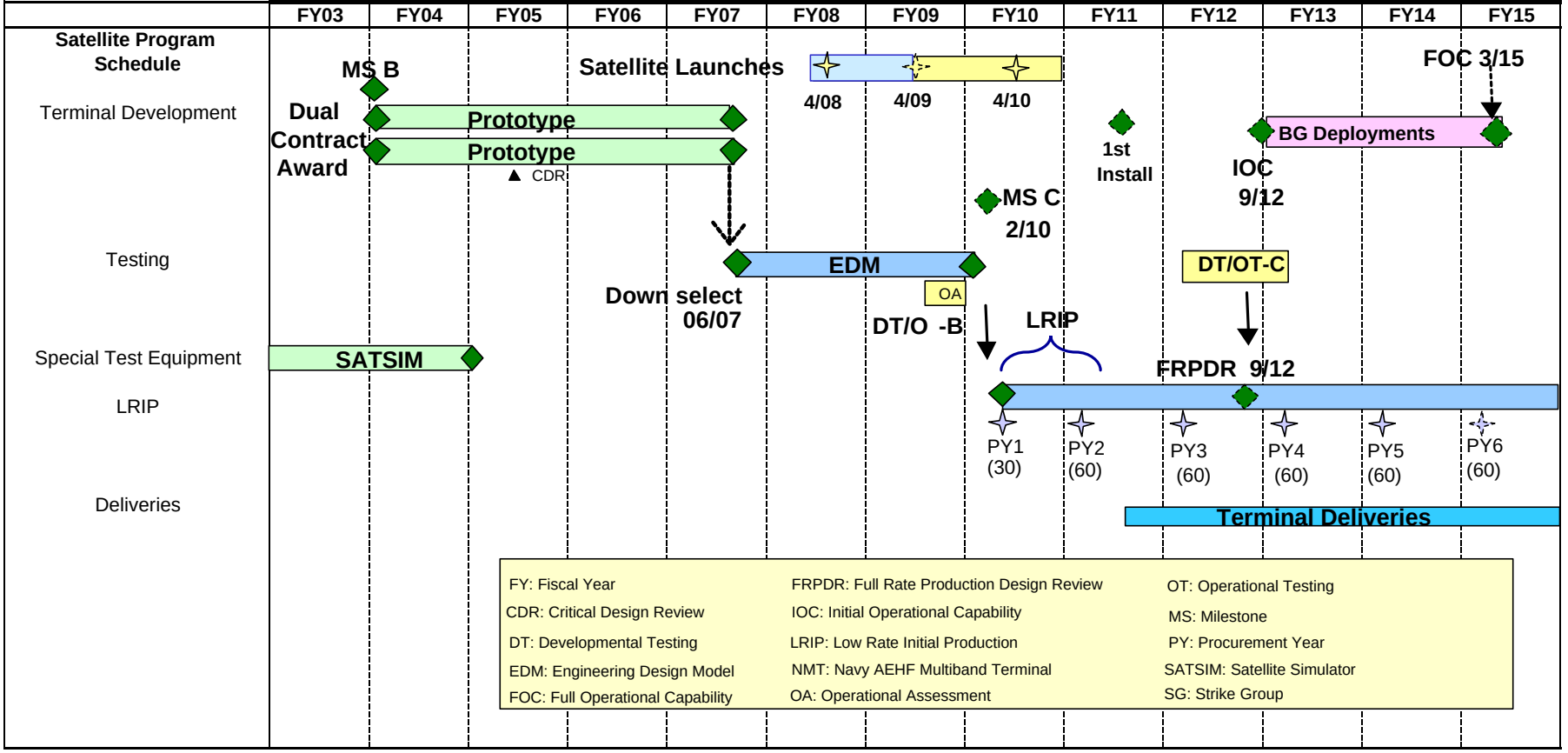
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	SSC SD	10.130	0.483	10/04	0.154	10/05	0.659	10/06	Continuing	Continuing	
Operational Test & Evaluation	WR	Various	0.556							Continuing	Continuing	
Subtotal T&E			10.686	0.483		0.154		0.659		Continuing	Continuing	
Remarks:												
Contract Management	Various	Various	2.480	0.760	10/04	0.716	10/05	0.737	10/06	Continuing	Continuing	
Program Management	Various	Various	2.047	1.548	10/04	1.318	10/05	1.562	10/06	Continuing	Continuing	
Acquisition Management	Various	BAH						0.966	10/06	Continuing	Continuing	
Acquisition Management	WR	NCAD		0.300	09/05							
Travel		Gov't Travel	0.105	0.100	10/04	0.098	10/05	0.100	10/06			
Subtotal Management			4.632	2.708		2.132		3.364		Continuing	Continuing	
Remarks:												
Total Cost			197.318	47.914		50.020		82.719		Continuing	Continuing	

Remarks:

Remarks:

CLASSIFICATION:

EXHIBIT R4, Schedule Profile	DATE: February 2006
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	PROGRAM ELEMENT NUMBER AND NAME 0303109N - Satellite Communications (Space)	PROJECT NUMBER AND NAME 0728 EHF SATCOM Terminals



Note:
Reflects development of 20 EDMs
Production Quantity includes 19 SCN platforms (2 of the PY2 buy are SCN procurements)

CLASSIFICATION:

Exhibit R-4a, Schedule Detail					DATE: **February 2006**			
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA - 7**	PROGRAM ELEMENT 0303109N - Satellite Communications (Space)				PROJECT NUMBER AND NAME 0728 EHF SATCOM Terminals			
Schedule Profile		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Milestone B (MS B)								
Dual Contract Award								
Prototype Complete				3Q				
Engineering Development Model (EDM) Begins (Quantity = 20)				3Q				
Developmental Testing (MS B)						4Q		
Operational Testing (Platform Operational Assessment) (MS B)						4Q		
Milestone C (MS C)							2Q	
Start Low-Rate Initial Production I (LRIP I)							2Q	
Start Low-Rate Initial Production II								1Q
Low-Rate Initial Production I Delivery								2Q
Developmental Testing (MS C) (NOTE 1)								
Operational Testing (MS C) (NOTE 2)								
Full Rate Production Decision Review (FRPDR) (NOTE 3)								
Initial Operational Capability (IOC) (NOTE 4)								
Full Operational Capability (FOC) (NOTE 5)								

NOTE 1: Development Testing (MS C) is scheduled for 2QFY12.
NOTE 2: Operations Testing (MS C) is scheduled for 3Q FY12.
NOTE 3: Full Rate Production Decision Review (FRPDR) is scheduled for 4QFY12
NOTE 4: Initial Operational Capability (IOC) is schedule for 4Q FY12.
NOTE 5: Full Operational Capability is scheduled for 2Q FY15.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification — DATE: **February 2006**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	0731 Fleet Satellite Comm

COST ($ in Millions)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost	**0.683**	**0.621**	**0.685**	**1.766**	**1.785**	**1.779**	**1.820**
RDT&E Articles Qty	**2**	**2**					

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(U) The Sensitive Compartmented Information Networks (SCI Networks), is an evolutionary acquisition program designed to provide enabling technology necessary for Intelligence, Cryptologic, and Information Warfare Systems with protected and reliable delivery of SI/SCI data through a secure, controllable network interface with the ADNS architecture. Specifically, SCI Networks shall ensure the availability of networks in defiance of hostile Information Warfare (IW). Technical, physical, and procedural security will be used to control access, protect Department of Navy (DoN) information technology resources, and ensure continuous operation of the system within an accredited security posture. This network connectivity will greatly expand the capability of cryptologic and intelligence personnel to fully interact with shore based nodes to provide expanding support to their commanders, including situational awareness, indications and warning (I&W), enemy force intentions, intelligence preparation for the battlefield, and battle damage assessment (BDA). The SCI Networks will provide real time indications and warning support to joint and component commanders through reliable high-speed transfer of sensor data and intelligence information. Enhanced interoperability with other services, agencies, and allies will permit a level of integration of SI operations not achievable with current systems.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	0731 Fleet Satellite Comm

(U) B. Accomplishments/Planned Program

	FY 05	FY 06	FY 07
SCI Networks	0.683	0.621	0.685
RDT&E Articles Quantity	2	2	

FY05: Continued integration and implementation of SCI Networks and associated Special Intelligence Communications. Conducted developmental and operational testing of software and hardware for sub, surface, and shore. Developed, integrated, and tested AN/USQ-148E(V)2 surface suites. Developed and integrated COMPOSE 2.0.3 software for AN/USQ-148E(V)2. Continued development and integration of IPv6 capabilities. Completed AN/USQ-148E(V)2 Lab DT.

FY06: Continue integration and implementation of SCI Networks and associated Special Intelligence Communications. DT/OOC of AN/USQ-148E(V)2 and development and integration of COMPOSE 3.X software. IPv6 integration and laboratory testing. Lab DT of AN/USQ-148D(V)2. Integration and testing of VoIP.

FY07: Continue integration and implementation of SCI Networks and associated Special Intelligence Communications. DT/OOC of AN/USQ-148D(V)2. Integration and testing of Video over IP.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	0731 Fleet Satellite Comm

(U) C. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Complete	Total Cost
SCI NETWORKS	0.806	4.409	23.141	13.298	4.914	5.119	5.107	Cont	Cont

(U) D. ACQUISITION STRATEGY: *

SCI Network variants are comprised of Commercial Off the Shelf equipments and Government Off the Shelf software integrated into SCI Networks designs associated with class of ship. Next Generation versions are being considered for acquisition via the LM Q-70 contract vehicle.

(U) E. Major Performers:

SPAWAR Systems Center, San Diego (SSC SD) provides research and development for next generation SCI Networks.

*** Not required for Budget Activities 1,2,3, and 6**

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)

DATE: **February 2006**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	0731 Fleet Satellite Comm

Cost Categories	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	Var	21.359	0.683	12/04	0.621	12/05	0.685	12/06	Continuing	Continuing	0.000
Ancillary Hardware Development										0.000	0.000
Systems Engineering										0.000	0.000
Licenses										0.000	0.000
Tooling										0.000	0.000
GFE										0.000	0.000
Award Fees										0.000	0.000
Subtotal Product Development		21.359	0.683		0.621		0.685		0.000	23.348	0.000

Remarks:

Development Support										0.000	0.000
Software Development										0.000	0.000
Training Development										0.000	0.000
Integrated Logistics Support										0.000	0.000
Configuration Management										0.000	0.000
Technical Data										0.000	0.000
GFE										0.000	0.000
Subtotal Support		0.000	0.000		0.000		0.000		0.000	0.000	0.000

Remarks:

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)

DATE: **February 2006**

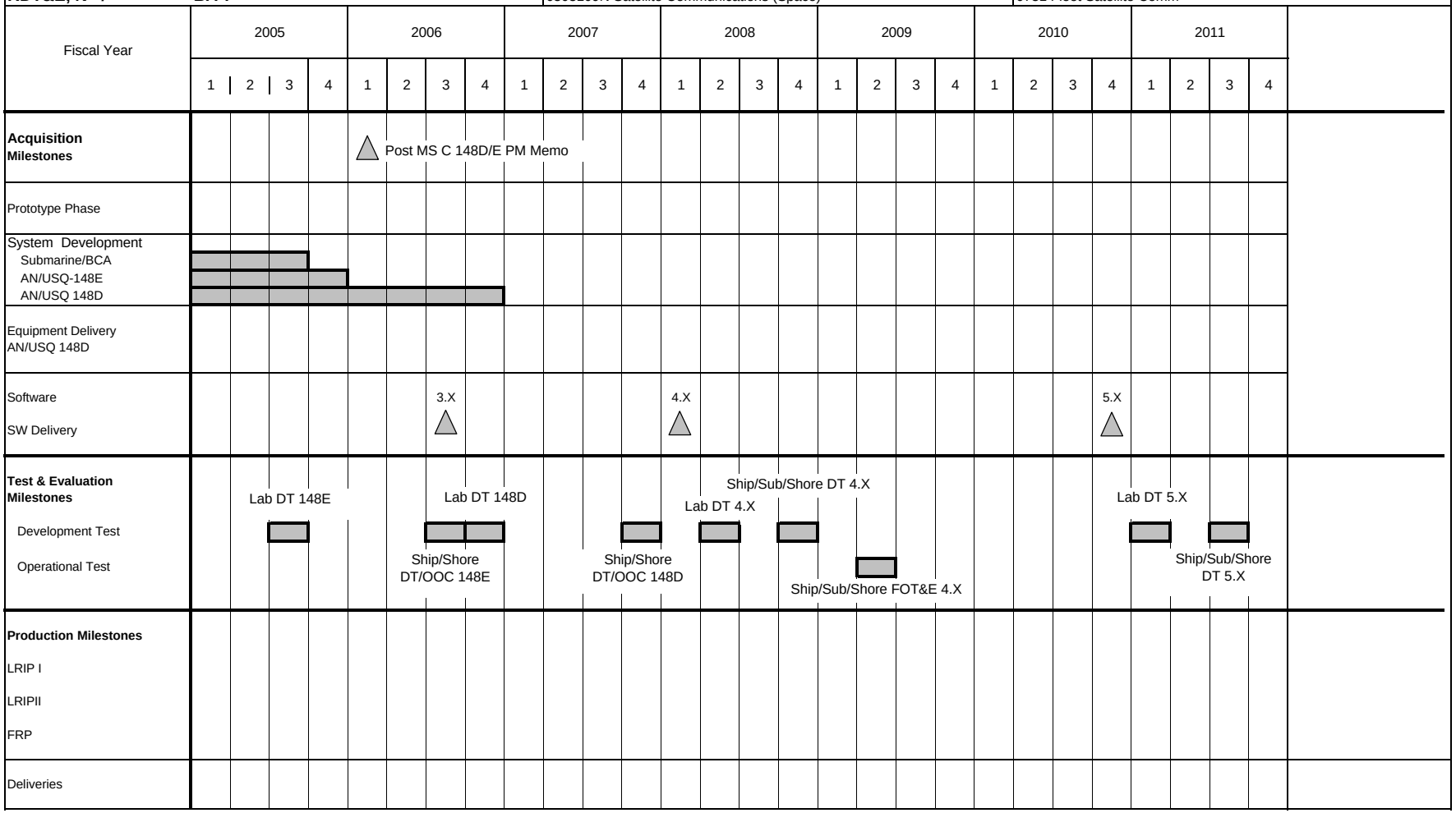
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	0731 Fleet Satellite Comm

Cost Categories	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation										0.000	0.000
Operational Test & Evaluation										0.000	0.000
Live Fire Test & Evaluation										0.000	0.000
Test Assets										0.000	0.000
Tooling										0.000	0.000
GFE										0.000	0.000
Subtotal T&E		0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:											
Contractor Engineering Support										0.000	0.000
Government Engineering Support										0.000	0.000
Program Management Support										0.000	0.000
Travel										0.000	0.000
Subtotal Management		0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:											
Total Cost		21.359	0.683		0.621		0.685		0.000	23.348	0.000
Remarks:											

CLASSIFICATION:

EXHIBIT R4, Schedule Profile — DATE: **February 2006**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	0731 Fleet Satellite Comm



Note: MS III (Submarine) and Submarine/BCA DT removed per MDA ADM decision of 2 SEP 2004 to grandfather Submarine/BCA variants under 4 OCT 2001 SCI Networks MS III ADM. 148E and 148D schedules shifted to the right due to delayed contract award. MS III, now known as MS C, shifted to the left and updated to reflect decision by PM to field 148E and 148D as a maintenance modification. 148E and 148D schedule shifted further to the right due to delayed contract award. Per agreement with OPNAV and COMOPTEVFOR 148E and 148D will have an Observation of Operational Capability (OOC) in conjunction with their respective Developmental Tests. As a result, 148E and 148D will not have an FOT&E, and as such, that was deleted from the schedule.

CLASSIFICATION:

Exhibit R-4a, Schedule Detail					DATE: **February 2006**		
APPROPRIATION/BUDGET ACTIVITY **RDT&BA-7**	PROGRAM ELEMENT 0303109N Satellite Communications (Space)				PROJECT NUMBER AND NAME 0731 Fleet Satellite Comm		
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Post MS C 148D/E PM Memo		1Q					
System Development (Submarine/BCA)	1Q-3Q						
System Development (AN/USQ-148E)	1Q-4Q						
System Development (AN/USQ-148D)	1Q-4Q	1Q-4Q					
Software Delivery 2.X							
Software Delivery 3.X		3Q					
Software Delivery 4.X				1Q			
Software Delivery 5.X						4Q	
Development Test - Lab DT 148E	3Q						
Development Test - Ship/Shore DT/OOC 148E		3Q					
Development Test - Lab DT 148D		4Q					
Development Test - Ship/Shore DT/OOC 148D			4Q				
Development Test - Lab DT 4.X				2Q			
Development Test - Ship/Sub/Shore DT 4.X				4Q			
Development Test - Lab DT 5.X							1Q
Development Test - Ship/Sub/Shore DT 5.X							3Q
Operational Test - Ship/Sub/Shore FOT&E 4.X					2Q		

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification — DATE: **February 2006**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	2472 Mobile User Objective System

COST ($ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost		**$375.209**	**$462.661**	**$665.258**	**$618.511**	**$473.906**	**$218.710**	**$52.187**
RDT&E Articles Qty				**1**	**1**			

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(U) The Mobile User Objective System (MUOS) program provides for the development of the next generation DoD advanced narrowband communications satellite constellation. The current UHF Follow-On (UFO) constellation is projected to degrade below acceptable availability parameters in 2009. The MUOS program is baselined to the joint warfighter requirements stipulated in the July 2001 ORD as modified by the 2003 JROC-M and will be designed to provide increased capacity and availability to the mobile warfighter.

(U) This MUOS RDT&E effort supports a USecAF approved IOC in 2010 and FOC in 2014. A MUOS Risk Reduction & Design Development (RRDD) contract was awarded in September 2004 to Lockheed Martin after Key Decision Point (KDP) B. The approval at KDP-B in September 2004 officially designated the MUOS Program as a Department of Defense Space Major Defense Acquisition Program. FY05-FY07 MUOS efforts are focused on Preliminary Design Review (PDR) and Critical Design Review (CDR). The funding for FY07 also includes software development for UFO TT&C Terminal upgrades due to parts obsolescence, advanced planning, and engineering for the terminal installation.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA 7	0303109N Satellite Communications (Space)	2472 Mobile User Objective System

(U) B. Accomplishments/Planned Program

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		375.209	462.661	665.258
RDT&E Articles Quantity				1

(U) **FY05**: Continued funding for MUOS Risk Reduction and Design Development (RRDD) contract and associated systems engineering tasks required for PDR.
(U) **FY06**: Continue funding MUOS RRDD contract and associated system engineering tasks in order to accomplish all FY06 CDR tasks, a necessary condition to meet IOC in 2010.
(U) **FY07**: Continue funding for MUOS RRDD contract to complete the CDR phase and begin work on spacecraft engineering development models. The funding for FY07 includes software development for UFO TT&C Terminal upgrades due to parts obsolescence, advanced planning, and engineering for the terminal installation.

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.000	0.000	0.000
RDT&E Articles Quantity				

		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.000	0.000	0.000
RDT&E Articles Quantity				

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	2472 Mobile User Objective System

(U) C. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Complete	Total Cost
2433 Mobile User Objective System (WPN Funding)					161.049	535.568	526.675	485.903	900.855	2,610.050
MUOS Ground Station Construction, PE: 0301376N (MILCON Funding)				26.180	2.100					28.280

(U) D. ACQUISITION STRATEGY: *

Concept Exploration contracts were awarded in early FY 2000 and completed in late FY 2001. Two Component Advancement Development (CAD) contracts were awarded in Q4 FY 2002. A RRDD contract was awarded in September 2004 for the first two satellites, system engineering and associated ground infrastructure. RDT&E funds will be used to procure the first two satellites. WPN funds will be used to procure the remaining four satellites and launch services for all six satellites.

Updates to the ground UFO TT&C terminals that support UFO on-orbit operations are included. RDT&E funds in the amount of $10.5M in FY07 will be used for UFO TT&C software and firmware development. WPN funds in the amount of $13.2M in FY08 and $2M in FY09 will be used to procure UFO TT&C terminal updates. MILCON funds are required to prepare MUOS ground sites located in Sicily, Virginia and Hawaii.

(U) E. MAJOR PERFORMERS:

Lockheed Martin

(U) F. METRICS:

Earned Value Management (EVM) is used for metrics reporting and risk management.

*** Not required for Budget Activities 1,2,3, and 6**

CLASSIFICATION: UNCLASSIFIED

Exhibit R-3 Cost Analysis

DATE: **February 2006**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	2472 Mobile User Objective System

Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
RRDD AOS Contract	CPAF/FPI	Lockheed Martin (LM)	$ 48.000	$ 341.262	10/04	$ 419.003	1Q	$ 603.160	1Q	$ 1,206.252	$ 2,617.677	$ 2,617.677
CE Contracts & Demos	FFP	LM / Raytheon / Spec Astro / Boeing	$ 21.320	$ -		$ -		$ -			$ 21.320	$ 21.320
CAD Contracts	FFP	LM / Raytheon	$ 105.154	$ -		$ -		$ -			$ 105.154	$ 105.154
AoA for MUOS	MIPR	Aerospace	$ 2.782	$ -		$ -		$ -			$ 2.782	$ 2.782
Government Studies	VAR	VAR	$ 0.711	$ -		$ -		$ -			$ 0.711	$ 0.711
Crypto Procurement	MIPR	NSA	$ 1.520	$ 0.321		$ 1.500		$ 2.500		$ -	$ 5.841	$ 5.841
Subtotal Product Development			$ 179.487	$ 341.583		$ 420.503		$ 605.660		$ 1,206.252	$ 2,753.485	$ 2,753.485
Remarks:												
Software Development for UFO TT&C	TBD	TBD		$ -		$ -		$ 10.500			$ 10.500	
Facilities Modifications	VAR	VAR		$ 0.673		$ 0.799		$ 3.000		$ 1.602	$ 6.073	
Leased Lines	TBD	TBD		$ -		$ -		$ -		$ 23.500	$ 23.500	
Studies & Analyses (EELV)	MIPR	SMC/FMAIC		$ -		$ 0.500		$ 1.600		$ 2.300	$ 4.400	
ISCS Integration	WX	NAVSOC		$ 0.400		$ 0.626		$ 2.000		$ 0.374	$ 3.400	
JTRS JTEL Testing	TBD	TBD		$ -		$ -		$ -		$ 2.500	$ 2.500	
Subtotal Support			$ -	$ 1.073		$ 1.925		$ 17.100		$ 30.276	$ 50.373	$ -
Remarks												
Developmental Test & Evaluation	VAR	VAR	$ 0.182	$ 0.840		$ 0.901		$ 0.824		$ 3.701	$ 6.448	
Operational Test & Evaluation	VAR	VAR		$ 0.223		$ 0.597		$ 0.715		$ 4.433	$ 5.968	
Live Fire Test & Evaluation				$ -		$ -		$ -			$ -	
Subtotal T&E			$ 0.182	$ 1.063		$ 1.498		$ 1.539		$ 8.134	$ 12.416	$ -
Remarks												
Contractor Engineering Support	VAR	VAR	$ 32.301	$ 19.871		$ 21.895		$ 22.736		$ 209.869	$ 306.672	
Government Engineering Support	VAR	VAR	$ 4.936	$ 4.463		$ 5.373		$ 5.580		$ 64.612	$ 84.964	
Program Management Support	VAR	VAR	$ 1.750	$ 6.823		$ 8.363		$ 8.685		$ 33.758	$ 59.379	
Travel	VAR	VAR	$ 0.295	$ 0.332		$ 0.303		$ 0.400		$ 10.181	$ 11.511	
Frequency Filing	ITU	MD	$ 0.635	$ -		$ 0.500		$ 1.000		$ 0.500	$ 2.635	
IPA/ICAT	TBD	TBD		$ -		$ 0.500		$ 0.500		$ -	$ 1.000	
PEO Management Support	VAR	VAR		$ -		$ 1.800		$ 2.059		$ -	$ 3.859	
Subtotal Management			$ 39.917	$ 31.490		$ 38.735		$ 40.959		$ 318.919	$ 470.020	$ -
Remarks												
Total Cost			$ 219.586	$ 375.209		$ 462.661		$ 665.258		$ 1,563.580	$ 3,286.294	$ 2,753.485
Remarks												

CLASSIFICATION:

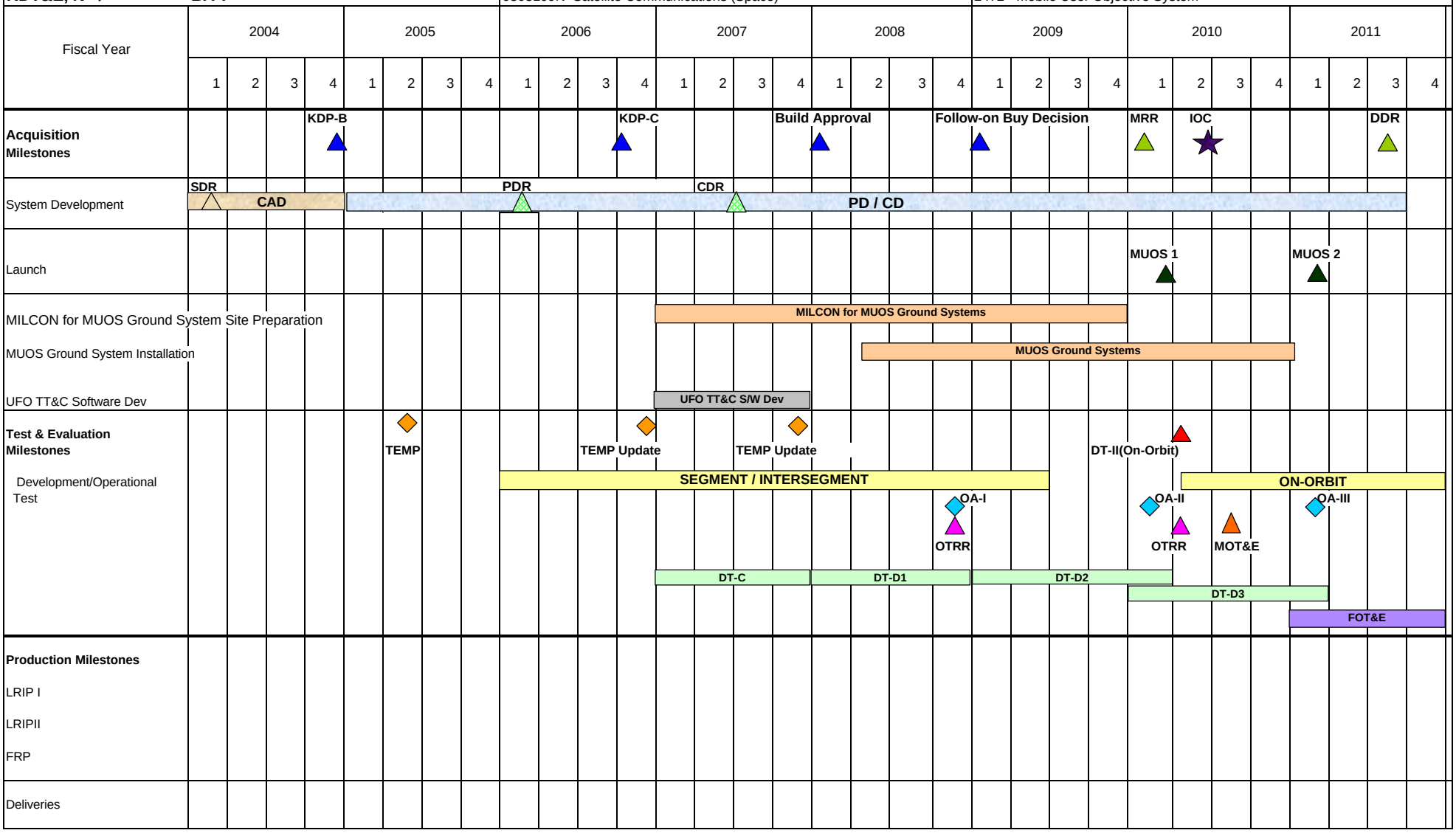
EXHIBIT R4, Schedule Profile

DATE: **February 2006**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E, N / BA-7**

PROGRAM ELEMENT NUMBER AND NAME: 0303109N Satellite Communications (Space)

PROJECT NUMBER AND NAME: 2472 - Mobile User Objective System



CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: **February 2006**		
APPROPRIATION/BUDGET ACTIVITY **RDT&BA-7**	PROGRAM ELEMENT 0303109N Satellite Communications (Space)				PROJECT NUMBER AND NAME 2472 Mobile User Objective System			
Schedule Profile	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
System Design Review (SDR)	1Q							
Component Advanced Development (CAD)	1Q-4Q							
Key Decision Point B	4Q							
Preliminary Design (PD) Phase		1Q-4Q	1Q-4Q					
Test and Evaluation Master Plan (TEMP)		2Q	4Q	4Q				
Segment/Intersegment Testing			1Q-4Q	1Q-4Q	1Q-4Q	1Q-2Q		
Preliminary Design Review (PDR)			1Q					
Key Decision Point C			4Q					
DT-C				1Q-4Q				
Critical Design Review (CDR)				3Q				
Complete Design (CD) Phase			4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
DT-D1					1Q-4Q			
Build Approval					1Q			
MUOS Ground Systems Site Prep and Installation				1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q
Operational Assessment (OA-1)					4Q			
Operational Test Readiness Review (OTRR)					4Q		2Q	
Follow-On Buy Decision						1Q		
DT-D3							1Q-4Q	1Q
Developmental Testing (DT-11A) (On Orbit)							1Q	
Mission Readiness Review (MRR)							1Q	
Operational Assessment (OA-11)							1Q	
Launch 1 (M1)							1Q	
IOC							2Q	
On-Orbit Testing							1Q-4Q	1Q-4Q
Multi-Service Operational Testing & Evaluation (MOT&E)							3Q	
Launch 2 (M2)								1Q
Follow-On Test Evaluation (FOT&E)								1Q-4Q
Deployment Decision Review (DDR)								3Q
UFO TT&C Terminal Software Development				1Q-4Q				

Classification:

Exhibit R-5, Termination Liability Funding for Major Defense Acquisition Programs, RDT&E Funding

DATE: **February 2006**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	2472 Mobile User Objective System

Program Title	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY2010	FY2011
2472 Mobile User Objective System	$ 41.689	$ 61.144	$ 50.486	$ 30.855	$ 23.873	$ 15.327	$ -

Notes:

1) Values are in millions of dollars.

2) The MUOS execution plan is dependent on termination liability funds being available for execution at the beginning of the following fiscal year. For example, termination liability funds for FY05 are obligated at the the beginning of FY05, but are required for expenditure at the beginning of FY06 (in October and November of CY05), assuming no termination occurs.

3) Termination values were obtained from the Contract Funds Status Report (CFSR), a contractually required deliverable on the RRDD contract.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification — DATE: **February 2006**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	9122 Advanced Wideband System / Transformational Communications

COST ($ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost		17.567	20.187	0.000	0.000	6.475	72.846	50.029
RDT&E Articles Qty							4	

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(U) The Navy Transformational Communications Integrated Terminal Satellite Communications (SATCOM) program provides for the development and production of terminals to provide high capacity reliable, low probability of intercept (LPI), Anti-Jam (AJ), communications capability to the fleet. Terminals will support multiple data streams over Q-band, Ka-band, and X-band. The terminals will also support mesh networking without the need for gateway terminals. Development will focus on a LAN to Antenna capability, including quality of service required for Navy unique missions. Advanced Wideband System/Transformational Communications (AWS/TC) Program draft acquisition strategy consists of terminal suite development and environmental qualification, on-orbit testing, platform integration and test, software enhancements and regression testing throughout the life of the program.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	9122 Advanced Wideband System / Transformational Communications

(U) B. Accomplishments/Planned Program

		FY 05	FY 06	FY 07
AWS/TC Concept Development		17.567	20.187	0.000
RDT&E Articles Quantity				

(U) **FY05:** Migrated component prototypes tested in FY 2004 into a terminal level design. Began system level engineering process to determine optimal tradeoffs between cost and performance. Continued prototype build of terminal level components (multi band antenna system, multi-band IF and RF generation systems).

(U) **FY06:** Continue system level engineering process to determine optimal tradeoffs between cost and performance. Mitigate risks that have been identified. Products to support the acquisition include the terminal suite acquisition specification flowdown, the Acquisition Strategy Report, and the draft Capability Development Document (CDD). Hardware products include the development of a prototype advanced Transmissions Security (TRANSEC)/Communications Security (COMSEC) computer chip that will be required for the operation of every Navy Transformations Communications terminal.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	9122 Advanced Wideband System / Transformational Communications

(U) C. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
321500 - OPN Ship and Shore							

(U) D. ACQUISITION STRATEGY:

System architecture is defined by the ongoing Transformational Communication Study. Acquisition documentation includes the development of a complete set of documentation required to support a Milestone B decision, including, but not limited to, a terminal specification, statement-of-work, Acquisition Strategy Report, and Source Selection Plan.

(U) E. MAJOR PERFORMERS:

Naval Undersea Warfare Center (NUWC), Newport, RI
SSC San Diego (SD), San Diego, CA

(U) F. METRICS:

Earned Value Management (EVM) is used for metrics reporting and risk management.

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)

DATE: **February 2006**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E, N / BA-7**

PROGRAM ELEMENT: 0303109N Satellite Communications (Space)

PROJECT NUMBER AND NAME: 9122 Advanced Wideband System / Transformational Communications

Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Hardware Development	Various	Various	11.774	11.456	11/04	12.944	10/05			Continuing	Continuing	
Systems Engineering	Various	Various	1.359	1.569	10/04	1.173	10/05			Continuing	Continuing	
Systems Engineering	WR	NUWC	0.895	1.141	10/04	1.472	10/05			Continuing	Continuing	
Subtotal Product Development			14.028	14.166		15.589		0.000		Continuing	Continuing	

Remarks:

Development Support	WR	SSC SD	0.860	1.494	10/04	1.086	10/05			Continuing	Continuing	
Studies & Analyses	WR	Various	2.275	1.200	10/04	2.000	10/05			Continuing	Continuing	
Information Assurance	WR	Various				0.939	10/05					
Subtotal Support			3.135	2.694		4.025		0.000		Continuing	Continuing	

Remarks:

CLASSIFICATION:

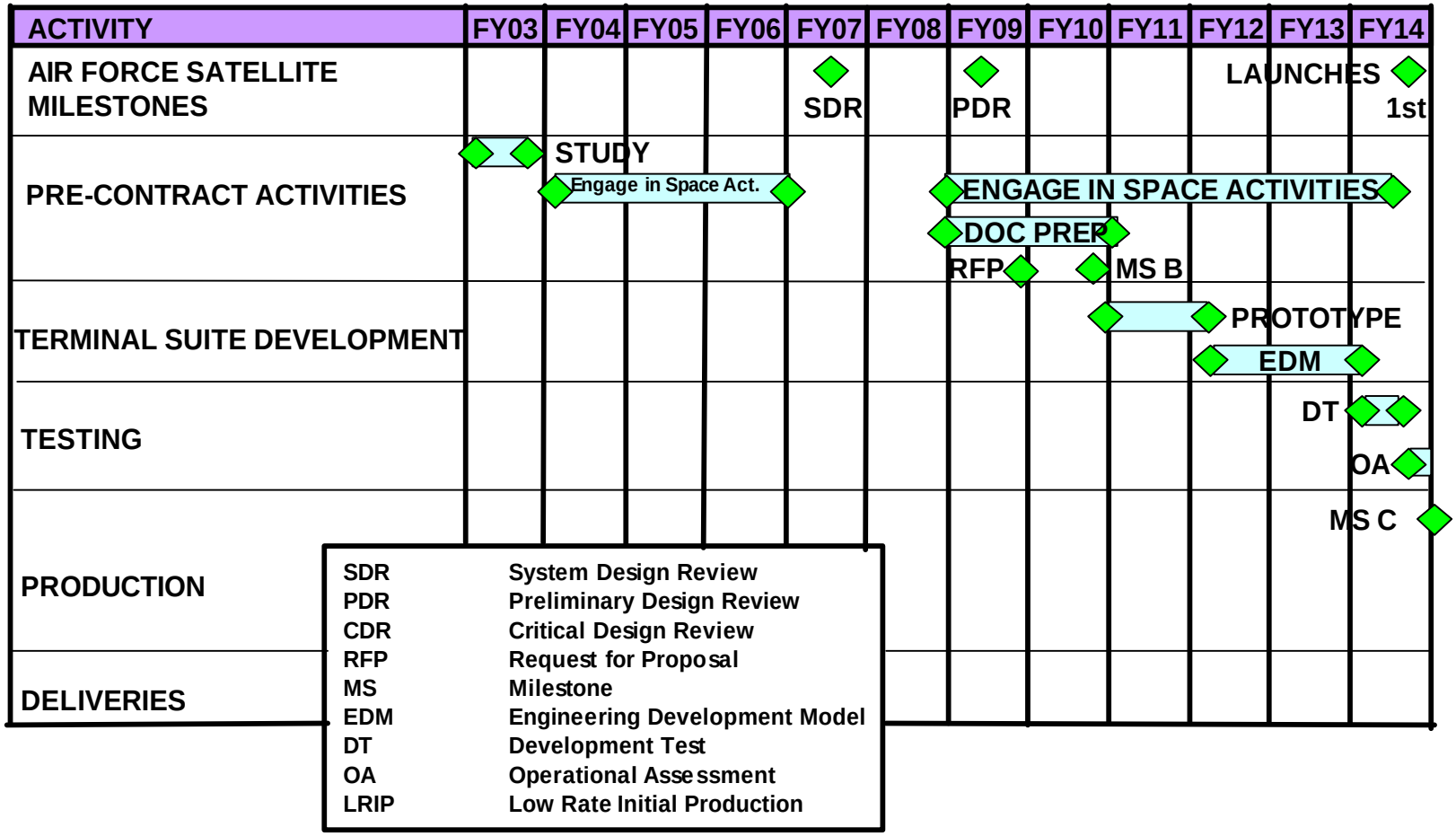
Exhibit R-3 Cost Analysis (page 2)

DATE: **February 2006**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N Satellite Communications (Space)	9122 Advanced Wideband System / Transformational Communications

Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation											0.000	
Operational Test & Evaluation											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal T&E			0.000			0.000		0.000		0.000	0.000	
Remarks:												
Contractor Engineering Support						0.494	10/05			Continuing	Continuing	
Development Support												
Program Management Support	Various	Various	0.446	0.632	10/04	0.079	10/05			Continuing	Continuing	
Studies & Analyses												
Travel			0.047	0.075	10/04							
Subtotal Management			0.493	0.707		0.573		0.000		Continuing	Continuing	
Remarks:												
Total Cost			17.656	17.567		20.187		0.000		Continuing	Continuing	
Remarks:												

EXHIBIT R4, Schedule Profile		DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-7	0303109N - Satellite Communications (Space)	9122 Advanced Wideband System / Transformational Communications



CLASSIFICATION:

Exhibit R-4a, Schedule Detail					DATE: **February 2006**			
APPROPRIATION/BUDGET ACTIVITY **RDT&BA-7**	PROGRAM ELEMENT 0303109N - Satellite Communications (Space)				PROJECT NUMBER AND NAME 9122 Advanced Wideband System / Trans. Communications			
Schedule Profile		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Milestone B (MSB)							4Q	
Contract Award(s) (Terminal Suite Development)							4Q	

Due to 2-year delay in the TC Satellite Launch, Issue 51029 (Transformational Communication Delay) realigned funding profile and pushed significant milestones past the FYDP.

CLASSIFICATION:								
EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2006	
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**	0303109N - Satellite Communications (Space)				PROJECT NUMBER AND NAME 9999 - Congressional Increases			
COST ($ in Millions)		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost		5.688	6.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Qty								

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(U) Congressional ADDs for Satellite Communications

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: **February 2006**
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-7**		PROJECT NUMBER AND NAME 9999 - Congressional Increases	

(U) B. Accomplishments/Planned Program

		FY 05	FY 06	FY 07
Software Development / Systems Engineering (9421)		4.720	3.500	0.000
RDT&E Articles Quantity				

(U) **FY05**: Conducted JIST-NET software development and engineering analysis operations with the following deliverable outputs for FY05: bandwidth study (delivered Dec 05 with monthly updates through Aug 06) and 2 software deliverables (due in May 06 and Aug 06).
(U) **FY06**: Conducted JIST-NET software development and engineering analysis operations with 1 software deliverable for FY06.

Cover and Comm & Information Transfer (9429)		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.968	0.500	
RDT&E Articles Quantity				

(U) **FY05**: Covert Communications required for operational utilization.

Navy Multiband Terminal (NMT) (9889)		FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost			2.000	
RDT&E Articles Quantity				

(U) **FY06**: Supports hardware and software prototype development efforts.