

## UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)									DATE <b>June 2001</b>		
BUDGET ACTIVITY <b>05 - Engineering and Manufacturing Development</b>					PE NUMBER AND TITLE <b>0604251F SPACE-BASED RADAR EMD</b>					PROJECT <b>5009</b>	
COST (\$ in Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost	
5009     SBR Concept and Technology Development	0	0	50,000	0	0	0	0	0	Continuing	TBD	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0	

FY02: New start initiated. Follow-on programmatic details and any associated budget requirements are being developed by USAF. Due to a database error and late receipt of a Program Element (PE) the funding is currently loaded in the wrong PE [i.e. 64251F (BA 5)]; however, funding for this new start should be appropriated in PE 63858F, Space Based Radar Dem/Val (BA 4).

FY03-FY07: This administration has not addressed FY 2003-2007 requirements. All FY 2003-2007 budget estimates included in this book are notional only and subject to change.

(U) **A. Mission Description**

The 2001 Multi-Theater Target Tracking Capability (MT3C) Mission Needs Statement (MNS) establishes the requirement for continuous multi-theater surveillance, identification, tracking, and targeting of ground-moving targets. In June 2001 USD(AT&L) directed a focused requirements and risk reduction effort to provide a space element of a future air/space Intelligence, Surveillance, and Reconnaissance (ISR) system to satisfy the MT3C MNS no later than FY10.

The Space Based Radar (SBR) program is focused to mature technology and develop an ISR system capable of providing Ground Moving Target Indication (GMTI), Synthetic Aperture Radar (SAR) imaging, and Digital Terrain and Elevation Data (DTED) over a large portion of the Earth on a near-continuous basis. The system will maximize utility to the tactical warfighters through responsive tasking and timely data dissemination. The SBR system will allow military forces a 'deep-look' into denied areas of interest, on a non-intrusive basis without risk to personnel or resources. This can be done across the spectrum of conflict and simultaneously in multiple theaters -- not currently available with existing capabilities.

Technology maturation, risk reduction and concept development are essential elements of the SBR program strategy to reach initial operational capability (IOC) prior to the end of FY10. Investments in key risk areas are focused to mature technologies leading to component design and demonstration. Concept development activities will focus on reducing risk, integrating technologies, and evaluating system level concepts. Demonstrations as well as modeling and simulation will maximize the operational capabilities of the SBR system.

(U) **FY 2000 (\$ in Thousands)**

(U) \$0                      No Activity

(U) \$0                      Total

Project 5009

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Exhibit R-2 (PE 0604251F)

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<b>RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)</b>		DATE <b>June 2001</b>	
<b>BUDGET ACTIVITY</b>		<b>PE NUMBER AND TITLE</b>	
<b>05 - Engineering and Manufacturing Development</b>		<b>0604251F SPACE-BASED RADAR EMD</b>	
		<b>PROJECT 5009</b>	

(U) **A. Mission Description Continued**

(U) FY 2001 (\$ in Thousands)

(U) \$0 No Activity

(U) \$0 Total

(U) FY 2002 (\$ in Thousands)

(U) \$13,000 Begin Electronically Scanned Array development (continuation of classified FY01 effort)

(U) \$5,000 Begin Battle Management Command, Control and Communication BMC3 effort

(U) \$13,000 Begin Concept Definition/Risk Reduction for candidate operational system to support Analysis of Alternatives efforts (mature on-board processing technology, data fusion, ECCM, etc.)

(U) \$12,000 Begin Requirements Development (SBR system and spacecraft operational requirements definition)

(U) \$2,000 Begin Ground Moving Target Indication (GMTI) demonstration (classified) program (algorithm development, data analysis, etc.) [continuation of classified FY01 effort]

(U) \$5,000 Provide Program Support

(U) \$50,000 Total

(U) **B. Budget Activity Justification**

Due to a database error the funding is currently loaded in the wrong PE [i.e., 64251F (BA 5)], the funding for this new start should be appropriated in PE 63858F, Space Based Radar Dem/Val (BA 4). This activity is a BA 4 because all efforts are included in the demonstration and validation phase and are necessary to evaluate integrated technologies in as realistic an operating environment as possible to assess the performance or cost reduction potential of advanced technology.

(U) **C. Program Change Summary (\$ in Thousands)**

	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Total Cost</u>
(U) Previous President's Budget (FY 2001 PBR)			0	0
(U) Appropriated Value				
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions				
b. Small Business Innovative Research				
c. Omnibus or Other Above Threshold Reprogram				
d. Below Threshold Reprogram				
e. Rescissions				

Project 5009

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<p>(U) <b><u>C. Program Change Summary (\$ in Thousands) Continued</u></b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>FY 2000</u></th> <th style="text-align: center;"><u>FY 2001</u></th> <th style="text-align: center;"><u>FY 2002</u></th> <th style="text-align: center;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>(U) Adjustments to Budget Years Since FY 2001 PBR</td> <td></td> <td></td> <td style="text-align: right;">50,000</td> <td></td> </tr> <tr> <td>(U) Current Budget Submit/FY 2002 PBR</td> <td></td> <td></td> <td style="text-align: right;">50,000</td> <td style="text-align: center;">TBD</td> </tr> </tbody> </table> <p>(U) <b><u>Significant Program Changes:</u></b>            In response to FY01 Congressional Authorization Language, the Secretary of Defense developed a roadmap for an acquisition program that addressed technology maturation, concept development, and risk reduction requirements for a SBR system with a 2008 initial launch capability.</p>										<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Total Cost</u>	(U) Adjustments to Budget Years Since FY 2001 PBR			50,000		(U) Current Budget Submit/FY 2002 PBR			50,000	TBD																																																																																									
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<p>(U) <b><u>E. Acquisition Strategy</u></b>            (U) The Air Force will lead the SBR Joint Program Office with the National Reconnaissance Office (NRO) as the principal partner. The acquisition strategy will consist of a mixture of sole source and competitive award approaches.</p>																																																																																																																
<p>(U) <b><u>F. Schedule Profile</u></b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th colspan="4" style="text-align: center;"><u>FY 2000</u></th> <th colspan="4" style="text-align: center;"><u>FY 2001</u></th> <th colspan="4" style="text-align: center;"><u>FY 2002</u></th> </tr> <tr> <th></th> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> <th style="text-align: center;">3</th> <th style="text-align: center;">4</th> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> <th style="text-align: center;">3</th> <th style="text-align: center;">4</th> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> <th style="text-align: center;">3</th> <th style="text-align: center;">4</th> </tr> </thead> <tbody> <tr> <td>(U) Milestone A</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) Release Request for Proposal for technology risk reduction</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) Analysis of Alternatives supporting contracts in place</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) Technology Risk Reduction Contract Award</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>(U) Electronically Scanned Array (ESA) Technology Contracts awarded</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>(U) Battle Management Command, Control and Communication effort</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>										<u>FY 2000</u>				<u>FY 2001</u>				<u>FY 2002</u>					1	2	3	4	1	2	3	4	1	2	3	4	(U) Milestone A									X				(U) Release Request for Proposal for technology risk reduction									X				(U) Analysis of Alternatives supporting contracts in place									X				(U) Technology Risk Reduction Contract Award										X			(U) Electronically Scanned Array (ESA) Technology Contracts awarded										X			(U) Battle Management Command, Control and Communication effort									X			
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE June 2001			
BUDGET ACTIVITY					PE NUMBER AND TITLE			PROJECT		
<b>05 - Engineering and Manufacturing Development</b>					<b>0604251F SPACE-BASED RADAR EMD</b>			<b>5009</b>		
(U)	<b><u>A. Project Cost Breakdown (\$ in Thousands)</u></b>									
						<u>FY 2000</u>		<u>FY 2001</u>		<u>FY 2002</u>
(U)	Electronically Scanned Array risk reduction effort									13,000
(U)	Battle Management Command, Control and Communications effort									5,000
(U)	Concept Definition/Risk Reduction for candidate operational system to support Analysis of Alternatives efforts (mature on-board processing technology, data fusion, ECCM, etc.)									13,000
(U)	Requirements Development (SBR system and spacecraft operational requirements definition)									12,000
(U)	Ground Moving Target Indication (GMTI) demonstration (classified ) program (algorithm development, data analysis, etc.)									2,000
(U)	Program Support									5,000
(U)	Total									50,000
(U)	<b><u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u></b>									
(U)	<b><u>Performing Organizations:</u></b>									
	<u>Contractor or</u>	<u>Contract</u>								
	<u>Government</u>	<u>Method/Type</u>	<u>Award or</u>	<u>Performing</u>	<u>Project</u>					
	<u>Performing</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Activity</u>	<u>Office</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>
	<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 2000</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Complete</u>
	<u>Product Development Organizations</u>									
	SMC & AFSPC	TBD							5,000	Continuing
	Electronically Scanned Array	Add to							13,000	Continuing
	development	Existing								
		Contract								
	Multiple System Integrating	Competitive							13,000	Continuing
	Contractors - Concept									
	Definition/Risk Reduction									
	ESC/NIMA - Battle	FFRDC/SETA							5,000	Continuing
	Management Command,	Contracts								
	Control and Communications									
	effort									
Project 5009					Page 5 of 6 Pages			Exhibit R-3 (PE 0604251F)		

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE		June 2001	
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT		
05 - Engineering and Manufacturing Development				0604251F SPACE-BASED RADAR EMD				5009		
(U) <b><u>Performing Organizations Continued:</u></b> <u>Product Development Organizations</u> Ground Moving Target      Add to current      2,000      Continuing      TBD Identification (GMTI) Demo      classified Program      contract <u>Support and Management Organizations</u> AFSPC Requirements      FFRDC/SETA      Various      Continuing      Continuing      12,000      Continuing      TBD Development      and GSA contracts <u>Test and Evaluation Organizations</u> N/A										
(U) <b><u>Government Furnished Property:</u></b> <u>Contract</u> <u>Method/Type</u> <u>Award or</u> <u>or Funding</u> <u>Obligation</u> <u>Delivery</u> <u>Item</u> <u>Vehicle</u> <u>Date</u> <u>Date</u> <u>Description</u> <u>Vehicle</u> <u>Date</u> <u>Date</u> <u>Product Development Property</u> None <u>Support and Management Property</u> None <u>Test and Evaluation Property</u> None  <u>Total Prior</u> <u>Budget</u> <u>Budget</u> <u>Budget</u> <u>Budget to</u> <u>Total</u> <u>to FY 2000</u> <u>FY 2000</u> <u>FY 2001</u> <u>FY 2002</u> <u>Complete</u> <u>Program</u> <u>Subtotals</u> Subtotal Product Development      38,000      TBD      TBD Subtotal Support and Management      12,000      TBD      TBD Subtotal Test and Evaluation Total Project      50,000      TBD      TBD										

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