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

**R-1 ITEM NOMENCLATURE** 

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

APPROPRIATION/BUDGET ACTIVITY

PE 0603438F: Space Control Technology

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	99.232	61.012	45.755	-	45.755	56.121	92.402	89.715	47.756	Continuing	Continuing
642611: Technology Insertion Planning and Analysis	78.992	42.038	26.715	-	26.715	36.812	72.803	69.821	27.510	Continuing	Continuing
64A007: Space Range	20.240	18.974	19.040	-	19.040	19.309	19.599	19.894	20.246	Continuing	Continuing

#### Note

The program funding includes Overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.063M in FY12.

CY funding totals include \$16.000M requested for Overseas Contingency Operations.

### A. Mission Description and Budget Item Justification

This program supports a range of activities including technology planning, development, demonstrations and prototyping, as well as modeling, simulations and exercises to support development of tactics and procedures in the Space Control mission area. The types of Space Control activities accomplished are Space Situational Awareness (SSA), Defensive Counterspace (DCS), Offensive Counterspace (OCS) and Command and Control and Battle Management. For use in the Space Control mission area, SSA includes monitoring, detecting, identifying, tracking, assessing, verifying, categorizing, and characterizing, objects and events in space and terrestrial based space capabilities. DCS includes defensive activities to protect U.S. and friendly space-systems assets, resources, and operations from enemy attempts to negate or interfere and prevention activities that limit or eliminate an adversary's ability to use U.S. space systems and services for purposes hostile to U.S. national security interests. OCS activities disrupt, deny, degrade or destroy space systems, or the information they provide, which may be used for purposes hostile to U.S. national security interests. Consistent with DOD policy, the negation efforts of this program currently focus on negation technologies which have temporary, localized, and reversible effects. Command & Control efforts include identifying technology solutions to enable fusion of data for use in multi-level security environments, near-real-time data delivery and decision support to war fighter needs. Rapid Reaction Capabilities in response to immediate war fighter needs are developed within this program.

Funding in FY10/11/12 also supports the development of the technology and infrastructure for space control elements of the space range. This includes development and demonstration of test assets, special test equipment, capabilities and systems required to test, validate, and verify performance of integrated space control systems. Additionally, this program supports the development of test range assets required to support developmental and operational test, exercises, training, and tactics development for space control systems. A collaborative command & control capability will be integrated into several range systems to provide real time communications during test event scenarios.

As a result of an FY08 \$25M congressional add, the Air Force began the Self Awareness Space Situation Awareness (SASSA) technology demonstration that will build a payload to provide tactical SSA around a host satellite. SASSA is designed to demonstrate the ability to detect attacks, locate attacking sources, and communicate relevant information to the ground. SASSA will contain a suite of threat warning sensors designed to address a range of anti-satellite and environmental threats.

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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 0603438F: Space Control Technology	
BA 4: Advanced Component Development & Prototypes (ACD&P)		

SASSA will also have a communication package and common interface unit that eases integration and performs on-board sensor data processing. The interface unit and sensors can be configured into tailored sensing payloads for future space missions.

Spacetrack Integration Node Global Enhanced Reporting (STINGER) project converts an enhanced processing capability developed for missile warning radar to use for the space situation awareness program radars.

These projects are 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	<b>FY 2012 Base</b>	FY 2012 OCO	FY 2012 Total
Previous President's Budget	100.951	61.012	45.907	-	45.907
Current President's Budget	99.232	61.012	45.755	-	45.755
Total Adjustments	-1.719	-	-0.152	-	-0.152
<ul> <li>Congressional General Reductions</li> </ul>		-			
<ul> <li>Congressional Directed Reductions</li> </ul>		-			
<ul> <li>Congressional Rescissions</li> </ul>	-	-			
<ul> <li>Congressional Adds</li> </ul>		-			
<ul> <li>Congressional Directed Transfers</li> </ul>		-			
<ul> <li>Reprogrammings</li> </ul>	-	-			
SBIR/STTR Transfer	-	-			
<ul> <li>Other Adjustments</li> </ul>	-1.719	-	-0.152	-	-0.152

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

**Project:** 642611: Technology Insertion Planning and Analysis

Congressional Add: HANDS ION Congressional Add: ESP DEMO

	FY 2010	FY 2011
	4.944	-
	3.955	-
Congressional Add Subtotals for Project: 642611	8.899	-
	2 222	
Congressional Add Totals for all Projects	8.899	-

# **Change Summary Explanation**

FY10 reductions result of FFRDC and revised economic assumptions.

Air Force Page 2 of 19 R-1 Line Item #33

DATE: February 2011

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EXHIBIT N-ZA, ND I & FIOJECT 30	Suncation. F L					DATE. 1 Ebituary 2011						
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)					IOMENCLA 8F: Space C			PROJECT 642611: Technology Insertion Planning and Analysis				
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	
642611: Technology Insertion Planning and Analysis	78.992	42.038	26.715	-	26.715	36.812	72.803	69.821	27.510	Continuing	Continuing	

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### A. Mission Description and Budget Item Justification

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Quantity of RDT&E Articles

Exhibit R-24 RDT&F Project Justification: PR 2012 Air Force

This program supports a range of activities including technology planning, development, demonstrations and prototyping, as well as modeling, simulations and exercises to support development of tactics and procedures in the Space Control mission area. The types of Space Control activities accomplished are Space Situational Awareness (SSA), Defensive Counterspace (DCS), Offensive Counterspace (OCS) and Command and Control and Battle Management. For use in the Space Control mission area, SSA includes monitoring, detecting, identifying, tracking, assessing, verifying, categorizing, and characterizing, objects and events in space and terrestrial based space capabilities. DCS includes defensive activities to protect U.S. and friendly space-systems assets, resources, and operations from enemy attempts to negate or interfere and prevention activities that limit or eliminate an adversary's ability to use U.S. space systems and services for purposes hostile to U.S. national security interests. OCS activities disrupt, deny, degrade or destroy space systems, or the information they provide, which may be used for purposes hostile to U.S. national security interests. Analysis to support vulnerability and survivability studies and projects. Consistent with DOD policy, the negation efforts of this program currently focus on negation technologies which have temporary, localized, and reversible effects. Command & Control efforts include identifying technology solutions to enable fusion of data for use in multi-level security environments, near-real-time data delivery and decision support to war fighter needs. Rapid Reaction Capabilities in response to immediate war fighter needs are developed within this program.

Also supported is the development of the technology and infrastructure for space control elements of the space range. This includes development and demonstration of test assets, special test equipment, capabilities and systems required to test, validate, and verify performance of integrated space control systems. Additionally, this program supports the development of test range assets required to support developmental and operational test, exercises, training, and tactics development for space control systems. A collaborative command & control capability will be integrated into several range systems to provide real time communications during test event scenarios.

As a result of an FY08 \$25M congressional add, the Air Force began the Self Awareness Space Situation Awareness (SASSA) technology demonstration that will build a payload to provide tactical SSA around a host satellite. SASSA is designed to demonstrate the ability to detect attacks, locate attacking sources, and communicate relevant information to the ground. SASSA will contain a suite of threat warning sensors designed to address a range of anti-satellite and environmental threats. SASSA will also have a communication package and common interface unit that eases integration and performs on-board sensor data processing. The interface unit and sensors can be configured into tailored sensing payloads for future space missions.

Spacetrack Integration Node Global Enhanced Reporting (STINGER) project converts an enhanced processing capability developed for missile warning radar to use for the space situation awareness program radars.

Air Force Page 3 of 19 R-1 Line Item #33

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 0603438F: Space Control Technolog	PROJECT 642611: Technology Insertion Planning and Analysis						
These projects are in Budget Activity 4, Advanced Component Deve technologies, representative modes or prototype systems in a high fi		efforts are	necessary to	o evaluate i	ntegrated			
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total		
Title: SSA		-	-	4.000	-	4.000		
<b>Description:</b> Space Situational Awareness efforts such as key space technologies, space sensor value modeling and architecture analysis.								
FY 2010 Accomplishments:  Continue analysis to support proximity Indications and Warnings sens community requirements sets for use in assessing solution options.	or trade space. Generating multi-							
FY 2011 Plans: Continuing optical sensor evaluations to augment the Space Surveilla Identification missions.	nce Network, and Space Object							
FY 2012 Base Plans: SSA- Explore developing market of smallsat and cubesats for potential assessments of possible sensors to augment the existing SSA capabi	•							
FY 2012 OCO Plans: Not applicable								
Title: Survivability		4.103	0.990	1.000	-	1.000		
FY 2010 Accomplishments: Analysis to support vulnerability and survivability studies and projects								
FY 2011 Plans: Analysis to support vulnerability and survivability studies and projects								
FY 2012 Base Plans:								
FY 2012 OCO Plans:								
Title: DCS		9.404	4.554	9.528	-	9.528		
FY 2010 Accomplishments:								

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			D	ATE: Febru	ary 2011				
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	-	ROJECT	, ,	<i></i> 51				
3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)	PE 0603438F: Space Control Technolo	642611: Technology Insertion Planning and Analysis							
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total			
Continuing asymmetric threat vulnerability and analysis in support of acquisition developments.	Space and Missile Center and partnered								
FY 2011 Plans: Continuing proximity Indications and Warnings (I&W) sensor developed performance validation and integration and test development. Planning testing.									
FY 2012 Base Plans:									
FY 2012 OCO Plans: Not applicable									
Title: SPP		6.820	-	_	-	-			
FY 2010 Accomplishments:  Began capability-based vulnerability and susceptibility assessments of enhance the survivability of the overall space architecture. Established (C&I) analysis team to keep a current database to provide senior lead capabilities, interdependencies and consequence of loss in support of	ed a capabilities and Interdependencies ers with understanding of space								
FY 2011 Plans: Transferred to new PE 060380F, Space Protection Program									
FY 2012 Base Plans:									
FY 2012 OCO Plans: Not applicable									
Title: C2		2.208	-	-	-	-			
FY 2010 Accomplishments: Continuing task execution, with completion expected towards the end mission needs for continued C2 efforts in support of ESC mission transport.									
FY 2011 Plans: not applicable									
FY 2012 Base Plans:									

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Air Force Page 5 of 19 R-1 Line Item #33

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			D	ATE: Febru	ary 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)	PROJECT ogy 642611: Technology Insertion Planning and Analysis							
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total		
FY 2012 OCO Plans: Not applicable Title: Rapid Reaction Branch (RRB)		7.235	20.809	4.867	-	4.867		
FY 2010 Accomplishments:  Developing advanced capabilities in response to warfighter JUONs. I techniques and technologies. Evaluating methods and technologies techniquest Messages (EReqMs). Developing techniques/technologies capabilities.	o answer new USSTRACOM Evaluation							
FY 2011 Plans: Will develop and test quick reaction capabilities to satisfy the UONS, USSTRATCOM and other warfighting commands. Funding includes sassets.								
FY 2012 Base Plans:								
FY 2012 OCO Plans:								
Title: SASSA		24.160	1.537	-	-	-		
FY 2010 Accomplishments: Continue development of the payload, integration on a bus for on-orbic capabilities. Deliver SASSA payload for beginning integration at the experiments of the second of the								
FY 2011 Plans: Complete SASSA integration in preparation for launch and on-orbit de	emonstration in FY 2012 and 2013.							
FY 2012 Base Plans:								
FY 2012 OCO Plans: Not applicable								
Title: STINGER		1.899	-	0.386	-	0.386		
FY 2010 Accomplishments:								

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Air Force Page 6 of 19 R-1 Line Item #33

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)	iy 6	PROJECT 42611: Techi Inalysis	rtion Planni	ng and					
B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total				
Conversion of an enhanced processing capability developed for missile situation awareness program radars.	warning radar to use for the space								
FY 2011 Plans: Not applicable									
FY 2012 Base Plans:									
FY 2012 OCO Plans: Not applicable									
Title: Program Office Support		14.26	4 14.148	6.934	-	6.934			
FY 2010 Accomplishments: Provides Program Office and Other Technical Support including System									
FY 2011 Plans: Provides Program Office and Other Technical Support including System	n Engineering and Architectural Support.								
FY 2012 Base Plans:									
FY 2012 OCO Plans:									
Accompl	ishments/Planned Programs Subtotals	70.09	3 42.038	26.715	-	26.715			
		FY 2010	FY 2011						
Congressional Add: HANDS ION		4.94	4 -						
FY 2010 Accomplishments: HANDS ION- The intent is to develop an inthe purpose of providing the capability of a single daylight IR tracking providing the capability of a single daylight IR tracking providing the capability of a single daylight IR tracking providing the capability of a single daylight IR tracking provided the capability of a single daylight IR tracking provided the capability of a single daylight IR tracking providing the capability of a single daylight IR tracking provided the capability of a single daylight IR tracking provided the capability of a single daylight IR tracking providing the capability of a single daylight IR tracking provided the capabili									
FY 2011 Plans:									
Congressional Add: ESP DEMO		3.95	5 -						
FY 2010 Accomplishments: Space Situational Awareness									
FY 2011 Plans:									
	Congressional Adds Subtotals	8.89	9 -						

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			<b>DATE</b> : February 2011

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

3600: Research, Development, Test & Evaluation, Air Force PE 0603438F: Space Control Technology 642611: Technology Insertion

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

Analysis

642611: Technology Insertion Planning and

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

			FY 2012	FY 2012	FY 2012					Cost To	
<u>Line Item</u>	FY 2010	FY 2011	<u>Base</u>	OCO	<u>Total</u>	FY 2013	FY 2014	FY 2015	FY 2016	<b>Complete</b>	<b>Total Cost</b>
<ul> <li>Activity Not Provided: None</li> </ul>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

## **D. Acquisition Strategy**

All contracts funded in this program element will be awarded using competitive procedures to the maximum extent possible. 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

APPROPRIATION/BUDGET ACTIVITY

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

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

R-1 ITEM NOMENCLATURE

PE 0603438F: Space Control Technology

PROJECT

OT

642611: Technology Insertion Planning and

**DATE:** February 2011

Analysis

Product Development	Product Development (\$ in Millions)			FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Survivability	C/CPFF	DTIC:,	4.103	0.990	Jan 2011	1.000	Jan 2012	-		1.000	0.000	6.093	0.000
HANDS ION CONGRESSIONAL ADD	SS/CPFF	OCEANIT:Kihei, HI	4.944	-		-		-		-	0.000	4.944	0.000
ESP DEMO CONGRESSIONAL ADD	MIPR	DMEA:,	6.955	-		-		-		-	0.000	6.955	0.000
SSA Development	Various	Various:Various,	22.401	-		4.000	Jan 2012	-		4.000	Continuing	Continuing	TBD
DCS Activities	Various	Various:Various,	65.862	4.554	Jan 2011	9.528	Jan 2012	-		9.528	Continuing	Continuing	TBD
Counterspace C2	Various	Various:Various,	3.406	-		-		-		-	Continuing	Continuing	TBD
Counterspace Technology Prototyping	Various	Various:Various,	81.397	20.809	Jan 2011	4.867	Jan 2012	-		4.867	Continuing	Continuing	TBD
SASSA Tech Demo	Various	Assurance Technolgy Corporation:Carlisle, MA	74.160	1.537	Jan 2011	-		-		-	4.500	80.197	40.000
STINGER	TBD	TBD:TBD,	1.896	-		0.386	Jan 2012	-		0.386	Continuing	Continuing	TBD
Space Protection Program	Various	Various:TBD,	6.821	-		-		-		-	0.000	6.821	0.000
		Subtotal	271.945	27.890		19.781		-		19.781			

Support (\$ in Millions)				FY 2	2011	FY 2 Ba	-		2012 CO	FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering and Architectural Support	C/CPAF	TASC:Redondo Beach, CA	1.000	0.900	May 2011	-		-		-	Continuing	Continuing	TBD
Program Office and Other Technical Support	Various	SMC:El Segundo, CA	28.031	5.563	Jan 2011	0.501	Nov 2011	-		0.501	Continuing	Continuing	TBD
STS System Engineering	C/FFP	AT&T:El Segundo, CA	1.699	2.478	Oct 2010	1.800	Oct 2011	-		1.800	0.000	5.977	0.000
AEROSPACE SUPPORT	RO	Aerospace Corp:El Segundo, CA	5.752	5.207	Oct 2010	4.633		-		4.633	0.000	15.592	0.000
		Subtotal	36.482	14.148		6.934		-		6.934			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 4: Advanced Component Development & Prototypes (ACD&P)

PROJECT
642611: Technology Insertion Planning and Analysis

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Test and Evaluation (\$	in Millions	)		FY 2	011	FY 2012 011 Base			2012 CO	FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location Subtotal	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
										]	0.000	0.000	
Management Services	(\$ in Millio	ns)		FY 2	011	FY 2 Ba	2012 se		2012 CO	FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
	,	Subtotal	-	-		-		-		-	0.000	0.000	0.00
			Total Prior Years Cost	FY 2	011	FY 2 Ba	2012 ise		2012 CO	FY 2012 Total	Cost To	Total Cost	Target Value of Contract
		Project Cost Totals	308.427	42.038		26.715		-		26.715			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603438F: Space Control Technology	PROJECT 642611: Technology Insertion Planning and Analysis

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

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 4: Advanced Component Development & Prototypes (ACD&P)

ARTITEM NOMENCLATURE
PE 0603438F: Space Control Technology
Analysis

## Schedule Details

	Sta	art	End		
Events	Quarter	Year	Quarter	Year	
Continue Technology Roadmaps & Planning	1	2010	4	2016	
SSA- Continue sensor development	1	2010	4	2016	
DCS - Continue DCS technology development and evaluation	1	2010	4	2016	
DCS - Continue Vulnerability and threat assessment report	1	2010	4	2016	
Concept Studies	1	2010	4	2016	
Prototyping and Rapid Transition to Weapons Systems	1	2010	4	2016	
SASSA Sensor Delivery	4	2010	1	2011	
SASSA Integration	4	2010	3	2012	

Exhibit R-2A, RDT&E Project Jus	tification: PE	3 2012 Air Fo	orce						DATE: Feb	uary 2011		
APPROPRIATION/BUDGET ACTI 3600: Research, Development, Tes BA 4: Advanced Component Devel	t & Evaluation		D&P)	<b>R-1 ITEM N</b> PE 0603438		TURE ontrol Techno	ology	PROJECT 64A007: Sp	JECT 07: Space Range			
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	
64A007: Space Range	20.240	18.974	19.040	-	19.040	19.309	19.599	19.894	20.246	Continuing	Continuing	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0			

## A. Mission Description and Budget Item Justification

B Accomplishments/Planned Programs (\$ in Millions)

This program supports the development of space test and training range capabilities required to support developmental and operational test, training, exercises and tactics development for Space Control systems and related architecture. This includes development and demonstration of test assets, special test equipment, capabilities and systems required to test, validate, and verify performance of integrated space control systems. Additionally, this program supports the development of test range assets required to support developmental and operational test, exercises, training, and tactics development for space control systems. A collaborative command & control capability will be integrated into several range systems to provide real time communications during test event scenarios.

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.

EV 2012 | EV 2012 | EV 2012

b. Accomplishments/Planned Programs (\$ in willions)			F1 2012	FI ZUIZ	F1 2012
	FY 2010	FY 2011	Base	oco	Total
Title: Range Control	11.559	11.763	11.932	-	11.932
<b>Description:</b> Range Control - Development and acquisition of mobile, transportable, and fixed range monitoring and communications capabilities for the space range					
FY 2010 Accomplishments: Transitioning from Space Range Operations Center (SROC) Test-bed into the SROC. Conducting DT/OT and preparing to make the new system operational. Transition from the SMU test-bed into fully operational COTS/GOTS system integrated inside the SROC. Deliver the first phase of Space - Center Scheduling Enterprise (S-CSE).					
FY 2011 Plans: Planning initial delivery of the SROC early in the FY. Completing additional upgrades to deliver a fully capable SROC system with deployable/transportable capability. Complete SMU integration into the SROC. Beginning the second phase of S-CSE.					
FY 2012 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			D	ATE: Febru	ary 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603438F: Space Control Technolog		PROJECT 64A007: Space Range				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	
Complete delivery of SROC. Planning initial delivery of transportable Continues second phase of S-CSE implementation.	range system and signal monitoring unit.						
FY 2012 OCO Plans:							
Title: Bandwith Support		3.000	3.040	3.100	-	3.100	
Description: STTR Leased Bandwith							
FY 2010 Accomplishments:  Providing required space range satellite communications bandwidth for offensive and defensive space control systems on the space range.	or exercise, testing and training of both						
FY 2011 Plans: Providing required space range satellite communications bandwidth for offensive and defensive space control systems on the space range.	or exercise, testing and training of both						
FY 2012 Base Plans: Providing required space range satellite communications bandwidth for offensive and defensive space control systems on the space range.	or exercise, testing and training of both						
FY 2012 OCO Plans:							
Title: Program Office Support		5.681	4.171	4.008	-	4.008	
<b>Description:</b> Provides program office and other technical support includes architectural support.	luding systems engineering and						
FY 2010 Accomplishments:  Provides program office and other technical support including systems	s engineering and architectural support.						
FY 2011 Plans: Provides program office and other technical support including systems	s engineering and architectural support.						
FY 2012 Base Plans: Provides program office and other technical support including systems	s engineering and architectural support.						
FY 2012 OCO Plans:							
Accom	plishments/Planned Programs Subtotals	20.240	18.974	19.040	-	19.040	

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

APPROPRIATION/BUDGET ACTIVITY **PROJECT** R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force PE 0603438F: Space Control Technology

64A007: Space Range BA 4: Advanced Component Development & Prototypes (ACD&P)

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

			FY 2012	FY 2012	FY 2012					Cost To	
<u>Line Item</u>	FY 2010	FY 2011	<b>Base</b>	OCO	<u>Total</u>	FY 2013	FY 2014	FY 2015	FY 2016	Complete	<b>Total Cost</b>
Activity Not Provided: No	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Additonal Funding											

### D. Acquisition Strategy

All contracts funded in this program element will be awarded using competitive procedures to the maximum extent possible.

### **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

APPROPRIATION/BUDGET ACTIVITY

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

R-1 ITEM NOMENCLATURE

PE 0603438F: Space Control Technology

PROJECT

KOJECI

64A007: Space Range

**DATE:** February 2011

			_								,		
Product Development (	\$ in Millio	ns)		FY 2	2011	FY 2 Ba	-	FY 2		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Leased Bandwidth	SS/FFP	DISA:Arlington, VA	6.000	3.040	Feb 2011	3.100	Feb 2012	-		3.100	-	Continuing	ТВІ
STTR Upgrade (Execution Test Center)	C/CPFF	Harris Corp:Melbourne, FL	9.633	-		-		-		-	9.109	18.742	9.10
Space Range Operations Center	C/CPAF	Harris Corp:Melbourne, FL	5.603	9.760	Nov 2010	5.698	Feb 2012	-		5.698	30.000	51.061	30.00
STTR Transportable	C/TBD	Harris Corp:Melbourne, FL	-	-		0.500	Feb 2012	-		0.500	9.000	9.500	10.00
Signal Generation, Monitoring and Collection	C/CPFF	TBD:TBD,	4.213	1.379	Nov 2010	3.734	Nov 2011	-		3.734	15.000	24.326	15.00
Range Scheduling Tool	SS/TBD	Various:Various,	0.892	0.400	Nov 2010	-		-		-	1.000	2.292	1.30
Advanced Capabilities Environment (ACE)	C/CPAF	Harris Corp:Melbourne, FL	-	0.224	Nov 2010	2.000	Nov 2011	-		2.000	5.424	7.648	5.424
MCATS II Upgrade	C/CPAF	Harris:Melbourne, FL	0.503	-		-		-		-	0.000	0.503	0.000
		Subtotal	26.844	14.803		15.032		-		15.032			
Support (\$ in Millions)				FY 2	2011	FY 2 Ba	-	FY 2		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office and Other Technical Support	Various	SMC:El Segundo, CA	22.827	4.171	Nov 2010	4.008	Nov 2011	-		4.008	Continuing	Continuing	ТВГ
		Subtotal	22.827	4.171		4.008		-		4.008			
Test and Evaluation (\$ i	n Millions	)		FY 2	2011	FY 2 Ba	-	FY 2		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	_	_		-		-		-	0.000	0.000	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force

APPROPRIATION/BUDGET ACTIVITY

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

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

R-1 ITEM NOMENCLATURE

PE 0603438F: Space Control Technology

PROJECT

64A007: Space Range

**DATE:** February 2011

Management Services	(\$ in Millio	ns)		FY:	2011		2012 ise		2012 CO	FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-	0.000	0.000	0.000
			Total Prior Years Cost	FY:	2011		2012 ise	1	2012 CO	FY 2012 Total	Cost To	Total Cost	Target Value of Contract
		Project Cost Totals	49.671	18.974		19.040		-		19.040			

Remarks

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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 0603438F: Space Control Technology	PROJECT 64A007: Space Range

**UNCLASSIFIED** 

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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 0603438F: Space Control Technology 64A007: Space Range

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

## Schedule Details

	St	art	E	nd
Events	Quarter	Year	Quarter	Year
Procure Leased Assets	1	2010	4	2016
Upgrade Transportable System	2	2012	4	2016
Develop fixed-site capability (SROC)	1	2010	4	2016
Signal monitoring and collection (SMU)	1	2010	4	2016
Signal Monitoring Unit Delivery (SMU)	3	2011	3	2011
Signal Monitoring Unit Delivery 2	4	2012	4	2012
Range Scheduling Software Tool	1	2010	4	2010
Range Scheduling Software Tool Delivery	2	2011	2	2011