

UNCLASSIFIED

PE NUMBER: 0603444F

PE TITLE: MAUI SPACE SURVEILLANCE SYSTEM

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2006

BUDGET ACTIVITY

03 Advanced Technology Development (ATD)

PE NUMBER AND TITLE

0603444F MAUI SPACE SURVEILLANCE SYSTEM

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	56.561	47.166	6.074	6.173	6.699	6.838	6.966	Continuing	TBD
4868 Maui Space Surveillance System	56.561	47.166	6.074	6.173	6.699	6.838	6.966	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 2006, Congress added \$22.0 million for MSSS Operations and Research, \$10.0 million for High Accuracy Network Determination System (HANDS), and \$10.0 million for the Panoramic Survey telescope and Rapid Response System (Pan-STARRS). 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 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	58.189	5.848	6.005
(U) Current PBR/President's Budget	56.561	47.166	6.074
(U) Total Adjustments	-1.628	41.318	
(U) Congressional Program Reductions			
Congressional Rescissions	-0.045	-0.682	
Congressional Increases		42.000	
Reprogrammings	-0.096		
SBIR/STTR Transfer	-1.487		

(U) **Significant Program Changes:**

Not Applicable.

C. Performance Metrics

Under Development.

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Exhibit R-2a, RDT&E Project Justification								DATE February 2006	
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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
4868 Maui Space Surveillance System	56.561	47.166	6.074	6.173	6.699	6.838	6.966	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		
<p>(U) <u>A. Mission Description and Budget Item Justification</u></p> <p>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 2006, Congress added \$22.0 million for MSSS Operations and Research, \$10.0 million for High Accuracy Network Determination System (HANDS), and \$10.0 million for the Panoramic Survey telescope and Rapid Response System (Pan-STARRS). 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.</p>									
(U) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>						<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</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 \$22.0 million in FY 2006.						38.224	27.450	6.074	
(U) In FY 2005: Enhanced MSSS utility by procuring critical sensor and telescope spares, refurbishing the control rooms and upgrading computers for increased personnel efficiency, and maintaining requirements for safety and security in accordance with Air Force regulations. Researched current and new, advanced technologies for improving active track of satellite and missile tests. Refined active imaging technology along with adaptive optics and image post-processing algorithms as well as techniques to assess when further processing is no longer productive. Pursued non-imaging space object identification techniques to determine how shape and size information can be extracted from non-imaging signature information.									
(U) In FY 2006: Continue MSSS operations, research, and development supporting various operational customers and experimenters. Procure additional critical sensor and telescope spares, continue to refurbish the control rooms and upgrade computers for increased efficiency, while maintaining requirements for safety and security in accordance with Air Force regulations.									
(U) In FY 2007: Continue MSSS research, development, and operational contributions supporting various customers and experimenters. Continue refurbishing and upgrading MSSS, and maintaining requirements for safety and security in accordance with Air Force regulations. Develop concepts for space situational awareness, space system characterization and active tracking. Lead and shape the development of system requirements for Congressional and customer funded programs.									
(U)									
(U) CONGRESSIONAL ADD: Panoramic Survey Telescope And Rapid Response System (Pan-STARRS).						9.912	9.858	0.000	
<div style="display: flex; justify-content: space-between; padding: 5px;"> Project 4868 R-1 Shopping List - Item No. 27-2 of 27-4 Exhibit R-2a (PE 0603444F) </div>									

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Exhibit R-2a, RDT&E Project Justification		DATE February 2006	
BUDGET ACTIVITY 03 Advanced Technology Development (ATD)		PE NUMBER AND TITLE 0603444F MAUI SPACE SURVEILLANCE SYSTEM	PROJECT NUMBER AND TITLE 4868 Maui Space Surveillance System
(U) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>		<u>FY 2005</u>	<u>FY 2006</u>
(U) In FY 2005: Performed site selection and ground-breaking activities. Fabricated and assembled first PanSTARRS telescope, which will be located on Haleakala, HI. Investigated satellite streak issue for dim object detections. Evaluated the PanSTARRS system for its military utility and completed development of focal plane arrays for use in the four-telescope system.			<u>FY 2007</u>
(U) In FY 2006: Conduct Congressionally-directed effort for Pan-STARRS.			
(U) In FY 2007: Not Applicable.			
(U) CONGRESSIONAL ADD: High Accuracy Network Determination System (HANDS).		8.425	9.858
(U) In FY 2005: Deployed additional HANDS sensors, both narrow field of view and mid-field of view, to expand global coverage of the geosynchronous earth orbit belt, advancing state-of-the-art space situation awareness technology. Developed the areas of improving satellite metrics accuracy, low earth orbit sensors, and meter-class sensors.			0.000
(U) In FY 2006: Conduct Congressionally-directed effort for HANDS.			
(U) In FY 2007: Not Applicable.			
(U) Total Cost		56.561	47.166
(U) <u>C. Other Program Funding Summary (\$ in Millions)</u>			
	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
	<u>Actual</u>	<u>Estimate</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) Related Activities:			
(U) PE 0602605F, Directed Energy Technology.			
(U) PE 0603605F, Advanced Weapons Technology.			
(U) PE 0602500F, Multi-Disciplinary Space Technology.			
(U) PE 0603500F, Multi-Disciplinary Advanced Development Space Technology.			
(U) PE 0603883C, Ballistic Missile Defense Boost Phase Segment.			

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

(U) This project has been coordinated through the Reliance process to harmonize efforts and eliminate duplication.

(U) D. Acquisition Strategy

Not Applicable.