Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*				R-1 ITEM NOMENCLATURE PE 0305110F: *Satellite Control Network*							
COST ($ in Millions)	**FY 2009 Actual**	**FY 2010 Estimate**	**FY 2011 Base Estimate**	**FY 2011 OCO Estimate**	**FY 2011 Total Estimate**	**FY 2012 Estimate**	**FY 2013 Estimate**	**FY 2014 Estimate**	**FY 2015 Estimate**	**Cost To Complete**	**Total Cost**
Total Program Element	54.547	20.825	21.667	0.000	21.667	19.883	15.700	15.939	16.182	Continuing	Continuing
673276: *Satellite Control Network*	54.547	20.825	21.667	0.000	21.667	19.883	15.700	15.939	16.182	Continuing	Continuing

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 DoD, Intelligence Community (IC), and Civil operational and RDT&E missions, and other designated users. The AFSCN is a fielded, globally-distributed infrastructure of control centers, Remote Tracking Stations (RTSs), and communications links that provides unique capability for designated users to deploy and operate their 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. Air Force Space Command (AFSPC) performs operations, maintenance, modernization, and sustainment of the system to provide operational capabilities validated by a US Strategic Command (USSTRATCOM) Initial Capabilities 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 satellite systems.

This program element funds the development and acquisition of AFSCN Improvement and Modernization (I&M), an ongoing program of replacements and upgrades which will meet validated USSTRATCOM and AFSPC operational requirements to replace non-standard, unsupportable equipment with more reliable, maintainable, interoperable, and standardized hardware and software. This new equipment is intended to enable AFSPC satellite operations to be performed with reduced hardware/software maintenance costs. The principal efforts within this program are focused on Range Upgrades, Network Operations Upgrades, and associated studies.

RANGE UPGRADES: This effort will upgrade the current RTSs. Several integrated efforts are grouped into the RTS Block Change (RBC) effort, which will standardize, automate and make interoperable the remote tracking stations through the replacement of outdated government-unique equipment with commercial off-the-shelf, standardized equipment and 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. FY11 funds continue development of an S-band high power amplifier and provide system engineering, integration and test support for the Colorado, Guam, Oakhanger, Hawaii, New Boston, and Thule Tracking Station RBC efforts as well as for the Transportable RBC #1 asset.

NETWORK OPERATIONS UPGRADES: These critical upgrades improve AFSCN resource management capabilities. No FY11 activities are budgeted.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force	DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305110F: *Satellite Control Network*

B. Program Change Summary ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	16.547	20.991	0.000	0.000	0.000
Current President's Budget	54.547	20.825	21.667	0.000	21.667
Total Adjustments	38.000	-0.166	21.667	0.000	21.667
• Congressional General Reductions		-0.166			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	38.000	0.000	21.667	0.000	21.667

Change Summary Explanation

Note: The FY 2010 President's Budget submittal did not reflect FY 2011 through FY 2015 funding. Therefore, explanation of changes between the two budget positions cannot be made in a relevant manner.

FY09: Increases ($37.999M) for Electronic Scheduling & Dissemination (ESD) software design/development complete system level requirements, two software builds, and design reviews.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305110F: *Satellite Control Network*	PROJECT 673276: *Satellite Control Network*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
673276: *Satellite Control Network*	54.547	20.825	21.667	0.000	21.667	19.883	15.700	15.939	16.182	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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 DoD, Intelligence Community (IC), and Civil operational and RDT&E missions, and other designated users. The AFSCN is a fielded, globally-distributed infrastructure of control centers, Remote Tracking Stations (RTSs), and communications links that provides unique capability for designated users to deploy and operate their 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. Air Force Space Command (AFSPC) performs operations, maintenance, modernization, and sustainment of the system to provide operational capabilities validated by a US Strategic Command (USSTRATCOM) Initial Capabilities 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 satellite systems.

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RANGE UPGRADES: This effort will upgrade the current RTSs. Several integrated efforts are grouped into the RTS Block Change (RBC) effort, which will standardize, automate and make interoperable the remote tracking stations through the replacement of outdated government-unique equipment with commercial off-the-shelf, standardized equipment and 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. FY11 funds continue development of an S-band high power amplifier and provide system engineering, integration and test support for the Colorado, Guam, Oakhanger, Hawaii, New Boston, and Thule Tracking Station RBC efforts as well as for the Transportable RBC #1 asset.

NETWORK OPERATIONS UPGRADES: These critical upgrades improve AFSCN resource management capabilities. No FY11 activities are budgeted.

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

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305110F: *Satellite Control Network*	PROJECT 673276: *Satellite Control Network*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Major Thrust: Range Upgrades to continue development of interoperability and RTS Block Change (RBC) efforts. These include high power amplifier development for S-band capability and predeployment ... *FY 2009 Accomplishments:* In FY09: continued systems engineering, integration and operational testing for Vandenberg RBC gov't acceptance *FY 2010 Plans:* In FY10: continued systems engineering, integration and testing for Eastern Vehicle Check Facility and Diego Garcia RBC gov't acceptance. Continued systems engineering integration and testing for ongoing Colorado, Guam, Oakhanger, Hawaii, New Boston, and Thule RBC efforts, as well as for the RBC transportable asset #1. Continue high power amplifier development for RBC to include S-band to enable dual-band uplink commanding. *FY 2011 Base Plans:* In FY11: continue systems engineering, integration and testing for gov't acceptance of Colorado, Guam, Oakhanger, and Diego Garcia RBC upgrades as well as for the ongoing RBC transportable asset #1. Continue development of S-band high power amplifier for RBC efforts to enable dual band uplink commanding. *FY 2011 OCO Plans:* In FY 2011 OCO: Not Applicable.	3.568	17.545	18.256	0.000	18.256
Major Thrust: Network Operations Upgrades to continue Electronic Scheduling & Dissemination (ESD) upgrade, including completion of system level requirements, two software builds, and design reviews. *FY 2009 Accomplishments:* In FY09: continued ESD upgrade to include completion of system level requirements, development of two software builds, and completion of preliminary design review.	47.825	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force		DATE: February 2010
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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: In FY10: N/A *FY 2011 Base Plans:* In FY11: N/A *FY 2011 OCO Plans:* In FY 2011 OCO: Not Applicable.					
Major Thrust: Program support to include FFRDC and SETA. *FY 2009 Accomplishments:* In FY09: continued engineering support from Aerospace (FFRDC) and ARINC (SETA) *FY 2010 Plans:* In FY10: continued engineering support from Aerospace (FFRDC) and ARINC (SETA) *FY 2011 Base Plans:* In FY11: continued engineering support from Aerospace (FFRDC) and ARINC (SETA) *FY 2011 OCO Plans:* In FY 2011 OCO: Not Applicable.	3.154	3.280	3.411	0.000	3.411
Accomplishments/Planned Programs Subtotals	54.547	20.825	21.667	0.000	21.667

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force		DATE: February 2010
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PE 0305110F: *Satellite Control Network (Space), OPAF*	62.768	58.689	60.383	0.000	60.383	66.355	68.811	69.831	66.031	0.000	0.000

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. The AF has also awarded sole source contracts to Honeywell to continue to modernize the AFSCN.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force			DATE: February 2010
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Satellite Control Network Contract	Various/ Various	Honeywell Colorado Springs, CO	164.290	17.545	Dec 2009	18.256	Dec 2010	0.000		18.256	Continuing	Continuing	Continuing
		Subtotal	164.290	17.545		18.256		0.000		18.256			

Remarks

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010 Cost	FY 2010 Award Date	FY 2011 Base Cost	FY 2011 Base Award Date	FY 2011 OCO Cost	FY 2011 OCO Award Date	FY 2011 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Support (FFRDC, SETA, SPO ops)	Various/ Various	various various	83.389	3.280	Dec 2009	3.411	Dec 2010	0.000		3.411	Continuing	Continuing	Continuing
		Subtotal	83.389	3.280		3.411		0.000		3.411			

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	247.679	20.825		21.667		0.000		21.667			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force			DATE: February 2010
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Total Prior Years Cost may include only FY 2009 data.

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0305110F: *Satellite Control Network*	PROJECT 673276: *Satellite Control Network*

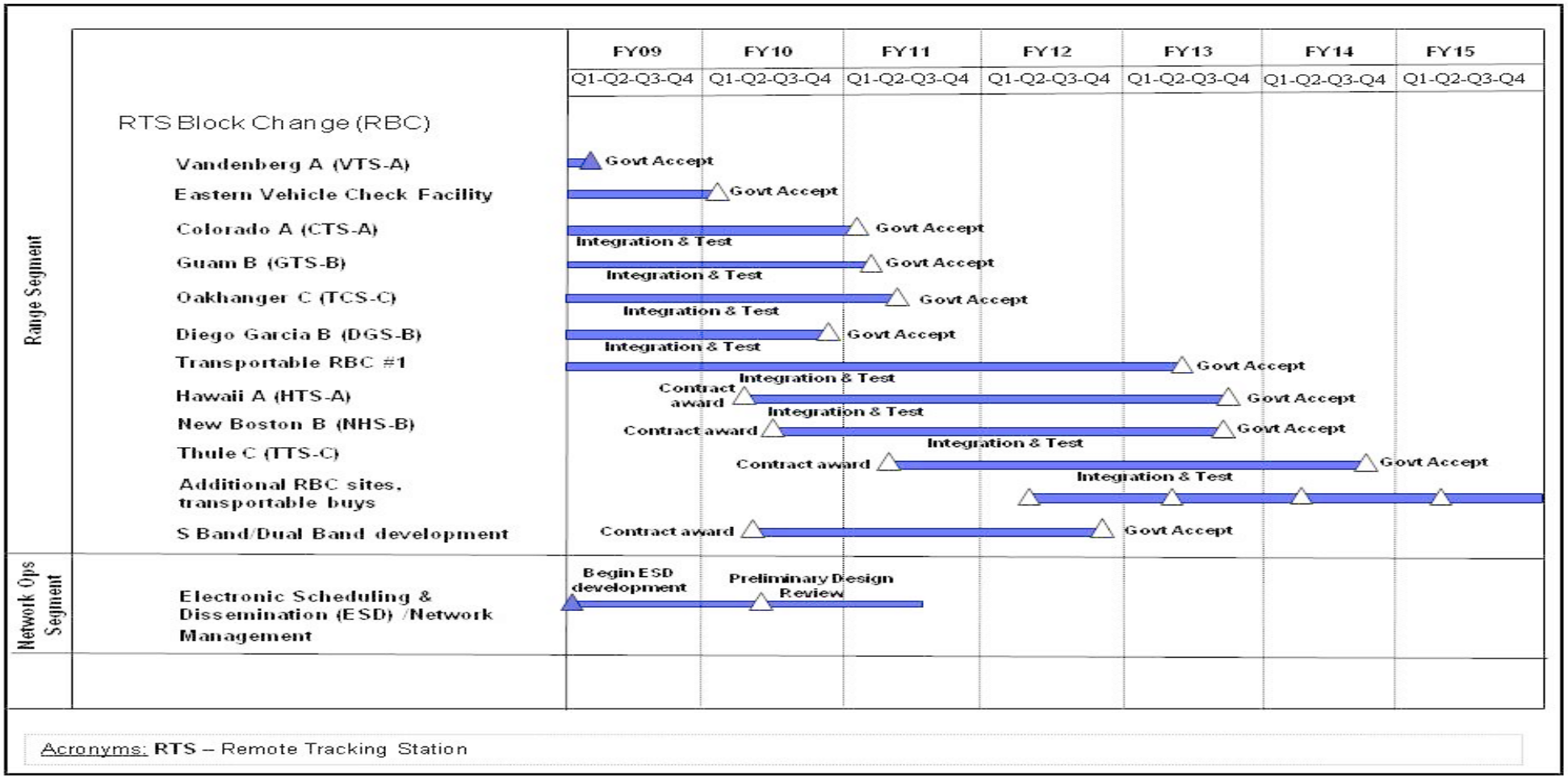

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0305110F: *Satellite Control Network*	**PROJECT** 673276: *Satellite Control Network*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
- Vandenberg-A RBC Gov't acceptance	1	2009	1	2009
- Eastern Vehicle Check Facility testing/Gov't acceptance	1	2009	1	2010
- Hawaii-A RBC integration/testing	2	2010	4	2011
- Colorado RBC integration/testing/Gov't acceptance	1	2009	1	2011
- New Boston-B RBC integration/testing	2	2010	4	2011
- Diego Garcia-B integration/testing/Gov't acceptance	1	2009	4	2010
- Oakhanger-C RBC integration/testing/Gov't acceptance	1	2009	2	2011
- Thule-C RBC integration/testing	2	2011	4	2011
- Guam-B RBC integration/testing/Gov't acceptance	1	2009	1	2011
- S Band/Dual Band High Power Amplifier development	2	2010	4	2011
- Electronic Scheduling & Dissemination (ESD) upgrade development/preliminary design review	1	2009	2	2010