

UNCLASSIFIED

PE NUMBER: 0604441F

PE TITLE: Space Based Infrared Systems (SBIRS) High EMD

Exhibit R-2, RDT&E Budget Item Justification								DATE February 2006	
BUDGET ACTIVITY 05 System Development and Demonstration (SDD)				PE NUMBER AND TITLE 0604441F Space Based Infrared Systems (SBIRS) High EMD					
Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	587.121	696.562	668.902	579.369	486.335	380.292	260.530	426.900	8,281.470
3616 SBIRS High Element EMD	587.121	696.562	668.902	579.369	486.335	380.292	260.530	426.900	8,281.470

(U) A. Mission Description and Budget Item Justification

(U) The Space-Based Infrared System's (SBIRS) primary mission is to provide initial warning of a ballistic missile attack on the US, its deployed forces or its allies. SBIRS will incorporate new technologies to enhance detection and improve reporting of intercontinental ballistic missile launches, submarine launched ballistic missile launches, and tactical ballistic missile launches. SBIRS supports Missile Defense, Battlespace Characterization and Technical Intelligence missions by providing reliable, accurate, and timely data to Unified Combatant Commanders, Joint Task Force (JTF) Commanders, the intelligence community, and other users. SBIRS provides increased detection and tracking performance in order to meet requirements in US Space Command's Capstone Requirements Document and Air Force Space Command's Operational Requirements Document. SBIRS will consist of satellites in Geosynchronous Earth Orbit (GEO), payloads hosted on satellites in Highly Elliptical Orbit (HEO), an integrated centralized ground station serving all SBIRS space elements, Defense Support Program (DSP) satellites, and program and other related support activities.

(U) This program is assigned to Budget Activity 5, System Development and Demonstration (SDD), because it funds the development activities for the SBIRS High program.

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

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	594.169	756.630	653.713
(U) Current PBR/President's Budget	587.121	696.562	668.902
(U) Total Adjustments	-7.048	-60.068	
(U) Congressional Program Reductions		-50.000	
Congressional Rescissions	-0.455	-10.068	
Congressional Increases			
Reprogrammings	9.924		
SBIR/STTR Transfer	-16.517		

(U) Significant Program Changes:

USD (AT&L) certified the SBIRS EMD program to Congress on 12 Dec 2005 as required by the Nunn-McCurdy Act. Additional funding was added in fiscal years 2007-2010 to match the OSD Cost Analysis Improvement Group (CAIG) restructured program cost estimate.

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Exhibit R-2a, RDT&E Project Justification

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Systems (SBIRS) High EMD

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Cost (\$ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
3616 SBIRS High Element EMD	587.121	696.562	668.902	579.369	486.335	380.292	260.530	426.900	8,281.470
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

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

(U) The Space-Based Infrared System's (SBIRS) primary mission is to provide initial warning of a ballistic missile attack on the US, its deployed forces or its allies. SBIRS will incorporate new technologies to enhance detection and improve reporting of intercontinental ballistic missile launches, submarine launched ballistic missile launches, and tactical ballistic missile launches. SBIRS supports Missile Defense, Battlespace Characterization and Technical Intelligence missions by providing reliable, accurate, and timely data to Unified Combatant Commanders, Joint Task Force (JTF) Commanders, the intelligence community, and other users. SBIRS provides increased detection and tracking performance in order to meet requirements in US Space Command's Capstone Requirements Document and Air Force Space Command's Operational Requirements Document. SBIRS will consist of satellites in Geosynchronous Earth Orbit (GEO), payloads hosted on satellites in Highly Elliptical Orbit (HEO), an integrated centralized ground station serving all SBIRS space elements, Defense Support Program (DSP) satellites, and program and other related support activities.

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

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Continue EMD contracts for Space and Ground segment development (includes GFE, continued GEO development, GEO 1&2 integration, assembly and test, design activities for GEO block upgrades, proposal preparation for GEO 3 advance procurement, HEO integration and test, HEO message certification, Ground System Development, System Engineering and Program Management, Host SPO support, Technical Intelligence activities, Data Exploitation activities, CTF support activities, continuation of systems integration and test studies and related support activities).	546.568	649.184	619.445
(U) Continue System Program Office Support.	9.388	13.800	14.200
(U) Continue technical analysis and independent verification and validation of contractor by Federally Funded Research and Development Center (FFRDC).	31.165	33.578	35.257
(U) Total Cost	587.121	696.562	668.902

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

	<u>FY 2005</u> <u>Actual</u>	<u>FY 2006</u> <u>Estimate</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY 2008</u> <u>Estimate</u>	<u>FY 2009</u> <u>Estimate</u>	<u>FY 2010</u> <u>Estimate</u>	<u>FY 2011</u> <u>Estimate</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>
(U) MPAF (PE 0305915F, BA-05, P-30)	0.000	0.000	0.000	317.000	1295.000	0.000	0.000	0.000	1,612.000
(U) Other Procurement (PE	0.000	3.640	4.219	3.979	1.947	1.956	1.949	0.000	17.690

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R-1 Shopping List - Item No. 79-3 of 79-7

Exhibit R-2a (PE 0604441F)

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Exhibit R-2a, RDT&E Project Justification

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

0305915F, BA-03, P-61)

(U) Related RDT&E:

(U) D. Acquisition Strategy

The pre-SDD SBIRS contracts were competed in full and open competition. Two contracts were awarded to Lockheed/Loral/Aerojet and Hughes/TRW in 1995 for the pre-SDD phase. A single contract was awarded to Lockheed Martin in 1996 for the SDD phase.

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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</u> <u>Method &</u> <u>Type</u>	<u>Performing</u> <u>Activity &</u> <u>Location</u>	<u>Total</u> <u>Prior to FY</u> <u>2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Award</u> <u>Date</u>	<u>FY 2006</u> <u>Cost</u>	<u>FY 2006</u> <u>Award</u> <u>Date</u>	<u>FY 2007</u> <u>Cost</u>	<u>FY 2007</u> <u>Award</u> <u>Date</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>	<u>Target Value</u> <u>of Contract</u>
(U) <u>Product Development</u>												
LMMS & Hughes (Pre-SDD)	C/CPFF		159.600							0.000	159.600	
LMMS (SDD)	C/CPAF	Lockheed Martin, Sunnyvale, CA	3,775.729	546.568	Oct-04	649.184	Oct-05	619.445	Oct-06	1,789.948	7,380.874	7,375.250
SBIRS Pre-SDD Contract Adjustment			4.780							0.000	4.780	
Technology	Various		11.600							0.000	11.600	
Phenomenology	Various		17.350							0.000	17.350	
Sandia Natl Lab (Cobra Brass)	Various		10.000							0.000	10.000	
Not Applicable											0.000	
Subtotal Product Development			3,979.059	546.568		649.184		619.445		1,789.948	7,584.204	7,375.250
Remarks:												
(U) <u>Support</u>												
Aerospace Corp	Reimbursable Order	Aerospace Corp, El Segundo CA	150.527	31.165	Oct-04	33.578	Oct-05	35.257	Oct-06	251.805	502.332	502.332
Prgm Mgmt Supt	Various	Various	65.868	9.388	Oct-04	13.800	Oct-05	14.200	Oct-06	91.632	194.888	194.888
Subtotal Support			216.395	40.553		47.378		49.457		343.437	697.220	697.220
Remarks:												
(U) <u>Test & Evaluation</u>												
Not Applicable											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) <u>Management</u>												
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			4,195.454	587.121		696.562		668.902		2,133.385	8,281.424	8,072.470

Exhibit R-4, RDT&E Schedule Profile

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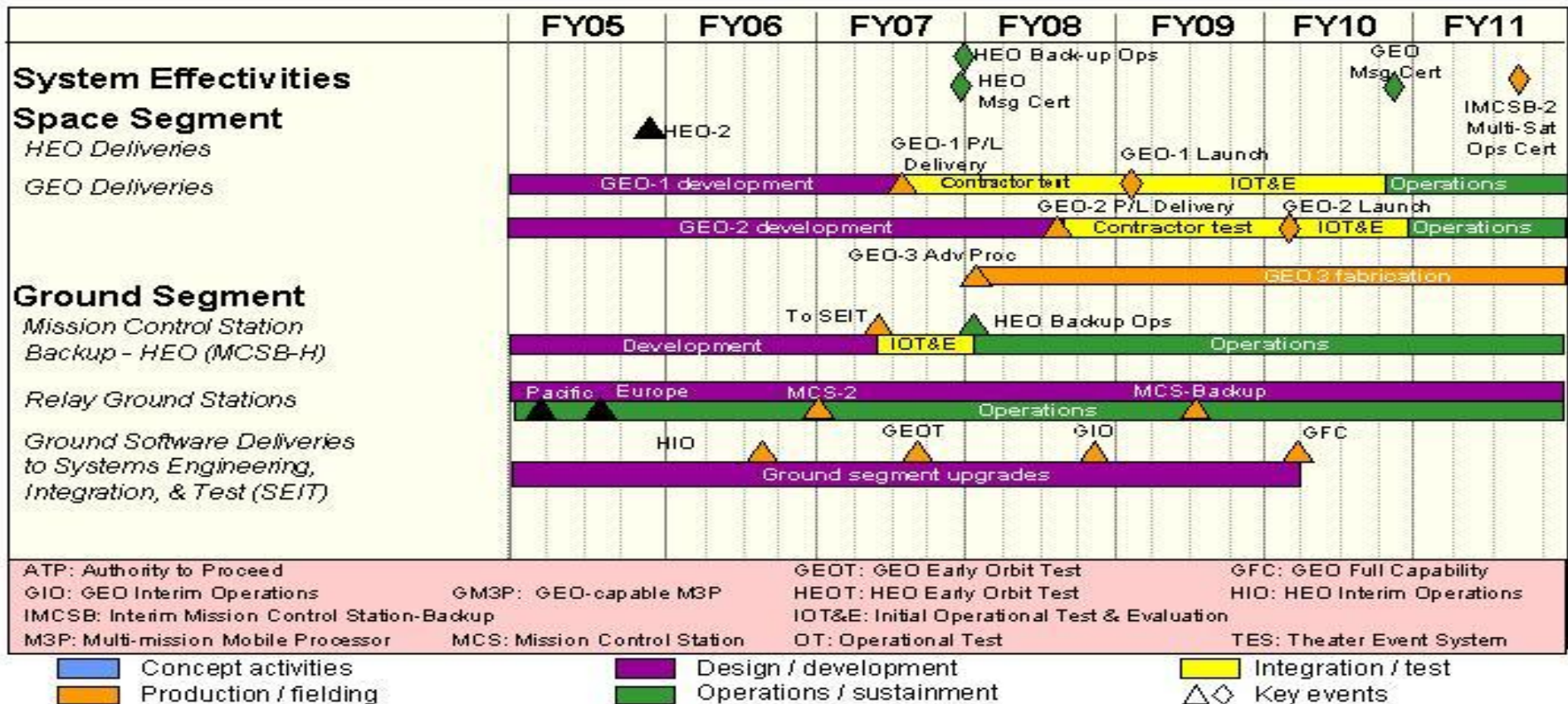
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Exhibit R-4a, RDT&E Schedule Detail

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(U) <u>Schedule Profile</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Relay Ground Station hardware installation	3Q		
(U) HEO Sensor #2 Delivery	4Q		
(U) GEO payload thermal vacuum		1Q	
(U) HEO Interim operations software delivered to Systems Engineering, Integration, and Test		3Q	
(U) Spacecraft Functional Ambient Test		3Q	
(U) Relay Ground Station Europe (RGS-E) and Pacific (RGS-P) Asynchronous Transfer Mode (ATM) Phase 3 Complete		4Q	
(U) Delivery of MCSB-H to SEIT			2Q
(U) GEO-1 payload delivered to LMSSC			3Q
(U) Effectivity 3 HEO message certification			4Q
(U) Effectivity 11 HEO Back-up Operations			4Q