

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)									DATE February 2003		
BUDGET ACTIVITY 05 - System Development and Demonstration (SDD)					PE NUMBER AND TITLE 0604731F Unmanned Combat Air Vehicle (UCAV)					PROJECT 5058	
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	
<p>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.</p> <p>(U) <u>A. Mission Description</u></p> <p>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.</p> <p>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.</p> <p>(U) <u>FY 2002 (\$ in Thousands)</u></p> <p>(U) \$0 Accomplishments/Planned Program</p> <p>(U) \$0 No Activity</p> <p>(U) \$0 Total</p> <p>(U) <u>FY 2003 (\$ in Thousands)</u></p> <p>(U) \$0 Accomplishments/Planned Program</p> <p>(U) \$35,591 Continuation of Spiral 0 and Spiral 1 of the Unmanned Combat Air Vehicle (UCAV) System Demonstration Program</p> <p style="margin-left: 40px;">- Design and initial component fabrication of the UCAV demonstrator air vehicle and mission control system</p> <p style="margin-left: 40px;">- Development/integration of the UCAV demonstrator's advanced avionics and communications</p>											
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(U) **A. Mission Description Continued**(U) **FY 2003 (\$ in Thousands) Continued**

- Requirements definition and development of advanced system software

(U) \$3,536 Other Government Cost

- Mission Support of the SPO; travel, computer costs, misc contracts, etc.

(U) \$39,127 Total

(U) **FY 2004 (\$ in Thousands)**

(U) \$0 Accomplishments/Planned Program

(U) \$157,444 Continuation of Spiral 0 and Spiral 1 of the UCAV System Demonstration Program

- Continue design and component fabrication of the UCAV demonstrator air vehicle and mission control system

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

- Continue development of advanced system software

(U) \$14,524 Funds Spiral 2 system design and component fabrication.

(U) \$3,976 Other Government Cost

- Mission Support of the SPO, travel, computer costs, misc contracts, test, etc.

(U) \$175,944 Total

(U) **B. Budget Activity Justification**

This program should be under Budget Activity 05, System Development and Demonstration (SDD) because it is demonstrating the technical feasibility, military utility and operational value of a UCAV system.

(U) **C. Program Change Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Total Cost</u>
(U) Previous President's Budget	0	40,000	180,000	TBD
(U) Appropriated Value	0	40,000		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions		-423		
b. Small Business Innovative Research				
c. Omnibus or Other Above Threshold Reprogram		-450		
d. Below Threshold Reprogram				

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<p>(U) <u>C. Program Change Summary (\$ in Thousands) Continued</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>FY 2002</u></th> <th style="text-align: center;"><u>FY 2003</u></th> <th style="text-align: center;"><u>FY 2004</u></th> <th style="text-align: center;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>e. Rescissions</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) Adjustments to Budget Years Since FY 2003 PBR</td> <td></td> <td></td> <td style="text-align: right;">-4,056</td> <td></td> </tr> <tr> <td>(U) Current Budget Submit/FY 2004 PBR</td> <td style="text-align: right;">0</td> <td style="text-align: right;">39,127</td> <td style="text-align: right;">175,944</td> <td style="text-align: right;">TBD</td> </tr> </tbody> </table> <p>(U) <u>Significant Program Changes:</u> FY04 decrease to fund other Air Force/DOD requirements.</p> <p>(U) <u>D. Other Program Funding Summary (\$ in Thousands)</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>FY 2002</u></th> <th style="text-align: center;"><u>FY 2003</u></th> <th style="text-align: center;"><u>FY 2004</u></th> <th style="text-align: center;"><u>FY 2005</u></th> <th style="text-align: center;"><u>FY 2006</u></th> <th style="text-align: center;"><u>FY 2007</u></th> <th style="text-align: center;"><u>FY 2008</u></th> <th style="text-align: center;"><u>FY 2009</u></th> <th style="text-align: center;"><u>Cost to</u></th> <th style="text-align: center;"><u>Total Cost</u></th> </tr> <tr> <th></th> <th style="text-align: center;"><u>Actual</u></th> <th style="text-align: center;"><u>Estimate</u></th> <th style="text-align: center;"><u>Estimate</u></th> <th style="text-align: center;"><u>Estimate</u></th> <th style="text-align: center;"><u>Estimate</u></th> <th style="text-align: center;"><u>Estimate</u></th> <th style="text-align: center;"><u>Estimate</u></th> <th style="text-align: center;"><u>Estimate</u></th> <th style="text-align: center;"><u>Complete</u></th> <th></th> </tr> </thead> <tbody> <tr> <td>(U) AF S&T (PE0603333F)</td> <td style="text-align: right;">18,903</td> <td style="text-align: right;">17,608</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) DARPA (PE0603765E)</td> <td style="text-align: right;">1,712</td> <td style="text-align: right;">0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) DARPA (PE0603285E)</td> <td style="text-align: right;">60,000</td> <td style="text-align: right;">59,492</td> <td style="text-align: right;">25,590</td> <td style="text-align: right;">3,923</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) AF (PE0207256F)</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: right;">4,892</td> <td style="text-align: right;">4,924</td> <td style="text-align: right;">4,879</td> <td style="text-align: right;">4,870</td> <td style="text-align: right;">154,848</td> <td style="text-align: right;">254,822</td> <td style="text-align: center;">Continuing</td> <td style="text-align: right;">TBD</td> </tr> <tr> <td>(U) Navy RDT&E (PE0604730N)</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: right;">20,000</td> <td style="text-align: right;">35,000</td> <td style="text-align: right;">15,000</td> <td></td> <td></td> <td></td> <td style="text-align: center;">Continuing</td> <td style="text-align: right;">TBD</td> </tr> <tr> <td>(U) Navy RDT&E (PE0604731N)</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: right;">700</td> <td style="text-align: right;">-47,900</td> <td style="text-align: right;">10,000</td> <td></td> <td></td> <td></td> <td style="text-align: center;">Continuing</td> <td style="text-align: right;">TBD</td> </tr> <tr> <td>(U) Navy RDT&E (PE0207256N)</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: right;">5,000</td> <td style="text-align: right;">5,000</td> <td style="text-align: right;">5,000</td> <td style="text-align: right;">5,000</td> <td style="text-align: right;">290,087</td> <td style="text-align: right;">483,900</td> <td style="text-align: center;">Continuing</td> <td style="text-align: right;">TBD</td> </tr> <tr> <td>(U) Aircraft Procurement (PE0207255F)</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: right;">0</td> <td style="text-align: right;">35,000</td> <td style="text-align: right;">336,977</td> <td style="text-align: right;">359,749</td> <td style="text-align: center;">Continuing</td> <td style="text-align: right;">TBD</td> </tr> </tbody> </table> <p>(U) <u>E. Acquisition Strategy</u> Near-term acquisition strategy is to continue the UCAV System Demonstration Program effort under the current DARPA/Air Force Other Transactions Authority (OTA) contract with Boeing Phantom Works, St. Louis, MO. The Spiral 1 option in the OTA was exercised by DARPA in August 2002 and will take the program through the 1st quarter of FY06. The acquisition strategy includes the development of additional UCAV systems for an early military assessment and conops development of UCAV capabilities. D,PA&E is leading a UCAV study with support from USD (AT&L), AF, and Navy. The study assesses UCAV technology opportunities and will develop decision options for operational capabilities. The results of the study will be used to define out-year efforts and acquisition strategy.</p>											<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Total Cost</u>	e. Rescissions					(U) Adjustments to Budget Years Since FY 2003 PBR			-4,056		(U) Current Budget Submit/FY 2004 PBR	0	39,127	175,944	TBD		<u>FY 2002</u>	<u>FY 2003</u>	<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>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) AF S&T (PE0603333F)	18,903	17,608									(U) DARPA (PE0603765E)	1,712	0									(U) DARPA (PE0603285E)	60,000	59,492	25,590	3,923							(U) AF (PE0207256F)	0	0	4,892	4,924	4,879	4,870	154,848	254,822	Continuing	TBD	(U) Navy RDT&E (PE0604730N)	0	0	20,000	35,000	15,000				Continuing	TBD	(U) 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
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(U) F. Schedule Profile

	<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) Conduct Spiral 1 Mid-Term Review						X						
(U) Spiral 1 Final Design Review									X			
(U) Block 4 Software Development Complete												X

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)										DATE February 2003		
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT		
05 - System Development and Demonstration (SDD)					0604731F Unmanned Combat Air Vehicle (UCAV)					5058		
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>												
					<u>FY 2002</u>		<u>FY 2003</u>		<u>FY 2004</u>			
(U) UCAV System Demonstration Program							35,591		157,444			
(U) Spiral 2 Development							0		14,524			
(U) Other Government Cost							3,536		3,976			
(U) Total							39,127		175,944			
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>												
(U) <u>Performing Organizations:</u>												
<u>Contractor or Government</u>		<u>Contract Method/Type</u>		<u>Award or Obligation</u>		<u>Performing Activity</u>		<u>Project Office</u>		<u>Total Prior to FY 2002</u>		
<u>Performing Activity</u>		<u>or Funding Vehicle</u>		<u>Date</u>		<u>EAC</u>		<u>EAC</u>		<u>Budget FY 2002</u>		
<u>Budget FY 2003</u>		<u>Budget FY 2004</u>		<u>Budget to Complete</u>		<u>Total Program</u>						
<u>Product Development Organizations</u>												
Boeing Phantom Works, St. Louis, MO.		Section 845, Other Transactions Authority (OTA) Agreement		Basic agreement awarded in March 1999		TBD		TBD		35,591 171,968 Continuing TBD		
<u>Support and Management Organizations</u>												
Various								3,536 3,976		Continuing TBD		
<u>Test and Evaluation Organizations</u>												
					<u>Total Prior to FY 2002</u>		<u>Budget FY 2002</u>		<u>Budget FY 2003</u>		<u>Budget FY 2004</u>	
<u>Subtotals</u>									<u>Budget to Complete</u>		<u>Total Program</u>	
Subtotal Product Development							35,591		171,968		TBD TBD	
Subtotal Support and Management							3,536		3,976		TBD TBD	
Subtotal Test and Evaluation												
Total Project							39,127		175,944		TBD TBD	
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