

UNCLASSIFIED

PE NUMBER: 0305207F

PE TITLE: Manned Reconnaissance System

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2005

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0305207F Manned Reconnaissance System

Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	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	15.391	21.591	8.101	10.023	12.680	12.906	13.211	13.432	Continuing	TBD
4754 COBRA BALL	15.391	21.591	8.101	10.023	12.680	12.906	13.211	13.432	Continuing	TBD

(U) **A. Mission Description and Budget Item Justification**

(U) The RC-135 Operational Systems Development and enhancement activities project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of the RC-135 and its mission systems - both air and ground. Extensive utilization of commercial-off the-shelf (COTS) based solutions allows rapid fielding of needed capabilities through continuous technology refresh cycles and vanishing-vendor logistics mitigation efforts.

(U) The results of these efforts provide for preliminary assessments of technical feasibility, operability, or military utility as well as specific engineering implementations integrated into the various systems baseline configurations.

(U) These activities are managed by the Air Force through the BIG SAFARI program located within the Reconnaissance System Program Office at the Air Force Material Command / Aeronautical Systems Center. Included is technical oversight and management of all aircraft, ground and support system modifications, integration and flight test engineering responsibility, product assurance and acceptance testing, and logistics and training activities. Aircraft, aircraft sensor systems, and associated ground support system modifications planned for FY06-FY11 include support for three distinct RIVET JOINT baseline configurations [baseline 8, 9,10] and two distinct baselines [baselines 3 & 4] for COMBAT SENT. SEE CLASSIFIED Congressional budget exhibits.

(U) The world-wide challenge of keeping pace against technologically agile targets used by both nation and non-nation-state participants and driven by time-to-market forces of COTS technologies, demands a responsive and adaptive acquisition strategy for fielding 'baseline capabilities' that are logistically supportable at all locations. The BIG SAFARI program office uses an incrementally acquired 'baseline' strategy to mitigate risk and find affordable solutions.

This program will participate in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability.

(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.

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	14.726	13.283	16.570	12.379
(U) Current PBR/President's Budget	15.391	21.591	8.101	10.023
(U) Total Adjustments	0.665	8.308		
(U) Congressional Program Reductions	-0.010			
Congressional Rescissions	-0.134	-0.192		
Congressional Increases	1.100	8.500		
Reprogrammings	-0.291			
SBIR/STTR Transfer				

(U) **Significant Program Changes:**

FY05 Congressional Adds include: \$2M for a Light Weight SIGINT System (LITES) technology demonstration; \$1M for a Combat Sent Tactical ELINT System Modernization improvement risk reduction study; \$2.1M for Cobra Ball Long Wave Infrared Mid-Course Data Collection Capability study; \$1.1M for a Cobra Ball Hi-Res E/O Signature Analysis study; and \$2.3M for Collaborative Information Operations technology demonstration.

In FY06, \$8.4M was transferred from PE 0305207F, Project 4754 (Cobra Ball) to PE 0303601F (MILSATCOM terminals), Project 2487 (MILSATCOM terminals) for RC-135 communications terminal development for FAB-T (long-haul communications).

In FY07 \$2.4M was transferred from PE 0305207F, Project 4754 (Cobra Ball) for the same purposes as in FY06.

Exhibit R-2a, RDT&E Project Justification

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4754 COBRA BALL

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4754 COBRA BALL	15.391	21.591	8.101	10.023	12.680	12.906	13.211	13.432	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) **A. Mission Description and Budget Item Justification**

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(U) The results of these efforts provide for preliminary assessments of technical feasibility, operability, or military utility as well as specific engineering implementations integrated into the various systems baseline configurations.

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(U) The world-wide challenge of keeping pace against technologically agile targets used by both nation and non-nation-state participants and driven by time-to-market forces of COTS technologies, demands a responsive and adaptive acquisition strategy for fielding 'baseline capabilities' that are logistically supportable at all locations. The BIG SAFARI program office uses an incrementally acquired 'baseline' strategy to mitigate risk and find affordable solutions.

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(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.

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Continues Non-Recurring Engineering (NRE) for the Airborne Extremely High Frequency Communications system to be added to the RC-135 fleet.	3.730	5.000		
(U) Continues Non-Recurring Engineering (NRE) for the development and installation of improved mission sensor elements - see classified submission.	10.561	8.091	8.101	10.023
(U) Congressional Add: Cobra Ball Advanced Airborne Sensor (AAS) - \$1.1M	1.100			

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(U) Congressional Add: Lightweight SIGINT System demonstration	2.000			
(U) Congressional Add: COMBAT SENT Tactical ELINT System modernization study	1.000			
(U) Congressional Add: COBRA BALL Long Wave IR Mid-course data collection capability study	2.100			
(U) Congressional Add: COBRA BALL Hi-res E/O signature analysis study	1.100			
(U) Congressional Add: Collaborative information operations technology demonstration	2.300			
(U) Total Cost	15.391	21.591	8.101	10.023

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</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>Estimate</u>	<u>Complete</u>	
(U) PE 0305207F, APAF	129.380	120.544	121.692	130.603	146.033	150.559	154.236	156.020	Continuing	TBD
(U) PE 0305207F, OPAF	16.651	18.653	21.507	22.007	22.518	23.070	23.650	24.029	Continuing	TBD
(U) PE 0305207F, O&M	315.511	204.977	234.157	239.941	246.936	252.335	256.055	262.081	Continuing	TBD

(U) **D. Acquisition Strategy**

The RC-135 Rivet Joint, Cobra Ball and Combat Sent aircraft are maintained and upgraded by the BIG SAFARI Program Office through an evolutionary acquisition strategy.

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Exhibit R-3, RDT&E Project Cost Analysis

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(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2004 Cost</u>	<u>FY 2004 Cost</u>	<u>FY 2004 Award Date</u>	<u>FY 2005 Cost</u>	<u>FY 2005 Award Date</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u> L-3 COMM	CPFF/CPI F/FFP	L-3 COMM Greenville TX	15.372	15.391	Mar-04	21.591	Nov-05	8.101	Nov-06	10.023	Nov-07	Continuing	TBD	TBD
Subtotal Product Development			15.372	15.391		21.591		8.101		10.023		Continuing	TBD	TBD
Remarks:	All activity is based around the Programmed Depot Maintenance (PDM) airframe schedule which includes multiple contracts and organizations with overlapping and continuous periods of performance.													
(U) Total Cost			15.372	15.391		21.591		8.101		10.023		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

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Manned Reconnaissance Program

OUTYEARS

As of: 18 Jan 05

	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
	<div>★ Cobra Ball AAS</div>	<div>★ Cobra Ball HI Res EO</div> <div>★ COBRA BALL UAVIR</div> <div>★ Combat Sentinel ELINT</div> <div>★ Collaborative INFO OPS</div>						
	<div>AEHF NRE</div>	<div>AEHF NRE</div>						
★★	<div>Mission Sensors</div>	<div>Mission Sensors</div>	<div>Mission Sensors</div>	<div>Mission Support Systems</div>	<div>Mission Support Systems</div>	<div>Mission Support Systems</div>	<div>Mission Support Systems</div>	<div>Mission Support Systems</div>
	\$15.682M	\$21.591M	\$8.101M	\$10.023M	\$12.680M	\$12.906M	\$13.211M	\$13.432M

* Congressional Adds

* * See CLASSIFIED Submission for detailed breakout (mission sensors transition to PE 0304260F starting in FY07)



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Exhibit R-4a, RDT&E Schedule Detail

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(U) **Schedule Profile**FY 2004FY 2005FY 2006FY 2007

(U) Initiate Cobra Ball Hi Res E/O

1Q

(U) Complete Cobra Ball Hi Res E/O

4Q

(U) Initiate Cobra Ball LWIR Study

1Q

(U) Complete Initiate Cobra Ball LWIR Study

4Q

(U) Initiate Combat Sent TAC ELINT improvement study

1Q

(U) Complete Combat Sent TAC ELINT improvement study

4Q

(U) Initiate Collaborative INFO Operations

1Q

(U) Complete the Collaborative INFO study effort

4Q

(U) Initiate AEHF FAB-T terminal NRE development

1Q

(U) Transfer AEHF FAB-T terminal development effort to ESC

4Q

(U) Transfer all mission sensor efforts* to PE-0304260

4Q

(U) Initiate mission support systems efforts

1Q

(U) Initiate Cobra Ball Advanced Airborne Sensor (AAS)

1Q

(U) Complete the AAS study efforts

4Q

* SEE Classified Budget Submission