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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305110F: <i>Satellite Control Network (SPACE)</i>
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COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	17.788	33.773	35.698	-	35.698	21.065	14.248	15.554	15.834	Continuing	Continuing
673276: <i>Satellite Control Network</i>	-	17.788	33.773	35.698	-	35.698	21.065	14.248	15.554	15.834	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

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 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 currently focused on Range Upgrades, Network Operations Upgrades, training tools, and associated studies.

RANGE UPGRADES include the RTS Block Change (RBC), which will provide standardization, automatation, and interoperability to the remote tracking stations through the replacement of outdated government-unique equipment with standardized equipment and technology, in order to reduce failures, correct operational deficiencies, and reduce operating and sustainment costs; the Unified S-band (USB) development to enable dual frequency band uplink commanding of satellites; and systems engineering to ensure integrated upgrade efforts. FY14 funds include, but are not limited to, systems engineering, integration, and test support to continue USB high power amplifier development.

NETWORK OPERATIONS UPGRADES improve AFSCN resource management capabilities. The focus of these efforts is on the upgrade of the Electronic Scheduling and Dissemination (ESD) system, which enables satellite operators at over 40 geographically separated locations to request contact time with their satellites via the shared AFSCN antennas, and allows AFSCN schedulers to de-conflict overlapping requests to create and publish a schedule. FY14 funds continue development of ESD 3.0 software builds and testing.

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

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B. Program Change Summary (\$ in Millions)		FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget		18.143	33.773	35.698	-	35.698
Current President's Budget		17.788	33.773	35.698	-	35.698
Total Adjustments		-0.355	0.000	0.000	-	0.000
• Congressional General Reductions		-	0.000			
• Congressional Directed Reductions		-	0.000			
• Congressional Rescissions		0.000	0.000			
• Congressional Adds		-	0.000			
• Congressional Directed Transfers		-	0.000			
• Reprogrammings		-0.355	0.000			
• SBIR/STTR Transfer		0.000	0.000			
• Other Adjustments		0.000	0.000	0.000	-	0.000
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2012	FY 2013	FY 2014
Title: RTS Block Change (RBC)				3.912	1.669	0.000
Description: Continue RBC development to replace outdated, unique RTS equipment with standardized equipment and technology to reduce failures and enhance sustainability						
FY 2012 Accomplishments: Completed Segment Verification Testing for Transportable RBC in all configurations and began Integrated System Testing						
FY 2013 Plans: Complete systems engineering, integration, testing and turnover for Transportable RBC						
Title: Unified S-band (USB) uplink				0.000	6.671	10.211
Description: Develop USB uplink transmitter to enable commanding of satellites using USB frequency in addition to the legacy L-band frequency uplink commanding						
FY 2013 Plans: Continue development begun with FY11 funding; refine design into detailed configuration-item level design; complete Preliminary Design Review for first article						
FY 2014 Plans: Complete Critical Design Review; complete hardware and software integration and installation; begin testing						
Title: Systems Engineering				3.367	4.658	4.628

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2012	FY 2013	FY 2014
Description: Provide test, Information Assurance (IA), requirements management, and system architecture support to the AFSCN FY 2012 Accomplishments: Provided testing, IA, and work package planning for RBC electronics core activities; continued future requirements development; completed AFSCN architecture roadmap FY 2013 Plans: Provide test, IA, and work package planning for RBC electronics core activities; design RTS performance monitoring at RBC sites; continue future requirements development; update AFSCN architecture roadmap FY 2014 Plans: Provide test, IA, and work package planning for RBC electronics core activities; design RTS performance monitoring at RBC sites; continue future requirements development; update AFSCN architecture roadmap				
Title: Electronic Scheduling and Dissemination System (ESD) 3.0 Description: Develop an upgrade for the aging, increasingly-unsustainable resource scheduling system needed to coordinate and manage satellite supports using the AFSCN antennas FY 2012 Accomplishments: Completed additional software builds and tested multiple functions on operational AFSCN to verify architecture FY 2013 Plans: Complete additional software builds, installation and check-out FY 2014 Plans: Complete Segment Verification testing and complete final software builds		9.212	18.000	18.000
Title: Management Services Description: Program support to include FFRDC (Aerospace) FY 2012 Accomplishments: FFRDC services provided in support of program office management processes to include program oversight and milestone and schedule tracking FY 2013 Plans:		1.297	2.775	2.859

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C. Accomplishments/Planned Programs (\$ in Millions)								FY 2012	FY 2013	FY 2014	
FFRDC services in support of program office management processes including program oversight as well as milestone and schedule tracking											
FY 2014 Plans: FFRDC services in support of program office management processes to include program oversight and milestone and schedule tracking											
Accomplishments/Planned Programs Subtotals								17.788	33.773	35.698	
D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPAF: BA03: Line Item # 836760: <i>AF Satellite Control Network Space</i>	60.592	44.219	30.237		30.237	60.445	66.290	60.172	61.256	Continuing	Continuing
Remarks Procures the mission critical electronics and telecommunications equipment to upgrade the aging AFSCN Range and Network Operations segments.											
E. Acquisition Strategy The AF uses the competitively awarded Satellite Control Network Contract (SCNC), managed by Space and Missile Systems 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 modifications to Honeywell to continue to modernize the AFSCN. The AF uses the existing SMC Technical Services Contract for information assurance systems engineering for AFSCN modernization.											
F. 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.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development						R-1 ITEM NOMENCLATURE PE 0305110F: Satellite Control Network (SPACE)						PROJECT 673276: Satellite Control Network			
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Satellite Control Network Contract	Various	Honeywell:Colorado Springs, CO	-	14.118	Dec 2011	28.918	Dec 2012	30.697	Dec 2013	-		30.697	Continuing	Continuing	TBD
Systems Engineering and Integration Contract	C/T&M	SAIC:El Segundo, CA	-	2.373	Dec 2011	2.080	Dec 2012	2.142	Dec 2013	-		2.142	Continuing	Continuing	TBD
Subtotal			0.000	16.491		30.998		32.839		0.000		32.839			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
FFRDC support to program office management (PMA)	RO	Aerospace Corp:El Segundo, CA	-	1.297	Dec 2011	2.775	Dec 2012	2.859	Dec 2013	-		2.859	Continuing	Continuing	TBD
Subtotal			0.000	1.297		2.775		2.859		0.000		2.859			
Project Cost Totals			0.000	17.788		33.773		35.698		0.000		35.698			

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APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305110F: Satellite Control Network (SPACE)			PROJECT 673276: Satellite Control Network			
	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract	
Remarks										

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

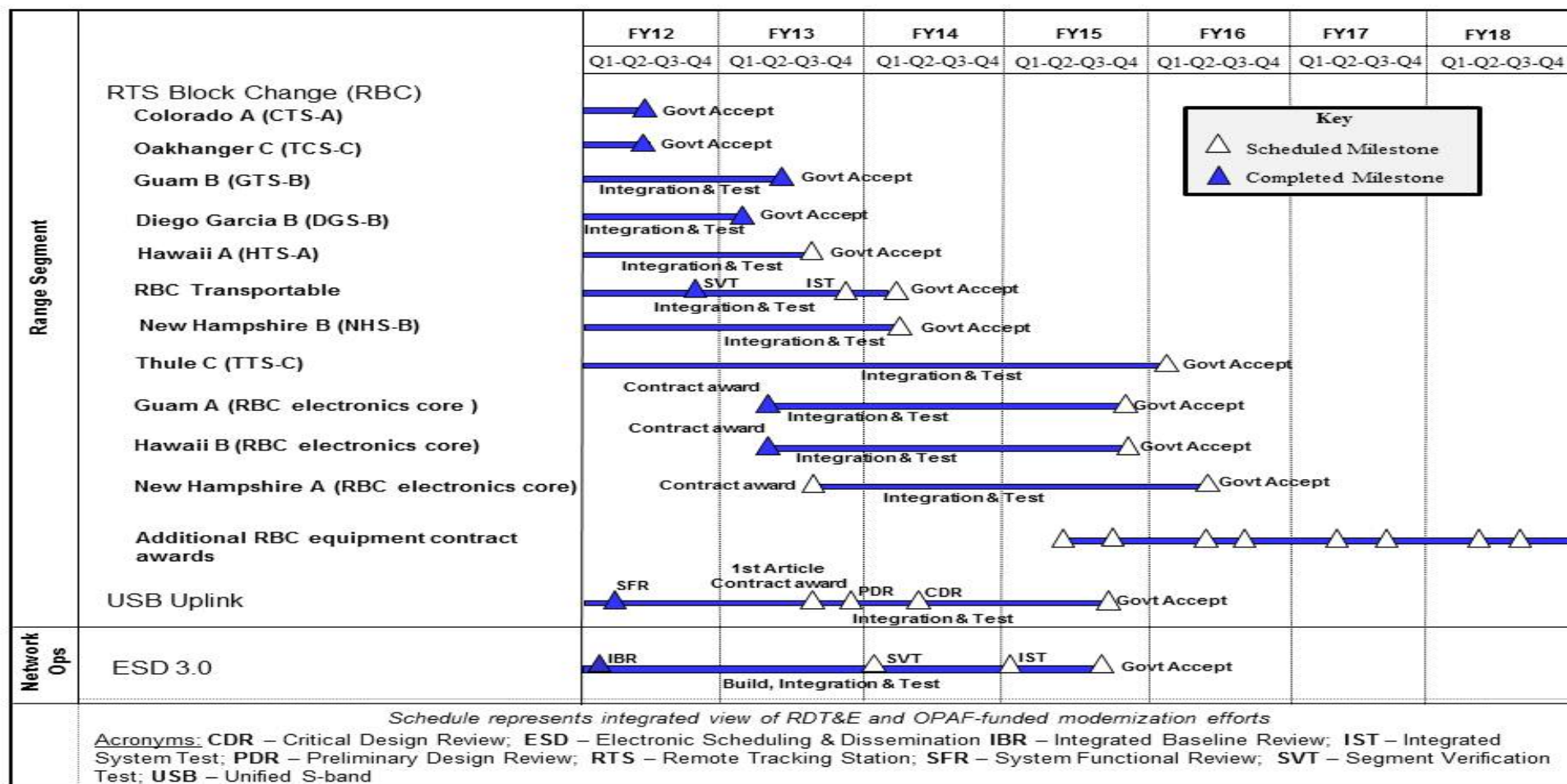
3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0305110F: Satellite Control Network
(SPACE)

PROJECT

673276: Satellite Control Network



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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force			DATE: April 2013
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Colorado-A RBC integration/test/Gov't accept	1	2012	2	2012
Guam-B RBC integration/test/Gov't accept	1	2012	2	2013
Oakhanger-C RBC integration/test/Gov't accept	1	2012	2	2012
Diego Garcia-B RBC integration/test/Gov't accept	1	2012	1	2013
Transportable RBC integration/test/Gov't accept	1	2012	1	2014
Hawaii-A RBC contract award/integration/test/Gov't accept	1	2012	3	2013
New Hampshire-B RBC contract award/integration/test/Gov't accept	1	2012	1	2014
Thule-C RBC contract award/integration/test/Gov't accept	1	2012	1	2016
Guam-A RBC core contract award/integration/test/Gov't accept	2	2013	4	2015
Hawaii-B RBC core contract award/integration/test/Gov't accept	2	2013	4	2015
New Hampshire-A RBC core contract award/integration/test/Gov't accept	3	2013	2	2016
Additional RBC contract awards	2	2015	4	2018
USB Uplink first article contract award	3	2013	3	2013
USB Uplink Preliminary Design Review	4	2013	4	2013
USB Uplink Critical Design Review/integration/test/Gov't accept	2	2014	3	2015
Electronic Scheduling & Dissemination (ESD) Integrated Baseline Review	1	2012	1	2012
ESD Segment Verification Test	1	2014	1	2014
ESD Integrated System Test	1	2015	1	2015
ESD Gov't accept	3	2015	3	2015