

UNCLASSIFIED

PE NUMBER: 0305173F

PE TITLE: Space & Missile Test & Evaluation Center

Exhibit R-2, RDT&E Budget Item Justification

DATE

May 2009

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0305173F Space & Missile Test & Evaluation Center

Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	4.986	1.967	3.599	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
A014 R&D Space and Missile Operations	4.986	1.967	3.599	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

(U) **A. Mission Description and Budget Item Justification**

The RDT&E efforts within this program focus on the Multi-Mission Satellite Operations Center (MMSOC), which the Research and Development (R&D) Space and Missile Operations (RDSMO) program started in FY07. The main objective of MMSOC is to develop the capability to rapidly support R&D and operational systems and to transition R&D space vehicle technology with residual military utility to operational status for immediate real world support. MMSOC is a multiple-mission operation system that uses standard software (1) to perform satellite command and control (C2) in support of launch requirements; (2) to develop and test tactics, techniques, procedures and concepts to conduct residual operations for R&D satellites; (3) to provide a satellite C2 incremental block evolution resource for RDT&E of new systems and concepts; and (4) to deliver operational flexibility for new and currently-flying assigned satellites. MMSOC leverages demonstrated RDT&E experience to expand the capabilities of proven technologies currently in use in RDSMO facilities. MMSOC also supports all RDSMO-sustained space vehicles through existing resources.

RDSMO develops and acquires systems to: operate experimental and demonstration satellites; operate fixed and deployable satellite ground systems; perform satellite compatibility testing; act as the focal point and center of expertise for DoD experimental and demonstration space and missile operations; support space and missile R&D; and conduct/support experimental/demonstration of space and missile Developmental Test and Evaluation (DT&E) and Initial Operational Test and Evaluation (IOT&E) activities. It consists of (1) the RDT&E Support Complex (RSC) at Kirtland AFB, NM which operates R&D satellites; (2) the Camp Parks Communication Annex at Dublin, CA which provides multi-band Telemetry Tracking and Commanding (TT&C), calibration and on-orbit testing; (3) the Test, Operations, and Programs organization at Kirtland AFB which is the focal point for tests, plans, programs, and policy and (4) the deployable test systems, based at Kirtland AFB, NM which deploys mobile antennas worldwide to support space RDT&E activities.

The RDT&E effort also includes the development of a mobile test system, known as the Next Generation Satellite Compatibility Test System (NGSCTS), used to verify satellite compatibility with the Air Force Satellite Control Network (AFSCN) Remote Block Change architecture. System will be capable of being deployed around the world to perform compatibility testing in the factory as well as launch ranges to include Kodiak, Alaska, Wallops Island, Virginia, and Kwajalein Atoll. This is a new start in FY10.

This effort is in Budget Activity 7, Operational System Development, and it supports research and development of space systems.

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Exhibit R-2 (PE 0305173F)

Exhibit R-2, RDT&E Budget Item Justification

DATE

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BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0305173F Space & Missile Test & Evaluation Center

(U) **B. Program Change Summary (\$ in Millions)**

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Previous President's Budget	3.070	1.985	1.660
(U) Current PBR/President's Budget	4.986	1.967	3.599
(U) Total Adjustments	1.916	-0.018	
(U) Congressional Program Reductions			
Congressional Rescissions		-0.018	
Congressional Increases			
Reprogrammings	2.000		
SBIR/STTR Transfer	-0.084		

(U) **Significant Program Changes:**

FY08: \$2.0M BTR for MMSOC to support design, development, and test.

FY10: Added \$2M to FY10 for the Next Generation Satellite Compatibility Test System (NGSCTS)

Exhibit R-2a, RDT&E Project Justification

DATE

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BUDGET ACTIVITY

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0305173F Space & Missile Test & Evaluation Center

PROJECT NUMBER AND TITLE

A014 R&D Space and Missile Operations

Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
A014 R&D Space and Missile Operations	4.986	1.967	3.599	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) **A. Mission Description and Budget Item Justification**

The RDT&E efforts within this program focus on the Multi-Mission Satellite Operations Center (MMSOC), which the Research and Development (R&D) Space and Missile Operations (RDSMO) program started in FY07. The main objective of MMSOC is to develop the capability to rapidly support R&D and operational systems and to transition R&D space vehicle technology with residual military utility to operational status for immediate real world support. MMSOC is a multiple-mission operation system that uses standard software (1) to perform satellite command and control (C2) in support of launch requirements; (2) to develop and test tactics, techniques, procedures and concepts to conduct residual operations for R&D satellites; (3) to provide a satellite C2 incremental block evolution resource for RDT&E of new systems and concepts; and (4) to deliver operational flexibility for new and currently-flying assigned satellites. MMSOC leverages demonstrated RDT&E experience to expand the capabilities of proven technologies currently in use in RDSMO facilities. MMSOC also supports all RDSMO-sustained space vehicles through existing resources.

RDSMO develops and acquires systems to: operate experimental and demonstration satellites; operate fixed and deployable satellite ground systems; perform satellite compatibility testing; act as the focal point and center of expertise for DoD experimental and demonstration space and missile operations; support space and missile R&D; and conduct/support experimental/demonstration of space and missile Developmental Test and Evaluation (DT&E) and Initial Operational Test and Evaluation (IOT&E) activities. It consists of (1) the RDT&E Support Complex (RSC) at Kirtland AFB, NM which operates R&D satellites; (2) the Camp Parks Communication Annex at Dublin, CA which provides multi-band Telemetry Tracking and Commanding (TT&C), calibration and on-orbit testing; (3) the Test, Operations, and Programs organization at Kirtland AFB which is the focal point for tests, plans, programs, and policy and (4) the deployable test systems, based at Kirtland AFB, NM which deploys mobile antennas worldwide to support space RDT&E activities.

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This effort is in Budget Activity 7, Operational System Development, and it supports research and development of space systems.

(U) **B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2008	FY 2009	FY 2010
(U) Multi-Mission Satellite Operations Center (MMSOC) development/integration	4.986	1.967	1.633
(U) Next Generation Satellite Compatibility Test System (NGSCTS)			1.966
Used to verify satellite compatibility with the AFSCN RBC architecture.			
(U) Total Cost	4.986	1.967	3.599

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Exhibit R-2a (PE 0305173F)

Exhibit R-2a, RDT&E Project Justification

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07 Operational System Development

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0305173F Space & Missile Test &
Evaluation Center

PROJECT NUMBER AND TITLE

A014 R&D Space and Missile
Operations(U) **C. Other Program Funding Summary (\$ in Millions)**

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) OPAF, Electronics & Telecom Equipment (BA 03, PE 0305173F, P-20)	7.714	10.015	11.333						Continuing	TBD

(U) **D. Acquisition Strategy**

The AF uses the competitively-awarded Engineering, Development, and Sustainment (EDS) Contract, managed by Space and Missile System Center, Space Development & Test Wing (formerly Detachment 12), to modernize and sustain RDSMO on a non-interference basis as it continues to support RDT&E and other designated users. The AF uses the competitively-awarded EDS Follow-On Contract to develop MMSOC.

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Exhibit R-3, RDT&E Project Cost Analysis

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07 Operational System Development				0305173F Space & Missile Test & Evaluation Center				A014 R&D Space and Missile Operations				
(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2008 Cost</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>FY 2010 Cost</u>	<u>FY 2010 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u> Engineering, Development, and Sustainment (EDS) Follow-on Contract Subtotal Product Development Remarks:	C/CPAF	TBD/Kirtland, Schreiver AFB	1.114	4.039	Nov-07	1.967	Oct-08	1.633	Nov-09	Continuing	TBD	TBD
(U) <u>Support</u> Program Support (SETA, SPO ops) Subtotal Support Remarks:	Various	Various	0.858	0.827		0.000	Dec-08	0.000		Continuing	TBD	TBD
(U) <u>Product Development</u> System Test and Engineering (STEC) Contract Subtotal Product Development Remarks:	C/CPAF	Kirtland, AFB	0.554	0.120		0.000	Oct-08	0.000		Continuing	TBD	0.000
(U) <u>Product Development</u> Next Generation Satellite Compatibility Test System Contract (TBD) Subtotal Product Development Remarks:	TBD	TBD/Kirtland AFB	0.000	0.000		0.000		1.966	Jan-10	0.000	1.966	0.000
(U) Total Cost			2.526	4.986		1.967		3.599		Continuing	TBD	TBD

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Exhibit R-3 (PE 0305173F)

Exhibit R-4, RDT&E Schedule Profile

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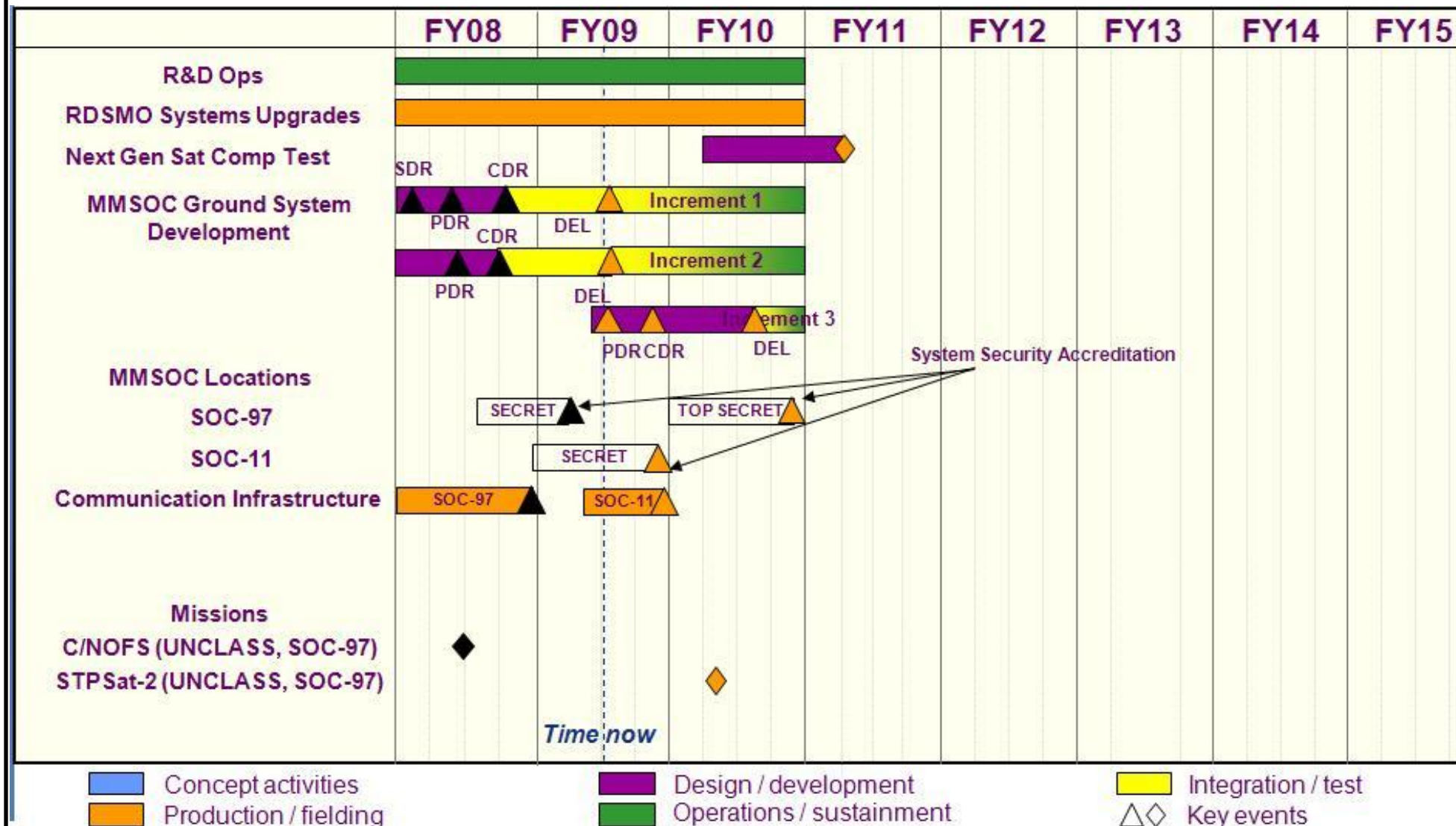
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Exhibit R-4 (PE 0305173F)

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Exhibit R-4a, RDT&E Schedule Detail

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Evaluation Center

PROJECT NUMBER AND TITLE

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Operations(U) Schedule ProfileFY 2008FY 2009FY 2010

(U) SDR	1Q		
(U) Increment 1 & 2 PDR	2Q		
(U) Increment 1 & 2 CDR	3Q		
(U) Increment 1-TT&C with Limited Mission Planning		2Q	
(U) Increment 2-Support 1 Mission		2Q	
(U) Increment 3-PDR		1Q	
(U) Increment 3-CDR		3Q	
(U) Increment 3-Support Multiple Missions			1Q
(U) Next Generation Satellite Compatibility Test System			

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Exhibit R-4a (PE 0305173F)

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