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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)				PE 0604425F: Space Situation Awareness Systems							
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	211.266	238.377	426.525	0.000	426.525	508.259	496.975	495.509	232.199	Continuing	Continuing
65A006: Space-Based Space Surveillance	143.139	144.242	185.915	0.000	185.915	210.011	186.282	127.520	7.337	Continuing	Continuing
65A008: Integrated Space Situation Awareness	42.620	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
65A009: Space Fence	25.507	60.228	164.790	0.000	164.790	242.023	264.949	334.928	204.202	Continuing	Continuing
65A012: Net-centric Sensors and Data Sources	0.000	18.357	24.435	0.000	24.435	10.447	12.982	12.424	7.217	Continuing	Continuing
65A037: Space Surveillance Telescope	0.000	0.000	1.947	0.000	1.947	0.000	0.000	0.000	0.000	Continuing	Continuing
65A038: SSA Environmental Monitoring	0.000	15.550	49.438	0.000	49.438	45.778	32.762	20.637	13.443	Continuing	Continuing
A. Mission Description and Budget Item Justification											
Space Situation Awareness (SSA) is knowledge of all aspects of space related to operations. The foundation for space control, SSA encompasses intelligence on adversary space operations; surveillance of all space objects and activities; detailed reconnaissance of specific space assets; monitoring space environmental conditions; monitoring cooperative space assets; and conducting integrated command, control, communications, processing, analysis, dissemination, and archiving activities. This program element develops new Air Force sensors for the SSA network and improved information capabilities for integration across it; also includes developmental planning and technology needs forecasting for future blocks and emerging needs. A companion program element, 0305940F, Space Situation Awareness Operations, fields, upgrades, operates, and sustains sensors and information integration capabilities within that network. An additional companion program element, 0305614F, JSpOC Mission System, processes surveillance of all space objects and activities, maintains detailed reconnaissance of space assets, fuses space data, maintains awareness of cooperative space assets, and allows JFCC-Space to conduct integrated C2 of space forces. Development activities are necessary to deploy new, advanced sensors capable of finding, fixing, tracking, and reconnoitering the expanding number of debris objects on orbit as well as the increasing number of satellites launched by other nations, many of them smaller and more capable than previous spacecraft. These activities are also required to better integrate the disparate elements of SSA in order to enable rapid, responsive space operations. These efforts are in Budget Activity 5, System Development and Demonstration, because they develop new SSA capabilities.											

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APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE			
3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)		PE 0604425F: Space Situation Awareness Systems			
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	215.266	308.134	0.000	0.000	0.000
Current President's Budget	211.266	238.377	426.525	0.000	426.525
Total Adjustments	-4.000	-69.757	426.525	0.000	426.525
• Congressional General Reductions		-68.600			
• 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	-4.000	-1.157	426.525	0.000	426.525
Change Summary Explanation					
FY09: \$6.0M reprogramming to support increased Space Based Space Surveillance (SBSS) Block 10 program costs due to launch delay.					
FY09: \$6.0M BTR to support increased SBSS program costs due to launch delay.					
FY09: -\$10.0M BTR to support higher AF priorities.					
FY10: -\$36.7M congressional program reduction to SBSS Follow-on					
FY10: -\$30.0M congressional program reduction to Space Fence					
FY10: -\$6.9M congressional program reduction to SST					
FY10: +\$5M congressional program add for HANDS ION					
FY10: Air Force requested a technical adjustment to the database transferring \$5M from PE 0604425F to PE 06303438F for HANDS ION					
Note: The FY 2010 President's Budget submission 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.					

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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 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604425F: Space Situation Awareness Systems				PROJECT 65A006: Space-Based Space Surveillance			
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
65A006: Space-Based Space Surveillance	143.139	144.242	185.915	0.000	185.915	210.011	186.282	127.520	7.337	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification											
Building upon the success of the Space-Based Visible (SBV) technology demonstration, which proved the utility of surveilling orbiting objects from space, the Space-Based Space Surveillance (SBSS) project will develop a constellation of optical sensing satellites to search, detect, and track objects in Earth orbit. It will accomplish this via collecting and processing space object identification and satellite metric data, then communicating it to command and control nodes. Surveillance from space augments existing ground sensors with timely 24-hour, all-weather object search capabilities. In conjunction with information from other Space Situation Awareness network sensors, SBSS data will enable more timely detection and tracking of space objects, particularly those in geosynchronous orbits.											
This effort is in Budget Activity 5, System Development and Demonstration, because it is developing a new spacecraft system.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
THRUST AREA: Block 10 design, development, and risk reduction FY 2009 Accomplishments: In FY09: Completion of space vehicle and ground system integration and test (I&T) activities; completion of final system Functional & Physical Configuration Audits (FCA/PCA) FY 2010 Plans: In FY10: Block 10 system available for launch; continuation of necessary contractor support to accomplish on-orbit system check out							35.559	15.712	0.000	0.000	0.000

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APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604425F: Space Situation Awareness Systems		PROJECT 65A006: Space-Based Space Surveillance		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: In FY11: N/A						
FY 2011 OCO Plans: In FY11 OCO: N/A						
THRUST AREA: Block 10 launch vehicle integration		33.579	3.720	0.000	0.000	0.000
FY 2009 Accomplishments: In FY09: Conduct final assembly and test of launch vehicle; complete space vehicle integration; coordinate range assets						
FY 2010 Plans: In FY10: SBSS Block 10 launch; conduct post-launch mission analyses						
FY 2011 Base Plans: In FY11: N/A						
FY 2011 OCO Plans: In FY11 OCO: N/A						
THRUST AREA: Block 10 contractor ops & Interim Contractor Support		46.210	47.030	20.500	0.000	20.500
FY 2009 Accomplishments: In FY09: Finalize contractor operations readiness and sustainment planning						
FY 2010 Plans: In FY10: Support launch operations readiness and sustainment planning						

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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 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604425F: Space Situation Awareness Systems		PROJECT 65A006: Space-Based Space Surveillance		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: In FY11: Complete Initial Operational Test & Evaluation (IOT&E); continue on-orbit operations and system sustainment						
FY 2011 OCO Plans: In FY11 OCO: N/A						
THRUST AREA: SBSS Follow-on Design, development and risk reduction		7.586	38.701	121.461	0.000	121.461
FY 2009 Accomplishments: In FY09: Finalize acquisition strategy planning; continue technology risk reduction effort						
FY 2010 Plans: In FY10: Obtain Milestone Decision Authority (MDA) approval of acquisition strategy; award Follow-on development contract						
FY 2011 Base Plans: In FY11: Purchase long-lead hardware and conduct preliminary design						
FY 2011 OCO Plans: In FY11 OCO: N/A						
THRUST AREA: Technology Transfer & Risk Reduction		0.000	10.000	20.000	0.000	20.000
FY 2009 Accomplishments: In FY09: N/A						
FY 2010 Plans: In FY10: Technical research, studies, and analyses for future space-based space situational awareness (SSA) sensor technology, risk reduction, and architecture modeling						

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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 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604425F: Space Situation Awareness Systems		PROJECT 65A006: Space-Based Space Surveillance		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: In FY11: Technical research, studies, and analyses for future space-based space situational awareness (SSA) sensor technology, risk reduction, and architecture modeling						
FY 2011 OCO Plans: In FY11 OCO: N/A						
THRUST AREA: Program Office and related support activities		20.205	29.079	23.954	0.000	23.954
FY 2009 Accomplishments: In FY09: Program Office and related support activities, such as, Technical Studies & Analysis, Systems Engineering & Integration						
FY 2010 Plans: In FY10: Program Office and related support activities, such as, Technical Studies & Analysis, Systems Engineering & Integration						
FY 2011 Base Plans: In FY11: Program Office and related support activities, such as, Technical Studies & Analysis, Systems Engineering & Integration						
FY 2011 OCO Plans: In FY11 OCO: N/A						
Accomplishments/Planned Programs Subtotals		143.139	144.242	185.915	0.000	185.915

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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 Not Provided (12811): <i>Activity Not Provided</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

D. Acquisition Strategy

This system is being acquired via a block approach. Block 10 will develop and field a satellite-based capability to replace the SBV sensor with a capability significantly improving the timeliness of data on objects in geosynchronous orbit. Block 10 was awarded competitively under an option on the existing Mission Area Prime Integrating contract for the space control mission area. The planning portion of the Block 10 contractor ops & interim contractor support effort was previously included in the design, development and risk reduction effort.

The Air Force is finalizing its approach to acquire additional SSA capabilities via the SBSS Follow-on, minimizing program risk and capability gap while leveraging existing lessons learned. The Air Force will also begin risk reduction and concept development studies to support long-term mission capability improvements and technology transfer to industry.

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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604425F: Space Situation Awareness Systems				PROJECT 65A006: Space-Based Space Surveillance				
Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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	
Block 10 design and development	C/CPAF	Northrop Grumman Redondo Beach, CA	41.350	9.020	Nov 2009	0.000		0.000		0.000	0.000	50.370	0.000	
Technical risk reduction, mission planning & mission data processing	SS/CPFF	MIT Lincoln Laboratory Lexington, MA	2.209	6.692	Jan 2010	0.000		0.000		0.000	0.000	8.901	0.000	
Launch vehicle integration	MIPR	Space and Missile Systems Center Det. Kirtland AFB, NM	25.579	3.720	Nov 2009	0.000		0.000		0.000	0.000	29.299	0.000	
Block 10 contractor ops & Interim Contract Support	SS/CPAF	Boeing Huntington Beach, CA	46.210	47.030	Nov 2009	20.500	Nov 2010	0.000		20.500	Continuing	Continuing	0.000	
SBSS Follow-on Design & Development	TBD/TBD	TBD TBD	7.586	38.701	Jun 2010	121.461	Nov 2010	0.000		121.461	Continuing	Continuing	0.000	
Technology Transfer & Risk Reduction	TBD/TBD	TBD TBD	0.000	10.000	Jan 2010	20.000	Nov 2010	0.000		20.000	Continuing	Continuing	0.000	
Subtotal			122.934	115.163		161.961		0.000		161.961			0.000	
Remarks														

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010		
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Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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, Technical Studies & Analysis, Systems Engineering & Integration	Various	Space and Missile Systems Center Los Angeles AFB, CA	20.205	29.079	Oct 2009	23.954		0.000		23.954	Continuing	Continuing	0.000
Subtotal			20.205	29.079		23.954		0.000		23.954			0.000
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			143.139	144.242		185.915		0.000		185.915			0.000
Remarks Total Prior Years Cost may include only FY 2009 data.													

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

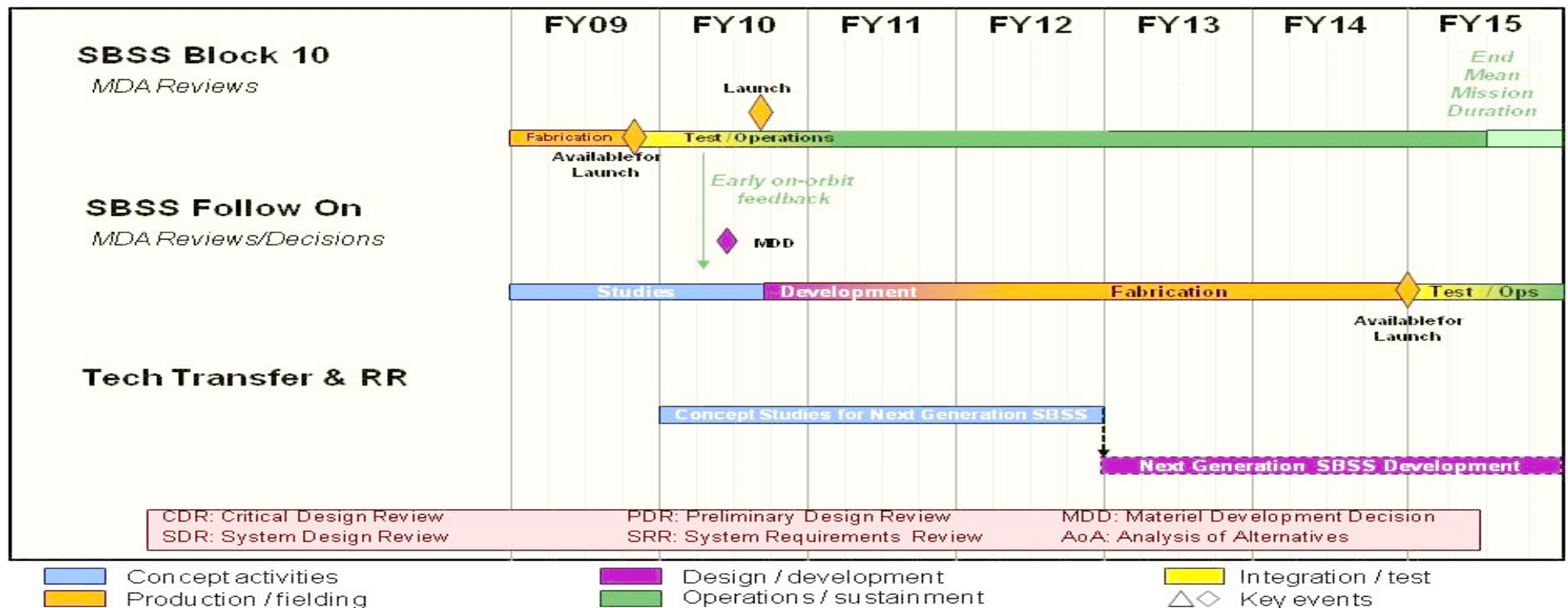
3600: Research, Development, Test & Evaluation, Air Force
BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604425F: Space Situation Awareness Systems

PROJECT

65A006: Space-Based Space Surveillance



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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604425F: <i>Space Situation Awareness Systems</i>	PROJECT 65A006: <i>Space-Based Space Surveillance</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Block 10 Available for Launch	4	2009	4	2009
SBSS Follow-on Materiel Development Decision (MDD)	2	2010	2	2010
SBSS Follow-on Authority to Proceed	3	2010	3	2010

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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 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604425F: Space Situation Awareness Systems				PROJECT 65A008: Integrated Space Situation Awareness			
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
65A008: Integrated Space Situation Awareness	42.620	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
Note Beginning in FY10 efforts formerly in the ISSA project have transferred to the JSpOC Mission System (JMS), PE 35164F, except for the ESSA ACTD, which is now executed in the Net-Centric Sensors and Data Sources project.											
A. Mission Description and Budget Item Justification In FY10, efforts that were formerly in the ISSA project have tranferred to the JSpOC Mission Ssystem (JMS) PE 35614F, except for the ESSA ACTD, which is now executed in the the Net-Centric Sensors and Data Sources project.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Major Thrust: ISSA Integrator and Test & Evaluation, Surveillance and Reconnaissance, Intelligence Products and Threat Processing, Environment, Capability Integration (includes Blue Force Status),... FY 2009 Accomplishments: In FY09: Continuation of activities listed above FY 2010 Plans: In FY10: N/A FY 2011 Base Plans: In FY11: N/A							42.620	0.000	0.000	0.000	0.000

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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 2011 OCO Plans: In FY11 OCO: N/A											
Accomplishments/Planned Programs Subtotals				42.620	0.000	0.000	0.000	0.000			
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 08036790F: <i>Space Mods Space, Other Procurement, Air Force</i>	8.983	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
D. Acquisition Strategy											
In FY10, efforts that were formerly in the ISSA project have tranferred to the JSpOC Mission Ssystem (JMS) PE 35614F, except for the ESSA ACTD, which is now executed in the the Net-Centric Sensors and Data Sources project.											
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.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010		
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Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
ISSA Integrator, T&E	C/CPFF	Various Various	10.177	0.000		0.000		0.000		0.000	0.000	10.177	0.000
Surveillance and Reconnaissance	C/CPAF	Various Various	15.204	0.000		0.000		0.000		0.000	0.000	15.204	0.000
Intelligence Products and Threat Processing	Various	Booz Allen Hamilton Colorado Springs, CO; TBD	3.300	0.000		0.000		0.000		0.000	0.000	3.300	0.000
Environment	Various	Various Various	2.323	0.000		0.000		0.000		0.000	0.000	2.323	0.000
Capability Integration (includes Blue Force Status)	Various	Northrop Grumman, Azuza, CA Boeing, Seal Beach, CA; MIT Lincoln Laboratory...	3.050	0.000		0.000		0.000		0.000	0.000	3.050	0.000
ESSA ACTD	Various	MIT Lincoln Laboratory, Lexington, MA; ITSP, Colora...	1.264	0.000		0.000		0.000		0.000	0.000	1.264	0.000
Subtotal			35.318	0.000		0.000		0.000		0.000	0.000	35.318	0.000
Remarks													

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Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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 and related support activities, such as, Technical Studies & Analysis, Systems Engineering & Integration	Various	Space and Missile Systems Center Los Angeles AFB, CA	7.302	0.000		0.000		0.000		0.000	0.000	7.302	0.000
Subtotal			7.302	0.000		0.000		0.000		0.000	0.000	7.302	0.000
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			42.620	0.000		0.000		0.000		0.000	0.000	42.620	0.000
Remarks													
Total Prior Years Cost may include only FY 2009 data.													

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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 5: Development & Demonstration (SDD)

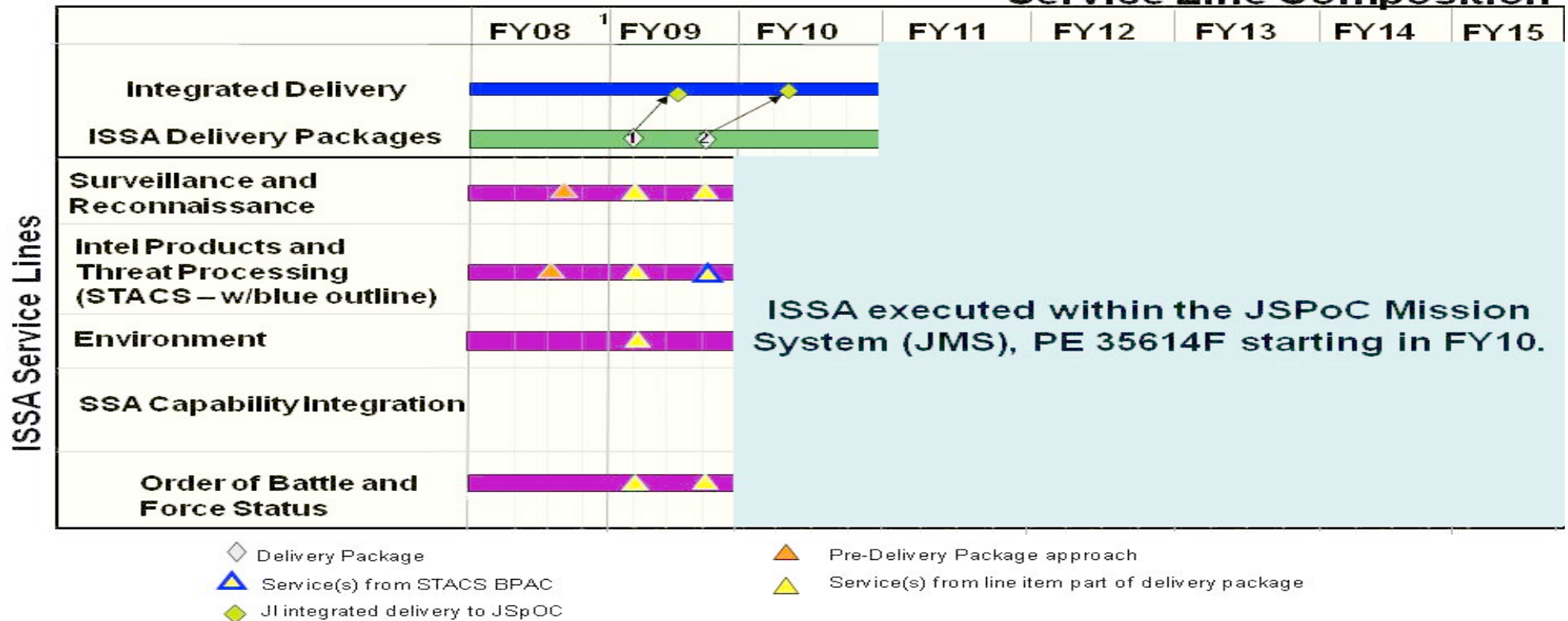
R-1 ITEM NOMENCLATURE

PE 0604425F: Space Situation Awareness Systems

PROJECT

65A008: Integrated Space Situation Awareness

**ISSA Delivery Package
Schedule and Mission
Service Line Composition**



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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force			DATE: February 2010	
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Schedule Details				
	Start		End	
Event	Quarter	Year	Quarter	Year
Surveillance and Reconnaissance Ops Prototype Delivery	2	2009	4	2009
Intelligence Products & Threat Processing Ops Prototype Delivery	2	2009	4	2009
Environment Ops Prototype Delivery	2	2009	2	2009
Capability Integration Ops Prototype Delivery	2	2009	4	2009

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604425F: <i>Space Situation Awareness Systems</i>				PROJECT 65A009: <i>Space Fence</i>			
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
65A009: <i>Space Fence</i>	25.507	60.228	164.790	0.000	164.790	242.023	264.949	334.928	204.202	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification <p>The Space Fence effort will develop a system of ground-based sensors to replace the aging Air Force Space Surveillance System (AFSSS), a Very High Frequency radar operational since 1961. By using higher radio frequencies in conjunction with radar transmitters and receivers co-located at sites dispersed worldwide, the Space Fence will provide timely detection of smaller orbiting objects, primarily those in low earth orbit (LEO). As a result, it will expand the uncued detection and tracking capacity of the Space Surveillance Network by an order of magnitude, from 10,000 to 100,000 objects, while working in concert with other network sensors.</p> <p>This effort is in Budget Activity 5, System Development and Demonstration, because it is developing a new system of ground-based sensors.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Space Fence will satisfy entry criteria to its DAE IPR in advance of Phase A PDR RFP release, and contractors will complete their Phase A SDR activities. <i>FY 2009 Accomplishments:</i> In FY 2009: Post PDR Contract Award, the contractors will continue radar development and prototype activities, to include HW/SW Design, and conduct Site Surveys. Space Fence achieved Key Decision Point (KDP) A. Awarded three concept development contracts to conduct trade studies, begin analysis of system design and initial design of prototypes. <i>FY 2010 Plans:</i> In FY 2010: The three prime contractors completed System Requirements Review (SRR). Government to form high performance team to develop and finalize the Capabilities Development Document (CDD). Contractors will conduct System Design Review (SDR) and demonstrate the prototypes.							25.507	60.228	164.790	0.000	164.790

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: February 2010							
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604425F: <i>Space Situation Awareness Systems</i>		PROJECT 65A009: <i>Space Fence</i>							
B. Accomplishments/Planned Program (\$ in Millions)											
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total			
<p><i>FY 2011 Base Plans:</i> In FY 2011:Space Fence will satisfy entry criteria to its Defense Acquisition Executive (DAE) In-Process Review (IPR) in advance of Preliminary Design Review (PDR) Request For Proposal (RFP) release for follow-on contract awards of two contractors to continue radar development and prototype activities, to include HW/SW Design, and conduct Site Surveys and refine their design/prototypes and complete their Delta - System Design Review (SDR) activities.</p> <p><i>FY 2011 OCO Plans:</i> In FY 2011 OCO: N/A</p>											
Accomplishments/Planned Programs Subtotals				25.507	60.228	164.790	0.000	164.790			
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 Not Provided (13366): <i>Other Procurement, Air Force</i> <i>(PE 0305940F, Space Situation Awareness Operations)</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	62.219	201.434	0.000	0.000
D. Acquisition Strategy											
The Air Force competitively awarded requirements definition contracts for the effort in FY 2006.											
The Air Force competitively awarded three (3) Phase A System Design Review (SDR) contracts in June 2009 to Lockheed Martin, Northrop Grumman, and Raytheon. Following SDR, a full and open competition is planned for award of up to two contracts through Preliminary Design Review (PDR), with a down-select to a single contractor for Block 10 and beyond. The block approach will deliver Space Fence capabilities that follow the principles of time-certain capability/ development and considers user needs and required delivery dates, technology maturity, program risk, and fiscal constraints. Initial Operational Capability (IOC) consisting of the first radar site is desired no later than FY15. The final schedule will be determined in Phase A.											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604425F: <i>Space Situation Awareness Systems</i>	PROJECT 65A009: <i>Space Fence</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.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010																																																																																																																																								
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604425F: <i>Space Situation Awareness Systems</i>				PROJECT 65A009: <i>Space Fence</i>																																																																																																																																											
Product Development (\$ in Millions) <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Cost Category Item</th> <th rowspan="2">Contract Method & Type</th> <th rowspan="2">Performing Activity & Location</th> <th rowspan="2">Total Prior Years Cost</th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th rowspan="2">Cost To Complete</th> <th rowspan="2">Total Cost</th> <th rowspan="2">Target Value of Contract</th> </tr> <tr> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td>Design and development (Lockheed Martin)</td> <td>C/FFP</td> <td>Lockheed Martin Moorestown, NJ</td> <td align="right">7.430</td> <td align="right">12.570</td> <td align="center">Oct 2009</td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td align="right">0.000</td> <td align="right">20.000</td> <td align="right">30.000</td> </tr> <tr> <td>Design and development (Northrop Grumman)</td> <td>C/FFP</td> <td>Northrop Grumman Linthicum Heights, MD</td> <td align="right">7.430</td> <td align="right">12.570</td> <td align="center">Oct 2009</td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td align="right">0.000</td> <td align="right">20.000</td> <td align="right">30.000</td> </tr> <tr> <td>Design and development (Raytheon)</td> <td>C/FFP</td> <td>Raytheon Sudbury, MA</td> <td align="right">7.430</td> <td align="right">12.570</td> <td align="center">Oct 2009</td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td align="right">0.000</td> <td align="right">20.000</td> <td align="right">30.000</td> </tr> <tr> <td>Design and development (TBD Contractor 1)</td> <td>C/FFP</td> <td>TBD Contractor 1 TBD</td> <td align="right">0.000</td> <td align="right">0.645</td> <td align="center">Apr 2011</td> <td align="right">70.126</td> <td align="center">Apr 2011</td> <td align="right">0.000</td> <td></td> <td align="right">70.126</td> <td align="center">Continuing</td> <td align="center">Continuing</td> <td align="right">0.000</td> </tr> <tr> <td>Design and development (TBD Contractor 2)</td> <td>C/FFP</td> <td>TBD Contractor 2 TBD</td> <td align="right">0.000</td> <td align="right">0.645</td> <td align="center">Apr 2011</td> <td align="right">70.126</td> <td align="center">Apr 2011</td> <td align="right">0.000</td> <td></td> <td align="right">70.126</td> <td align="center">Continuing</td> <td align="center">Continuing</td> <td align="right">0.000</td> </tr> <tr> <td>Design evaluation (Lincoln Lab)</td> <td>SS/FP</td> <td>MIT Lincoln Laboratory Lexington, MA</td> <td align="right">4.300</td> <td align="right">4.500</td> <td align="center">Oct 2009</td> <td align="right">3.534</td> <td align="center">Oct 2010</td> <td align="right">0.000</td> <td></td> <td align="right">3.534</td> <td align="center">Continuing</td> <td align="center">Continuing</td> <td align="right">0.000</td> </tr> <tr> <td>Design evaluation (Mitre)</td> <td>SS/FP</td> <td>MITRE Corp. Bedford, MA</td> <td align="right">3.336</td> <td align="right">2.808</td> <td align="center">Oct 2009</td> <td align="right">2.892</td> <td align="center">Oct 2010</td> <td align="right">0.000</td> <td></td> <td align="right">2.892</td> <td align="center">Continuing</td> <td align="center">Continuing</td> <td align="right">0.000</td> </tr> <tr> <td align="right" colspan="3">Subtotal</td><td align="right">29.926</td><td align="right">46.308</td><td></td><td align="right">146.678</td><td></td><td align="right">0.000</td><td></td><td align="right">146.678</td><td></td><td></td><td align="right">90.000</td> </tr> </tbody> </table>															Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Design and development (Lockheed Martin)	C/FFP	Lockheed Martin Moorestown, NJ	7.430	12.570	Oct 2009	0.000		0.000		0.000	0.000	20.000	30.000	Design and development (Northrop Grumman)	C/FFP	Northrop Grumman Linthicum Heights, MD	7.430	12.570	Oct 2009	0.000		0.000		0.000	0.000	20.000	30.000	Design and development (Raytheon)	C/FFP	Raytheon Sudbury, MA	7.430	12.570	Oct 2009	0.000		0.000		0.000	0.000	20.000	30.000	Design and development (TBD Contractor 1)	C/FFP	TBD Contractor 1 TBD	0.000	0.645	Apr 2011	70.126	Apr 2011	0.000		70.126	Continuing	Continuing	0.000	Design and development (TBD Contractor 2)	C/FFP	TBD Contractor 2 TBD	0.000	0.645	Apr 2011	70.126	Apr 2011	0.000		70.126	Continuing	Continuing	0.000	Design evaluation (Lincoln Lab)	SS/FP	MIT Lincoln Laboratory Lexington, MA	4.300	4.500	Oct 2009	3.534	Oct 2010	0.000		3.534	Continuing	Continuing	0.000	Design evaluation (Mitre)	SS/FP	MITRE Corp. Bedford, MA	3.336	2.808	Oct 2009	2.892	Oct 2010	0.000		2.892	Continuing	Continuing	0.000	Subtotal			29.926	46.308		146.678		0.000		146.678			90.000
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract																																																																																																																																						
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Remarks																																																																																																																																																			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604425F: <i>Space Situation Awareness Systems</i>				PROJECT 65A009: <i>Space Fence</i>					
Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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/ Various	Electronic Systems Center Various	3.764	9.378	Nov 2010	13.433	Nov 2011	0.000		13.433	Continuing	Continuing	0.000
Development review and management (Odyssey)	C/FP	Odyssey Systems Wakefield, MA	2.084	1.795	Jan 2010	1.849	Jan 2011	0.000		1.849	Continuing	Continuing	0.000
Development review and management (Jacobs)	C/FP	Jacobs Technology Tullahoma, TN	3.415	2.747	Dec 2009	2.830	Dec 2010	0.000		2.830	Continuing	Continuing	0.000
Development review and management (Prior)	C/FP	L3/Engility Billerica, MA	0.166	0.000		0.000		0.000		0.000	Continuing	Continuing	0.000
Subtotal			9.429	13.920		18.112		0.000		18.112			0.000
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			39.355	60.228		164.790		0.000		164.790			90.000
Remarks Total Prior Years Cost may include only FY 2009 data.													

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

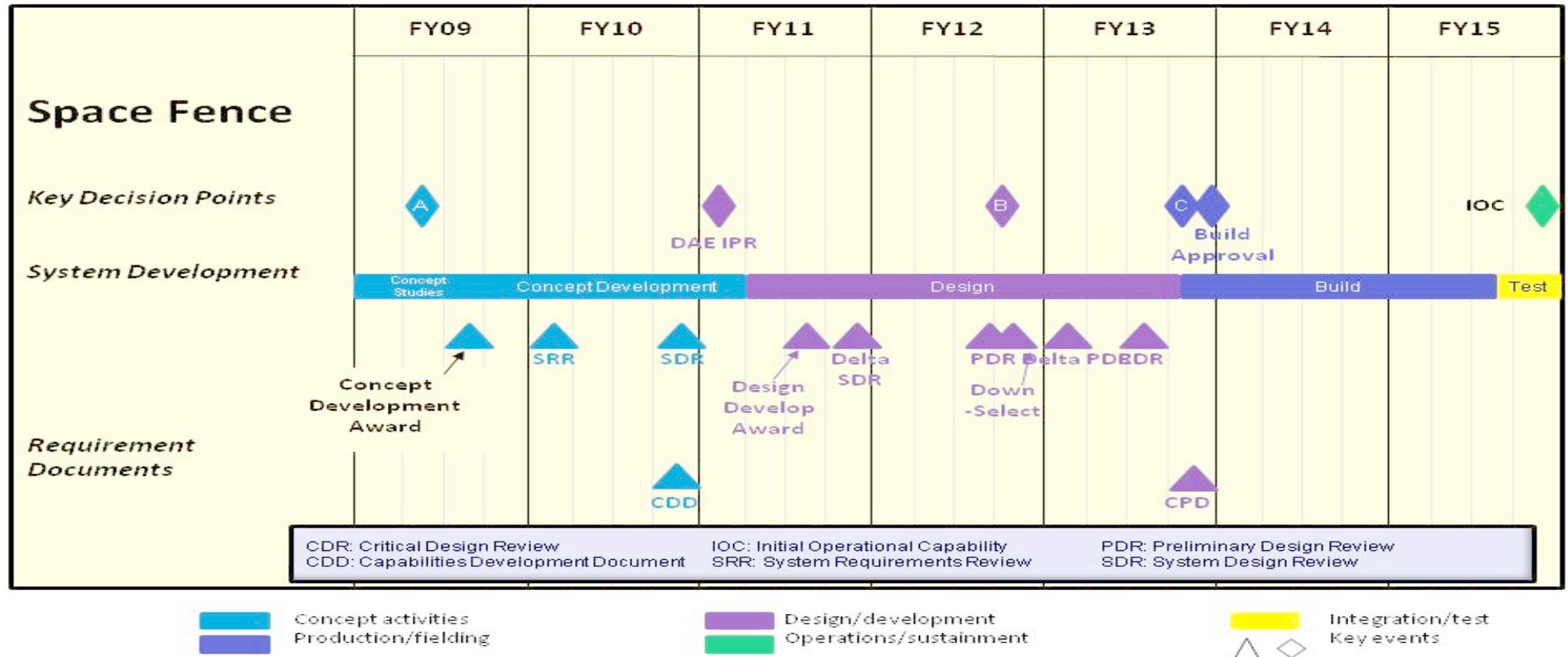
3600: Research, Development, Test & Evaluation, Air Force
BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604425F: Space Situation Awareness Systems

PROJECT

65A009: Space Fence



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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604425F: <i>Space Situation Awareness Systems</i>	PROJECT 65A009: <i>Space Fence</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Key Decision Point A	2	2009	2	2009
Concept Definition Contract Award	3	2009	3	2009
System Requirements Review	1	2010	1	2010
Capability Development Document	4	2010	4	2010
System Design Review	4	2010	4	2010
Defense Acquisition Executive In-Process Review	1	2011	1	2011
Design Development Award	3	2011	3	2011
Delta System Design Review	4	2011	4	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604425F: <i>Space Situation Awareness Systems</i>				PROJECT 65A012: <i>Net-centric Sensors and Data Sources</i>			
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
65A012: <i>Net-centric Sensors and Data Sources</i>	0.000	18.357	24.435	0.000	24.435	10.447	12.982	12.424	7.217	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification <p>Net-centric Sensors and Data Sources efforts migrate the space surveillance network, non-traditional SSA sensors and data sources for use by any entity (primarily the JSpOC) into a net-centric enterprise, enabling more rapid distribution of data to the warfighter based on an AFSPC provided prioritization list. This effort will define and implement the technical architecture, and support concept to provide the foundational data necessary to enable rapid, responsive decisions by the Commander, US Strategic Command's Joint Functional Component Commander for Space and other national capability users to detect, evaluate, attribute space events. This effort builds upon and operationalizes the successful Extended Space Sensor Architecture Advanced Concept Technology Demonstration (ESSA ACTD) and prototypes how disparate and legacy space sensor network data can be translated into a net-centric operating environment. Data will be exposed as defined by published DoD and community interface standards to ensure technical interoperability.</p> <p>These efforts are in Budget Activity 5, System Development & Demonstration, because they develop and demonstrate capabilities for better integration of SSA data.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
MAJOR THRUST: Sensor & Data Source Integration & Exposure						0.000	18.357	24.435	0.000	24.435	
<i>FY 2009 Accomplishments:</i> In FY09: N/A											
<i>FY 2010 Plans:</i> In FY10: Research and analysis for sensor and data source roadmapping; traditional / non-traditional SSA sensor and data source exposure; program office related support activities, such as, Technical											

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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	
Studies and Analysis, Systems Engineering and Integration, and Advanced Concept Technology Demonstrations (ACTDs) <i>FY 2011 Base Plans:</i> In FY11: Reserach and analysis for sensor and data source roadmapping; continuation of traditional / non-traditional SSA sensor and data source exposure; program office related support activities, such as, Technical Studies and Analysis, Systems Engineering and Integration, and ACTDs <i>FY 2011 OCO Plans:</i> In FY11 OCO: N/A											
Accomplishments/Planned Programs Subtotals						0.000	18.357	24.435	0.000	24.435	
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PE Not Provided (13721): <i>None</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
D. Acquisition Strategy											
Sensor and data sources activities utilize existing engineering and study contracts and a competitively selected system engineering team. Sensor integration focus is on supporting the migration of the space surveillance network sensors, non-traditional sensors and data sources to a net-centric architecture based on an AFSPC provided prioritization list. The systems engineering team will provide high-level technical oversight support and assist in the proper execution of data exposure.											
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.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010			
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Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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 and Analysis	Various	Various Various	0.000	4.659	Nov 2009	6.141	Nov 2010	0.000		6.141	Continuing	Continuing	Continuing	
Sensor & Data Source Exposure	Various	Various Various	0.000	10.151	Nov 2009	13.381	Nov 2010	0.000		13.381	Continuing	Continuing	Continuing	
Systems Engineering and Integration	Various	Various Various	0.000	2.500	Nov 2009	3.685	Nov 2010	0.000		3.685	Continuing	Continuing	Continuing	
ESSA ACTD	Various	MIT Lincoln Laboratory, Lexington, MA APL, Laurel, MD	0.000	0.100	Nov 2009	0.000		0.000		0.000	0.000	0.100	0.000	
Subtotal			0.000	17.410		23.207		0.000		23.207				
Remarks														
Support (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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 and related support activities, such as Technical Studies and Analysis, Systems Engineering and Integration	Various	Various Various	0.000	0.947	Oct 2009	1.228	Oct 2010	0.000		1.228	Continuing	Continuing	Continuing	

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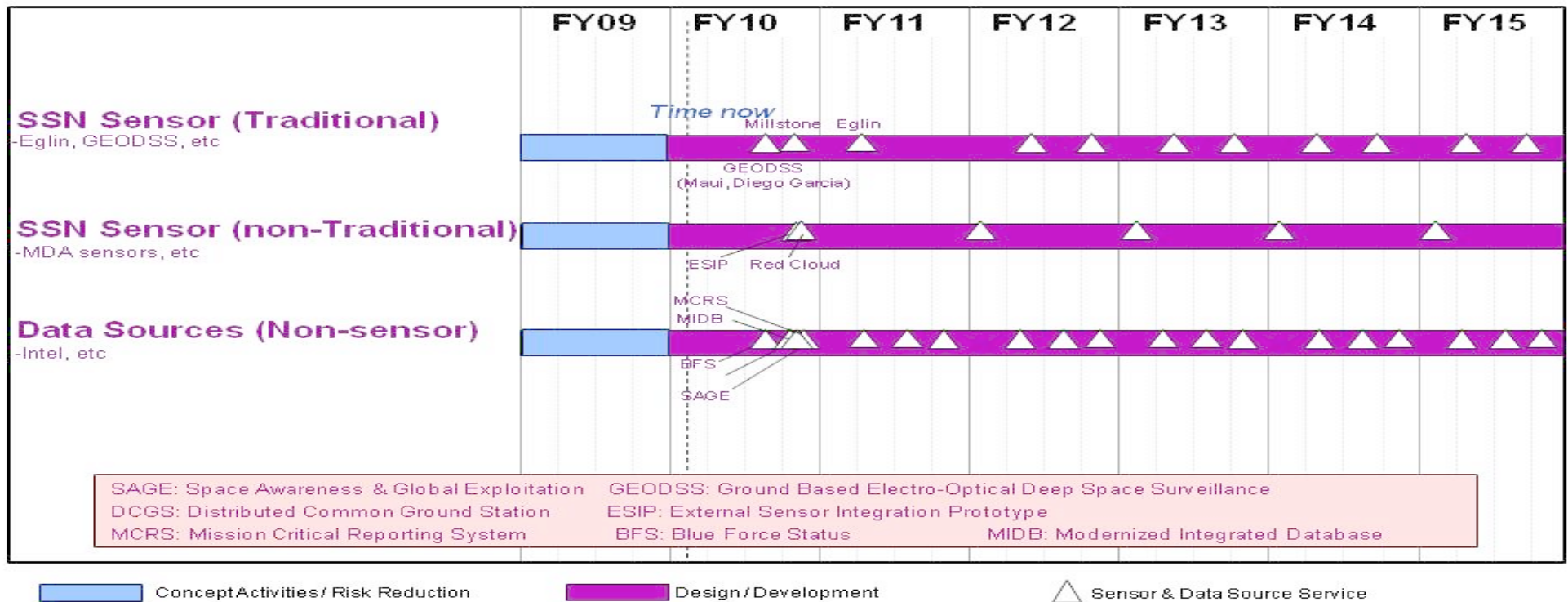
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Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			0.000	0.947		1.228		0.000		1.228			
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			0.000	18.357		24.435		0.000		24.435			
Remarks Total Prior Years Cost may include only FY 2009 data.													

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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 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604425F: Space Situation Awareness Systems	PROJECT 65A012: Net-centric Sensors and Data Sources

Net-Centric Sensors & Data Sources



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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 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604425F: Space Situation Awareness Systems		PROJECT 65A012: Net-centric Sensors and Data Sources
Schedule Details				
	Start		End	
Event	Quarter	Year	Quarter	Year
SSN Sensor (Traditional)	3	2010	2	2011
SSN Sensor (Non-traditional)	4	2010	4	2010
Data Sources (Non-sensor)	3	2010	4	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604425F: <i>Space Situation Awareness Systems</i>				PROJECT 65A037: <i>Space Surveillance Telescope</i>			
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
65A037: <i>Space Surveillance Telescope</i>	0.000	0.000	1.947	0.000	1.947	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification <p>The Space Surveillance Telescope (SST) is a Defense Advanced Research Projects Agency (DARPA) program to develop an advanced ground-based optical system to enable detection and tracking of faint objects in deep space, while providing rapid, wide-area search capability. After demonstrating the successful application of state-of-the-art optical, curved charge couple device (CCD) and large telescope control technologies, DARPA involvement will end and AFSPC will conduct a Military Utility Assessment (MUA). This budget item funds post-DARPA development and system support to allow for testing and mission operations during the MUA. The SST system will become a contributing Space Surveillance Network sensor during the MUA and a dedicated sensor upon completion of the MUA.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Space Surveillance Telescope Transition to Operations <i>FY 2009 Accomplishments:</i> In FY 2009: N/A <i>FY 2010 Plans:</i> In FY 2010: N/A <i>FY 2011 Base Plans:</i> In FY 2011: Develop technical data, technical orders, complete the technical baseline, and modify SST-Initial System during AFSPC's Military Utility Assessment (MUA) to optimize mission performance.							0.000	0.000	1.947	0.000	1.947

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: February 2010							
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604425F: <i>Space Situation Awareness Systems</i>		PROJECT 65A037: <i>Space Surveillance Telescope</i>							
B. Accomplishments/Planned Program (\$ in Millions)											
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total			
<i>FY 2011 OCO Plans:</i> In FY 2011 OCO: N/A											
Accomplishments/Planned Programs Subtotals				0.000	0.000	1.947	0.000	1.947			
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PE Not Provided (13971): N/A	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
D. Acquisition Strategy											
This project transitions the SST system, located at White Sands Missile Range, Socorro, New Mexico, from DARPA to the Air Force. It will enable the Air Force to support the system and conduct the MUA beginning in FY11 by obtaining technical baseline documentation, mission communications, sustainment planning, and technical orders-none of which will be provided by DARPA.											
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.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604425F: <i>Space Situation Awareness Systems</i>				PROJECT 65A037: <i>Space Surveillance Telescope</i>					
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
Space Surveillance Telescope Transition	TBD/TBD	MIT Lincoln Laboratory Lexington, MA	0.000	0.000		1.370	Nov 2010	0.000		1.370	0.000	1.370	0.000
Space Surveillance Telescope Data Delivery	C/CPAF	ITT Corporation Colorado Springs, CO	0.000	0.000		0.391	Nov 2010	0.000		0.391	0.000	0.391	0.000
Subtotal			0.000	0.000		1.761		0.000		1.761	0.000	1.761	0.000
Remarks													
Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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/ Various	Electronic Systems Center Peterson AFB, CO	0.000	0.000		0.186	Nov 2010	0.000		0.186	0.000	0.186	0.000
Subtotal			0.000	0.000		0.186		0.000		0.186	0.000	0.186	0.000
Remarks													

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force							DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604425F: <i>Space Situation Awareness Systems</i>			PROJECT 65A037: <i>Space Surveillance Telescope</i>			
<div style="display: flex; justify-content: space-between;"> <div style="width: 25%;"></div> <div style="width: 20%; text-align: center;"> Total Prior Years Cost </div> <div style="width: 10%; text-align: center;"> FY 2010 </div> <div style="width: 10%; text-align: center;"> FY 2011 Base </div> <div style="width: 10%; text-align: center;"> FY 2011 OCO </div> <div style="width: 10%; text-align: center;"> FY 2011 Total </div> <div style="width: 10%; text-align: center;"> Cost To Complete </div> <div style="width: 10%; text-align: center;"> Total Cost </div> <div style="width: 10%; text-align: center;"> Target Value of Contract </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 25%;">Project Cost Totals</div> <div style="width: 20%; text-align: center;">0.000</div> <div style="width: 10%; text-align: center;">0.000</div> <div style="width: 10%; text-align: center;">1.947</div> <div style="width: 10%; text-align: center;">0.000</div> <div style="width: 10%; text-align: center;">1.947</div> <div style="width: 10%; text-align: center;">0.000</div> <div style="width: 10%; text-align: center;">1.947</div> <div style="width: 10%; text-align: center;">0.000</div> </div>									
Remarks Total Prior Years Cost may include only FY 2009 data.									

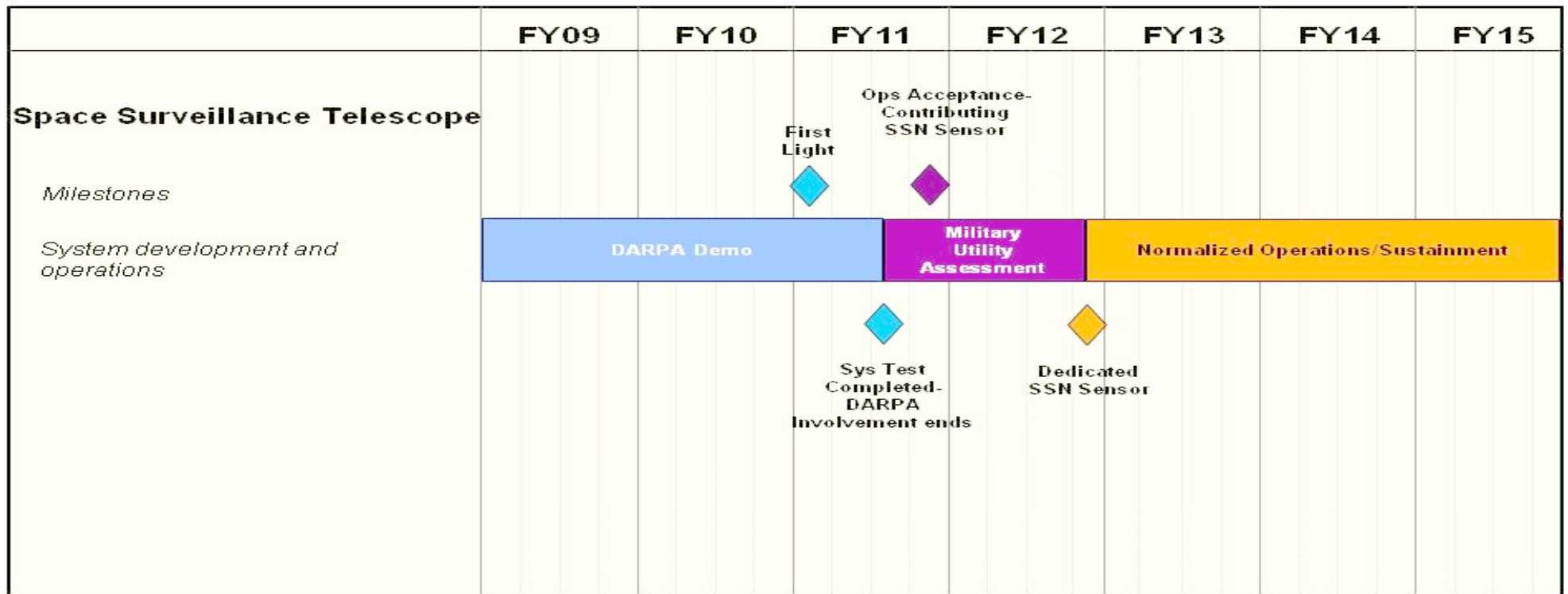
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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604425F: <i>Space Situation Awareness Systems</i>	PROJECT 65A037: <i>Space Surveillance Telescope</i>



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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force			DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604425F: <i>Space Situation Awareness Systems</i>		PROJECT 65A037: <i>Space Surveillance Telescope</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Initiate Military Utility Assessment (MUA)	3	2011	3	2011
SSN Contributing Sensor Ops Acceptance	4	2011	4	2011

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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 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604425F: Space Situation Awareness Systems				PROJECT 65A038: SSA Environmental Monitoring			
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
65A038: SSA Environmental Monitoring	0.000	15.550	49.438	0.000	49.438	45.778	32.762	20.637	13.443	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification											
Space Situational Awareness Environmental Monitoring (SSAEM) continues the key space environment measurements of the Defense Meteorological Satellite Program (DMSP) program de-manifested from the planned next generation weather program. These measurements are critical inputs to the nation's space environment analysis and forecasting models supporting the pervasive nature of space environmental support to all aspects of SSA, offensive and defensive space control, GPS accuracy assurance, system anomaly resolution, attribution and responsive actions, and force protection from communication outages/degradation modulated by solar activity. The key component of SSAEM includes a space-based sensing capability to acquire space environment measurement data. SSAEM will fund risk reduction efforts for space sensors by leveraging existing prototypes, operational systems and Joint/Advanced Concept Technology Demonstrations (JCTDs/ACTDs). SSAEM will seamlessly integrate into the overall SSA mission, comply with net-centricity requirements, and provide timely critical decision making data to the SSA battlespace management infrastructure.											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
MAJOR THRUST: Replenishing critical space weather sensing capability de-manifested from next generation weather program						0.000	15.550	49.438	0.000	49.438	
FY 2009 Accomplishments: In FY2009: N/A.											
FY 2010 Plans: In FY2010: We are funding risk reduction efforts by leveraging Joint/Advanced Concept Technology Demonstrations (JCTDs/ACTDs). Refine and finalize acquisition/approach for the procurement of spacecraft and sensors in support of initial Key Performance Parameters (KPP) provided by Air Force											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force						DATE: February 2010					
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604425F: <i>Space Situation Awareness Systems</i>			PROJECT 65A038: <i>SSA Environmental Monitoring</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<p>Space Command. Provides funding for initial development of critical sensors. Funds program office and related support activities, such as Acquisition Planning, Technical Studies, Systems Engineering & Integration.</p> <p><i>FY 2011 Base Plans:</i> In FY2011: We will continue funding risk reduction efforts. Provides funding for continued development of critical sensors and begins spacecraft development. Continue to fund program office and related support activities, such as Acquisition Planning, Technical Studies, Systems Engineering & Integration.</p> <p><i>FY 2011 OCO Plans:</i> In FY2011 OCO: N/A.</p>											
Accomplishments/Planned Programs Subtotals						0.000	15.550	49.438	0.000	49.438	
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 Not Provided (14172): N/A	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
D. Acquisition Strategy											
<p>The space environment measurement data sources will be acquired through competitive contract awards. Studies are being conducted to determine the optimum concept to acquire environment measurement data sources. Existing sensors with high Technology Readiness Levels (TRL) will be leveraged. Hosting sensors on rides of opportunity will be a primary consideration, however a variety of other concepts will be considered also, within existing funding levels.</p>											
E. Performance Metrics											
<p>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.</p>											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604425F: <i>Space Situation Awareness Systems</i>				PROJECT 65A038: <i>SSA Environmental Monitoring</i>					
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
Sensor and Spacecraft Development	TBD/TBD	TBD TBD	0.000	13.119	Mar 2010	47.229	Mar 2011	0.000		47.229	Continuing	Continuing	0.000
Subtotal			0.000	13.119		47.229		0.000		47.229			0.000
Remarks													
Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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 Management	TBD/TBD	TBD TBD	0.000	2.431	Jan 2010	2.209	Oct 2010	0.000		2.209	Continuing	Continuing	0.000
Subtotal			0.000	2.431		2.209		0.000		2.209			0.000
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			0.000	15.550		49.438		0.000		49.438			0.000
Remarks Total Prior Years Cost may include only FY 2009 data.													

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

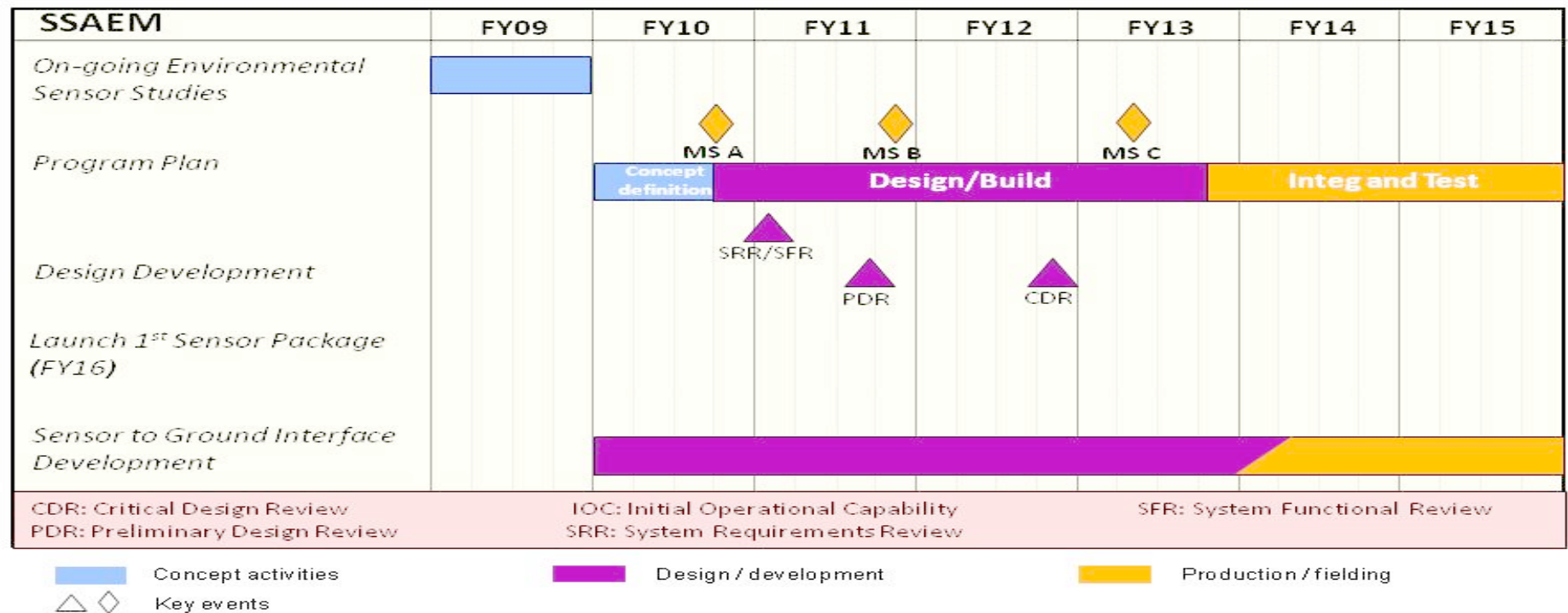
3600: Research, Development, Test & Evaluation, Air Force
BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604425F: Space Situation Awareness Systems

PROJECT

65A038: SSA Environmental Monitoring



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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604425F: <i>Space Situation Awareness Systems</i>	PROJECT 65A038: <i>SSA Environmental Monitoring</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Milestone A	4	2010	4	2010
Systems Requirements Review	1	2011	1	2011
Preliminary Design Review	3	2011	3	2011
Milestone B	4	2011	4	2011

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