

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				PE 0305614F: <i>JSpOC Mission System</i>							
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	87.465	132.706	118.950	-	118.950	99.958	106.250	108.387	110.027	Continuing	Continuing
67A030: <i>Infrastructure</i>	15.000	35.348	31.074	-	31.074	32.923	32.256	34.011	36.168	Continuing	Continuing
67A031: <i>Mission Applications</i>	58.993	79.169	73.291	-	73.291	42.984	45.892	46.961	47.518	Continuing	Continuing
67A032: <i>Command & Control</i>	2.500	9.907	11.230	-	11.230	19.814	24.439	25.310	21.701	Continuing	Continuing
67A033: <i>Data Integration</i>	10.972	8.282	3.355	-	3.355	4.237	3.663	2.105	4.640	Continuing	Continuing

Note

The program funding includes Overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$1.417M in FY12.

A. Mission Description and Budget Item Justification

Overall, the program will continue risk reduction engineering and focus on incremental releases (Information Technology BOX construct) to deploy a service-oriented architecture (SOA) environment and tools to progressively advance operational capabilities toward an integrated JSpOC Mission System (JMS). This program will produce a net-centric collaborative environment, enhance and modernize space surveillance capabilities, create decision relevant views of the space environment, and enable efficient distribution of data across the space surveillance network.

JMS is responsible for Space Situational Awareness (SSA) and command and control (C2) of space forces. SSA includes the knowledge of all aspects of space related to operations to thoroughly assess threats to U.S. space assets and develop options, military and diplomatic, to counter them and to establish contingency plans to ensure U.S. forces can maintain access to space assets. JMS will access intelligence on adversary space operations, process surveillance of all space objects and activities, maintain detailed reconnaissance of specific space assets; fuse space environmental data, maintain awareness of cooperative space assets; and allow the Joint Functional Component Command for Space (JFCC-Space) to conduct space forces integrated command, control, communications, processing, analysis, dissemination, and archiving activities.

Near-term focus is to provide a sustainable net-centric environment with a highly accurate, responsive, and robust SSA system migration from the rapidly aging, and sustainment challenged Space Defense Operations Center (SPADOC) system (SPADOC design end of life was 2002). JMS will provide integrated space knowledge/ information for the Command, JFCC-Space to plan, direct, coordinate, and control operations of assigned forces. JMS will provide the ability to: monitor status, activities, and environment for assigned/attached space forces; assess how space forces support the battle space, provide impacts of changes to force status, and impacts of enemy forces on space assets; plan space operations to support theater and national operations; and execute Joint space tasking, track task performance, adapt tasking to changing situations, and conduct technology forecasting for emerging needs. JMS will also develop improved information capabilities for integration across SSA sensors through data exposure accomplished via the Net Centric Sensors and Data Sources effort (BPAC A012) in the SSA Systems PE (0604425F).

This program is in Budget Activity 07, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal years.

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
--	----------------------------

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>
--	--

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	139.471	132.706	121.764	-	121.764
Current President's Budget	87.465	132.706	118.950	-	118.950
Total Adjustments	-52.006	-	-2.814	-	-2.814
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-47.999	-			
• SBIR/STTR Transfer	-4.007	-			
• Other Adjustments	-	-	-2.814	-	-2.814

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 67A033: *Data Integration*

 Congressional Add: *KARNAC*

 Congressional Add: *COTS Technology for Space C2*

Congressional Add Subtotals for Project: 67A033

Congressional Add Totals for all Projects

FY 2010	FY 2011
5.000	-
3.180	-
8.180	-
8.180	-

Change Summary Explanation

FY10: -\$38.000M ATR to support other Air Force priorities

FY10: -\$9.999M BTR to support other Air Force priorities

FY10: -\$4.007M SBIR transfer

FY12: +\$4.700M Reprogramming

FY12: -\$0.397M to support other Air Force priorities

FY12: -\$1.417M to support Air Force efficiencies

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011				
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305614F: JSpOC Mission System				PROJECT 67A030: Infrastructure				
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost	
67A030: Infrastructure	15.000	35.348	31.074	-	31.074	32.923	32.256	34.011	36.168	Continuing	Continuing	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0			
A. Mission Description and Budget Item Justification												
Infrastructure will provide a services-oriented architecture (SOA) net-centric collaborative information environment at the Unclassified, Secret, TS/SCI, and SAP levels. Efforts incorporate net-centric enterprise services and integrate incremental space mission applications services. Priority is migration off the legacy SPADOC hardware and services into a sustainable infrastructure. Effort integrates components of SSA mission applications and C2 capabilities into the JSpOC to create timely, actionable knowledge necessary for maintaining space superiority and exercising command and control of space forces.												
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Infrastructure								15.000	35.348	31.074	-	31.074
Description: Pursue and integrate a collaborative net-centric, SOA information environment												
FY 2010 Accomplishments: Accomplishments: Developed and tested SOA infrastructure at SCI and Secret security levels; initial User Defined Operational Picture (UDOP); provided basic core services like registry/user profiles management, collaboration expansion; information assurance accreditation; and conducted system engineering integration, planning, coordination, and execution.												
FY 2011 Plans: Continue development, fielding, and accreditation of new mission services, core services; expands the SOA infrastructure to include releaseable and Unclassified information; and systems engineering, support, and testing of existing and updated baseline system.												
FY 2012 Base Plans: Continue fielding, and accreditation of SOA infrastructure to include alternate location; net-ready, security, and reliability core services; UDOP capabilities; and provide systems engineering integration, support, and testing of releases.												
FY 2012 OCO Plans:												
Accomplishments/Planned Programs Subtotals								15.000	35.348	31.074	-	31.074

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A030: <i>Infrastructure</i>	

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Other Procurement: <i>Air Force</i>	0.000	0.000	0.929	0.000	0.929	1.348	0.757	6.025	1.690	Continuing	Continuing

D. Acquisition Strategy

Ongoing activities utilize existing risk reduction engineering and study efforts to rapidly deploy a SOA environment and tools to progressively advance operational capabilities toward an integrated JMS.

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.

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force											DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT						
3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				PE 0305614F: JSpOC Mission System				67A030: Infrastructure						
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Integration	C/Various	Various:Various,	2.125	15.465	Jan 2011	17.192	Dec 2011	-		17.192	Continuing	Continuing	TBD	
Infrastructure Design & Development	C/Various	Various:Various,	7.278	8.676	Dec 2010	2.687	Dec 2011	-		2.687	Continuing	Continuing	TBD	
Subtotal			9.403	24.141		19.879		-		19.879				
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Program Office Support	Various	Electronic Systems Center:Hanscom AFB, MA	1.030	2.468	Nov 2010	2.215	Dec 2011	-		2.215	Continuing	Continuing	TBD	
Development, Eng Mgt, and Review	SS/TBD	Electronic Systems Center FFRDC: Various:Various,	1.340	1.525	Nov 2010	1.620	Nov 2011	-		1.620	Continuing	Continuing	TBD	
Development, Management and Review	C/TBD	Various:Various,	2.727	4.064	Nov 2010	4.171	Nov 2011	-		4.171	Continuing	Continuing	TBD	
Subtotal			5.097	8.057		8.006		-		8.006				
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
RTO	C/TBD	Not specified.:	0.500	3.150	Dec 2010	3.189	Dec 2011	-		3.189	Continuing	Continuing	TBD	
Subtotal			0.500	3.150		3.189		-		3.189				
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	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	

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force							DATE: February 2011					
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>			PROJECT 67A030: <i>Infrastructure</i>						
		Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		15.000	35.348		31.074		-		31.074			
Remarks												

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A030: <i>Infrastructure</i>

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A030: <i>Infrastructure</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Design and Development of Release 1	2	2011	1	2013
Operational Utility Evaluation of Release 1	1	2013	4	2013
Design and Development of Release 2	1	2014	2	2015
Operational Utility Evaluation of Release 2	3	2015	4	2015
Full Deployment Decision	2	2014	2	2014

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force									DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305614F: JSpOC Mission System				PROJECT 67A031: Mission Applications				
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost	
67A031: Mission Applications	58.993	79.169	73.291	-	73.291	42.984	45.892	46.961	47.518	Continuing	Continuing	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0			
A. Mission Description and Budget Item Justification												
Mission applications will provide space services to enhancing the accuracy, sustainability, and responsiveness of space surveillance capabilities from the legacy SPADOC SSA functions onto a net-centric enterprise enabling automated, real-time correlation, integration, distribution of data, and provide the knowledge environment necessary to enable the Commander JFCC Space rapid, responsive decisions for the protection of space assets from proliferating threats (adversary as well as orbiting debris). The system will provide a high accuracy space catalog (knowledge of space objects), increased observation verification and capabilities, and improved event processing. Research, design, and development will provide SSA space catalog applications, services, space surveillance observation processing, and sensor tasking. Funding includes technical studies, systems engineering, and integration. These efforts are in Budget Activity 7, Operational System Development												
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Mission Applications								58.993	79.169	73.291	-	73.291
Description: services/mission applications to conduct space control/situational awareness												
FY 2010 Accomplishments: FY10 Accomplishments: Develop and tested mission services like sensor management and force status. Initiated risk reduction for space environmental effects, space superiority, and SSA web services.												
FY 2011 Plans: FY11 Plans: Develop, field, and test mission services like orbit determination satellite positional database (i.e. high accuracy catalog); conjunction analysis/collision prediction; and continue risk reduction efforts like SSA data sharing, space environmental effects, space superiority, and SSA web services.												
FY 2012 Base Plans: FY12 Base Plans: Continues development of mission services like satellite positional database and conjunction analysis/collision prediction; SSA data sharing; maneuver processing; sensor calibration and tasking; and risk reduction efforts.												
FY 2012 OCO Plans:												
Accomplishments/Planned Programs Subtotals								58.993	79.169	73.291	-	73.291

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A031: <i>Mission Applications</i>	

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPAF: <i>PE 0305614F, JSpOC Mission System</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

Continues existing SSA risk reduction efforts and competitively selected system developer and integrator. Rapid release prototyping approach to progressively advance capabilities towards integrated SSA envisioned by existing architectures and roadmaps.

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.

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305614F: JSpOC Mission System				PROJECT 67A031: Mission Applications					
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Positional Mission Apps Design and Develop	C/Various	Various:Various,	21.030	7.341	Nov 2010	7.523	Nov 2011	-		7.523	Continuing	Continuing	TBD
Mission Apps Design and Develop	C/Various	Various:Various,	19.778	42.242	Dec 2010	42.250	Dec 2011	-		42.250	Continuing	Continuing	TBD
SSA Risk Reduction	C/Various	Various:Various,	4.500	15.800	Jan 2011	8.634	Jan 2012	-		8.634	Continuing	Continuing	TBD
Subtotal			45.308	65.383		58.407		-		58.407			
Remarks Note: Potential Mission Aps for FY10 is in error in ABIDES and this Rdoc. FY10 actuals for Potential Mission Apps is: \$19.859M (-\$1.172 less than what is reflected in ABIDES and Rdocs).													
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Support	Various	Electronic Systems Center:Hanscom AFB, MA	2.792	2.202	Nov 2010	2.381	Nov 2011	-		2.381	Continuing	Continuing	TBD
Development, Eng Management, and Review	SS/TBD	MITRE:Boston, MA	4.862	4.651	Nov 2010	5.079	Nov 2011	-		5.079	Continuing	Continuing	TBD
Development, Management & Review	C/TBD	Various:Various,	5.031	6.833	Nov 2010	7.159	Nov 2011	-		7.159	Continuing	Continuing	TBD
Subtotal			12.685	13.686		14.619		-		14.619			
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
RTO	C/CPAF	Not specified.:	1.000	0.100	Dec 2010	0.265	Dec 2011	-		0.265	Continuing	Continuing	TBD
Subtotal			1.000	0.100		0.265		-		0.265			

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force											DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>					R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>				PROJECT 67A031: <i>Mission Applications</i>				

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	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

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	58.993	79.169		73.291		-		73.291			

Remarks

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A031: <i>Mission Applications</i>

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A031: <i>Mission Applications</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Risk Reduction & Prototyping	1	2011	4	2015
Release 1 design and development	2	2011	1	2013
Release 1 operational utility evaluation	1	2013	4	2013
Release 2 design and development	1	2014	2	2015
Release 2 operational utility evaluation	3	2015	4	2015

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305614F: JSpOC Mission System				PROJECT 67A032: Command & Control			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
67A032: Command & Control	2.500	9.907	11.230	-	11.230	19.814	24.439	25.310	21.701	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification Command & Control (C2) effort will design, develop and integrate functions to create, visualize, and share decision-relevant views of space operational environment at all echelons. Functions include Space Situational Awareness and attack assessment data to provide an integrated space information environment for the JSpOC C2 node and improve deliberate attack warning/reporting, planning, tasking, course of action (COA) development capability, and situation assessment.											
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: C2 Description: Risk reduction/prototype development of space C2 services FY 2010 Accomplishments: FY10 Accomplishments: Initiated Joint Execution & Tasking System for Space. FY 2011 Plans: FY 11 Plans: explore JSpOC C2 human factors visualization technologies and space control applications like master space plan, joint space tasking order, space order of battle. FY 2012 Base Plans: FY 12 Base Plans: Continues space control services like courses of action preparation and C2 presentation. FY 2012 OCO Plans:							2.500	9.907	11.230	-	11.230
Accomplishments/Planned Programs Subtotals							2.500	9.907	11.230	-	11.230
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
D. Acquisition Strategy											
Risk reduction technology development/operational pilots to decrease uncertainties then employ competitively selected developer to produce and field incremental capabilities.											

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A032: <i>Command & Control</i>

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.

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force											DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305614F: JSpOC Mission System				PROJECT 67A032: Command & Control					
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
C2 Risk Reduction	Various	AFRL:Rome, NY	2.500	9.214	Dec 2010	10.531	Nov 2011	-		10.531	Continuing	Continuing	TBD
Subtotal			2.500	9.214		10.531		-		10.531			
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Support	Various	Electronic Systems Center:Hanscom AFB, MA	-	0.693	Nov 2010	0.699	Nov 2011	-		0.699	Continuing	Continuing	TBD
Subtotal			-	0.693		0.699		-		0.699			
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	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
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	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
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			2.500	9.907		11.230		-		11.230			
Remarks													

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A032: <i>Command & Control</i>

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A032: <i>Command & Control</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Risk Reduction	1	2011	4	2015
Release 2 Design and Development	1	2014	2	2015
Release 2 Operational Utility Evaluation	3	2015	4	2015

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305614F: JSpOC Mission System				PROJECT 67A033: Data Integration			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
67A033: Data Integration	10.972	8.282	3.355	-	3.355	4.237	3.663	2.105	4.640	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification											
The Data Integration Risk reduction effort mitigates JMS risk for the integration of legacy sensors into a net-centric based enterprise enabling distribution of data obtained across traditional sensors within the space surveillance network and non-traditional sensors and data sources critical to the Joint Space Operations Center (JSpOC) mission. This effort will define and implement the operational concept, technical architecture, and support concept to provide data to enable rapid, responsive decisions by the Commander, US Strategic Command’s Joint Functional Component Commander for Space and other space capability users to ensure protection of US space assets from proliferating adversary threats. This effort is vital to JSpOC modernization. The Extended Space Sensor Architecture Advanced Concept Technology Demonstration (ESSA ACTD) is an example how disparate and legacy space sensors network data can be translated into a net-centric environment. This effort will build upon those lessons learned and ensure success thorough participation in Data Management Working Groups (DMWGs) and the Command and Control Space Situational Awareness Community of Interest (C2 SSA COI)											
These efforts are in Budget Activity 7, Operational System Development, because they develop capabilities for better integration of SSA data or develop architectures guiding associated technical and budgetary planning.											
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Data Integration							1.792	8.282	3.355	-	3.355
Description: Data Integration Risk Reduction Effort											
FY 2010 Accomplishments: FY10 Accomplishments: engineering for common logical data model; \$1M additional for KARNAC study to improve JSpOC capabilities to include non-traditional data and three dimensional modeling and simulation											
FY 2011 Plans: FY11 Plans: continues common logical data model and management interfaces to include net-centric satellite observations for high-accuracy processing; space surveillance observations interface; and non-traditional sensors.											
FY 2012 Base Plans:											

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0305614F: JSpOC Mission System	PROJECT 67A033: Data Integration				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
FY12 Base Plans: Expand the net-centric sensor interfaces to include new space surveillance sensors such as the Space Fence program and continue non-traditional sensor integration.						
FY 2012 OCO Plans:						
Title: KARNAC (1) Description: Additional funding for Project KARNAC FY 2010 Accomplishments: Further KARNAC study to improve JSpOC capabilities to include non-traditional data and three dimensional modeling and simulation FY 2011 Plans: FY 2012 Base Plans: FY 2012 OCO Plans:		1.000	-	-	-	-
Accomplishments/Planned Programs Subtotals		2.792	8.282	3.355	-	3.355
		FY 2010	FY 2011			
Congressional Add: KARNAC FY 2010 Accomplishments: KARNAC study to improve JSpOC capabilities to include non-traditional data and three dimensional modeling and simulations FY 2011 Plans:		5.000	-			
Congressional Add: COTS Technology for Space C2 FY 2010 Accomplishments: COTS technology to be used for Space Command and Control FY 2011 Plans:		3.180	-			
Congressional Adds Subtotals		8.180	-			

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A033: <i>Data Integration</i>	

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

Data integration focus is on supporting the migration of the space surveillance network sensors and non-traditional sensors and data sources to a net-centric architecture.

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.

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force										DATE: February 2011				
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0305614F: JSpOC Mission System				PROJECT 67A033: Data Integration					
Product Development (\$ in Millions)					FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Concept Definition Research/ Analysis	Various	Various:Various,	0.240	6.202	Nov 2010	1.830	Nov 2011	-		1.830	Continuing	Continuing	TBD	
Sensor & Data Source Integration	Various	Various:Various,	1.552	1.500	Dec 2010	1.275	Nov 2011	-		1.275	Continuing	Continuing	TBD	
Subtotal			1.792	7.702		3.105		-		3.105				
Support (\$ in Millions)					FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Program Office/Related Support	Various	Various:Various,	-	0.580	Nov 2010	0.250	Nov 2011	-		0.250	Continuing	Continuing	TBD	
Subtotal			-	0.580		0.250		-		0.250				
Test and Evaluation (\$ in Millions)					FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
KARNAC Study	MIPR	DOE:Various,	6.000	-		-		-		-	0.000	6.000	0.000	
COTS for Space C2	SS/CPFF	General Dynamics:Santa Clara, CA	3.180	-		-		-		-	0.000	3.180	0.000	
Subtotal			9.180	-		-		-		-	0.000	9.180	0.000	
Management Services (\$ in Millions)					FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	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	

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force							DATE: February 2011				
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>			PROJECT 67A033: <i>Data Integration</i>					
	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	10.972	8.282		3.355		-		3.355			
Remarks											

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A033: <i>Data Integration</i>

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

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

R-1 ITEM NOMENCLATURE

PE 0305614F: *JSpOC Mission System*

PROJECT

67A033: *Data Integration*

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Data Integration	1	2011	4	2016

UNCLASSIFIED