

UNCLASSIFIED

PE NUMBER: 0603444F
 PE TITLE: MAUI SPACE SURVEILLANCE SYSTEM

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
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BUDGET ACTIVITY 03 Advanced Technology Development (ATD)	PE NUMBER AND TITLE 0603444F MAUI SPACE SURVEILLANCE SYSTEM
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Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	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	45.943	50.383	5.237	5.338	6.773	6.888	6.025	6.179	Continuing	TBD
4868 Maui Space Surveillance System	45.943	50.383	5.237	5.338	6.773	6.888	6.025	6.179	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This program funds space situational awareness technology development and demonstration at the Maui Space Surveillance System (MSSS) in Hawaii, as well as the operation and upgrade of the facility. Note: In FY 2007, Congress added \$8.0 million for the High Accuracy Network Determination System (HANDS), \$25.0 million for MSSS Operations and Research, and \$11.5 million for the Panoramic Survey Telescope and Rapid Response System (PanSTARRS). This program is in Budget Activity 3, Advanced Technology Development, since it enables and demonstrates technologies for existing system upgrades and/or new system developments that have military utility and address warfighter needs.

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

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	47.166	6.074	6.173	6.699
(U) Current PBR/President's Budget	45.943	50.383	5.237	5.338
(U) Total Adjustments	-1.223			
(U) Congressional Program Reductions				
Congressional Rescissions	-0.001	-0.191		
Congressional Increases		44.500		
Reprogrammings	-0.016			
SBIR/STTR Transfer	-1.206			

(U) Significant Program Changes:

Not Applicable.

C. Performance Metrics

Under Development.

Exhibit R-2a, RDT&E Project Justification

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Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total	
4868 Maui Space Surveillance System	45.943	50.383	5.237	5.338	6.773	6.888	6.025	6.179	Continuing	TBD	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0			

(U) A. Mission Description and Budget Item Justification

This program funds space situational awareness technology development and demonstration at the Maui Space Surveillance System (MSSS) in Hawaii, as well as the operation and upgrade of the facility. Note: In FY 2007, Congress added \$8.0 million for the High Accuracy Network Determination System (HANDS), \$25.0 million for MSSS Operations and Research, and \$11.5 million for the Panoramic Survey Telescope and Rapid Response System (PanSTARRS). This program is in Budget Activity 3, Advanced Technology Development, since it enables and demonstrates technologies for existing system upgrades and/or new system developments that have military utility and address warfighter needs.

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

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) MAJOR THRUST/CONGRESSIONAL ADD: Develop, demonstrate, and integrate space situational awareness technology at the Maui Space Surveillance System (MSSS) in Hawaii, as well as operate and upgrade the facility. Note: This effort includes Congressional Adds of \$25.0 million in FY 2007.	26.732	30.957	5.237	5.338
(U) In FY 2006: Continued MSSS operations, research, and development supporting various operational customers and experimenters, with the focus on space situational awareness (SSA). Procured additional critical sensor and telescope spares, continued to refurbish the control rooms and upgrade computers for increased efficiency, while maintaining requirements for safety and security in accordance with Air Force regulations. Significantly improved computational imaging technology and demonstrated the best-ever ground-to-space image of an operational satellite. Established techniques for defining the absolute performance limits of imaging systems. These techniques are being transitioned to a variety of optical system designers within the Department of Defense (DoD), as well as academia.				
(U) In FY 2007: Continue MSSS research, and development, and operational contributions supporting various operational customers and experimenters. Continue refurbishing and upgrading MSSS, and maintaining requirements for safety and security in accordance with Air Force regulations. Develop concepts for SSA, space system characterization, and active tracking. Assess military utility, optimize mission effectiveness, and evaluate transition opportunities of technology to Air Force Space Command. Initiate development of a state-of-the-art, high-performance sodium beacon adaptive optics system. Continue development of high performance and ultra-precise astrodynamics techniques. Continue to identify unique electro-optical phenomenologies that can cost-effectively provide health/status, identification, and anomaly resolution for satellite owner/operators.				
(U) In FY 2008: Continue MSSS research, development, and operational contributions supporting various				

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(U)	<u>B. Accomplishments/Planned Program (\$ in Millions)</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>						
	customers and experimenters. Continue refurbishing and upgrading MSSS, and maintaining requirements for safety and security in accordance with Air Force regulations. Develop concepts for SSA, space system characterization and active tracking. Continue development of a state-of-the-art, high-performance sodium beacon adaptive optics system.										
(U)	In FY 2009: Continue MSSS research, development, and operational contributions supporting various customers and experimenters. Continue refurbishing and upgrading MSSS to accommodate those missions, and maintaining requirements for safety and security in accordance with Air Force regulations. Develop concepts for SSA, space system characterization, and active tracking. Continue development of a state-of-the-art, high-performance sodium beacon adaptive optics system.										
(U)											
(U)	CONGRESSIONAL ADD: Panoramic Survey Telescope And Rapid Response System (Pan-STARRS).	9.605	11.456	0.000	0.000						
(U)	In FY 2006: Conducted Congressionally-directed effort for Pan-STARRS.										
(U)	In FY 2007: Conduct Congressionally-directed effort for Pan-STARRS.										
(U)	In FY 2008: Not Applicable.										
(U)	In FY 2009: Not Applicable.										
(U)											
(U)	CONGRESSIONAL ADD: High Accuracy Network Determination System (HANDS).	9.606	7.970	0.000	0.000						
(U)	In FY 2006: Conducted Congressionally-directed effort for HANDS.										
(U)	In FY 2007: Conduct Congressionally-directed effort for HANDS.										
(U)	In FY 2008: Not Applicable.										
(U)	In FY 2009: Not Applicable.										
(U)	Total Cost	45.943	50.383	5.237	5.338						
(U)	<u>C. Other Program Funding Summary (\$ in Millions)</u>										
		<u>FY 2006</u>	<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>Estimate</u>	<u>Complete</u>	
(U)	Related Activities:										
(U)	PE 0602605F, Directed Energy Technology.										
(U)	PE 0603605F, Advanced Weapons Technology.										
(U)	PE 0602500F,										

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System(U) **C. Other Program Funding Summary (\$ in Millions)**Multi-Disciplinary Space
Technology.

(U) PE 0603500F,

Multi-Disciplinary Advanced
Development Space
Technology.

(U) PE 0603883C, Ballistic

Missile Defense Boost Phase
Segment.

(U) This project has been

coordinated through the
Reliance process to harmonize
efforts and eliminate
duplication.(U) **D. Acquisition Strategy**

Not Applicable.