

UNCLASSIFIED

PE NUMBER: 0305182F
 PE TITLE: Spacelift Range System

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
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BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305182F Spacelift Range System
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	Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	45.633	27.095	12.376	10.157	10.276	10.476	10.686	Continuing	TBD
4137	Launch and Test Range System (LTRS) Modernization	45.633	27.095	12.376	10.157	10.276	10.476	10.686	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Eastern Range (ER) at Patrick Air Force Base (AFB)/Cape Canaveral Air Force Station, FL, and the Western Range (WR) at Vandenberg AFB, CA, make up the Spacelift Range System (SLRS). They provide tracking, telemetry, communications, flight analysis, and other capabilities necessary to safely conduct: national security, civil, and commercial spacelift operations; ballistic missile and missile defense evaluations; and aeronautical and guided weapons tests. Reliability of aging range equipment is a major issue. It forces the AF to use redundant assets during launches to ensure range availability, increasing operations and maintenance costs.

The AF is addressing range deficiencies through two contracts. First, the Range Standardization and Automation (RSA) Phase IIA contract modernizes the control/display and communications segments at both ranges. Systems being modernized include: weather; communications (voice, video, data, and timing; network management system; and digital telemetry); planning and scheduling; and flight operations and analysis. Second, the SLRS Contract (SLRSC) modernizes command, telemetry, and radar instrumentation at both ranges and supports activation of the WR Operations Control Center. It also provides overall systems engineering and architecture management, follow-on modernization of the control/display and communications segments, and system level testing to complete the modernization effort. Some examples of the most recent deliveries on these two contracts include: automated planning and network management systems; digital telemetry systems; and optical system upgrades. RSA IIA ends in mid FY09 using OPAF funding. FY09 funds continue the SLRSC modernization, system engineering, testing and architectural management efforts.

These upgrades to fielded systems are categorized as Budget Activity 7, Operational Systems Development.

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	38.900	27.300	12.559
(U) Current PBR/President's Budget	45.633	27.095	12.376
(U) Total Adjustments	6.733	-0.205	
(U) Congressional Program Reductions	-0.003	-0.032	
Congressional Rescissions		-0.173	
Congressional Increases			
Reprogrammings	7.000		
SBIR/STTR Transfer	-0.264		
(U) <u>Significant Program Changes:</u>			

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BUDGET ACTIVITY

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FY07: AF added \$7M to address RSA IIA developmental and operational acceptance issues

Exhibit R-2a, RDT&E Project Justification

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Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4137 Launch and Test Range System (LTRS) Modernization	45.633	27.095	12.376	10.157	10.276	10.476	10.686	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Complete RSA Phase IIA development, test, and evaluation of planning/ scheduling; communications; weather; and flight operations/analysis systems. Complete integration of systems into WR Operations Control Center.	34.121	13.100	
(U) Continue SLRSC systems engineering, instrumentation modernization, and systems integration. Continue development, test, and evaluation of command destruct, telemetry, and radar instrumentation and local control interfaces. Continue activation of operational centers in WR Operations Control Center.	9.785	13.495	11.876
(U) Provide program support, to include System Program Office operations, SETA, FFRDC, and Systems Engineering and Integration.	0.759	0.500	0.500
(U) Funds added by Congress for California Space Authority (CSA) to continue California Space Infrastructure Program.	0.968		
(U) Total Cost	45.633	27.095	12.376

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

	<u>FY 2007</u>	<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>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>Complete</u>	
(U) OPAF (Spacelift Range System Space, P-65, BA 03)	117.310	121.321	101.983	104.164	105.444	107.520	109.648	Continuing	TBD
(U) OPAF (Spares and Repair Parts, P-103, BA 05)	2.793	2.912	2.957	3.000	3.047	3.106	3.167	Continuing	TBD

(U) **D. Acquisition Strategy**

The AF is using two competitively awarded, complementary contracts, managed by the Space and Missile Systems Center, to modernize the ranges on a minimal-interference basis as they continue to support operational launches and tests.

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Exhibit R-3, RDT&E Project Cost Analysis

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<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 2007 Cost</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
<u>(U) Product Development</u> RSA Phase IIA	C/CPAF	Lockheed Martin, Santa Maria, CA	288.401	34.121	Oct-06	13.100	Oct-07			0.000	335.622	349.469
SLRSC	C/CPAF	ITT Industries, Cape Canaveral, FL	135.116	9.785	Oct-06	13.495	Oct-07	11.876	Oct-08	Continuing	TBD	TBD
Subtotal Product Development Remarks:			423.517	43.906		26.595		11.876		Continuing	TBD	TBD
<u>(U) Support</u> SPO Program Support (FFRDC, SETA, SPO Ops)	Various	Various	35.112	0.759	Oct-06	0.500	Oct-07	0.500	Oct-08	Continuing	TBD	TBD
California Space Infrastructure Program	Various	Various	33.385	0.968						Continuing	TBD	TBD
Subtotal Support Remarks:			68.497	1.727		0.500		0.500		Continuing	TBD	TBD
<u>(U) Total Cost</u>			492.014	45.633		27.095		12.376		Continuing	TBD	TBD

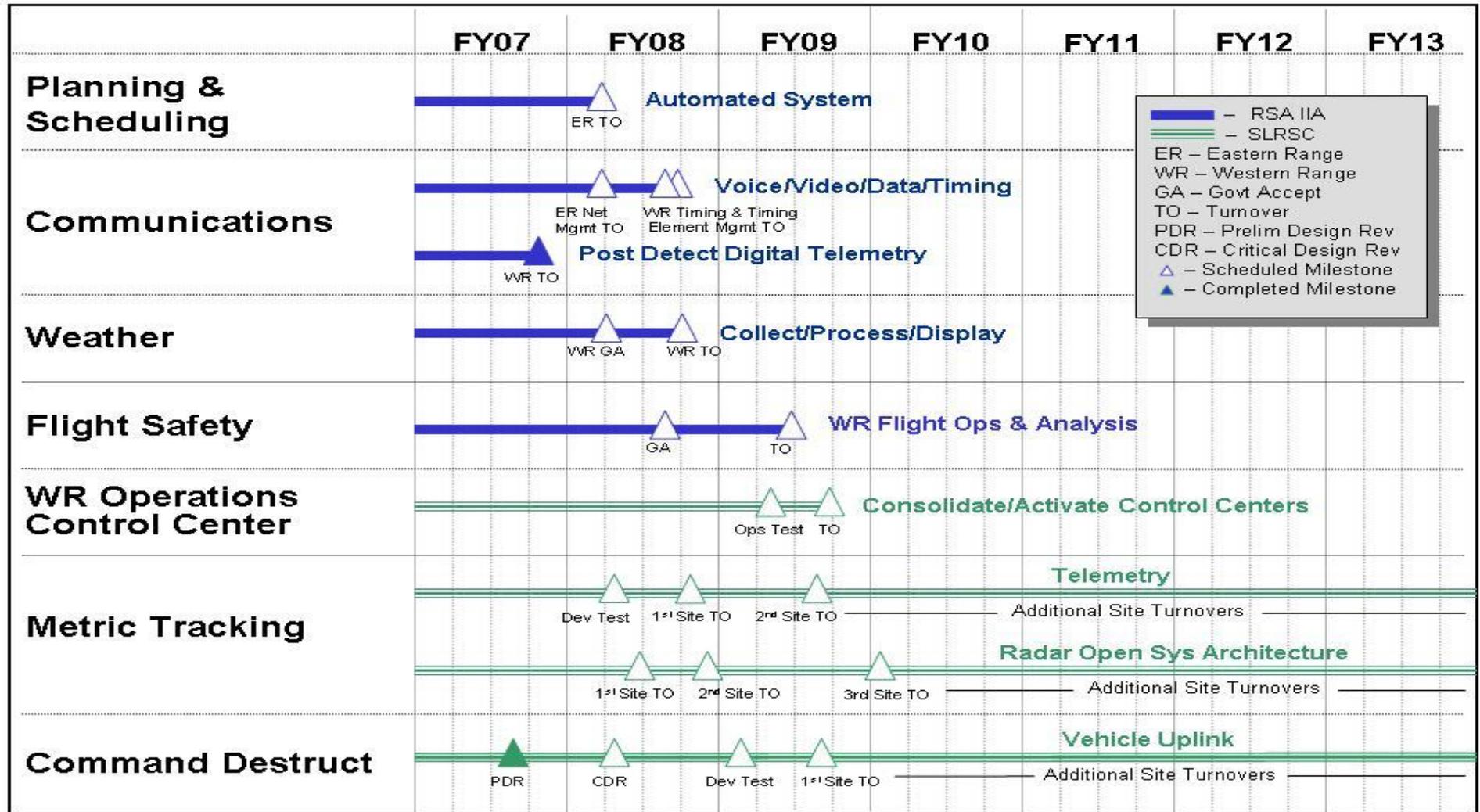
Exhibit R-4, RDT&E Schedule Profile

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PROJECT NUMBER AND TITLE
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- █ - RSA IIA
- ▬▬▬ - SLRSC
- ER - Eastern Range
- WR - Western Range
- GA - Govt Accept
- TO - Turnover
- PDR - Prelim Design Rev
- CDR - Critical Design Rev
- △ - Scheduled Milestone
- ▲ - Completed Milestone

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
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(U) <u>Schedule Profile</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) RSA Phase IIA			
(U) - Planning & Scheduling ER Operational (Ops) Turnover		1Q	
(U) - Communications (Post Detect Digital Telemetry) WR Ops Turnover	4Q		
(U) - Communications (Net Mgmt System) ER Final Ops Turnover		1Q	
(U) - Communications (Timing) WR Final Ops Turnover		3Q	
(U) - Communications (Timing Element Mgmt System) WR Final Ops Turnover		3Q	
(U) - Weather WR Final Govt Acceptance		2Q	
(U) - Weather WR Final Ops Turnover		4Q	
(U) - Flight Safety (WR Flight Ops & Analysis) Govt Acceptance		3Q	
(U) - Flight Safety (WR Flight Ops & Analysis) Ops Turnover			2Q
(U) - Contract Closeout			3Q
(U) SLRS Contract			
(U) - WR Ops Control Center (WROCC) Operational Test Complete			2Q
(U) - WR Ops Control Center (WROCC) Final Turnover			3Q
(U) - Metric Tracking (Telemetry) Developmental Test Complete		2Q	
(U) - Metric Tracking (Telemetry) 1st Site Turnover		4Q	
(U) - Metric Tracking (Telemetry) 2nd Site Turnover			3Q
(U) - Metric Tracking (Radar Open System Architecture) 1st Site Turnover		2Q	
(U) - Metric Tracking (Radar Open System Architecture) 2nd Site Turnover		4Q	
(U) - Command Destruct (Vehicle Uplink) Preliminary Design Review	3Q		
(U) - Command Destruct (Vehicle Uplink) Critical Design Review		2Q	
(U) - Command Destruct (Vehicle Uplink) Developmental Test Complete			1Q
(U) - Command Destruct (Vehicle Uplink) 1st Site Turnover			3Q