	RDT&E BUDGET ITEM	DATE	DATE February 2003								
	et activity System Development and Demons	SDD)		UMBER AND 14731F	ehicle (	UCAV)	PROJECT <b>5058</b>				
	COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
5058	Unmanned Combat Air Vehicle (UCAV)	0	39,127	175,944	423,447	468,356	307,803	100,845	86,789	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	2	6	8	0	0	0	0

Note: The UCAV Program Office is currently updating the program Life Cycle Cost Estimate. Cost and quantities will be revised in the FY05 PB to reflect Air Force's desired capabilities and configuration.

## (U) A. Mission Description

The Unmanned Combat Air Vehicle (UCAV) program will demonstrate and develop an unmanned, highly survivable and interoperable weapons system capable of effectively and affordably performing lethal and non-lethal Suppression of Enemy Air Defenses (SEAD)/Strike missions. Potential future missions for UCAV include Electronic Attack (EA), Directed Energy, Tactical Reconnaissance, Long Range Strike and Long Range Interdiction. This program will demonstrate the technical feasibility, military utility, and operational value of a UCAV system and will develop the initial and follow-on operational capabilities using an effects-based spiral development approach.

The UCAV program consists of an ongoing System Demonstration Program (SDP), broken into three spirals. Spiral 0, which began in FY99 and is funded by multiple Air Force and DARPA PEs, provides the core functionality for the UCAV system. Spiral 1 (previously referred to as System B), which began in August 2002, takes the system-level preliminary design of the next generation UCAV demonstrator begun under Spiral 0 and proceeds into detailed design and fabrication, further demonstrating and maturing UCAV technology. Spiral 2, beginning in FY04, will provide for Air Force directed operational capabilities and the development of up to 14 UCAV systems.

### (U) FY 2002 (\$ in Thousands)

(U) \$0 Accomplishments/Planned Program

(U) \$0 No Activity

(U) \$0 Total

### (U) FY 2003 (\$ in Thousands)

(U) \$0 Accomplishments/Planned Program

(U) \$35,591 Continuation of Spiral 0 and Spiral 1 of the Unmanned Combat Air Vehicle (UCAV) System Demonstration Program

- Design and intial component fabrication of the UCAV demonstrator air vehicle and mission control system

- Development/integration of the UCAV demonstrator's advanced avionics and communications

Project 5058 Page 1 of 5 Pages Exhibit R-2 (PE 0604731F)

	RD	T&E BUDGET ITEM JUSTIFICATION	ON SHEET (R-2 Exhib	oit)	DATE <b>Februa</b>	ry 2003
	SET ACTIVITY  System Dev	elopment and Demonstration (SDD)	PE NUMBER AND TITLE <b>0604731F Unmanne</b>	ed Combat Air	Vehicle (UCAV)	PROJECT <b>5058</b>
(U)	A. Mission Desc	ription Continued				
(U)	FY 2003 (\$ in Th	nousands) Continued				
(U)	\$3,536	<ul> <li>Requirements definition and development of ad Other Government Cost</li> <li>Mission Support of the SPO; travel, computer of</li> </ul>	•			
(U)	\$39,127	Total				
(U)	FY 2004 (\$ in Tl	nousands)				
(U)	\$0	Accomplishments/Planned Program				
(U)	\$157,444	Continuation of Spiral 0 and Spiral 1 of the UCA - Continue design and component fabrication of the UCAV - Continue development/integration of the UCAV - Continue development of advanced system software.	he UCAV demonstrator air vehicle demonstrator's advanced avionics ware			
(U)	\$14,524	Funds Spiral 2 system design and component fabr	rication.			
(U)	\$3,976	Other Government Cost - Mission Support of the SPO, travel, computer co	osts misc contracts test etc			
(U)	\$175,944	Total	osts, finse contracts, test, etc.			
(U) (U)	and operational v	ity Justification ould be under Budget Activity 05, System Development value of a UCAV system. ange Summary (\$ in Thousands)	t and Demonstration (SDD) becaus	se it is demonstrating	g the technical feasibility	, military utility
(0)	C. I Togram Ch	ange Summary (\$\psi\$ in Thousands)	FY 2002	FY 2003	FY 2004	Total Cos
(U)	Previous Preside	ent's Budget	0	40,000	180,000	TBD
(U)	Appropriated Va		0	40,000		
(U)	•	Appropriated Value		422		
	•	/General Reductions ss Innovative Research		-423		
		ther Above Threshold Reprogram		-450		
	d. Below Thresh	old Reprogram				
P	roject 5058		Page 2 of 5 Pages		Exhibit R-2 (	PE 0604731F)

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)  DATE February 200											
•	GET ACTIVITY  System Developmer	nt and Dem	onstratio	on (SDD)		NUMBER AND <b>04731F</b>		d Comba	t Air Veh	nicle (UCAV)	PROJECT <b>5058</b>
(U)	C. Program Change Summ	nary (\$ in Tho	usands) Cor	ntinued		F	FY 2002	FY 2003	3 F	Y 2004	Total Cost
(U) (U)	e. Rescissions Adjustments to Budget Year Current Budget Submit/FY		03 PBR			-	0	39,127		-4,056 75,944	TBD
(U)	Significant Program Change FY04 decrease to fund other		D requireme	nts.							
(U)	D. Other Program Funding	Summary (\$ FY 2002 Actual	in Thousand FY 2003 Estimate	<u>fy 2004</u> <u>Estimate</u>	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>
(U)	AF S&T (PE0603333F) DARPA (PE0603765E) DARPA (PE0603285E)	18,903 1,712 60,000	17,608 0 59,492	25 500	3,923						
(U)	AF (PE0207256F) Navy RDT&E	0	0 0	25,590 4,892 20,000	3,923 4,924 35,000	4,879 15,000	4,870	154,848	254,822	Continuing Continuing	TBD TBD
(U)	(PE0604730N) Navy RDT&E (PE0604731N)	0	0	700	-47,900	10,000				Continuing	TBD
(U)	Navy RDT&E (PE0207256N)	0	0	5,000	5,000	5,000	5,000	290,087	483,900	Continuing	TBD
(U)	Aircraft Procurement (PE0207255F)	0	0	0	0	0	35,000	336,977	359,749	Continuing	TBD
	E. Acquisition Strategy Near-term acquisition strateg contract with Boeing Phanton 1st quarter of FY06. The acc capabilities. D,PA&E is lead decision options for operation	m Works, St. L quisition strateg ling a UCAV st	ouis, MO. T gy includes th tudy with sup	the Spiral 1 one developme oport from U	ption in the Cent of addition SD (AT&L),	OTA was exe nal UCAV sy AF, and Nav	rcised by DA ystems for an yy. The study	RPA in Augu early military assesses UC	ust 2002 and y assessmen AV technol	d will take the prog t and conops devel	gram through the opment of UCAV
P	roject 5058				Page 3 of	f 5 Pages				Exhibit R-2 (	PE 0604731F)

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)										DATE February 2003				
JDGET ACTIVITY 5 - System Development and Demonstration (SDD)	PE NUMBER AND TITLE  0604731F Unmanned Combat Air V								-			PROJECT <b>5058</b>		
J) <u>F. Schedule Profile</u>														
	1	<u>FY 2</u> 2	. <u>002</u> 3	4	1	<u>FY</u> 2	2 <u>003</u> 3	4	1	<u>FY 2</u> 2	2 <u>004</u> 3	4		
J) Conduct Spiral 1 Mid-Term Review						X								
<ul><li>J) Spiral 1 Final Design Review</li><li>J) Block 4 Software Development Complete</li></ul>									X			X		
, Book Bottmare Bevelopment Complete												11		
Project 5058	D	ge 4 of 5 Pa							Evbib:	R-2 (PI	T 0604	704F		

Note		RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)  DATE February 2003												
CU   UCAV System Demonstration Program   Signal 2 Development   Signal 2 Sign			nt and Demo	onstration (	(SDD)			nned Com	ıbat Air Ve	ehicle (UC	CAV)	PROJECT <b>5058</b>		
UCAV System Demonstration Program   15   15   15   15   15   15   15   1	(U)	A. Project Cost Breakdown	n (\$ in Thousan	ds)				FV '	2002	FV 20	03	FY 2004		
CU    Other Government Cost	(U)	UCAV System Demonstration	on Program					11.	<u> 2002</u>		_	157,444		
(U) Total  (U) B. Budget Acquisition History and Planning Information (\$ in Thousands)  (U) Performing Organizations:  Contractor or Contract Government Method/Type Award or Performing Project Performing or Funding Obligation Activity Office Total Prior Budget Budget Budget Budget to Activity Yehicle Date EAC EAC to FY 2002 FY 2002 FY 2003 FY 2004 Complete Product Development Organizations  Boeing Phantom Works, St. Section 845, Basic TBD TBD TBD 35,591 171,968 Continuing Activity March 1999 (OTA) Authority March 1999 (OTA) Agreement  Support and Management Organizations  Various  Test and Evaluation Organizations  Subtotal Product Development Subtotal Product Development Subtotal Support and Management Subtotal Subtotal Support and Management Subtotal Subtotal Support and Management Sub	(U)	•	C								0	14,524		
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)  (U) Performing Organizations:  Contractor or Contract Government Method/Type Award or Performing Project Performing or Funding Obligation Activity Office Total Prior Budget Budget Budget Budget or Product Development Organizations  Boeing Phantom Works, St. Section 845, Basic TBD TBD TBD 35,591 171,968 Continuing Louis, MO. Other agreement Transactions awarded in Authority March 1999 (OTA)  Agreement Support and Management Organizations  Various Test and Evaluation Organizations  Subtotals  Subtotals  Subtotal Support and Management  Support and Management Organizations  Subtotal Support and Management  Subtotal Support and Management  Subtotal Support and Management  Subtotal Support and Management  Support and Management  Support and Management  Support and Management  Subtotal Support and Management  Subtotal Support and Management  Subtotal Support and Management	(U)									3,53	36	3,976		
(U) Performing Organizations:  Contractor or Contract Government Method/Type Award or Performing Project Performing or Funding Obligation Activity Office Total Prior Budget Budget Budget Product Development Organizations Boeing Phantom Works, St. Section 845, Basic TBD	(U)	Total								39,12	27	175,944		
Contractor or Government Method/Type Award or Performing Project Performing or Funding Obligation Activity Office Total Prior Budget Budget Budget to Activity Office Total Prior Budget Budget Budget to Product Development Organizations Boeing Phantom Works, St. Section 845, Basic TBD TBD TBD 35,591 171,968 Continuing Louis, MO. Other agreement Transactions awarded in Authority March 1999 (OTA) Agreement Support and Management Organizations Various Test and Evaluation Organizations Subtotals Subtotals Subtotal Product Development Support and Management Support and Mana	(U)	B. Budget Acquisition History	ory and Plannin	ng Information	ı (\$ in Thousand	<u>ls</u> )								
Government Method/Type Award or Performing Project Performing or Funding Obligation Activity Office Total Prior Budget Budget Budget Budget Ophical Support and Management  Method/Type Award or Performing Obligation Activity Office Total Prior Budget Budget Budget Budget Ophical Support and Management  Product Development Organizations  Boeing Phantom Works, St. Section 845, Basic TBD TBD TBD 35,591 171,968 Continuing Louis, MO. Other agreement Transactions awarded in Authority (OTA) Agreement  Support and Management Organizations  Various Total Prior Budget Budget Budget Budget Budget Ophical Subtotal Product Development Subtotal Support and Management Support Su	(U)	<b>Performing Organizations:</b>												
Performing or Funding Obligation Activity Office Total Prior Budget Budget Budget to Activity Vehicle Date EAC EAC to FY 2002 FY 2002 FY 2003 FY 2004 Complete Product Development Organizations  Boeing Phantom Works, St. Section 845, Basic TBD TBD TBD 35,591 171,968 Continuing Louis, MO. Other agreement Transactions awarded in Authority March 1999 (OTA) Agreement Support and Management Organizations  Various Test and Evaluation Organizations  Subtotals  Subtotal Product Development Organization Activity Office Total Prior Budget Budget Budget to Ty 2004 Complete Product Development Subtotal Support and Management Organization Subtotal Support S	1	Contractor or	Contract											
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(OTA) Agreement  Support and Management Organizations Various Test and Evaluation Organizations  Total Prior Budget Budget Budget Budget Budget to FY 2002 FY 2003 FY 2004 Complete Product Development Subtotal Product Development Subtotal Support and Management  Subtotal Support and Management  OTA  Total Prior Budget Budget Budget Budget to FY 2002 FY 2003 FY 2004 Complete Product Development Subtotal Support and Management  35,591 171,968 TBD	1													
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Various Test and Evaluation Organizations  Total Prior Budget Budget Budget Budget to Subtotals Subtotal Product Development Subtotal Support and Management  Substitute Support Support Substitute Support Substitute Support Substitute Support Substitute Support Substitute Support Substitute	1	Comment and Management On	_											
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Subtotal Product Development 35,591 171,968 TBD Subtotal Support and Management 3,536 3,976 TBD	1	Subtotals												
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												TBD		
Subtotal Test and Evaluation		Subtotal Test and Evaluation							2,220	2,5 . 0	155	120		
Total Project 39,127 175,944 TBD									39,127	175,944	TBD	TBD		
		,							,	•				
Project 5058 Page 5 of 5 Pages Exhibit R-3 (PE 060473	P	roject 5058			Рас	ge 5 of 5 Pag	res			Exhib	oit R-3 (PE 0	)604731F)		