

UNCLASSIFIED

PE NUMBER: 0603432F

PE TITLE: Polar MILSATCOM (Space)

Exhibit R-2, RDT&E Budget Item Justification								DATE February 2006																																													
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)				PE NUMBER AND TITLE 0603432F Polar MILSATCOM (Space)																																																	
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	0.894	2.154	35.685	121.481	129.581	188.945	128.507	Continuing	TBD																																												
4052 Polar Satellite Communications	0.894	2.154	35.685	121.481	129.581	188.945	128.507	Continuing	TBD																																												
<p>(U) <u>A. Mission Description and Budget Item Justification</u></p> <p>This program element acquires the Polar Military Satellite Communications (MILSATCOM) system that provides protected communications (anti jam, anti scintillation, and low probability of intercept) for users in the north polar region.</p> <p>Project 4052, Polar Satellite Communications, has previously funded three low data rate (LDR) Milstar packages onto three classified host satellites as an expedited, interim solution to protected connectivity requirements in the north polar region. One package is on-orbit, and the final two LDR packages will be available in FY06 and FY07, respectively. Two satellites with hosted packages are required to provide the necessary 24 hour coverage.</p> <p>Beginning FY06, the Polar MILSATCOM system will acquire the next generation capability with two more polar packages via the same host program. Both the host and the polar communications packages require design modifications to replace obsolete components and take advantage of the more capable Advanced Extremely High Frequency (AEHF) technology. FY06 funds requirements analyses and design trade studies based on an updated Polar Capability Development Document (CDD) and FY07 begins design/development of an Enhanced Polar System.</p> <p>The Polar MILSATCOM program is in Budget Activity 4, Advanced Component Development and Prototypes, based on the 30 Mar 95 USD(A&T) memorandum to pursue the interim hosted solution.</p> <p>(U) <u>B. Program Change Summary (\$ in Millions)</u></p> <table style="width: 100%; margin-top: 10px;"> <thead> <tr> <th></th> <th style="text-align: right;"><u>FY 2005</u></th> <th style="text-align: right;"><u>FY 2006</u></th> <th style="text-align: right;"><u>FY 2007</u></th> </tr> </thead> <tbody> <tr> <td>(U) Previous President's Budget</td> <td style="text-align: right;">0.895</td> <td style="text-align: right;">2.185</td> <td style="text-align: right;">35.281</td> </tr> <tr> <td>(U) Current PBR/President's Budget</td> <td style="text-align: right;">0.894</td> <td style="text-align: right;">2.154</td> <td style="text-align: right;">35.685</td> </tr> <tr> <td>(U) Total Adjustments</td> <td style="text-align: right;">-0.001</td> <td style="text-align: right;">-0.031</td> <td></td> </tr> <tr> <td>(U) Congressional Program Reductions</td> <td style="text-align: right;">-0.001</td> <td></td> <td></td> </tr> <tr> <td> Congressional Rescissions</td> <td></td> <td style="text-align: right;">-0.031</td> <td></td> </tr> <tr> <td> Congressional Increases</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Reprogrammings</td> <td></td> <td></td> <td></td> </tr> <tr> <td> SBIR/STTR Transfer</td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) <u>Significant Program Changes:</u></td> <td></td> <td></td> <td></td> </tr> <tr> <td> N/A</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>											<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	(U) Previous President's Budget	0.895	2.185	35.281	(U) Current PBR/President's Budget	0.894	2.154	35.685	(U) Total Adjustments	-0.001	-0.031		(U) Congressional Program Reductions	-0.001			Congressional Rescissions		-0.031		Congressional Increases				Reprogrammings				SBIR/STTR Transfer				(U) <u>Significant Program Changes:</u>				N/A			
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Exhibit R-2a, RDT&E Project Justification

DATE

February 2006

BUDGET ACTIVITY

04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE

0603432F Polar MILSATCOM (Space)

PROJECT NUMBER AND TITLE

4052 Polar Satellite Communications

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
4052 Polar Satellite Communications	0.894	2.154	35.685	121.481	129.581	188.945	128.507	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

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

This program element acquires the Polar Military Satellite Communications (MILSATCOM) system that provides protected communications (anti jam, anti scintillation, and low probability of intercept) for users in the north polar region.

Project 4052, Polar Satellite Communications, has previously funded three low data rate (LDR) Milstar packages onto three classified host satellites as an expedited, interim solution to protected connectivity requirements in the north polar region. One package is on-orbit, and the final two LDR packages will be available in FY06 and FY07, respectively. Two satellites with hosted packages are required to provide the necessary 24 hour coverage.

Beginning FY06, the Polar MILSATCOM system will acquire the next generation capability with two more polar packages via the same host program. Both the host and the polar communications packages require design modifications to replace obsolete components and take advantage of the more capable Advanced Extremely High Frequency (AEHF) technology. FY06 funds requirements analyses and design trade studies based on an updated Polar Capability Development Document (CDD) and FY07 begins design/development of an Enhanced Polar System.

The Polar MILSATCOM program is in Budget Activity 4, Advanced Component Development and Prototypes, based on the 30 Mar 95 USD(A&T) memorandum to pursue the interim hosted solution.

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

	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Completed integration and test of Polar package 3 with host vehicle	0.894		
(U) Conduct requirements analyses and design trade studies for Enhanced Polar packages.		1.000	2.000
(U) Conduct design and development of Enhanced Polar packages			30.447
(U) Provide Program Office Support and other related support activities		1.154	1.638
(U) Provide Technical Support			1.600
(U) Total Cost	0.894	2.154	35.685

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

	<u>FY 2005</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>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) None.

The Navy has used its own PE(s) to modify control systems and terminals to work with Polar MILSATCOM.

(U) **D. Acquisition Strategy**

The Air Force has provided funds to the classified host program office to modify the host satellite system contract to include three Interim Polar (Low Data Rate)

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packages. The host program office has total acquisition responsibility for Interim Polar. Under the direction of the Program Executive Officer for Space, the Program Office is developing the Enhanced Polar System Acquisition Strategy through studies and activities leading to a Sep 06 Acquisition Strategy Panel.

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Exhibit R-3, RDT&E Project Cost Analysis

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04 Advanced Component Development and Prototypes (ACD&P)

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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>												
Classified	Classified		298.700	0.894							299.594	
EPS Requirement Analyses and Design Trade Studies	Various	Various				1.000	Feb-06	2.000	Nov-06		3.000	
EPS Design/Development Contract	TBD	TBD						30.447	Nov-06	Continuing	TBD	
Subtotal Product Development			298.700	0.894		1.000		32.447		Continuing	TBD	0.000
Remarks:												
(U) <u>Support</u>												
Technical Support	Various					0.000		1.600	Nov-06	Continuing	TBD	
Program Office Support	Various					1.154	Feb-06	1.638	Nov-06	Continuing	TBD	
Subtotal Support			0.000	0.000		1.154		3.238		Continuing	TBD	0.000
Remarks:												
(U) <u>Test & Evaluation</u>												
N/A											0.000	
N/A											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			298.700	0.894		2.154		35.685		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2006

BUDGET ACTIVITY

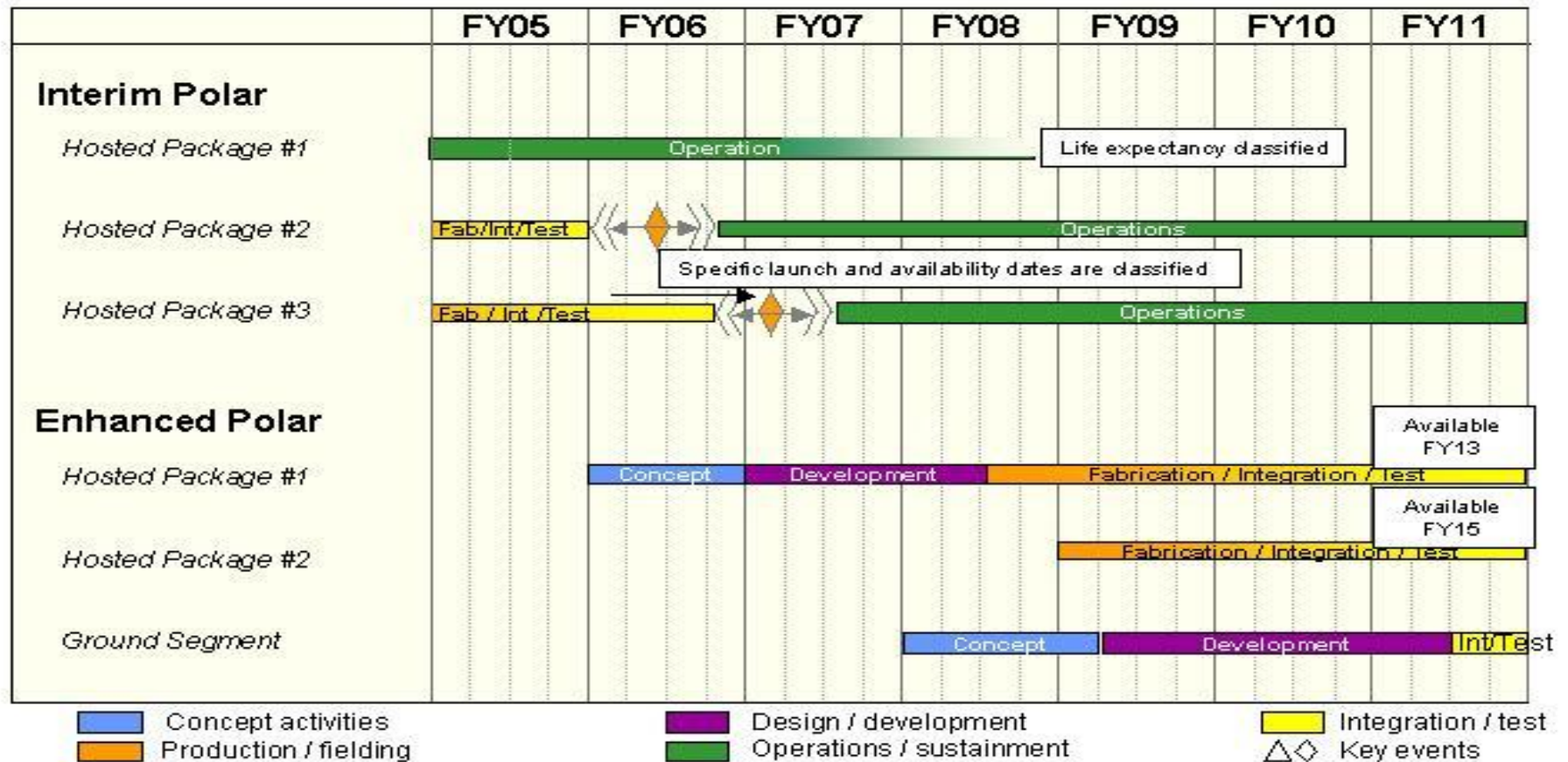
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Exhibit R-4a, RDT&E Schedule Detail

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0603432F Polar MILSATCOM (Space)

PROJECT NUMBER AND TITLE

4052 Polar Satellite Communications

(U) Schedule ProfileFY 2005FY 2006FY 2007

(U) Begin requirements analysis for Enhanced Polar packages

1Q

(U) Begin design and development of Enhanced Polar packages

1Q