PE NUMBER: 0305110F
PE TITLE: Satellite Control Network

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2004
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305110F Satellite Control Network

Cost ($ in Millions)		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
	Total Program Element (PE) Cost	16.725	20.468	17.833	22.086	20.138	17.931	17.554	Continuing	TBD
3276	Satellite Control Network	16.725	20.468	17.833	22.086	20.138	17.931	17.554	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Air Force Satellite Control Network (AFSCN) mission is to command and control space systems and to distribute space system information in support of operational DoD missions, National Security, RDT&E programs, and other designated users. Air Force Space Command (AFSPC) performs operations, maintenance, modernization, and sustainment of the system to meet requirements validated by a HQ USAF approved Operational Requirements Document (ORD). This program element contains funds for the development and acquisition of this integrated national satellite telemetry, tracking, commanding, and data relay capability to meet the requirements of the growing inventory of operational and developmental DoD, National, Civil, and Allied satellite systems.

The AFSCN is a global infrastructure of control centers, Remote Tracking Stations (RTSs), and communications links that provide the highly reliable command and control, communications, and range systems required to support the nation's surveillance, navigation, communications, warning, and weather satellite operations. The AFSCN is the DoD's common user network that provides satellite state-of-health, telemetry, tracking, and commanding (TT&C) for the following operational satellite systems: Defense Meteorological Satellite Program (DMSP), Global Positioning System (GPS), Defense Satellite Communications System (DSCS), Defense Support Program (DSP), Fleet Satellite (FLEETSAT), Military Strategic and Tactical Relay Satellite (MILSTAR), the Navy's Ultra High Frequency Follow-On (UHF F/O), Skynet, NATO III/IV, and classified programs. In addition, it provides launch and early orbit tracking operations in support of all major US launches and is the world's only global satellite network equipped with high-power capability necessary for satellite rescue, anomaly resolution, and end-of-life disposal operations.

AFSCN Improvement and Modernization (I&M) is an ongoing program of replacements and upgrades which will meet AFSPC operational requirements to replace non-standard, unsupportable equipment with more reliable, maintainable, interoperable, and standardized hardware and software. This new equipment will enable AFSPC satellite operations to be performed with fewer, less skilled personnel and will significantly reduce hardware/software maintenance costs. The principal efforts within this program are currently focused on Range Upgrades and Network Operations Upgrades.

RANGE UPGRADES: This effort will upgrade the current RTSs. Several integrated efforts, which are now grouped into the Remote Tracking Station (RTS) Block Change (RBC) effort, will standardize, automate and make interoperable the remote tracking stations through the replacement of outdated government unique equipment with commercial off-the-shelf technology in order to reduce failures, correct operational deficiencies, and reduce operating and sustainment costs. Additionally, interoperability efforts to address standards and protocols and external user connectivity are included in this segment.

NETWORK OPERATIONS UPGRADES: These upgrades, that include resource scheduling and orbit analysis system follow-on, build upon the Electronic Schedule Dissemination (ESD) and Orbit Analysis Subsystem (OAS) deliveries to improve AFSCN resource management capabilities. These capabilities include electronic scheduling and status report information dissemination. Also, these upgrades provide the infrastucture for a multi-domain and web-based system.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2004
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305110F Satellite Control Network

This effort is in Budget Activity 7, Operational System Development, because it supports a fielded system.

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

		FY 2003	FY 2004	FY 2005
(U)	Previous President's Budget	16.779	18.603	17.880
(U)	Current PBR/President's Budget	16.725	20.468	17.833
(U)	Total Adjustments	-0.054	1.865	
(U)	Congressional Program Reductions		-0.235	
	Congressional Rescissions			
	Congressional Increases		2.100	
	Reprogrammings			
	SBIR/STTR Transfer	-0.054		

(U) Significant Program Changes:

FY04: Congressional plus-up to continue research into technical feasibility of augmenting AFSCN capabilities with commercial satellite control antennas (+$2.1M); Congressional/general reductions (-$0.235M).

Exhibit R-2a, RDT&E Project Justification			DATE: February 2004
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305110F Satellite Control Network	PROJECT NUMBER AND TITLE: 3276 Satellite Control Network	

Cost ($ in Millions)		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
3276	Satellite Control Network	16.725	20.468	17.833	22.086	20.138	17.931	17.554	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Air Force Satellite Control Network (AFSCN) mission is to command and control space systems and to distribute space system information in support of operational DoD missions, National Security, RDT&E programs, and other designated users. Air Force Space Command (AFSPC) performs operations, maintenance, modernization, and sustainment of the system to meet requirements validated by a HQ USAF approved Operational Requirements Document (ORD). This program element contains funds for the development and acquisition of this integrated national satellite telemetry, tracking, commanding, and data relay capability to meet the requirements of the growing inventory of operational and developmental DoD, National, Civil, and Allied satellite systems.

The AFSCN is a global infrastructure of control centers, Remote Tracking Stations (RTSs), and communications links that provide the highly reliable command and control, communications, and range systems required to support the nation's surveillance, navigation, communications, warning, and weather satellite operations. The AFSCN is the DoD's common user network that provides satellite state-of-health, telemetry, tracking, and commanding (TT&C) for the following operational satellite systems: Defense Meteorological Satellite Program (DMSP), Global Positioning System (GPS), Defense Satellite Communications System (DSCS), Defense Support Program (DSP), Fleet Satellite (FLEETSAT), Military Strategic and Tactical Relay Satellite (MILSTAR), the Navy's Ultra High Frequency Follow-On (UHF F/O), Skynet, NATO III/IV, and classified programs. In addition, it provides launch and early orbit tracking operations in support of all major US launches and is the world's only global satellite network equipped with high-power capability necessary for satellite rescue, anomaly resolution, and end-of-life disposal operations.

AFSCN Improvement and Modernization (I&M) is an ongoing program of replacements and upgrades which will meet AFSPC operational requirements to replace non-standard, unsupportable equipment with more reliable, maintainable, interoperable, and standardized hardware and software. This new equipment will enable AFSPC satellite operations to be performed with fewer, less skilled personnel and will significantly reduce hardware/software maintenance costs. The principal efforts within this program are currently focused on Range Upgrades and Network Operations Upgrades.

RANGE UPGRADES: This effort will upgrade the current RTSs. Several integrated efforts, which are now grouped into the Remote Tracking Station (RTS) Block Change (RBC) effort, will standardize, automate and make interoperable the remote tracking stations through the replacement of outdated government unique equipment with commercial off-the-shelf technology in order to reduce failures, correct operational deficiencies, and reduce operating and sustainment costs. Additionally, interoperability efforts to address standards and protocols and external user connectivity are included in this segment.

NETWORK OPERATIONS UPGRADES: These upgrades, that include resource scheduling and orbit analysis system follow-on, build upon the Electronic Schedule Dissemination (ESD) and Orbit Analysis Subsystem (OAS) deliveries to improve AFSCN resource management capabilities. These capabilities include electronic scheduling and status report information dissemination. Also, these upgrades provide the infrastucture for a multi-domain and web-based system.

Exhibit R-2a, RDT&E Project Justification		DATE February 2004
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305110F Satellite Control Network	PROJECT NUMBER AND TITLE 3276 Satellite Control Network

This effort is in Budget Activity 7, Operational System Development, because it supports a fielded system.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2003	FY 2004	FY 2005
(U)	Accomplishments/Planned Program			
(U)	Range Upgrades: continue upgrades to include development of interoperability and RTS Block Change efforts. Continue predeployment system engineering and network integration.	11.216	11.330	11.592
(U)	Network Operations Upgrades: continue upgrades to network operations to include development of Phase 2 and Phase 3 (Enterprise Management) of Orbit Analysis Subsystem follow-on upgrade and predeployment system engineering and network integration.	2.174	3.155	2.170
(U)	Program support for Systems Program Office	3.335	3.883	4.071
(U)	Conduct research into technical feasibility of augmenting AFSCN capabilities with commercial satellite control antennas (Civil Reserve Space Service -- CRSS)		2.100	
(U)	Total Cost	16.725	20.468	17.833

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

		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
(U)	OPAF, Electronics & Telecom Equipment (BA 03, PE 0305110F, P-72)	43.263	47.871	43.882	51.437	68.510	60.566	60.250	Continuing	TBD
(U)	OPAF, Initial Spares & Repair Parts (BA 05 PE 0305110F, P-112)	1.259	4.411	3.167	3.419	3.499	0.000	0.000	0.000	18.098

(U) D. Acquisition Strategy

The AF uses the competitively awarded Satellite Control Network Contract (SCNC), managed by Space and Missile System Center, to modernize and sustain the AFSCN on a non-interference basis as it continues to support operational, RDT&E, and other designated users.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2004

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305110F Satellite Control Network

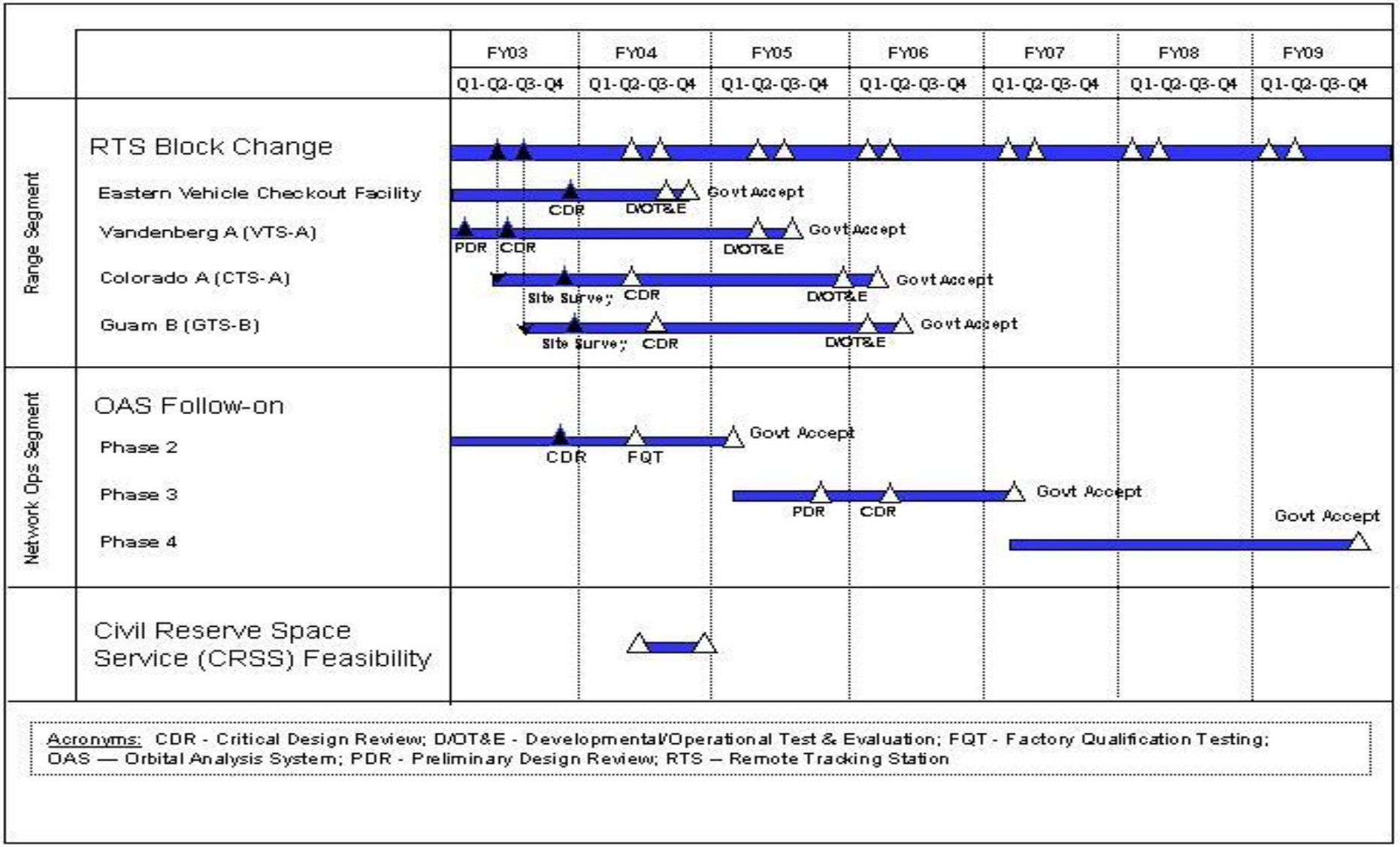
PROJECT NUMBER AND TITLE: 3276 Satellite Control Network

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2003 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
(U) Product Development												
Range & Comm Development Contract	C/CPAF	Lockheed Martin, San Jose, CA	133.146	0.656	Dec-02	0.000		0.000		0.000	133.802	133.802
Satellite Control Network Contract*	C/CPAF	Honeywell, Colorado Springs, CO	22.300	12.734	Dec-02	14.485	Dec-03	13.762	Dec-04	22.919	86.200	86.200
Congressional Plus-up for civil reserve space service	TBD	TBD	0.000	0.000		2.100	Mar-04	0.000		0.000	2.100	2.100
Subtotal Product Development			155.446	13.390		16.585		13.762		22.919	222.102	222.102
Remarks: *note: EACs include basic contract and options but do not include unpriced, future ECPs												
(U) Support												
Program Support (FFRDC, SETA, SPO ops)	various	various	79.612	3.335	Dec-02	3.883	Dec-03	4.071	Dec-04	Continuing	TBD	
Subtotal Support			79.612	3.335		3.883		4.071		Continuing	TBD	0.000
Remarks:												
(U) Management												
N/A											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Subtotal additional reprogrammings											0.000	
(U) Total Cost			235.058	16.725		20.468		17.833		Continuing	TBD	222.102
Remarks:												

Exhibit R-4, RDT&E Schedule Profile

DATE: February 2004

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0305110F Satellite Control Network	3276 Satellite Control Network



Acronyms: CDR - Critical Design Review; D/OT&E - Developmental/Operational Test & Evaluation; FQT - Factory Qualification Testing; OAS — Orbital Analysis System; PDR - Preliminary Design Review; RTS — Remote Tracking Station

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2004
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305110F Satellite Control Network	PROJECT NUMBER AND TITLE 3276 Satellite Control Network

(U) **Schedule Profile**	FY 2003	FY 2004	FY 2005
(U) RANGE UPGRADES (RTS Block Change)			
(U) - Vandenberg RTS Preliminary Design Review (PDR)	1Q		
(U) - Vandenberg RTS Critical Design Review (CDR)	2Q		
(U) - Eastern Vehicle Checkout Facility (EVCF) CDR	4Q		
(U) - Colorado RTS CDR		2Q	
(U) - Guam RTS CDR		3Q	
(U) - EVCF Developmental/operational test & eval		3Q	
(U) - Vandenberg RTS Developmental/operational test & eval			2Q
(U) - Colorado RTS Developmental/operational test & eval			4Q
(U) NETWORK OPERATIONS UPGRADES			
(U) - OAS follow-on Phase 2 CDR	4Q		
(U) - OAS Follow-on Phase 2 Factory Qualification Testing		2Q	
(U) - OAS Follow-on Phase 2 Gov't acceptance			1Q
(U) - OAS Follow-on Phase 3 Preliminary Design Review			2Q
(U) - OAS Follow-on Phase 3 Critical Design Review			4Q