PE NUMBER: 0304260F

PE TITLE: Airborne SIGINT Enterprise (JMIP)

	Exhib	it R-2, RDT	&E Budge	t Item Just	ification			DATE	February	2006
	T ACTIVITY erational System Development	JMIP)	•							
	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	0.000	77.798	117.834	123.304	142.563	145.779	148.346	Continuing	TBD
5180	RC-135 (Airborne SIGINT Development - RC-135)	0.000	0.000	38.465	33.758	33.365	31.375	32.860	Continuing	TBD
5181	U-2 (Airborne SIGINT Development - U-2)	0.000	1.972	0.000	0.000	0.000	0.000	0.000	1.972	1.972
5182	MQ-1/MQ-9 (Airborne SIGINT Development - Predator)	0.000	0.000	2.475	2.588	2.703	2.919	3.016	Continuing	TBD
5183	Common Development (Airborne SIGINT Development - Common Development)	0.000	70.481	53.896	63.347	82.277	86.572	86.993	Continuing	TBD
5184	RQ-4 (Airborne SIGINT Development - Global Hawk	0.000	4.958	10.520	10.770	11.018	11.258	11.438	Continuing	TBD
5185	Compass Bright (Airborne SIGINT Development - Compass Bright)	0.000	0.387	8.250	8.492	8.730	8.964	9.151	Continuing	TBD
5186	Special Programs (Airborne SIGINT Development - Special Platforms)	0.000	0.000	4.228	4.349	4.470	4.691	4.888	Continuing	TBD

(U) This PE began in FY06 and combines signals intelligence (SIGINT) development efforts previously being accomplished in multiple USAF PEs. The funds have been distributed among all seven Airborne SIGINT Enterprise (ASE) projects based on the development priorities established by the USAF SIGINT Capabilities Working Group in order to build a total SIGINT capability. This program element will participate in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability.

(U) A. Mission Description and Budget Item Justification

- (U) This Program Element (PE) funds efforts associated with the Airborne SIGINT (Signals Intelligence) Enterprise (ASE). ASE is the SIGINT modernization framework for all USAF airborne SIGINT collection platforms and their appropriate interfaces with the Air Force Distributed Common Ground System (AF DCGS). This PE will allow a synergistic development effort to be accomplished while developing a true Air Force-wide capability. This enterprise will use the Air Force Cryptologic Architecture (AFCA) for planning and decision-making and, in turn, employ the Joint Airborne SIGINT Architecture (JASA) open architecture standards to allow maximum ease of future upgrades and system interoperability. The primary goal of ASE is to produce an architecture-based, capability-focused SIGINT investment strategy for the USAF.
- (U) This program is Budget Activity 7, Operational Systems Development, because it involves the development of SIGINT capabilities and integration with operational systems such as the RC-135, U-2, MQ-1/MQ-9, RQ-4, Special Programs (Senior Scout and others as required), their associated ground stations and data links, and Compass Bright programs.

R-1 Shopping List - Item No. 177-1 of 177-33

	Exhibit R-2, RDT&E Budget Item Ju	DATE Febru a	February 2006	
	GET ACTIVITY Operational System Development	PE NUMBER AND TITLE 0304260F Airborne SIGINT Enterprise (JMIP	')	
(U)	B. Program Change Summary (\$ in Millions)			
		<u>FY 2005</u>	FY 2006	FY 2007
(U)	Previous President's Budget	0.000	78.920	116.500
(U)	Current PBR/President's Budget	0.000	77.798	117.834
(U)	Total Adjustments	0.000	-1.122	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-1.122	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			
	(U) FY06 reduction was due to higher priorities. The growth in funds in FY07 refle	ects the completion of the baseline Airborne Signals Ir	ntelligence Payload ((ASIP)
	program and the start of development work on the RC-135 fleet, MQ-1/9, Special Proprojects will add work in the ASIP Upgrade Program (Spiral development capabilitine necessary to counter the evolving threat). U-2 Flight Test will be used for ASIP sendepartment priorities.	ies to enhance the ASIP baseline program through har	dware and software	modifications

R-1 Shopping List - Item No. 177-2 of 177-33

	Exhibit R-2a, RDT&E Project Justification									February 2006		
BUDGET ACTIVITY 07 Operational System Development			0304260F Airborne SIGINT Enterprise 5180 R				5180 RC-135	CT NUMBER AND TITLE RC-135 (Airborne SIGINT opment - RC-135)				
	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		
5180	RC-135 (Airborne SIGINT Development - RC-135)	0.000	0.000	38.465	33.758	33.365	31.375	32.860	Continuing	TBD		
	Quantity of RDT&E Articles	0	0	0	0	0	0	0				

⁽U) These funds will be split between the RIVET JOINT, COMBAT SENT, and COBRA BALL programs.

(U) A. Mission Description and Budget Item Justification

- (U) This project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of the RC-135 SIGINT sensors and their associated air and ground components. Through extensive utilization of commercial-off-the-shelf (COTS)-based solutions to fielding of needed capabilities, it also incurs the need for continuous diminishing manufacturing sources integration efforts consistent with the COTS technology cycle.
- (U) These efforts provide the requisite engineering for preliminary assessments of technical feasibility, operability, or military utility as well as specific engineering implementations integrated into the various baseline modifications.
- (U) Budget Activity Justification: This program effort is Budget Activity 7, Operational Systems Development, because it involves Air Force RDT&E necessary to field essential operational capabilities.
- (U) RC-135 Breakdown of funds (in millions):

	FY06	FY07	FY08	FY09	FY10	FY11	
RIVET JOINT	0	32.065	26.958	26.465	24.475	25.860	
COMBAT SENT	0	3.400	3.700	3.700	3.600	3.700	
COBRA BALL	0	3.000	3.100	3.200	3.300	3.300	

U) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>

(U) Initiates Non-Recurring Engineering (NRE) for the RC-135 SIGINT Systems SEE Classified Budget Exhibits (PE 0305207F)

(U)

(U) Total Cost

FY 2005

0.000

Project 5180 R-1 Shopping List - Item No. 177-3 of 177-33

Exhibit R-2a (PE 0304260F)

FY 2006

0.000

FY 2007

38.465

38.465

	Exhibit R-2a, RDT&E Project Justification									DATE February 2006		
	BUDGET ACTIVITY 07 Operational System Development					ND TITLE irborne SIGIN	T Enterprise		MBER AND TITLE 5 (Airborne SIO nt - RC-135)	GINT		
(U)	C. Other Program Funding Sum	mary (\$ in Millic	ons)									
		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to	Total Cost		
		<u>Actual</u>	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Complete	Total Cost		
(U)	(U) PE 0305207F, APAF			89.093	104.026	106.275	109.044	111.302	Continuing	TBD		
	(U) These funds within the PE 030: developed under Project 675180 of	-	•		is for the RC-135	5 program and in	iclude those fun	ids necessary to	o field SIGINT o	apabilities		

(U) D. Acquisition Strategy

(U) Aircraft, aircraft sensor systems, and associated ground support system modifications planned for FY06-FY11 include the procurement, fielding and logistical support for three distinct RIVET JOINT baseline configurations [baseline 8, 9, 10] and two distinct baselines [baselines 3 & 4] for COMBAT SENT and COBRA BALL. Development and integration managed by the Big Safari Systems Group; they employ evolutionary acquisition approaches to field incremental capability improvements.

Project 5180 R-1 Shopping List - Item No. 177-4 of 177-33 Exhibit R-2a (PE 0304260F)

			UNC	LASSIFI	ED							
Exhibit R-3, RDT&E Project Cost Analysis February 2006												
7 Operational System Development 0304260F Airborne SIGINT Enterprise 5180 RC-								NUMBER AND 135 (Airbo nent - RC-	rne SIGII	NT		
(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 SIGINT Sensor Development and Integration Subtotal Product Development Remarks:	TBD	TBD	0.000	0.000 0.000		0.000 0.000		38.465 38.465	Jan-07	Continuing Continuing	TBD TBD	TBD TBD
(U) Total Cost			0.000	0.000		0.000		38.465		Continuing	TBD	TBD

Project 5180

R-1 Shopping List - Item No. 177-5 of 177-33

Exhibit R-4, RDT&E Schedul	e Profile	DATE February 2006
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0304260F Airborne SIGINT Enterprise	5180 RC-135 (Airborne SIGINT
	(JMIP)	Development - RC-135)



RC-135

FY06 FY07 FY08 FY09 FY10 FY11

RIVET JOINT Mission Sensors/Hardware/software

COMBAT SENT Mission Sensors/Hardware/software

COBRA BALL Mission Sensors/Hardware/software

See PE 0305207 classified submission for breakout

As of: 10 Jan 06

Project 5180 R-1 Shopping List - Item No. 177-6 of 177-33

Exhibit R-4a, RDT&E Schedu	DATE February 2006			
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE 5180 RC-135 (Airborne SIG Development - RC-135)		e SIGINT
(U) Development of RIVET JOINT mission sensors (U) Development of COMBAT SENT mission sensors (U) Development of COBRA BALL mission sensors Details are classified and are shown in the classified portion of PE 0305207F	FY 2005		FY 2006	FY 2007 2-4Q 2-4Q 2-4Q
Project 5180 R-1 Shopping List	- Item No. 177-7 of 177-33		Exhibit R	-4a (PE 0304260F)

	Exhibit R-2a, RDT&E Project Justification									2006
07 Operational System Development				PE NUMBER AND 0304260F Airb (JMIP)		Enterprise	PROJECT NUME 5181 U-2 (Air Developmen	borne SIGIN	г	
	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
5181	U-2 (Airborne SIGINT Development - U-2)	0.000	1.972	0.000	0.000	0.000	0.000	0.000	1.972	1.972
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

⁽U) The source for these funds was the redistribution of SIGINT funds moved into the ASE PE from other USAF SIGINT projects as explained in the R2.

(U) A. Mission Description and Budget Item Justification

- (U) This project supports sensor integration and test, flight test, design studies, engineering analysis and non-recurring engineering of the ASIP sensor.
- (U) This project provides risk reduction for the RQ-4 Global Hawk and will provide the warfighter with a near term combat capability with increased capability improvements accomplished as soon as technology and risk achieve satisfactory levels.
- (U) Budget Activity Justification: This program effort is Budget Activity 7, Operational Systems Development, because it involves Air Force RDT&E necessary to field essential operational capabilities.

ı	(U)	B. Accomplishments/Planned Program (\$ in Millions)	<u>FY 2005</u>	FY 2006	FY 2007
ı	(U)	Signals Intelligence (SIGINT) Sensor Integration on the U-2 aircraft		1.972	0.000
ı	(U)	Total Cost	0.000	1.972	0.000

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

FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to	Total Cost
<u>Actual</u>	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Complete	Total Cost

(U) Airborne Signals Intelligence

Program (ASIP) development in 62.463

0305202F

(U) ASIP development for FY05 and before resides in the U-2 and Global Hawk PEs

(U) D. Acquisition Strategy

(U) SIGINT capabilities will be integrated on to this platform using an evolutionary acquisition approach.

Project 5181

R-1 Shopping List - Item No. 177-8 of 177-33

			UNC	LASSIFI	ED							
E	xhibit R-	3, RDT&E	Project Co	st Anal	ysis				DA		ruary 20	006
OGET ACTIVITY Operational System Development				0304	260F Air		SINT Ente	erprise 5	5181 U-2	UMBER ANI (Airborne	TITLE SIGINT	
Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005	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
Product Development SIGINT Sensors Integration	CPAF	Lockheed Martin Aero,	Con	0.000		1.972	Jan-06	0.000			1.972	ТВЕ
Subtotal Product Development		Palmdale Ca.	0.000	0.000		1.972		0.000		0.000	1.972	TBD
Total Cost			0.000	0.000		1.972		0.000		0.000	1.972	TBD
	OGET ACTIVITY Operational System Development Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions) Product Development SIGINT Sensors Integration Subtotal Product Development Remarks:	Cost Categories (Tailor to WBS, or System/Item Requirements) (\$\frac{1}{2}\text{ in Millions}\text{ Method & Type} \\ \text{Product Development} \\ Subtotal Product Development \\ Subtotal Product Development \\ Remarks:	Cost Categories (Tailor to WBS, or System/Item Requirements) (\$\frac{\text{Contract}}{\text{Type}}\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Cost Categories (Tailor to WBS, or System/Item Requirements) (\$\frac{1}{2}\$ in Millions) (Cost Development SIGINT Sensors Integration (CPAF Lockheed Martin Aero, Palmdale Ca. Subtotal Product Development (Cost Development (CPAF Lockheed Martin Aero, Palmdale Ca. (COst Develop	Exhibit R-3, RDT&E Project Cost Analy Operational System Development Cost Categories (Tailor to WBS, or System/Item Requirements) Method & Activity & Prior to FY (\$ in Millions) Type Location 2005 Cost Product Development SIGINT Sensors Integration CPAF Lockheed Martin Aero, Palmdale Ca. Subtotal Product Development Subtotal Product Development O.000 0.000 Remarks:	Cost Categories Contract Performing Total FY 2005 FY 2005 (Tailor to WBS, or System/Item Requirements) Method & Activity & Prior to FY Cost Award (\$ in Millions) Type Location 2005 Date Product Development SIGINT Sensors Integration CPAF Lockheed Martin Aero, Palmdale Ca. Subtotal Product Development Remarks:	Exhibit R-3, RDT&E Project Cost Analysis OGET ACTIVITY Operational System Development Cost Categories (Tailor to WBS, or System/Item Requirements) (\$\frac{1}{2} Nethod & Activity & Prior to FY & Cost Award Awa	Exhibit R-3, RDT&E Project Cost Analysis OGET ACTIVITY Operational System Development Cost Categories (Tailor to WBS, or System/Item Requirements) (\$\frac{1}{2}\text{Type} \text{Location} \text{Location} \text{Prior to FY} \text{Cost} \text{Cost} \text{Award} \text{Cost} \text{Award} \text{Cost} \text{Date} \text{Date} \text{Date} \text{Product Development} \text{SIGINT Sensors Integration} \text{CPAF} \text{Lockheed} \text{Martin Aero, Palmdale Ca.} \text{0.000} \text{0.000} \text{0.000} \text{0.000} \text{1.972} \text{Jan-06} \text{1.972} Vanish and the content of the conten	Exhibit R-3, RDT&E Project Cost Analysis DESCRIPTION Operational System Development Cost Categories (JMIP) Cost Categories (Contract Performing Total FY 2005 FY 2006 FY 2006 FY 2007 (Tailor to WBS, or System/Item Requirements) Method & Activity & Prior to FY Cost Award Cost Award Cost Award Cost Opate Cost Date Product Development SIGINT Sensors Integration CPAF Lockheed Martin Aero, Palmdale Ca. Subtotal Product Development Subtotal Product Dev	Exhibit R-3, RDT&E Project Cost Analysis PE NUMBER AND TITLE O304260F Airborne SIGINT Enterprise O304260F Airborne SIGINT Enterprise O4000 O4000	Exhibit R-3, RDT&E Project Cost Analysis DATE Feb DESCRIPTION Operational System Development Cost Categories (Tailor to WBS, or System/Item Requirements) (S in Millions) COAF Location CPAF Lockheed Martin Aero, Palmdale Ca. Subtotal Product Development Exhibit R-3, RDT&E Project Cost Analysis PE NUMBER AND TITLE 0304260F Airborne SIGINT Enterprise (JMIP) PROJECT NUMBER AND TITLE 0304260F Airborne SIGINT Enterprise (JMIP) PROJECT NUMBER AND TITLE 0304260F Airborne SIGINT Enterprise (S 181 U-2 (Airborne Development - U-2) Cost Categories (Cost Award Cost Award Cost Award Cost Date Date Date Date Product Development SIGINT Sensors Integration CPAF Lockheed Martin Aero, Palmdale Ca. O.000 0.000 1.972 Jan-06 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	Exhibit R-3, RDT&E Project Cost Analysis Operational System Development Cost Categories (Tailor to WBS, or System/Item Requirements) (Sin Millions) Performing Total FY 2005 FY 2006 FY 2006 FY 2007 FY 2007 Cost to Date Cost Categories (Sin Millions) Cost Categories (Sin Millions)

R-1 Shopping List - Item No. 177-9 of 177-33 1669

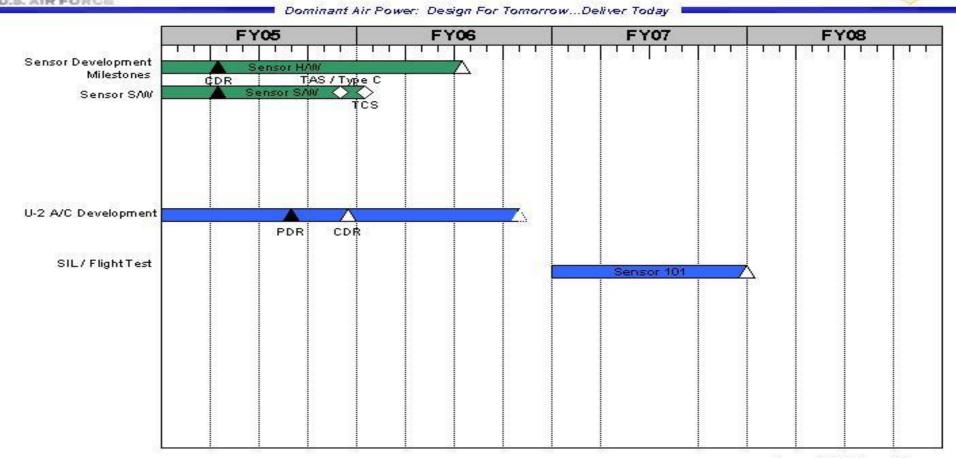
Project 5181

Exhibit R-4, RDT&E Schedule Profile BUDGET ACTIVITY O7 Operational System Development PE NUMBER AND TITLE O304260F Airborne SIGINT Enterprise (JMIP) PROJECT NUMBER AND TITLE 5181 U-2 (Airborne SIGINT Development - U-2)



ASIP U2 Integration





As of: 10 Jan 06

Project 5181 R-1 Shopping List - Item No. 177-10 of 177-33

Exhibit R-4a, RDT&E	Schedule Detail		DATE Febru	DATE February 2006		
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0304260F Airborne SIGI (JMIP)	NT Enterprise 51	ROJECT NUMBER AND THE 81 U-2 (Airborne SI evelopment - U-2)			
 (U) Schedule Profile (U) U-2 flight test of baseline ASIP sensor (Commaon Dev) (U) End-to-end flight test of ASIP sensor (Common Dev) 	E	Y 2005	FY 2006	<u>FY 2007</u> 1-4Q 1-4Q		
(U) Sensor integration efforts of capabilities developed under Project 67518 quick reaction capabilities that are developed for the U-2	83 of this PE and of any		1-4Q			
Project 5181 R-1 Sh	nopping List - Item No. 177-11 of 177-33		Exhibit R	R-4a (PE 0304260F)		

	Exi	nibit R-2a, F	RDT&E Pro	ject Justi	fication			DATE	February	2006
	T ACTIVITY erational System Development			[PE NUMBER AND 0304260F Airb (JMIP)		Enterprise	PROJECT NUME 5182 MQ-1/M Developmen	Q-9 (Airborn	e SIGINT
	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
5182	MQ-1/MQ-9 (Airborne SIGINT Development - Predator)	0.000	0.000	2.475	2.588	2.703	2.919	3.016	Continuing	TBD
	Quantity of RDT&E Articles	0	0	C	0	0	0	0		

⁽U) The source for these funds was the redistribution of SIGINT funds moved into the ASE PE from other USAF SIGINT projects as explained in the R2.

(U) A. Mission Description and Budget Item Justification

- (U) This project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of the MQ-1/9 SIGINT sensors and their associated air and ground components.
- (U) Funding will begin efforts on antennas, receivers, processors, software development, aircraft integration and ground station upgrades to allow a persistent reconnaissance, surveillance, targeting, and acquisition capability against mission specific threats. Development of a networked capability to other SIGINT platforms will also be initiated.
- (U) This project provides the warfighter with increased combat capability as soon as technology and risk achieve satisfactory levels.
- (U) Budget Activity Justification: This program effort is Budget Activity 7, Operational Systems Development, because it involves Air Force RDT&E necessary to field essential operational capabilities.

(U)B. Accomplishments/Planned Program (\$ in Millions)FY 2005FY 2006FY 2007(U)Signals Intelligence (SIGINT) Sensor Development/Integration for MQ-1/92.475(U)Total Cost0.0000.0002.475

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

FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to	Tatal Cast
Actual	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Complete	Total Cost

(U) N/A

(U) D. Acquisition Strategy

(U) Signals Intelligence (SIGINT) capabilities will be integrated on to this platform using an Evolutionary Acquisition approach.

Project 5182 R-1 Shopping List - Item No. 177-12 of 177-33

			UNC	LASSIFI	ED							
E	Exhibit R-3, RDT&E Project Cost Analysis										ruary 20	06
BUDGET ACTIVITY 07 Operational System Development							GINT Ente	erprise	5182 MQ-	NUMBER AND -1/MQ-9 (A nent - Pred	irborne S	IGINT
(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 SIGINT Sensors Integration Subtotal Product Development Remarks:	TBD	TBD	0.000	0.000 0.000		0.000 0.000		2.475 2.475	Jan-07	Continuing Continuing	TBD TBD	TBD TBD
(U) Total Cost			0.000	0.000		0.000		2.475		Continuing	TBD	TBD

Project 5182

R-1 Shopping List - Item No. 177-13 of 177-33

	UNCLA	SSIFIED			
Exhibit R-4, RDT	&E Schedule F	Profile			DATE February 2006
UDGET ACTIVITY 7 Operational System Development		PE NUMBER AND TI 0304260F Airboi (JMIP)		rprise 5182	ECT NUMBER AND TITLE MQ-1/MQ-9 (Airborne SIGIN' Plopment - Predator)
U.S. AIR FORCE	MQ.	-1/MG)-9 AS	SE F	Projects
FY06	FY07	FY08	FY09	FY10	FY11
Antenna, Receiver, Processor, and Network Development					
Software Upgrades	Si .				
Aircraft and					

Aircraft and Ground Station Integration

As of: 10 Jan 06

Project 5182 R-1 Shopping List - Item No. 177-14 of 177-33

	DATE February 2006
0304260F Airborne SIGINT Enterprise	PROJECT NUMBER AND TITLE
(JMIP) FY 2005	<u>FY 2006</u> <u>FY 2007</u> 2-4Q
Shooning List - Item No. 177-15 of 177-33	Eyhibit R-4a (PE 0304260F)
	0304260F Airborne SIGINT Enterprise (JMIP) FY 2005

	Ext	DATE	DATE February 2006							
	T ACTIVITY erational System Development			į.	PE NUMBER AND 0304260F Airb (JMIP)		Enterprise	PROJECT NUME 5183 Commo (Airborne SIC Common De	on Developmo GINT Develop	
	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
5183	Common Development (Airborne SIGINT Development - Common Development)	0.000	70.481	53.896		82.277	86.572		Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

⁽U) The source for these funds was the redistribution of SIGINT funds moved into the ASE PE from other USAF SIGINT projects as explained in the R2.

(U) A. Mission Description and Budget Item Justification

- (U) This project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of sensors and their associated air and ground components that will be used on/by more than one platform. The common development SIGINT program develops new sensors and maintains present capability by developing replacements for current components affected by diminishing manufacturing sources as well as enhancing capability via spiral development to exploit evolving signals of interest to meet emerging operational requirements. The current sensor being developed is the Airborne Signals Intelligence Payload (ASIP) Program, to be tested by both the Global Hawk (RQ-4B) and U-2.
- (U) This program will design and build a common/scalable SIGINT system designed for maximum coverage of the electromagnetic spectrum through the use of an integrated high and low band system. ASIP will deliver developmental units for integration and test to both the Global Hawk and U-2. The Global Hawk article is scheduled to complete integration and test for the developmental article and begin flight test in 1Q FY08. In accordance with an evolutionary acquisition strategy, ASIP will begin preliminary design activities to support spiral software and hardware upgrades beginning in FY08.
- (U) This strategy provides the warfighter with a near term combat capability with increased capability improvements accomplished as soon as technology and risk achieve satisfactory levels. Sensors will be integrated and tested on the various platforms as funding permits.
- (U) Budget Activity Justification: This program effort is Budget Activity 7, Operational Systems Development, because it involves Air Force RDT&E necessary to field essential operational capabilities.

(U)	B. Accomplishments/Planned Program (\$ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Signals Intelligence (SIGINT) Sensor Development/Integration		70.481	53.896
	(U) Complete Baseline ASIP development. Begin ASIP upgrades to meet the evolving threat			
(U)	Total Cost	0.000	70.481	53.896

Project 5183 R-1 Shopping List - Item No. 177-16 of 177-33

		Exhibit R-	2a, RDT&E	Project Jus	tification			DATE	February	2006
-	GET ACTIVITY Operational System Developn	nent			PE NUMBER A 0304260F A (JMIP)	ND TITLE irborne SIGIN '		PROJECT NUME 5183 Commo (Airborne SIC Common Dev	n Developme SINT Develop	
(U)	C. Other Program Funding Sur	mmary (\$ in Millio	ons)							
		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to	Total Cost
		<u>Actual</u>	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Complete	Total Cost
(U)	RDT&E, 0305220F - ASIP Development	62.074								62.074
(U)	RDT&E, 0305202F - ASIP Development	62.463								62.463
(U)	APAF, 0305220F - ASIP Production BP10		0.000	0.000	15.000	53.300	55.800	45.600		169.700
(U)	APAF, 0305220F - ASIP Production BP11				0.000	52.900	50.300	33.300	112.600	249.100
(U)	U) D. Acquisition Strategy Signals Intelligence (SIGINT) capabilities will be developed and integrated on to various platforms using an Evolutionary Acquisition approach.									

Project 5183 R-1 Shopping List - Item No. 177-17 of 177-33

E	Exhibit R-	3, RDT&E F		st Anal					D	ATE Feb	ruary 200	
BUDGET ACTIVITY 07 Operational System Development	erational System Development 0304260F Airborne SIGINT Enterprise 5183 C (JMIP) (Airborne SIGINT Enterprise 5183 C					PROJECT NUMBER AND TITLE			D TITLE elopment Developme	nent		
(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 T	Carget Value of Contract
(U) Product Development SIGINT Sensor Development and Integration	CPAF	Northrop Grumman San Jose CA		0.000		70.481	Jan-06	53.896	Jan-07	Continuing	TBD	ТВГ
Subtotal Product Development Remarks: Other contractors (U) Total Cost	are listed above		0.000	0.000		70.481 70.481		53.896 53.896		Continuing Continuing	TBD TBD	TBC TBC

Project 5183 R-1 Shopping List - Item No. 177-18 of 177-33

Exhibit R-4, RDT&E Schedule Profile BUDGET ACTIVITY O7 Operational System Development DATE February 2006 PE NUMBER AND TITLE 0304260F Airborne SIGINT Enterprise (JMIP) PROJECT NUMBER AND TITLE 5183 Common Development (Airborne SIGINT Development - Common Development)



ASIP System of Systems RDT&E



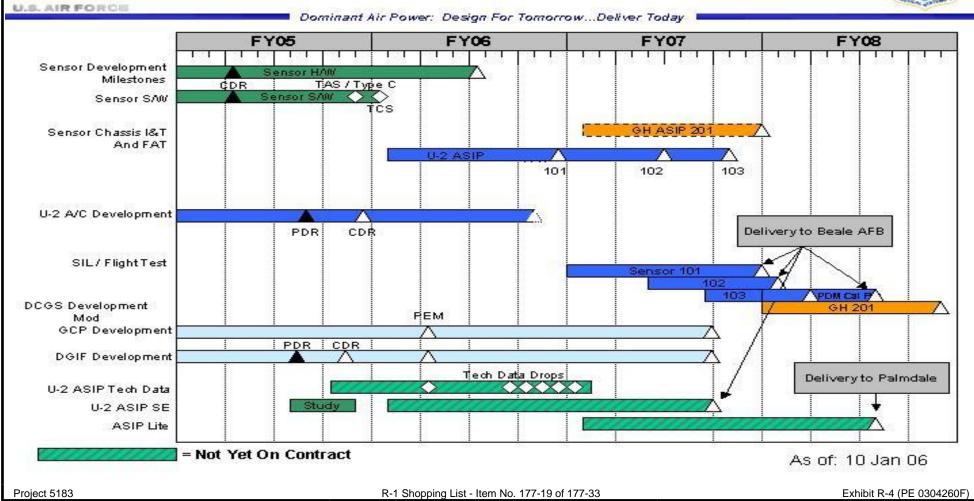


Exhibit R-4a, RDT&E Sc	hedule Detail	DATE Fe	bruary 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER A 5183 Common De (Airborne SIGINT Common Develor	velopment Development -
(U) Schedule Profile (U) Sensor Development (U) - Critical Design Review (CDR) (U) - Raytheon - ASIP Preliminary Design Review (R-APDR) (U) - Raytheon - ASIP Critical Design Review (R-ACDR)	FY 2005 1-4Q 2Q 2Q 3Q	<u>FY 2006</u> 1-4Q	<u>FY 2007</u> 1-4Q
 (U) Global Hawk Factory Acceptance Test (FAT) (U) U-2 FAT (U) Distributed Common Ground Station (DCGS) ASIP Update (U) U-2 Flight Test (U) End-to-End Flight Test (U) Note: FY04 and 05 efforts were accomplished in the Global Hawk 030 	05220F and U-2 0305202F PEs.	4Q 3Q	3Q 1-4Q 1-4Q
Project 5183 R-1 Shoppir	ing List - Item No. 177-20 of 177-33	Ext	nibit R-4a (PE 0304260F)

	Exh	DATE	DATE February 2006								
	BUDGET ACTIVITY 07 Operational System Development				0304260F Airborne SIGINT Enterprise 5184 R			5184 RQ-4 (A	CT NUMBER AND TITLE CQ-4 (Airborne SIGINT ppment - Global Hawk		
	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	
5184	RQ-4 (Airborne SIGINT Development - Global Hawk	0.000	4.958	10.520	10.770	11.018	11.258	11.438	Continuing	TBD	
	Quantity of RDT&E Articles	0	0	0	0	0	0	0			

⁽U) The source for these funds was the redistribution of SIGINT funds moved into the ASE PE from other USAF SIGINT projects as explained in the R2.

(U) A. Mission Description and Budget Item Justification

- (U) This project supports sensor integration and test, flight test, design studies, engineering analysis and non-recurring engineering of the air and ground components for the Global Hawk SIGINT sensors.
- (U) This project provides the warfighter with a near-term combat capability with increased capability improvements implemented as soon as technology and risk achieve satisfactory levels. The current sensor being developed for the Global Hawk SIGINT is ASIP. In concordance with an evolutionary acquisition strategy, ASIP will begin preliminary design activities to support spiral software and hardware upgrades beginning in FY08. These upgrades are designed to exploit evolving signals of interest to meet emerging operational requirements.
- (U) Budget Activity Justification This program effort is equivalent to RDT&E budget activity 7, Operational Systems Development, because it involves Air Force R&D necessary to field essential operational capabilities.

ı	(U)	B. Accomplishments/Planned Program (\$ in Millions)	FY 2005	<u>FY 2006</u>	FY 2007
	(U)	Signals Intelligence (SIGINT) Sensor Integration on the Global Hawk aircraft		4.958	10.520
	(U)	Total Cost	0.000	4.958	10.520

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

FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to	Total Cost
Actual	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Complete	Total Cost

(U) Sensor Integration

0305205/030220F - Sensor 62.074

Development

(U) ASIP development for FY05 and before resides in the U-2 and Global Hawk PEs

(U) D. Acquisition Strategy

(U) Signals Intelligence (SIGINT) capabilities will be integrated on to this platform using an Evolutionary Acquisition approach.

Project 5184 R-1 Shopping List - Item No. 177-21 of 177-33

E	Exhibit R-3, RDT&E Project Cost Analysis February 2006												
BUDGET ACTIVITY 07 Operational System Development	Operational System Development 0304260F Airborne SIGINT Enterprise 5184 RQ								184 RQ-4	T NUMBER AND TITLE Q-4 (Airborne SIGINT pment - Global Hawk			
(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 Valu of Contrac	
U) Product Development SIGINT Sensor Integration	CPAF	Northrop Grumman Mission Sys, San Jose, CA		0.000		4.958	Jan-06	10.520	Jan-07	21.905	37.383	ТВ	
Subtotal Product Development Remarks:			0.000	0.000		4.958		10.520		21.905	37.383	TE	
U) Total Cost			0.000	0.000		4.958		10.520		21.905	37.383	ТВ	

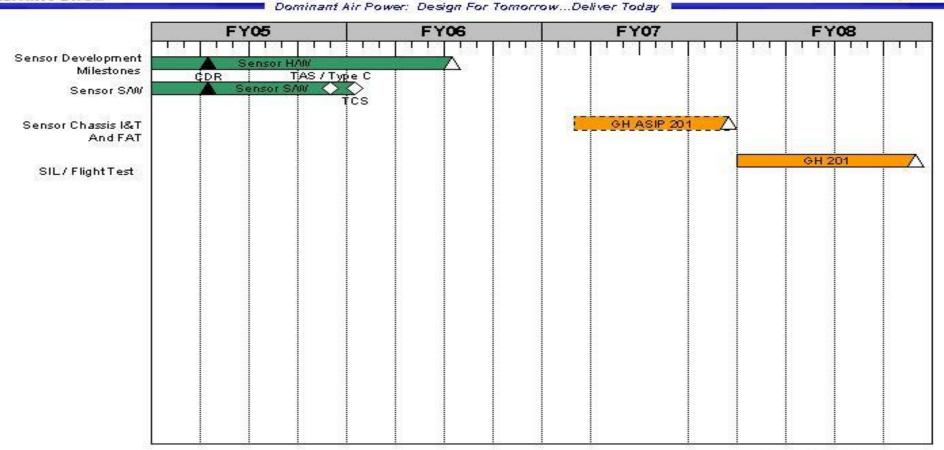
Project 5184 R-1 Shopping List - Item No. 177-22 of 177-33

Exhibit R-4, RDT&E Schedule Profile BUDGET ACTIVITY O7 Operational System Development PE NUMBER AND TITLE O304260F Airborne SIGINT Enterprise (JMIP) PROJECT NUMBER AND TITLE 5184 RQ-4 (Airborne SIGINT Development - Global Hawk



ASIP GH Integration





As of: 10 Jan 06

Project 5184 R-1 Shopping List - Item No. 177-23 of 177-33

Exhibit R-4a, RDT&E Sch	nedule Detail		February 2006 JECT NUMBER AND TITLE 4 RQ-4 (Airborne SIGINT relopment - Global Hawk		
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0304260F Airborne SIGINT Enterp (JMIP)	rise 5184 R0			
 (U) Schedule Profile (U) End-to-end flight test of ASIP sensor (U) Sensor integration efforts of capabilities developed under Project 675183 of quick reaction capabilities developed for the RQ-4 	FY 2005 this PE and any]	FY 2006	<u>FY 2007</u> 1-4Q 1-4Q	
(U) Sensor Development			1-3Q		
Project 5184 R-1 Shoppin	ng List - Item No. 177-24 of 177-33		Evhihit !	R-4a (PE 0304260F)	

	Exh	ibit R-2a, F	RDT&E Pro	ject Justif	stification				DATE February 2006		
	T ACTIVITY erational System Development			į.	PE NUMBER AND 0304260F Airk (JMIP)		Enterprise	PROJECT NUMB 5185 Compa SIGINT Deve Bright)	ss Bright (Air		
	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	
5185	Compass Bright (Airborne SIGINT Development - Compass Bright)	0.000	0.387	8.250	8.492	8.730	8.964	9.151	Continuing	TBD	
	Quantity of RDT&E Articles	0	0	0	0	0	0	0			

⁽U) All funds in Compass Bright are 3600 RDT&E. The source for these funds was the redistribution of SIGINT funds moved into the ASE PE from other USAF SIGINT projects as explained in the R2.

(U) A. Mission Description and Budget Item Justification

- (U) The COMPASS BRIGHT program develops, demonstrates, and rapidly transitions advanced Air Force-specific signals intelligence (SIGINT) and radio frequency (RF) measurement and signature intelligence (MASINT) capabilities against emerging and future target signals. It is the only USAF program that pursues SIGINT and RF MASINT technology transition. Funds were reduced in FY06 from previous submissions due to higher USAF priorities.
- (U) The COMPASS BRIGHT program objective is to develop technologies for application in SIGINT and RF MASINT systems/subsystems. Acquisition and production of these developed technologies will occur within the appropriate platform programs.
- (U) Compass Bright projects are selected through a data call process whereby the USAF evaluates proposals from the labs and industry to select those projects that are most promising. This process is completed the year prior to award.
- (U) This program is categorized as Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development.

(U)	B. Accomplishments/Planned Pr	<u>ogram (\$ in Mill</u>	lions)				<u>FY</u>	2005	FY 2006	FY 2007
(U)	Continue COMPASS BRIGHT de	velopment projec	ts in the signals	intelligence (SI	GINT) and radio	o frequency (RF))			7.286
	measurement and signature intellig	gence (MASINT)	areas							
(U)	Mission Support, Program Manage	ement Activities							0.387	0.964
(U)	Total Cost							0.000	0.387	8.250
(U)	C. Other Program Funding Sumi	mary (\$ in Millio	ons)							
		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to	Total Cost
		<u>Actual</u>	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	<u>Complete</u>	10tai Cost
(U)	RDT&E, PE 0305206F, BPAC									
	674882 - Compass Bright	2.105								2.105
	Development									
	Compass Bright Funds for FY06 an	nd out were move	d from the abov	e PE to the ASE	E PE					
Pro	oject 5185		R-1	Shopping List - Ite	em No. 177-25 of	177-33			Exhibit R-2a (PE 0304260F)

	SSIFIED			
Exhibit R-2a, RDT&E Project Just	tification		February 2006	
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE 5185 Compass Bright (Airborne SIGINT Development - Compass Bright)		
(U) D. Acquisition Strategy (U) Ongoing COMPASS BRIGHT technology development and demonstration cont contractual vehicles, with future development projects emphasizing full and open contractual vehicles, with future development projects emphasizing full and open contractual vehicles, with future development projects emphasizing full and open contractual vehicles, with future development projects emphasizing full and open contractual vehicles, with future development projects emphasizing full and open contractual vehicles, with future development projects emphasizing full and open contractual vehicles, with future development projects emphasizing full and open contractual vehicles, with future development projects emphasizing full and open contractual vehicles, with future development projects emphasizing full and open contractual vehicles, with future development projects emphasized future future development projects emphasized future future future development projects emphasized future fut		relationsh	Exhibit R-2a (PE 0304260F)	

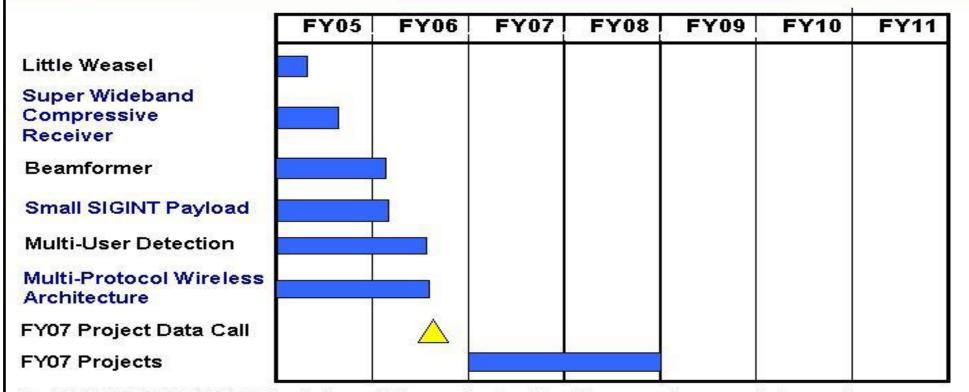
			UNC	LASSIFI	ED							
E	xhibit R	-3, RDT&E	Project Co	st Anal	ysis				D	ATE Feb i	ruary 20	06
BUDGET ACTIVITY 07 Operational System Development		0304	0304260F Airborne SIGINT Enterprise 5185 Co					IT Development - Compass				
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	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 T	<u> Γarget Value</u> <u>of Contract</u>
(U) Product Development Various Subtotal Product Development Remarks:	Various	AFRL	0.000	0.000		0.000 0.000	Jan-06	7.286 7.286	Jan-07	Continuing Continuing	TBD TBD	ТВГ ТВГ
(U) Management ASC/RSW Subtotal Management Remarks:		WPAFB, OH	0.000	0.000 0.000		0.387 0.387		0.964 0.964		Continuing Continuing	TBD TBD	TBD TBD
(U) Total Cost			0.000	0.000		0.387		8.250		Continuing	TBD	TBD

Project 5185 R-1 Shopping List - Item No. 177-27 of 177-33

Exhibit R	2-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	0304260F Airborne SIGINT Enterprise (JMIP)	5185 Cd	T NUMBER AND TITLE ompass Bright (Airborne Development - Compass



COMPASS BRIGHT Project Schedules



Note1: COMPASS BRIGHT Projects are 1-2 years in duration, thus no outyear projects are shown

Note 2: Efforts previous to FY 06 were funded from PE 0305206F, Project 4882

As Of: 10 Jan 06

Project 5185 R-1 Shopping List - Item No. 177-28 of 177-33

Exhibit R-4 (PE 0304260F)

1

Exhibit R-4a,	DATE F	February 2006		
UDGET ACTIVITY 7 Operational System Development	PE NUMBER AND TITLE 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER 5185 Compass I	AND TITLE	
U. Schedule Profile U. Little Weasel U. Super Wideband U. Beamformer U. SSP Demo U. Multi-User Detection Demo U. Multi-Protocol Wireless Architecture Demo U. FY07 Proposal Call U. FY07 Proposals Evaluated and Approved U. FY08 Proposals Authorized to Proceed U. FY08 Proposals Evaluated and Approved U. FY08 Proposals Evaluated and Approved	FY 2005 2Q 3Q	FY 2006 1Q 1Q 3Q 3Q 4Q	1Q 3Q 4Q	
Project 5185	R-1 Shopping List - Item No. 177-29 of 177-33	E	Exhibit R-4a (PE 0304260F)	

	Exh	DATE	DATE February 2006							
BUDGET ACTIVITY 07 Operational System Development			[0304260F Airborne SIGINT Enterprise 5186 (JMIP)			PROJECT NUMBER AND TITLE 5186 Special Programs (Airborne SIGINT Development - Special Platforms)			
	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
5186	Special Programs (Airborne SIGINT Development - Special Platforms)	0.000	0.000	4.228	4.349	4.470	4.691	4.888	Continuing	TBD
	Quantity of RDT&E Articles	0	0	C	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

- (U) This project supports special SIGINT studies as well as the development and integration of advanced SIGINT capabilities on Senior Scout and other classified platforms. Through extensive utilization of commercial-off-the-shelf (COTS)-based solutions to fielding of needed capabilities, it also incurs the need for continuous diminishing manufacturing sources integration efforts consistent with the COTS technology cycle.
- (U) Senior Scout development efforts will include antenna improvements, sensitivity upgrades, and radio frequency distribution upgrades. Additionally, development will begin to allow this platform to network with other SIGINT assets to increase collection accuracy.
- (U) This project provides the warfighter with a near term combat capability with increased capability improvements accomplished as soon as technology and risk achieve satisfactory levels. Sensors will be integrated and tested on various platforms as funding permits.
- (U) Budget Activity Justification: This program effort is Budget Activity 7, Operational Systems Development, because it involves Air Force RDT&E necessary to field essential operational capabilities.

(U)	B. Accomplishments/Planned Program (\$ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Signals Intelligence (SIGINT) Sensor Integration			4.228
(U)	Total Cost	0.000	0.000	4.228
(U)	C. Other Program Funding Summary (\$ in Millions)			

FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Cost to	Total Cost
Actual	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Complete	Total Cost

None

(U) D. Acquisition Strategy

(U) Signals Intelligence (SIGINT) capabilities will be integrated on to various classified platforms using an Evolutionary Acquisition approach.

Project 5186 R-1 Shopping List - Item No. 177-30 of 177-33

UNCLASSIFIED												
Exhibit R-3, RDT&E Project Cost Analysis DATE February 2006											06	
BUDGET ACTIVITY 07 Operational System Development					0304260F Airborne SIGINT Enterprise (JMIP)			erprise (PROJECT NUMBER AND TITLE			
(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 T	Carget Value of Contract
(U) Product Development SIGINT Sensor Integration Subtotal Product Development Remarks:	Various	Various	0.000	0.000 0.000		0.000 0.000		4.228 4.228	Jan-07	Continuing Continuing	TBD TBD	TBD TBD
(U) Total Cost			0.000	0.000		0.000		4.228		Continuing	TBD	TBD

Project 5186 R-1 Shopping List - Item No. 177-31 of 177-33

		UNULA	SSIFIED					
Exhibit	R-4, RDT&E	Schedule F	Profile			DATE February 2006		
UDGET ACTIVITY 7 Operational System Development	elopment			TLE rne SIGINT Ente	erprise 5186 Sp SIGINT	PROJECT NUMBER AND TITLE 5186 Special Programs (Airborne SIGINT Development - Special Platforms)		
U.S. AIR FORCE				Spec	ial P	rojects		
	FY06	FY07	FY08	FY09	FY10	FY11		
Hardware/Software Improvements								
Accuracy Improvements								
Network Ops								
					As	of: 10 Jan 06		
Project 5186	R-1	Shopping List - Ite	m No. 177-32 of 177-33	3		Exhibit R-4 (PE 0304260		

Exhibit R-4a, RDT&E Sch	DATE Fobruary 2006			
BUDGET ACTIVITY 07 Operational System Development	5186 S	February 2006 CT NUMBER AND TITLE Special Programs (Airborne T Development - Special rms)		
(U) Sensor Development on Senior Scout	FY 2005		FY 2006	FY 2007 2-4Q
Project 5186 R-1 Shoppin	ng List - Item No. 177-33 of 177-33		Exhibit	: R-4a (PE 0304260F)