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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force											Date: February 2015	
Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)</i>					R-1 Program Element (Number/Name) PE 0604426F / <i>Space Fence</i>							
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	0.000	-	200.082	243.909	-	243.909	196.042	68.503	5.316	-	-	713.852
65A009: <i>Space Fence</i>	0.000	-	200.082	243.909	-	243.909	196.042	68.503	5.316	-	-	713.852
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Program MDAP/MAIS Code: 438												
<u>A. Mission Description and Budget Item Justification</u> The Space Fence effort will develop a system of ground-based sensors to improve upon the former Air Force Space Surveillance System (AFSSS), a Very High Frequency (VHF) radar operational from 1961 to 2013. The Space Fence will provide a more accurate and timely detection capability of smaller orbiting objects, primarily in low-earth orbit (LEO). The system will use higher frequency S-band radars at globally dispersed sites. As a result, it will greatly expand the uncued detection and tracking capacity of the Space Surveillance Network, from around 20,000 to up to 100,000+ objects, while working in concert with other network sensors. Requirements are identified in the June 2012 approved Space Fence Capabilities Development Document. This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.												
<u>B. Program Change Summary (\$ in Millions)</u>				<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016 Base</u>	<u>FY 2016 OCO</u>	<u>FY 2016 Total</u>				
Previous President's Budget				-	214.131	291.530	-	291.530				
Current President's Budget				-	200.082	243.909	-	243.909				
Total Adjustments				-	-14.049	-47.621	-	-47.621				
• Congressional General Reductions				-	-0.049							
• Congressional Directed Reductions				-	-14.000							
• Congressional Rescissions				-	-							
• Congressional Adds				-	-							
• Congressional Directed Transfers				-	-							
• Reprogrammings				-	-							
• SBIR/STTR Transfer				-	-							
• Other Adjustments				-	-	-47.621	-	-47.621				
<u>Change Summary Explanation</u> FY15: -\$14.0M Congressional reduction due to program delay. The Department delayed contract award by one year from May 2013 to May 2014 due to strategic affordability trades.												

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FY15: -\$.049M Congressional General Reduction (FFRDC)											
FY16: The FY2016 funding request was reduced by \$[46.0] million to account for the availability of prior execution balances											
FY16: -1.621M inflation adjustment											
C. Accomplishments/Planned Programs (\$ in Millions)								FY 2014	FY 2015	FY 2016	
Title: Space Fence								-	200.082	243.909	
Description: Develops S-band SSA radar system to provide detection and tracking capability of objects in Low Earth Orbit.											
FY 2014 Accomplishments: FY14 Funds were executed in PE 0604425F Space Situational Awareness Systems.											
FY 2015 Plans: Continuing EMD, Production and Deployment activities. This includes the continued construction of Site 1 facilities; continued manufacturing and integration of radar components and assemblies; and the further development and integration of the Space Fence Operations Center (SOC) and Site 1 Radar hardware and software. SOC facility preparation has also begun.											
FY 2016 Plans: The Space Fence program will continue system manufacture, software builds, in-plant integration and test, and training, technical orders, and technical manuals development. This includes the majority of radar facility and operations building construction as well as power plant annex construction and commissioning. Radar final production and test will also occur.											
Accomplishments/Planned Programs Subtotals								-	200.082	243.909	
D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• OPAF: BA03: Line Item # 836830: Space Fence	-	-	-	-	-	-	-	46.337	50.591	Continuing	Continuing
• RDTE: BA05: PE 0604425F: Space Situation Awareness Systems	294.624	-	-	-	-	-	-	-	-	-	-
Remarks											

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E. Acquisition Strategy A single Engineering, Manufacturing, and Development (EMD), Production and Deployment contract was awarded on 2 Jun 14 to Lockheed Martin Mission Systems and Training. The contract will take the contractor through Critical Design Review (CDR), fabrication, integration, test, production and deployment, with up to two years of Interim Contractor Support (ICS). The program will utilize a two increment approach. Increment 1/Initial Operational Capability (IOC) will consist of successful operations at the first radar site located in the Kwajalein Atoll and the Space Fence Operations Center (SOC) at a CONUS location. Increment 2 will include completion of the second radar at a location which is to be determined pending negotiations with the proposed host nation.		
F. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force												Date: February 2015			
Appropriation/Budget Activity 3600 / 5						R-1 Program Element (Number/Name) PE 0604426F / <i>Space Fence</i>				Project (Number/Name) 65A009 / <i>Space Fence</i>					
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Prime Contract	C/FPIF	Lockheed Martin : Moorestown, NJ	0.000	-		177.630	Apr 2015	219.882	Dec 2015	-		219.882	238.058	635.570	914.699
Subtotal			0.000	-		177.630		219.882		-		219.882	238.058	635.570	914.699
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Various (Independent Program Assessment, site survey, travel, software, SATAF)	Various	Various : Various,	0.000	-		3.535	Oct 2014	1.067	Oct 2015	-		1.067	1.529	6.131	-
Design Oversight and Management (Software Engineering Institute)	SS/FP	Carnegie Mellon : Pittsburgh, PA	0.000	-		0.478	Nov 2014	-		-		-	-	0.478	-
10/63Design Oversight and Management (MITRE)	SS/FP	MITRE Corp : Bedford, MA	0.000	-		5.448	Oct 2014	5.763	Oct 2015	-		5.763	7.391	18.602	-
Design Oversight and Management (MIT/LL)	SS/FP	MIT Lincoln Laboratory : Lexington, MA	0.000	-		2.628	Nov 2014	2.345	Nov 2015	-		2.345	4.473	9.446	-
Subtotal			0.000	-		12.089		9.175		-		9.175	13.393	34.657	-
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test - 46th Test Group	PO	46th Test Group : Eglin AFB, FL	0.000	-		1.976	Jan 2015	0.494	Jan 2016	-		0.494	4.009	6.479	-
Test - Joint Interoperability Test Command	MIPR	Joint Interoperability Test Command : Fort Huachuca, AZ	0.000	-		0.023	Jan 2015	0.185	Jan 2016	-		0.185	0.370	0.578	-
Subtotal			0.000	-		1.999		0.679		-		0.679	4.379	7.057	-

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Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Support (Infrastructure) (PMA)	Various	Various : Various,	0.000	-		1.030	Oct 2014	2.915	Oct 2015	-		2.915	2.261	6.206	-
Program Office Support, Technical Studies and Analysis, Systems Engineering and Integration Management (PMA)	Various	Various : Various,	0.000	-		3.416	Oct 2014	6.928	Oct 2015	-		6.928	2.907	13.251	-
Development Review and Management (Odyssey) (PMA)	C/CPIF	Odyssey Systems : Wakefield, MA	0.000	-		1.732	Dec 2014	1.908	Dec 2015	-		1.908	4.195	7.835	-
Development Review and Management (Jacobs) (PMA)	C/CPFF	Jacobs Technology : Tullehoma, TN	0.000	-		2.186	Dec 2014	2.422	Dec 2015	-		2.422	4.668	9.276	-
Subtotal			0.000	-		8.364		14.173		-		14.173	14.031	36.568	-
			Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	-		200.082		243.909		-		243.909	269.861	713.852	-
Remarks Prior to FY15 all funds were executed and reported in PE 0604225F (Space Situational Awareness Systems)															

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force	Date: February 2015
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Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604426F / <i>Space Fence</i>	Project (Number/Name) 65A009 / <i>Space Fence</i>
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	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Milestone B Increment 1																												
Increment 1 EMD																												
Contract Award Increment 1																												
Critical Design Review (CDR) Increment 1																												
Development Test and Evaluation																												
Initial Operational Test and Evaluation																												
Initial Operational Capability (IOC) Increment 1																												
Increment 1 Interim Contractor Support Option 1																												
Increment 1 Interim Contractor Support Option 2																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604426F / <i>Space Fence</i>	Project (Number/Name) 65A009 / <i>Space Fence</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Milestone B Increment 1	3	2014	3	2014
Increment 1 EMD	3	2014	2	2019
Contract Award Increment 1	3	2014	3	2014
Critical Design Review (CDR) Increment 1	2	2015	2	2015
Development Test and Evaluation	2	2018	4	2018
Initial Operational Test and Evaluation	1	2019	2	2019
Initial Operational Capability (IOC) Increment 1	2	2019	2	2019
Increment 1 Interim Contractor Support Option 1	3	2019	2	2020
Increment 1 Interim Contractor Support Option 2	3	2020	4	2020