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

R-1 ITEM NOMENCLATURE

APPROPRIATION/BUDGET ACTIVITY
3600: Research, Development, Test & Evaluation, Air Force

PE 0603830F: Space Protection Program

DATE: February 2011

BA 4: Advanced Component Development & Prototypes (ACD&P)

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	-	8.349	9.819	-	9.819	10.410	11.464	12.417	12.637	Continuing	Continuing
64A025: Space Protection Program	-	8.349	9.819	-	9.819	10.410	11.464	12.417	12.637	Continuing	Continuing

Note

In order to better clarify program efforts/deliverables and directly correlate these activities to specific strategies, measures and objectives which support overarching AF and AFSPC objectives, SPP is transitioning from a task-based to an objective-based construct. Program mission and content remains unchanged.

A. Mission Description and Budget Item Justification

Growing dependence on space and demonstrated vulnerabilities have highlighted the need to actively plan and respond to threats against national security space effects and deliver informed options to national leaders and system acquirers. Public Law 110-181 mandated development of a DoD space protection strategy and the recent "Sense of Congress" has been that "the United States should place greater priority on the protection of national security space systems." In response to these needs, concerns and direction, the Air Force (AF) and National Reconnaissance Office (NRO) formed a partnership and leveraged a combination of Department of Defense (DoD) and Office of the Director of National Intelligence (ODNI) resources in March 2008 to establish and execute the Space Protection Program (SPP); a joint, enduring program to develop an integrated protection approach for the nation covering all defense, intelligence, civil, commercial and allied space systems. In the absence of a SPP-specific construct or Program Element Code (PEC), the DoD portion of the SPP was budgeted and executed under existing program/mission areas in FY08-FY10. As the SPP mission matured and specific efforts were defined/directed, the activity evolved into an independent effort requiring implementation of a financial construct consistent with this evolution and emergent mission.

SPP is the foundational element of the National Space Protection Strategy; unifying and integrating AF, NRO, DoD and IC activities to deliver strategic recommendations to senior leaders and inform their decisions on how best to protect our space systems and stay ahead of the threat. The SPP mission is to preserve national security space effects through an integrated strategy to articulate vulnerabilities, assess threat impacts, identify options and recommend solutions leading to comprehensive space protection capabilities.

A fully-functioning SPP effort allows for the active planning, comprehensive analysis and timely delivery of products/tools to respond to threats against national security space effects and deliver informed options to national leaders and system acquirers. As designed, the SPP is to execute an integrated strategy to articulate vulnerabilities, assess threat impacts, identify options and recommend solutions leading to comprehensive space protection capabilities. Specifically, this involves identifying and initiating protection-focused architectural decisions, generating comprehensive products to identify national capabilities and interdependencies, delivering tailored decision aids to operations centers, instituting key defense initiatives to address vulnerabilities in multiple orbit regimes, integrating cyberspace into the National Infrastructure Protection Framework, and continuing specific tasks to implement the Space Protection Strategy.

SPP will identify, prioritize, and develop recommendations for space protection options to preserve national space capabilities and guide future Science and Technology (S&T) research and investment focus areas. As part of this effort, SPP will conduct capability-based vulnerability and susceptibility assessments of blue

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

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0603830F: Space Protection Program

BA 4: Advanced Component Development & Prototypes (ACD&P)

architectures to identify options to enhance the survivability of the overall architectures. These assessments will deliver comprehensive technically justified set of space protection recommendations.

SPP will update and maintain a capabilities and interdependencies (C&I) analysis capability for our nation by operating a C&I analysis team and continuously updating a C&I database. This capability provides senior leaders and our nation's space operational command centers with understanding of space capabilities, interdependencies, and consequence of loss in support of planning and decision making that impact the economic and physical security of the United States. In coordination with USTRATCOM and Joint Functional Component Command-Space, SPP will provide Combatant Commanders a specific C&I product capturing theater space services dependencies, reliance on those services, and the consequence of the loss of those services. This product will be tailored to highlight space service reliance in each phase of the theater OPLANS/CONPLANS and have the capability to export data for use in other tools (e.g. visualization tools). Additionally, SPP will develop and maintain a future space architecture identifying the future on-orbit space architecture for the current year through additional 12 years focusing on DoD, Intelligence Community, Civil, Commercial-leased, and Friends & Allies space systems. This effort also includes participation in wargames and exercises; ensuring that SPP C&I products and analysis are leveraged to improve strategy development at the strategic and operational levels.

SPP will provide insight to senior space leaders on how their space activities shape the strategic environment, and will be directly responsible to develop and coordinate Strategic Communication strategies on space protection across DoD and IC agencies. These strategies focus on space mission areas, architectures, programs and significant space and cyber events and how it relates to the overarching space protection strategy. SPP will develop protection policy and strategy recommendations to include the development and implementation of the SECDEF and DNI approved National Space Protection Strategy for the nation. This strategy must be updated every 2 years.

This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P) because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	-	8.349	9.852	-	9.852
Current President's Budget	-	8.349	9.819	-	9.819
Total Adjustments	-	-	-0.033	-	-0.033
 Congressional General Reductions 		-			
 Congressional Directed Reductions 		-			
 Congressional Rescissions 	-	-			
 Congressional Adds 		-			
 Congressional Directed Transfers 		-			
 Reprogrammings 	-	-			
SBIR/STTR Transfer	-	-			
Other Adjustments	-	-	-0.033	-	-0.033

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603830F: Space Protection Program	1
Change Summary Explanation FY 2011: No significant Program changes. FY 2012: No significant program changes.		

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Exhibit R-2A, RDT&E Project Just	ification: PE	3 2012 Air Fo	orce						DATE: Febr	uary 2011		
APPROPRIATION/BUDGET ACTIV				R-1 ITEM N				PROJECT	_			
3600: Research, Development, Test		•		PE 0603830	0F: Space P	rotection Pro	gram	64A025: Space Protection Progra			ram	
BA 4: Advanced Component Develo	pment & Pro	totypes (AC	D&P)									
COST (\$ in Millions)			FY 2012	FY 2012	FY 2012					Cost To		
CCCT (\$ III IIIIIIICIIS)	FY 2010	FY 2011	Base	oco	Total	FY 2013	FY 2014	FY 2015	FY 2016	Complete	Total Cost	
64A025: Space Protection Program	-	8.349	9.819	-	9.819	10.410	11.464	12.417	12.637	Continuing	Continuing	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0			

Note

In order to better clarify program efforts/deliverables and directly correlate these activities to specific strategies, measures and objectives which support overarching AF and AFSPC objectives, SPP is transitioning from a task-based to an objective-based construct. Program mission and content remains unchanged.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
3600: Research, Development, Test & Evaluation, Air Force	PE 0603830F: Space Protection Program	64A025: Sp	pace Protection Program
BA 4: Advanced Component Development & Prototypes (ACD&P)			

architectures to identify options to enhance the survivability of the overall architectures. These assessments will deliver comprehensive technically justified set of space protection recommendations.

SPP will update and maintain a capabilities and interdependencies (C&I) analysis capability for our nation by operating a C&I analysis team and continuously updating a C&I database. This capability provides senior leaders and our nation's space operational command centers with understanding of space capabilities, interdependencies, and consequence of loss in support of planning and decision making that impact the economic and physical security of the United States. In coordination with USTRATCOM and Joint Functional Component Command-Space, SPP will provide Combatant Commanders a specific C&I product capturing theater space services dependencies, reliance on those services, and the consequence of the loss of those services. This product will be tailored to highlight space service reliance in each phase of the theater OPLANS/CONPLANS and have the capability to export data for use in other tools (e.g. visualization tools). Additionally, SPP will develop and maintain a future space architecture identifying the future on-orbit space architecture for the current year through additional 12 years focusing on DoD, Intelligence Community, Civil, Commercial-leased, and Friends & Allies space systems. This effort also includes participation in wargames and exercises; ensuring that SPP C&I products and analysis are leveraged to improve strategy development at the strategic and operational levels.

SPP will provide insight to senior space leaders on how their space activities shape the strategic environment, and will be directly responsible to develop and coordinate Strategic Communication strategies on space protection across DoD and IC agencies. These strategies focus on space mission areas, architectures, programs and significant space and cyber events and how it relates to the overarching space protection strategy. SPP will develop protection policy and strategy recommendations to include the development and implementation of the SECDEF and DNI approved National Space Protection Strategy for the nation. This strategy must be updated every 2 years.

This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P) because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
	F1 2010			000	
Title: Program Objectives Support	-	5.785	7.011	-	7.011
Description: Space Protection/Security Systems & Capabilities					
FY 2010 Accomplishments: Not applicable					
FY 2011 Plans:					
Identify, prioritize, and develop recommendations for space protection options to guide future Science and					
Technology (S&T) research and investment focus areas. Compile and analyze US National Security systems/					

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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 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603830F: Space Protection Program	m PROJECT 64A025: Space Protection Program				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
capabilities (current and future) for decision makers. Develop alternative leaders insights and recommendations on how space activities shape to						
FY 2012 Base Plans: Identify, prioritize, and develop recommendations for space protection (Technology (S&T) research and investment focus areas. Compile and capabilities (current and future) for decision makers. Develop alternative leaders insights and recommendations on how space activities shape to	analyze US National Security systems/ ve futures support to provide senior space					
FY 2012 OCO Plans: Not applicable						
Title: Oversight/advisory Support		-	1.761	1.973	-	1.97
Description: Provide oversight, advisory and other technical support to	o the Space Protection Program.					
FY 2010 Accomplishments: Not applicable						
FY 2011 Plans: Provide oversight, advisory and other technical support to the Space P	rotection Program.					
FY 2012 Base Plans: Provide oversight, advisory and other technical support to the Space P	rotection Program.					
FY 2012 OCO Plans: Not applicable						
Title: Program support/infrastructure		-	0.803	0.835	-	0.83
Description: Provide program support and infrastructure.						
FY 2010 Accomplishments:						

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Not applicable **FY 2011 Plans:**

FY 2012 Base Plans:

Provide program support and infrastructure.

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE PROJECT

3600: Research, Development, Test & Evaluation, Air Force

BA 4: Advanced Component Development & Prototypes (ACD&P)

PE 0603830F: Space Protection Program

64A025: Space Protection Program

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Provide program support and infrastructure.					
FY 2012 OCO Plans: Not applicable					
Accomplishments/Planned Programs Subtotals	-	8.349	9.819	-	9.819

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

			FY 2012	FY 2012	FY 2012					Cost To	
<u>Line Item</u>	FY 2010	FY 2011	Base	OCO	<u>Total</u>	FY 2013	FY 2014	FY 2015	FY 2016	Complete	Total Cost
PE 0603438F: Space Control	6.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Technology, AF RDT&E											
PE 0305940F: Space Situational	2.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Awareness, OMAF											

D. Acquisition Strategy

All contracts funded in this program element will be awarded using competitive procedures to the maximum extent possible. The program consists of numerous small projects.

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 2012 Air Force DATE: February 2011 APPROPRIATION/BUDGET ACTIVITY **R-1 ITEM NOMENCLATURE PROJECT** 3600: Research, Development, Test & Evaluation, Air Force PE 0603830F: Space Protection Program 64A025: Space Protection Program BA 4: Advanced Component Development & Prototypes (ACD&P) FY 2012 FY 2012 FY 2012 **Product Development (\$ in Millions)** oco **FY 2011** Base Total **Total Prior** Target Contract Method Performing Years Award Award Award Cost To Value of Complete **Cost Category Item Activity & Location** Cost Cost Date Cost Date **Total Cost** Contract & Type Cost Date Cost Assessment and Analysis Various: Various. 5.785 Dec 2010 7.011 Dec 2011 7.011 Continuing Continuing TBD Various **Projects** Subtotal 5.785 7.011 7.011 FY 2012 FY 2012 FY 2012 Support (\$ in Millions) **FY 2011** Base oco Total **Total Prior** Contract **Target** Method Performing Years Award Award Award Cost To Value of **Cost Category Item Activity & Location** Cost Cost Date Cost Cost Date Cost Complete **Total Cost** Contract & Type Date Program Support and 0.803 Dec 2010 Various Various:Various. 0.835 Dec 2011 0.835 Continuing Continuing TBD Infrastructure Subtotal 0.803 0.835 0.835 FY 2012 FY 2012 FY 2012 Test and Evaluation (\$ in Millions) oco FY 2011 Base Total **Total Prior** Contract Target Years **Cost To** Method **Performing** Award Award Award Value of **Cost Category Item** & Type **Activity & Location** Cost Cost Date Cost Date Cost Date Cost Complete **Total Cost** Contract Subtotal 0.000 0.000 0.000 **FY 2012** FY 2012 FY 2012 Management Services (\$ in Millions) FY 2011 Base oco Total **Total Prior** Contract Target Method **Performing** Years Award Award Award **Cost To** Value of Cost Category Item **Activity & Location** Cost Cost **Total Cost** Contract & Type Cost Cost Date Date Date Cost Complete Oversight, Advisory and other Various Various: Various. 1.761 Dec 2010 1.973 Dec 2011 1.973 Continuing Continuina TBD **Technical Support** 1.761 1.973 1.973 Subtotal **Total Prior** Target FY 2012 FY 2012 Years FY 2012 Cost To Value of FY 2011 oco Total **Total Cost** Cost Base Complete Contract **Project Cost Totals** 8.349 9.819 9.819

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Exhibit R-3, RDT&E Project Cost Analysis	: PB 2012 Air Force				DAT	E: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evalu BA 4: Advanced Component Development &			MENCLATURE : Space Protection P	PROJECT 64A025: Space F	Protection Progra	m	
,	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 201 OCO	2 FY 2012 Total	Cost To Complete Total C	Target Value of Cost Contract
<u>Remarks</u>							

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603830F: Space Protection Program	PROJECT 64A025: Space Protection Program

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

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

3600: Research, Development, Test & Evaluation, Air Force PE 0603830F: Space Protection Program 64A025: Space Protection Program

BA 4: Advanced Component Development & Prototypes (ACD&P)

Air Force

Schedule Details

	Sta	art	End		
Events	Quarter	Year	Quarter	Year	
Assured C2 Study Protection Recommendations	1	2011	3	2011	
Position, Navigation, Timing Rcommendations	1	2011	3	2011	
Assured C2 Cyber Assessment	1	2011	2	2012	
Space Protection Initiatives	1	2011	4	2016	
C&I Database Development & Data Collection	1	2011	1	2011	
C&I Database Maintenance & Data Collection	2	2011	4	2016	
COCOM Engagement/Support	1	2011	4	2016	
Future Space Architecture Product Deliverables	1	2011	4	2016	
Wargame & Exercise Planning/Support	1	2011	4	2016	
Event Strategic Communication and Assessment	1	2011	4	2016	
Program Strategic Communication and Assessment	1	2011	4	2016	
Mission Area Strategic Communication and Assessment	1	2011	4	2016	

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