PE NUMBER: 0604443F
PE TITLE: Third Generation Infrared Surveillance (3GIRS)

Exhibit R-2, RDT&E Budget Item Justification

DATE **February 2008**

BUDGET ACTIVITY
05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE
0604443F Third Generation Infrared Surveillance (3GIRS)

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	67.552	75.410	149.064	148.116	158.128	346.944	346.649	Continuing	TBD
A020 3GIRS	67.552	75.410	149.064	148.116	158.128	346.944	346.649	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

(U) This PE has had its title changed to 3rd Generation Infrared Surveillance (3GIRS) to reflect the decision to reposition the program as a follow on to the Space Based Infrared System High (SBIRS) High program.

(U) The 3rd Generation Infrared Surveillance (3GIRS) mission is to provide a missile warning capability to warn of ballistic missile attack on the U.S., its deployed forces, and its allies while also supporting missile defense, battlespace awareness and technical intelligence missions. As a result of the Nunn-McCurdy certification for the SBIRS High program, the USD(AT&L) directed the DoD Executive Agent for Space to plan for a new program for space-based Overhead Non-Imaging Infrared (ONIR) that generates competition for the SBIRS GEO 3 satellite and exploits alternative technologies. Alternative Infrared Satellite System (AIRSS) was to pursue an approach with acceptable technical risk that offered, at a minimum, Defense Support Program (DSP)-like missile warning capability and can ensure a launch availability date of FY15. With the Defense Acquisition Executive's decision to procure SBIRS GEO-3 in July 2007 and following congressional guidance, the Air Force has reapportioned AIRSS resources to pursue risk reduction, system definition, and ground tests to enable a 3rd Generation Space-based infrared (IR) program after the SBIRS GEO-3 satellite is delivered. The Air Force will pursue an acquisition risk reduction approach that conducts Wide Field of View (WFOV) technology maturation, along with technology needs forecasting activities prior to a system design decision in FY10.

(U) This program is assigned to Budget Activity 5, System Development and Demonstration (SDD), because it funds the development activities for a follow-on to the SBIRS High program for the next generation of missile warning satellites.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	67.552	230.887	354.308
(U)	Current PBR/President's Budget	67.552	75.410	149.064
(U)	Total Adjustments	0.000	-155.477	
(U)	Congressional Program Reductions		-155.000	
	Congressional Rescissions		-0.477	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

FY08 reflects -$155 million congressional mark and $481 thousand in congressional general reductions. FY09 reduction is part of AF plan to reapportion AIRSS into a 3rd

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Gen Space-based IR program with a 2019 first launch.

Exhibit R-2a, RDT&E Project Justification

DATE **February 2008**

BUDGET ACTIVITY
05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE
0604443F Third Generation Infrared Surveillance (3GIRS)

PROJECT NUMBER AND TITLE
A020 3GIRS

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
A020 3GIRS	67.552	75.410	149.064	148.116	158.128	346.944	346.649	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

(U) This PE has had its title changed to 3rd Generation Infrared Surveillance (3GIRS) to reflect the decision to reposition the program as a follow on to the Space Based Infrared System High (SBIRS) High program.

(U) The 3rd Generation Infrared Surveillance (3GIRS) mission is to provide a missile warning capability to warn of ballistic missile attack on the U.S., its deployed forces, and its allies while also supporting missile defense, battlespace awareness and technical intelligence missions. As a result of the Nunn-McCurdy certification for the SBIRS High program, the USD(AT&L) directed the DoD Executive Agent for Space to plan for a new program for space-based Overhead Non-Imaging Infrared (ONIR) that generates competition for the SBIRS GEO 3 satellite and exploits alternative technologies. Alternative Infrared Satellite System (AIRSS) was to pursue an approach with acceptable technical risk that offered, at a minimum, Defense Support Program (DSP)-like missile warning capability and can ensure a launch availability date of FY15. With the Defense Acquisition Executive's decision to procure SBIRS GEO-3 in July 2007 and following congressional guidance, the Air Force has reapportioned AIRSS resources to pursue risk reduction, system definition, and ground tests to enable a 3rd Generation Space-based infrared (IR) program after the SBIRS GEO-3 satellite is delivered. The Air Force will pursue an acquisition risk reduction approach that conducts Wide Field of View (WFOV) technology maturation, along with technology needs forecasting activities prior to a system design decision in FY10.

(U) This program is assigned to Budget Activity 5, System Development and Demonstration (SDD), because it funds the development activities for a follow-on to the SBIRS High program for the next generation of missile warning satellites.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Risk reduction activities	46.450	50.461	103.790
(U)	Objective Systems Definition	16.838	15.315	32.635
(U)	System Design	0.000	0.000	0.000
(U)	FFRDC, Development Planning, SETA and Systems Engineering and Integration Technical Support	4.264	9.634	12.639
(U)				
(U)	Total Cost	67.552	75.410	149.064

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)									

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY **05 System Development and Demonstration (SDD)**	PE NUMBER AND TITLE **0604443F Third Generation Infrared Surveillance (3GIRS)**	PROJECT NUMBER AND TITLE **A020 3GIRS**

(U) D. Acquisition Strategy

In March 2008, the AF will take delivery of two WFOV Risk Reduction Integrated Sensor Assemblies and begin a calibration, characterization, and environmental test campaign to assess their technical maturity for the IR mission. In FY2009, the AF will continue sensor testing and technology maturation activities with the development of an integrated test bed (ITB) that will include payloads built from the Risk Reduction sensors matured under the AIRSS program and critical test equipment for the ITB. The ITB effort will demonstrate WFOV system technical maturation with the aim to lower cost, schedule, and risk for the objective system. The ITB effort will include algorithm development, ground signal processing demonstrations, key satellite sub-system risk reduction activities, and options to acquire multiple WFOV payloads. Technology maturation activities also includes an option for rideshare on a commercial communications satellite to conduct space-based testing. FY2009 system definition activities will support pre-acquisition decision preparation as the program postures for an FY2019 launch. Lessons learned from the 3G System Design Review (SDR) along with data from the ITB effort will be used to initiate new contract awards for the 3rd Generation system development efforts in the 4th Qtr of FY11. The program activities are planned to conform to the OSD competitive prototyping policy and will support a competitive commercial environment by carrying two system definition contractors through FY2010.

Key Decision Point B (KDP-B) is now planned in August 2010, with Authority to Proceed (ATP) in January 2011 - First 3rd Generation satellite delivery in 2016.

Exhibit R-3, RDT&E Project Cost Analysis

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(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Risk reduction activities	Various	Various	0.000	46.450	Oct-06	50.461	Mar-08	103.790	Oct-08	558.900	759.601	773.837
Objective System Definition	Various	Various	0.000	16.838	Dec-06	15.315	Oct-08	32.635		66.600	131.388	102.881
System Development	Various	Various								Continuing	TBD	TBD
Subtotal Product Development			0.000	63.288		65.776		136.425		Continuing	TBD	TBD
Remarks:												
(U) Support												
Program office, developmental planning, and technical support including federally funded research and development center (FFRDC/SETA)	Various	Space and Missile Center, El Segundo, CA	0.000	4.264	Oct-06	9.634	Oct-07	12.639	Oct-08	Continuing	TBD	TBD
Subtotal Support			0.000	4.264		9.634		12.639		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
			0.000								0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
			0.000								0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	67.552		75.410		149.064		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604443F Third Generation Infrared Surveillance (3GIRS)	PROJECT NUMBER AND TITLE A020 3GIRS

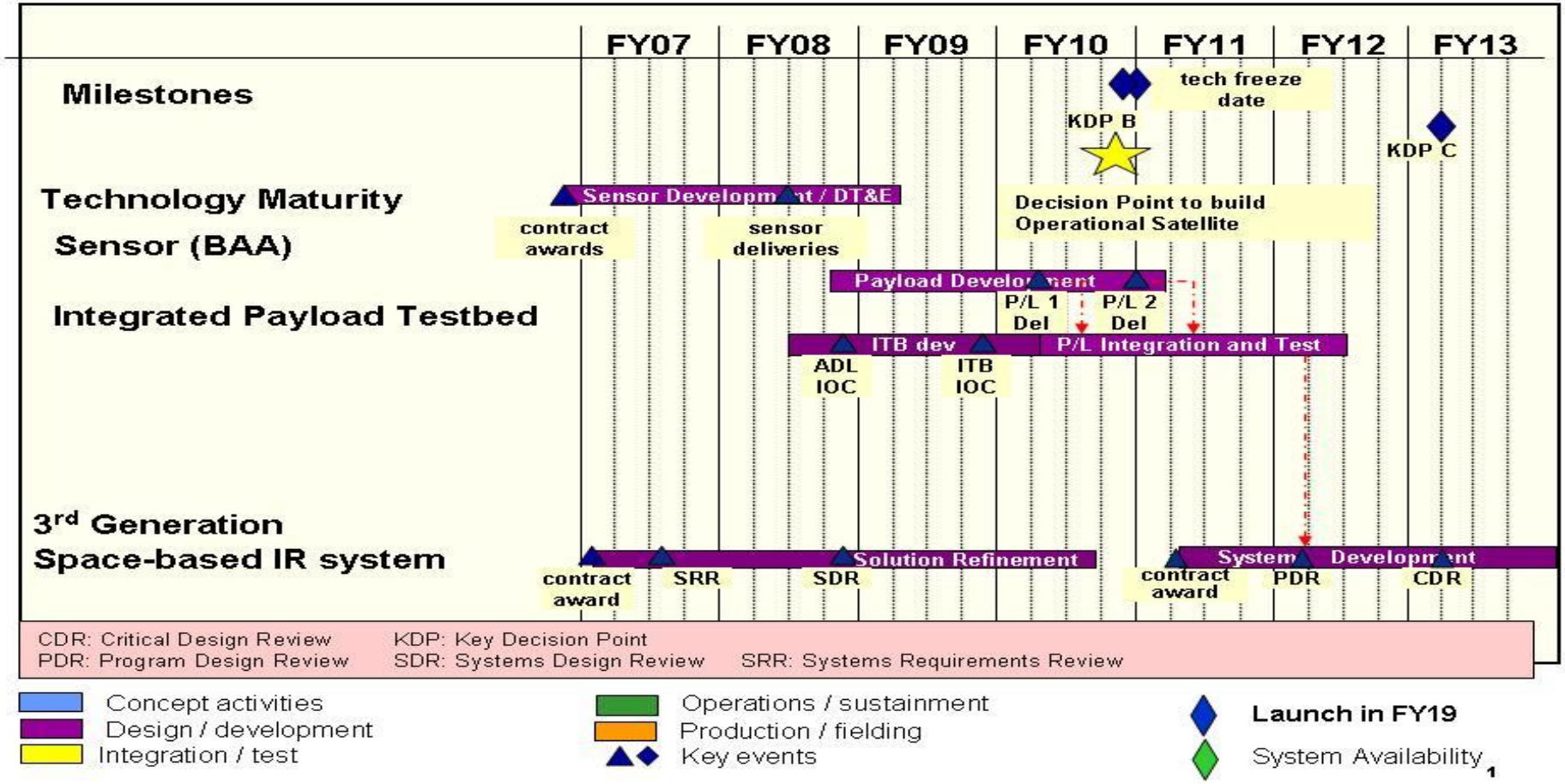

Exhibit R-4a, RDT&E Schedule Detail

DATE
February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
05 System Development and Demonstration (SDD)	**0604443F Third Generation Infrared Surveillance (3GIRS)**	**A020 3GIRS**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Demonstration Sensors Awards (x2 contractors)	1Q		
(U) AIRSS System Definition Awards	1Q		
(U) AIRSS System Requirements Review (SRR)	3Q		
(U) Risk Reduction Sensor Deliveries		2Q	
(U) Risk Reduction Sensors DT&E		3-4Q	1-2Q
(U) 3rd Generation System Design Review (SDR)		4Q	
(U) ITB IOC			4Q
(U) 3rd Gen System Definition Awards			4Q