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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305182F: Spacelift Range System							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	13.322	9.915	9.933	0.000	9.933	10.061	10.224	10.366	10.524	Continuing	Continuing
674137: Launch and Test Range System (LTRS) Modernization	13.322	9.915	9.933	0.000	9.933	10.061	10.224	10.366	10.524	Continuing	Continuing
A. Mission Description and Budget Item Justification											
<p>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), also known as LTRS. They provide tracking, telemetry, communications, flight safety, and other capabilities to safely conduct: national security, civil, and commercial spacelift operations; ballistic missile and missile defense evaluations; and aeronautical and guided weapons tests. Decreasing reliability of aging range systems forces the AF to use redundant assets during launches to ensure range availability, increasing operations and maintenance costs.</p>											
<p>The AF is addressing range deficiencies in FY11 via multiple contracts. The Range Standardization and Automation (RSA) IIA contract (OPAF only in FY11) modernizes control/display and communications systems. The SLRS Contract (SLRSC) modernizes command, telemetry, and radar instrumentation; and provides systems engineering, architecture management, and system level testing. RSA IIA and SLRSC end in FY11. The AF awarded a follow-on systems engineering and integration contract in Dec 09 and will award a follow-on modernization and sustainment contract in FY11. Planned communications system upgrades will comply with OSD policies and standards for netcentricity, global information grid interface, information assurance, and test/training enabling architecture.</p>											
<p>These upgrades to fielded systems are categorized as Budget Activity 7, Operational Systems Development.</p>											

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE			
3600: Research, Development, Test & Evaluation, Air Force		PE 0305182F: Spacelift Range System			
BA 7: Operational Systems Development					
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	12.322	9.957	0.000	0.000	0.000
Current President's Budget	13.322	9.915	9.933	0.000	9.933
Total Adjustments	1.000	-0.042	9.933	0.000	9.933
• Congressional General Reductions		-0.042			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	1.000	0.000	9.933	0.000	9.933
Change Summary Explanation					
FY09: AF increase of \$1M for systems engineering.					

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APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0305182F: Spacelift Range System				PROJECT 674137: Launch and Test Range System (LTRS) Modernization			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
674137: Launch and Test Range System (LTRS) Modernization	13.322	9.915	9.933	0.000	9.933	10.061	10.224	10.366	10.524	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
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), also known as LTRS. They provide tracking, telemetry, communications, flight safety, and other capabilities to safely conduct: national security, civil, and commercial spacelift operations; ballistic missile and missile defense evaluations; and aeronautical and guided weapons tests. Decreasing reliability of aging range systems forces the AF to use redundant assets during launches to ensure range availability, increasing operations and maintenance costs.											
The AF is addressing range deficiencies in FY11 via multiple contracts. The Range Standardization and Automation (RSA) IIA contract (OPAF only in FY11) modernizes control/display and communications systems. The SLRS Contract (SLRSC) modernizes command, telemetry, and radar instrumentation; and provides systems engineering, architecture management, and system level testing. RSA IIA and SLRSC end in FY11. The AF awarded a follow-on systems engineering and integration contract in Dec 09 and will award a follow-on modernization and sustainment contract in FY11. Planned communications system upgrades will comply with OSD policies and standards for netcentricity, global information grid interface, information assurance, and test/training enabling architecture.											
These upgrades to fielded systems are categorized as Budget Activity 7, Operational Systems Development.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Major Thrust: Modernize timing and safety systems to complete activation of Western Range (WR) Operations Control Center. Modernize telemetry, radar, and command destruct instrumentation on WR and...							12.776	9.340	3.685	0.000	3.685

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: In FY 2009: Continued critical design reviews, system security accreditations, system integration testing, antenna pointing system software development, and preparations for operational testing.						
FY 2010 Plans: In FY 2010: Continued critical design reviews, system security accreditations, system integration testing, antenna pointing system software development, and preparations for operational testing.						
FY 2011 Base Plans: In FY 2011: Completed critical design reviews, system security accreditations, system integration testing, antenna pointing system software development, and preparations for operational testing. Transitioned efforts to operational testing/acceptance.						
FY 2011 OCO Plans: In FY 2011 OCO: N/A						
Major Thrust: Conduct independent systems engineering and integration (SE&I) effort starting in FY10. Continue systems engineering efforts previously accomplished under SLRSC.		0.000	0.175	5.948	0.000	5.948
FY 2009 Accomplishments: In FY 2010: Initiated follow-on, separate systems engineering and integration effort.						
FY 2010 Plans: In FY 2011: Continue follow-on, separate systems engineering and integration effort. Support completion of SLRSC and transition to follow-on modernization/ improvement contract.						
FY 2011 Base Plans: In FY 2011 OCO: N/A						

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B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.											
Major Thrust: Provide program support, to include System Program Office operations, SETA, and FFRDC. FY 2009 Accomplishments: In FY 2009: Continued engineering support from Aerospace (FFRDC). FY 2010 Plans: In FY 2010: Continued engineering support from Aerospace (FFRDC). FY 2011 Base Plans: In FY 2011: Continue engineering support from Aerospace (FFRDC). FY 2011 OCO Plans: In FY 2011 OCO: N/A						0.546	0.400	0.300	0.000	0.300	
Accomplishments/Planned Programs Subtotals						13.322	9.915	9.933	0.000	9.933	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PE 0305182F: Spacelift Range System Space, OPAF	99.086	99.975	91.004	0.000	91.004	107.629	106.619	104.514	106.412	0.000	0.000
	2.948	2.948	2.978	0.000	2.978	3.032	3.082	3.126	3.178	0.000	0.000

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C. Other Program Funding Summary (\$ in Millions)												
	<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
	• PE 0305182F (1): <i>Spares and Repair Parts, OPAF</i>											
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. The AF competitively awarded a follow-on systems engineering and integration contract in Dec 09 and will competitively award a follow-on modernization/improvement contract in late FY11.												
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 2011 Air Force											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0305182F: Spacelift Range System				PROJECT 674137: Launch and Test Range System (LTRS) Modernization					
Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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	
Range Standardization and Automation IIA	C/CPAF	Lockheed Martin Santa Maria, CA	335.704	0.000		0.000		0.000		0.000	0.000	335.704	349.469	
Spacelift Range System Contract	C/CPAF	ITT Industries Cape Canaveral, FL	169.084	9.340	Oct 2009	3.685	Oct 2010	0.000		3.685	0.000	182.109	Continuing	
Follow-on modernization and improvement contract	C/CPIF	TBD TBD	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing	
Separate systems engineering and integration contract	C/CPIF	Booz Allen and Hamilton McLean, VA	0.000	0.175	Dec 2009	5.948	Oct 2010	0.000		5.948	Continuing	Continuing	Continuing	
Subtotal			504.788	9.515		9.633		0.000		9.633				
Remarks														
Support (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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	
SPO Program Support (FFRDC, SETA, SPO Ops)	Various	Various Various	36.917	0.400	Oct 2009	0.300	Oct 2010	0.000		0.300	Continuing	Continuing	Continuing	
	Various	Various	34.353	0.000		0.000		0.000		0.000	0.000	34.353	Continuing	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010		
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Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 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
California Space Infrastructure Program		Various											
Subtotal			71.270	0.400		0.300		0.000		0.300			
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			576.058	9.915		9.933		0.000		9.933			
Remarks Total Prior Years Cost may include only FY 2009 data.													

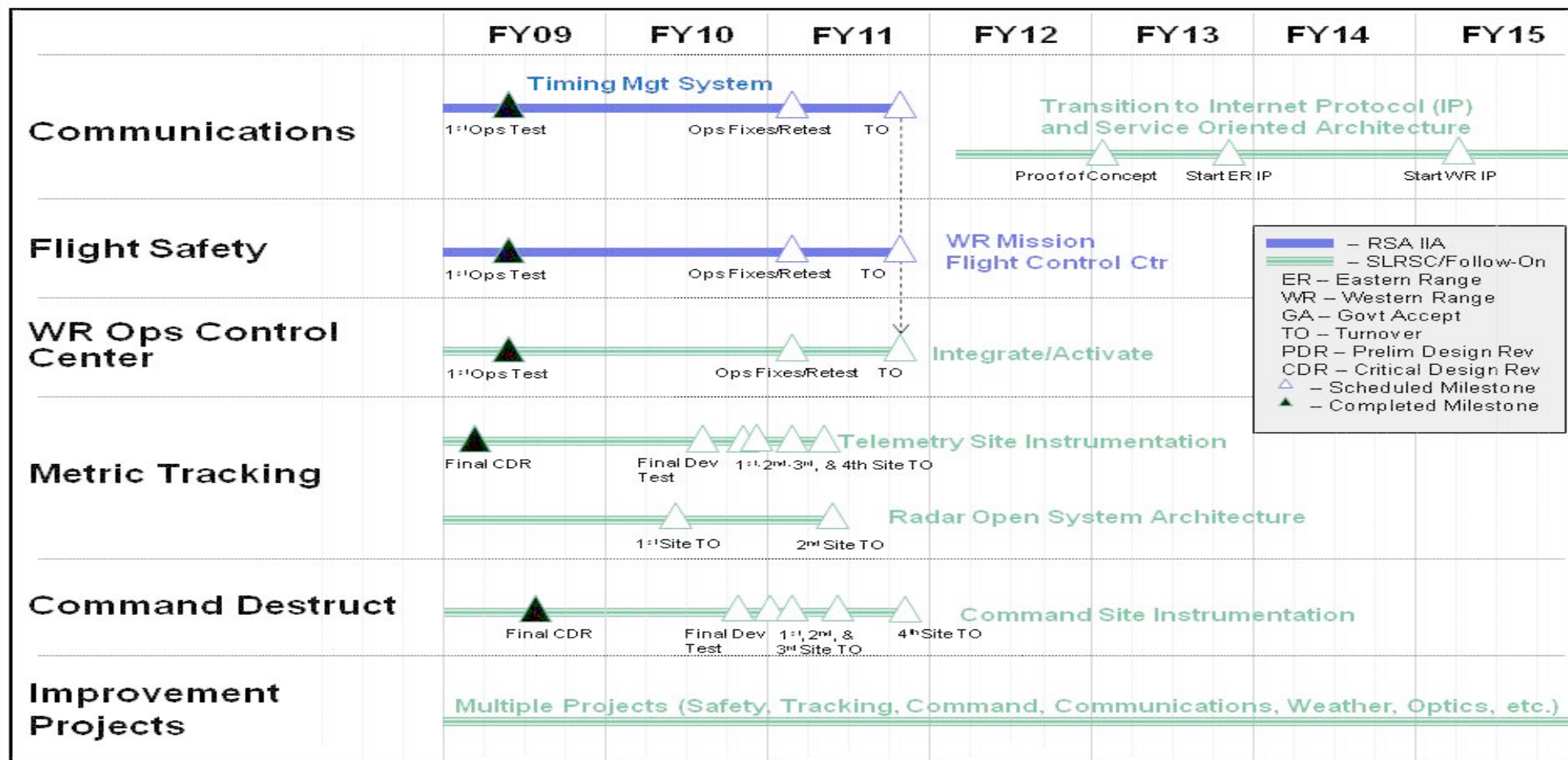
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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force		DATE: February 2010
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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305182F: <i>Spacelift Range System</i>	PROJECT 674137: <i>Launch and Test Range System (LTRS) Modernization</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
- WR Comm Timing Mgmt System Ops Testing	1	2009	2	2009
- WR Comm Timing Mgmt System Ops Fix, Retest, Acceptance, and Turnover	1	2010	4	2011
- WR Mission Flight Control Center Ops Testing	1	2009	2	2009
- WR Mission Flight Control Center Ops Fix, Retest, Acceptance, and Turnover	1	2010	4	2011
- WR Ops Control Center (WROCC) Ops Testing	1	2009	2	2009
- WR Ops Control Center (WROCC) Ops Fix, Retest, Acceptance, and Turnover	1	2010	4	2011
- Metric Tracking (Telemetry) Final Critical Design Review	1	2009	1	2009
- Metric Tracking (Telemetry) Final Developmental Test	2	2010	3	2010
- Metric Tracking (Telemetry) 1st Site Ops Testing, Acceptance, and Turnover	3	2009	4	2010
- Metric Tracking (Telemetry) 2nd Site Ops Testing, Acceptance, and Turnover	3	2010	4	2010
- Metric Tracking (Telemetry) 3rd Site Ops Testing, Acceptance, and Turnover	3	2010	1	2011
- Metric Tracking (Telemetry) 4th Site Ops Testing, Acceptance, and Turnover	3	2010	2	2011
- Metric Tracking (Radar Open System Architecture) 1st Site Ops Testing, Acceptance, and Turnover	1	2009	2	2010
- Metric Tracking (Radar Open System Architecture) 2nd Site Ops Testing, Acceptance, and Turnover	3	2010	2	2011
- Command Destruct (Vehicle Uplink) Final Critical Design Review	1	2009	3	2009
- Command Destruct (Vehicle Uplink) Final Developmental Test	1	2010	4	2010
- Command Destruct (Vehicle Uplink) 1st Site Ops Testing, Acceptance, and Turnover	3	2010	1	2011

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force			DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0305182F: Spacelift Range System		PROJECT 674137: Launch and Test Range System (LTRS) Modernization	
	Start		End	
Event	Quarter	Year	Quarter	Year
- Command Destruct (Vehicle Uplink) 2nd Site Ops Testing, Acceptance, and Turnover	4	2010	1	2011
- Command Destruct (Vehicle Uplink) 3rd Site Ops Testing, Acceptance, and Turnover	1	2011	2	2011
- Command Destruct (Vehicle Uplink) 4th Site Ops Testing, Acceptance, and Turnover	3	2011	4	2011

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