PE NUMBER: 0305110F
PE TITLE: Satellite Control Network

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

	Cost ($ in Millions)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	19.521	20.013	29.143	20.487	18.240	17.899	20.351	18.547	Continuing	TBD
3276	Satellite Control Network	19.521	20.013	29.143	20.487	18.240	17.899	20.351	18.547	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 provide operational capabilities validated by a Joint Staff Capstone Requirements Document and a Headquarters 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 provides unique capability for DoD to deploy and operate its satellites. AFSCN provides 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 and future satellite systems: Defense Meteorological Satellite Program (DMSP), National Polar Orbiting Environmental Satellite System (NPOESS), Global Positioning System (GPS), Defense Satellite Communications System (DSCS), Defense Support Program (DSP), Space Based Infrared System (SBIRS), Space Based Surveillance System (SBSS), Space Tracking and Surveillance System (STSS), Fleet Satellite (FLEETSAT), Military Strategic and Tactical Relay Satellite (MILSTAR), the Navy's Ultra High Frequency Follow-On (UHF F/O), Mobile User Objective System (MUOS), Advanced EHF (AEHF), Wideband Gapfiller System (WGS), Transformational Communications Satellites (TSAT), 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 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

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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.

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

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

		FY 2004	FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	20.468	17.833	22.086	20.138
(U)	Current PBR/President's Budget	19.521	20.013	29.143	20.487
(U)	Total Adjustments	-0.947	2.180		
(U)	Congressional Program Reductions	-0.947	-0.320		
	Congressional Rescissions				
	Congressional Increases		2.500		
	Reprogrammings				
	SBIR/STTR Transfer				

(U) Significant Program Changes:

FY05: Congressional increase to continue research, development, and testing for Civil Reserve Space Service (CRSS) to augment AFSCN capabilities with commercial satellite control antennas

FY06: Funding increased to complete High Power Amplifier development for Remote Tracking Station Block Change

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Cost ($ in Millions)		FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
3276	Satellite Control Network	19.521	20.013	29.143	20.487	18.240	17.899	20.351	18.547	Continuing	TBD
	Quantity of RDT&E Articles	0	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 provide operational capabilities validated by a Joint Staff Capstone Requirements Document and a Headquarters 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 provides unique capability for DoD to deploy and operate its satellites. AFSCN provides 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 and future satellite systems: Defense Meteorological Satellite Program (DMSP), National Polar Orbiting Environmental Satellite System (NPOESS), Global Positioning System (GPS), Defense Satellite Communications System (DSCS), Defense Support Program (DSP), Space Based Infrared System (SBIRS), Space Based Surveillance System (SBSS), Space Tracking and Surveillance System (STSS), Fleet Satellite (FLEETSAT), Military Strategic and Tactical Relay Satellite (MILSTAR), the Navy's Ultra High Frequency Follow-On (UHF F/O), Mobile User Objective System (MUOS), Advanced EHF (AEHF), Wideband Gapfiller System (WGS), Transformational Communications Satellites (TSAT), 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.

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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.

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

	B. Accomplishments/Planned Program ($ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007
(U)	Range Upgrades: continue upgrades to include development of interoperability and RTS Block Change efforts. Continue predeployment system engineering and network integration.	10.533	11.243	21.966	11.986
(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.	3.155	2.268	2.912	4.032
(U)	Program support for Systems Program Office	3.883	4.177	4.265	4.469
(U)	Conduct research into technical feasibility of augmenting AFSCN capabilities with commercial satellite control antennas (Civil Reserve Space Service -- CRSS)	1.950	2.325		
(U)	Total Cost	19.521	20.013	29.143	20.487

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

		FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	OPAF, Electronics & Telecom Equipment (BA 03, PE 0305110F, P-64)	48.486	43.328	51.778	86.487	67.366	67.337	65.035	68.077	Continuing	TBD
(U)	OPAF, Initial Spares & Repair Parts (BA 05 PE 0305110F, P-103)	2.911	3.155	3.442	3.567	0.000	0.000	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

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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 2004 Cost	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Satellite Control Network Contract	C/CPAF	Honeywell, Colorado Springs, CO	35.034	13.688	Nov-03	13.511	Dec-04	24.878	Dec-05	16.018	Dec-06	Continuing	TBD	TBD
Congressional increase for Civil Reserve Space Service	various	various	0.000	1.950	Jul-04	2.325	Feb-05	0.000		0.000			4.275	TBD
Subtotal Product Development			35.034	15.638		15.836		24.878		16.018		Continuing	TBD	TBD
Remarks:														
(U) Support														
Program Support (FFRDC, SETA, SPO ops)	various	various	82.947	3.883	Dec-03	4.177	Dec-04	4.265	Dec-05	4.469	Dec-06	Continuing	TBD	TBD
Subtotal Support			82.947	3.883		4.177		4.265		4.469		Continuing	TBD	TBD
Remarks:														
(U) Subtotal additional reprogrammings														
(U) Total Cost			117.981	19.521		20.013		29.143		20.487		Continuing	TBD	TBD
Remarks:														

Exhibit R-4, RDT&E Schedule Profile

DATE: February 2005

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

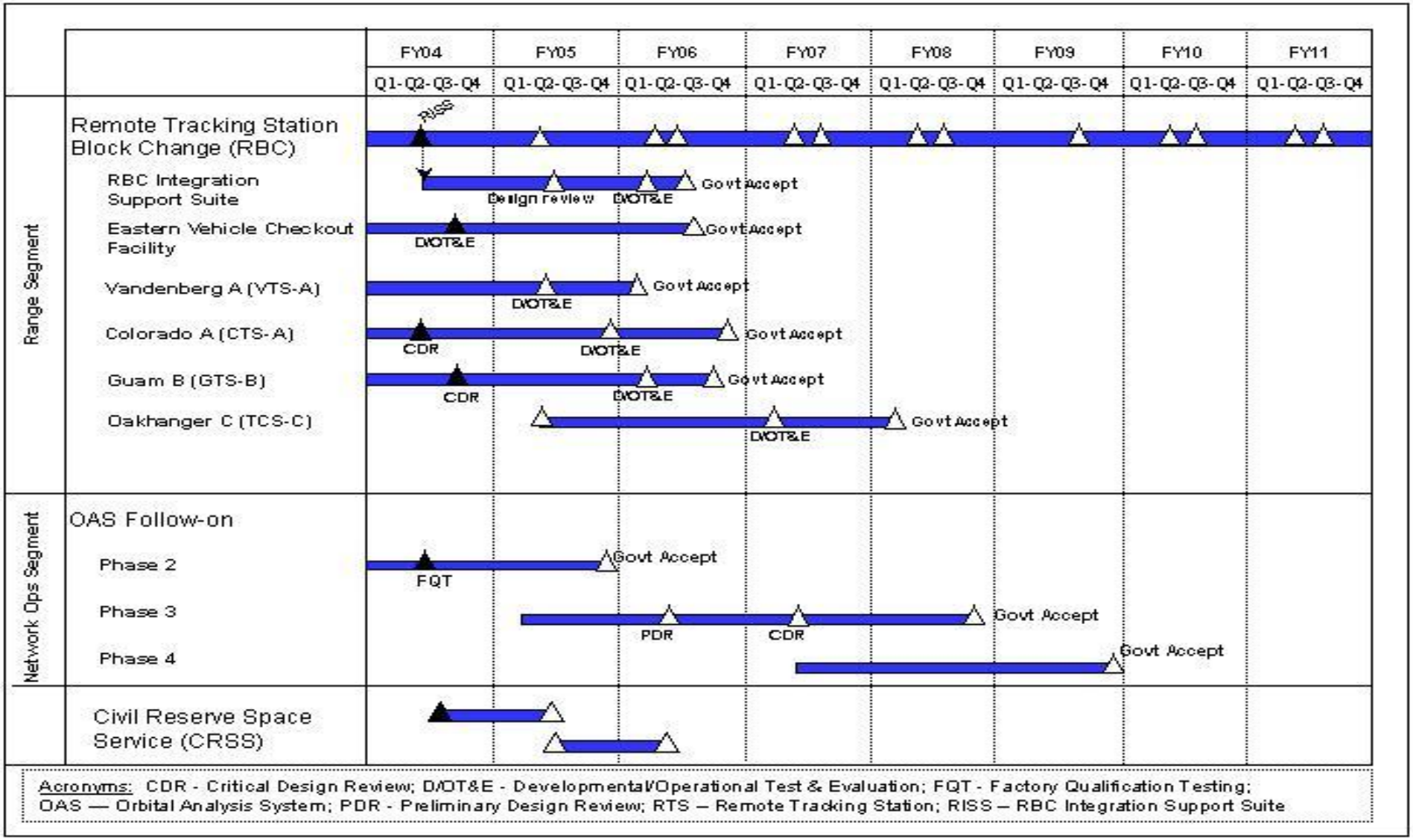

Exhibit R-4a, RDT&E Schedule Detail			DATE: February 2005
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(U) Schedule Profile	FY 2004	FY 2005	FY 2006	FY 2007
(U) RANGE UPGRADES (Remote Tracking Station (RTS) Block Change)				
(U) - Colorado RTS CDR	2Q			
(U) - Colorado RTS Gov't acceptance			4Q	
(U) - Guam RTS CDR	3Q			
(U) - Eastern Vehicle Checkout Facility (EVCF) Developmental/operational test & eval	3Q			
(U) - EVCF Gov't acceptance			3Q	
(U) - Vandenberg RTS Developmental/operational test & eval		2Q		
(U) - Vandenberg RTS Gov't acceptance			1Q	
(U) - Remote Tracking Station Block Change Integration Support Suite (RISS) CDR		2Q		
(U) - RISS Gov't acceptance			3Q	
(U) NETWORK OPERATIONS UPGRADES				
(U) - Orbit Analysis System (OAS) follow-on Phase 2 Factory Qualification Testing	2Q			
(U) - OAS Follow-on Phase 2 Gov't acceptance		4Q		
(U) - OAS Follow-on Phase 3 Preliminary Design Review			2Q	
(U) - OAS Follow-on Phase 3 Critical Design Review				2Q