

**UNCLASSIFIED**

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 2002		
BUDGET ACTIVITY <b>04 - Demonstration and Validation</b>				PE NUMBER AND TITLE <b>0603858F Space-Based Radar Dem/Val</b>				PROJECT <b>A004</b>		
COST (\$ in Thousands)		FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
A004	SBR Concept and Technology Development	0	0	47,859	81,995	81,385	105,881	235,887	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0

Note 1: In FY 2003 Project #5009, SBR Concept and Technology Development, efforts were transferred from PE 0604251F (BA 5), Space-Based Radar EMD, to PE 0603858F, Space-Based Radar (SBR) Dem/Val (BA 4), Project #A004, SBR Concept and Technology Development, in order to correct a database error which loaded the funding in the wrong PE.

Note 2: In FY03, the Space Based Radar program anticipates receiving \$43.0M from the Cost of War Transfer Account. These funds are not included in the FY03 Air Force baseline. Funding will be used to accelerate the program.

**(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 surface-moving targets. In November 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.

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 war fighters 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. 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 within the broad range of the C2ISR architecture. Demonstrations as well as modeling and simulation will maximize the operational capabilities of the SBR system.

Project A004 Page 1 of 6 Pages Exhibit R-2 (PE 0603858F)

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<b>BUDGET ACTIVITY</b> <b>04 - Demonstration and Validation</b>	<b>PE NUMBER AND TITLE</b> <b>0603858F Space-Based Radar Dem/Val</b>	<b>PROJECT</b> <b>A004</b>																																													
<p>(U) <b><u>A. Mission Description Continued</u></b></p> <p>(U) <u>FY 2001 (\$ in Thousands)</u></p> <p>(U) \$0 No Activity</p> <p>(U) \$0 Total</p> <p>(U) <u>FY 2002 (\$ in Thousands)</u></p> <p>(U) \$0 No Activity - Program funded in PE 0604251F, Space-Based Radar (SBR) EMD</p> <p>(U) \$0 Total</p> <p>(U) <u>FY 2003 (\$ in Thousands)</u></p> <p>(U) \$23,052 Continue Technology Risk Reduction activities (Continuation of Electronically Scanned Array (ESA) effort; Continue on-board processing efforts; Continue BMC3 effort; Provide Demonstration support)</p> <p>(U) \$8,216 Continue Requirements Development (SBR system and operational requirements definition)</p> <p>(U) \$12,220 Begin Concept Definition for candidate operational system</p> <p>(U) \$4,371 Continue Program Support (Concept Evaluation, Schedule Management, Independent Cost Analysis, Technical Evaluation, Source Selection)</p> <p>(U) \$47,859 Total</p> <p>(U) <b><u>B. Budget Activity Justification</u></b></p> <p>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.</p> <p>(U) <b><u>C. Program Change Summary (\$ in Thousands)</u></b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 10%; text-align: center;"><u>FY 2001</u></th> <th style="width: 10%; text-align: center;"><u>FY 2002</u></th> <th style="width: 10%; text-align: center;"><u>FY 2003</u></th> <th style="width: 10%; text-align: center;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>(U) Previous President's Budget</td> <td></td> <td></td> <td style="text-align: center;">0</td> <td style="text-align: center;">TBD</td> </tr> <tr> <td>(U) Appropriated Value</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) Adjustments to Appropriated Value</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    a. Congressional/General Reductions</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    b. Small Business Innovative Research</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    c. Omnibus or Other Above Threshold Reprogram</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    d. Below Threshold Reprogram</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    e. Rescissions</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Total Cost</u>	(U) Previous President's Budget			0	TBD	(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				
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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)							DATE February 2002		
BUDGET ACTIVITY <b>04 - Demonstration and Validation</b>				PE NUMBER AND TITLE <b>0603858F Space-Based Radar Dem/Val</b>			PROJECT <b>A004</b>		
<b>(U) <u>C. Program Change Summary (\$ in Thousands) Continued</u></b>									
			<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Total Cost</u>			
(U)	Adjustments to Budget Years Since FY 2002 PBR				47,859				
(U)	Current Budget Submit/FY 2003 PBR				47,859		TBD		
	Note: FY02 funding (currently \$24.7 million) was loaded in PE 0604251F, Space-Based Radar (SBR) EMD (BA 5) out of necessity; however, all out year funding has been appropriately loaded in PE 0603858F, Space Based Radar Dem/Val (BA 4).								
<b>(U) <u>Significant Program Changes:</u></b>									
	FY03: Follow-on funding has been programmed into the budget in PE 0603858F, Space-Based Radar (SBR) Dem/Val, to develop a viable and executable program.								
<b>(U) <u>D. Other Program Funding Summary (\$ in Thousands)</u></b>									
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</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)	AF RDT&E								
(U)	RDT&E - AF, PE 0604251F, Space-Based Radar (SBR) EMD (BA 5)*		24,752						
(U)	Cost of War Transfer Account		43,000	203,000	283,000	373,000	281,000	0	1,183,000
(U)	Other APPN								
(U)	None								
	*Note: Due to database error and late receipt of PE, FY02 funds were loaded in this PE when appropriately, they should have been loaded in PE 0603858F, SBR Dem/Val (BA 4)								
<b>(U) <u>E. Acquisition Strategy</u></b>									
	The Air Force will lead the SBR Joint Program Office with the National Reconnaissance Office (NRO) as the principal partner. The funding is all Air Force and the acquisition strategy will consist of a mixture of sole source and competitive award approaches.								
<b>(U) <u>F. Schedule Profile</u></b>									
			<u>FY 2001</u>		<u>FY 2002</u>		<u>FY 2003</u>		



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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2002			
BUDGET ACTIVITY <b>04 - Demonstration and Validation</b>				PE NUMBER AND TITLE <b>0603858F Space-Based Radar Dem/Val</b>			PROJECT <b>A004</b>			
<b>(U) A. Project Cost Breakdown (\$ in Thousands)</b>										
					<u>FY 2001</u>			<u>FY 2002</u>		<u>FY 2003</u>
(U)	Technology Risk Reduction effort									23,052
(U)	Concept Definition for candidate operational system									12,220
(U)	Requirements Development									8,216
(U)	Program Support									4,371
(U)	Total									47,859
<b>(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)</b>										
<b>(U) Performing Organizations:</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>Total</u>
<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 2001</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Organizations</u>										
AFSPC Requirements Development	FFRDC/SETA and GSA Contracts	Various	Continuing	Continuing				8,216	Continuing	TBD
Technology Risk Reduction Effort	Add to Existing Contract and other contracts as appropriate	TBD						23,052	Continuing	TBD
Concept Definition Contracts	Various Competitive Contracts	TBD						12,220	Continuing	TBD
<u>Support and Management Organizations</u>										
SMC & AFSPC	TBD	Feb 02						4,371	Continuing	TBD

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)				DATE					
BUDGET ACTIVITY				PE NUMBER AND TITLE			PROJECT		
<b>04 - Demonstration and Validation</b>				<b>0603858F Space-Based Radar Dem/Val</b>			<b>A004</b>		
<b>(U) <u>Performing Organizations Continued:</u></b>									
<u>Test and Evaluation Organizations</u>									
N/A									
<b>(U) <u>Government Furnished Property:</u></b>									
	<u>Contract</u>	<u>Award or</u>							
	<u>Method/Type</u>	<u>Obligation</u>	<u>Delivery</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Item</u>	<u>or Funding</u>	<u>Date</u>	<u>Date</u>	<u>to FY 2001</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Complete</u>	<u>Program</u>
<u>Description</u>	<u>Vehicle</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>Subtotals</u>				<u>to FY 2001</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development							43,488	TBD	TBD
Subtotal Support and Management							4,371	TBD	TBD
Subtotal Test and Evaluation									
Total Project							47,859	TBD	TBD