PE NUMBER: 0603858F
PE TITLE: Space Radar

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 0603858F Space Radar

	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	67.820	98.253	266.401	565.470	1,068.093	1,316.383	1,410.309	Continuing	TBD
A004	SBR Concept and Technology Development	67.820	98.253	266.401	565.470	1,068.093	1,316.383	1,410.309	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

DoD and National users have committed to pursue a common, flexible, agile, and responsive space radar system which will address future intelligence, surveillance, and reconnaissance (ISR) needs of defense, national intelligence and civil users. Key to this commitment is the continued development of a flexible and agile multi-mode radar providing Synthetic Aperture Radar (SAR), Surface Moving Target Indications (SMTI), High Resolution Terrain Information (HRTI), Advanced Geospatial Intelligence (AGI) and Open Ocean Surveillance (OOS) capabilities. SR will be supported by a ground infrastructure and a space and terrestrial communications network that will permit SR data to be stored, processed, exploited, and disseminated within timelines responsive to the needs of the user community. The SR system will be jointly managed and operated directly under the authorities of the DNI and the SECDEF. The SR system will allow a deep look into denied areas of interest in all weather, day or night, without risk to personnel or equipment. SR's on-demand intelligence capability will have global utility during peacetime and across the entire spectrum of conflict.

The 2007 program focuses on overall program affordability by stressing innovation through program risk reduction and technology maturation. The program integrates National Reconnaissance Office (NRO), National Geospatial-Intelligence Agency (NGA), Defense Advanced Research Projects Agency (DARPA), and Air Force Research Laboratory (AFRL) activities to ensure both DoD and Intelligence Community requirements are addressed and the best available technologies explored for application. The program will implement a demonstration framework approach, to include a mix of ground, air, and existing space components, with a focus on risk reduction, technology maturation, CONOPS experimentation, and early system engineering analyses consistent with successful acquisition best practices.

This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACDP), because it involves evaluating integrated technologies in as realistic an operating environment as possible to assess the performance or cost reduction potential of advanced technology.

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 0603858F Space Radar

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	73.847	225.839	356.178
(U)	Current PBR/President's Budget	67.820	98.253	266.401
(U)	Total Adjustments	-6.027	-127.586	
(U)	Congressional Program Reductions	-0.057	-126.162	
	Congressional Rescissions		-1.424	
	Congressional Increases			
	Reprogrammings	-4.000		
	SBIR/STTR Transfer	-1.970		

(U) Significant Program Changes:

Given Congressional language and funding reductions in FY05/06, SR has re-focused the program to address stated concerns. Program planning is focused to satisfy DoD and the Intelligence Community's functional concepts addressing military, national, and civil missions. The development efforts have been adjusted to emphasize an integrated demonstration framework which maximizes the use of ground, airborne, and space assets to reduce risk, mature radar technologies, implement concepts for horizontal integration, mature data processing and exploitation techniques, conduct CONOPS experimentation, and seek new technology breakthroughs. These activities will significantly increase confidence in technology maturation, program cost estimating, and payload development.

Affordability continues to be a paramount consideration and the program has made major changes to ensure that it is responsive to that need. Specifically, SR is pursuing the path as the single acquisition program to satisfy the needs of DoD and the National Intelligence Community, thereby avoiding multiple systems and duplication of effort and cost.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE: 0603858F Space Radar	PROJECT NUMBER AND TITLE: A004 SBR Concept and Technology Development	

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
A004	SBR Concept and Technology Development	67.820	98.253	266.401	565.470	1,068.093	1,316.383	1,410.309	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

DoD and National users have committed to pursue a common, flexible, agile, and responsive space radar system which will address future intelligence, surveillance, and reconnaissance (ISR) needs of defense, national intelligence and civil users. Key to this commitment is the continued development of a flexible and agile multi-mode radar providing Synthetic Aperture Radar (SAR), Surface Moving Target Indications (SMTI), High Resolution Terrain Information (HRTI), Advanced Geospatial Intelligence (AGI) and Open Ocean Surveillance (OOS) capabilities. SR will be supported by a ground infrastructure and a space and terrestrial communications network that will permit SR data to be stored, processed, exploited, and disseminated within timelines responsive to the needs of the user community. The SR system will be jointly managed and operated directly under the authorities of the DNI and the SECDEF. The SR system will allow a deep look into denied areas of interest in all weather, day or night, without risk to personnel or equipment. SR's on-demand intelligence capability will have global utility during peacetime and across the entire spectrum of conflict.

The 2007 program focuses on overall program affordability by stressing innovation through program risk reduction and technology maturation. The program integrates National Reconnaissance Office (NRO), National Geospatial-Intelligence Agency (NGA), Defense Advanced Research Projects Agency (DARPA), and Air Force Research Laboratory (AFRL) activities to ensure both DoD and Intelligence Community requirements are addressed and the best available technologies explored for application. The program will implement a demonstration framework approach, to include a mix of ground, air, and existing space components, with a focus on risk reduction, technology maturation, CONOPS experimentation, and early system engineering analyses consistent with successful acquisition best practices.

This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACDP), because it involves evaluating integrated technologies in as realistic an operating environment as possible to assess the performance or cost reduction potential of advanced technology.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Invest in technology and concept definition activities to include but not limited to up-front, in-depth system engineering, and risk reduction activities. Continue technology risk reduction activities on Electronically Scanned Array (ESA) and on-board processing efforts that include end-to-end payload test beds and prototype development of high-risk signal processing algorithms, expanded tactical integration effort that includes interface identification and definition, and support an Advanced Concept Technology Demonstration (ACTD). Additional near term efforts include technology risk reduction demonstrations, program system engineering, as well as, system-of-systems engineering activities, wargames and experiments, and Modeling & Simulation (M&S) capability, to include access to operational Command, Control, Communications, and Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) systems for enhanced data exploitation.	58.733	87.786	249.801

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE: 0603858F Space Radar	PROJECT NUMBER AND TITLE: A004 SBR Concept and Technology Development

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

		FY 2005	FY 2006	FY 2007
(U)	Program Support activities include but are not limited to acquisition planning, schedule management, requirements/CONOPS development, source selection, and financial management.	9.087	10.467	16.600
(U)	Total Cost	67.820	98.253	266.401

(U) C. Other Program Funding Summary ($ 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 Cost
(U)	0901211F Planning and Design						3.000		Continuing	TBD
(U)	0901212F							32.500	Continuing	TBD

(U) D. Acquisition Strategy

The Air Force will lead the SR Integrated Program Office (IPO) with the National Reconnaissance Office (NRO), National Geospatial-Intelligence Agency (NGA), and the Office of the Director of National Intelligence (ODNI) as the principal partners with other Service, DoD, and Intelligence Community participation. The SR IPO has awarded two contracts for Concept Definition and plans to select a single contractor after KDP-B. The program is planning to use evolutionary acquisition during the design, build, and operations phases to continue technical maturation and risk reduction throughout the life of the program.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **04 Advanced Component Development and Prototypes (ACD&P)**

PE NUMBER AND TITLE: **0603858F Space Radar**

PROJECT NUMBER AND TITLE: **A004 SBR Concept and Technology Development**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Phase A Concept Development/Technology Risk Reduction Activities	Various Contracts	Various	189.821	58.733	Oct-04	87.786	Oct-05	249.801	Oct-06	Continuing	TBD	
Subtotal Product Development			189.821	58.733		87.786		249.801		Continuing	TBD	0.000
Remarks:												
(U) Support												
SMC, ESC, AFSPC, NRO & NGA	Various Contracts	Various	20.706	9.087	Oct-04	10.467	Oct-05	16.600	Oct-06	Continuing	TBD	
Subtotal Support			20.706	9.087		10.467		16.600		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
N/A											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
N/A											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			210.527	67.820		98.253		266.401		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE: 0603858F Space Radar	PROJECT NUMBER AND TITLE: A004 SBR Concept and Technology Development

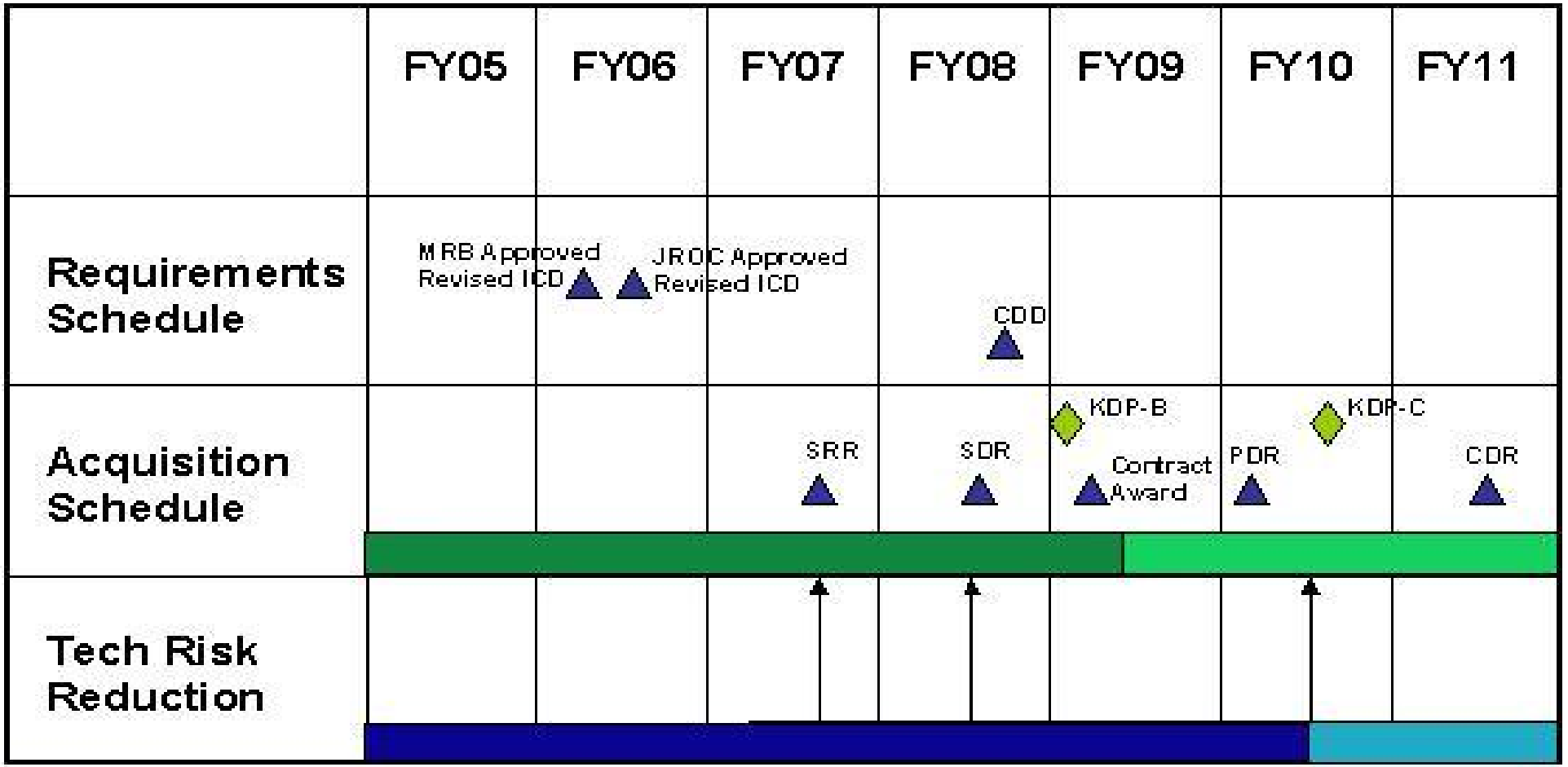

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **04 Advanced Component Development and Prototypes (ACD&P)**	PE NUMBER AND TITLE **0603858F Space Radar**	PROJECT NUMBER AND TITLE **A004 SBR Concept and Technology Development**

(U)	**Schedule Profile**	FY 2005	FY 2006	FY 2007
(U)	Prime Contractor Program Management Reviews (PMR)	1-4Q	1-4Q	1-4Q
(U)	Government Reference Architecture (GRA) Update		1Q	
(U)	Program Office Estimate (POE) Update		1Q	
(U)	JROC MRB Approved Revised ICD		2Q	
(U)	ACTD Military Utility Assessment		2Q	
(U)	CONOPS Revision B		4Q	
(U)	System Requirements Review (SRR)			3Q
(U)	Cost Analysis Requirement Description (and POE update)			4Q