

UNCLASSIFIED

PE NUMBER: 0604731F

PE TITLE: Joint Unmanned Combat Air System (J-UCAS)

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2005

BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604731F Joint Unmanned Combat Air System (J-UCAS)

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	160.551	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5058 Unmanned Combat Air Vehicle (UCAV)	160.551	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

Note: In FY06 the Joint Unmanned Combat Air Systems (J-UCAS) program was transferred from the Defense Advanced Research Projects Agency (DARPA) to be a joint program led by the Air Force with Navy representation. The program is undergoing a restructure and will realign the adjusted resources in the next budget cycle to advance the J-UCAS program. Funding is being realigned from PEs 0603400D8Z and 0604400D8Z to PEs 0603400F and 0604400F, respectively.

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

The Joint Unmanned Combat Air Systems (J-UCAS) program is a joint effort to develop and demonstrate unmanned combat capabilities for high-threat Suppression of Enemy of Air Defense (SEAD), Information Operations/ Electronic Attack, Persistent Surveillance/Reconnaissance, and related strike missions within the emerging global command and control architecture for the warfighting community.

The J-UCAS program combines and expands the efforts that were previously conducted under the DARPA/Air Force Unmanned Combat Air Vehicle (UCAV) program and the DARPA/Navy Naval UCAV (UCAV-N) program. Although these efforts were targeted towards service-specific needs, the Department recognized the potential for significant synergy by combining the programs. The accomplishments and ongoing efforts of the X-45A technology demonstrator, as well as the development of the X-47A demonstrator, are reducing the risk of the "operationalized" demonstration system being developed for a joint early operational assessment (OA) planned for the FY07-10 timeframe. The J-UCAS concept incorporates the next generation family of demonstrator air vehicles, together with common subsystems (e.g. sensors, payloads, communications) and a Common Operating System to achieve the system's diverse mission functionality. These common system elements will maximize mission flexibility and operational versatility while reducing overall costs and maintaining schedule toward a joint early OA.

The J-UCAS Office operates in close coordination with Service users and other operational components. The program is focused on demonstrating capabilities that support both Services and enable an operational system development decision by the end of the decade.

This PE only has FY 2004 funding. In FY 2005 funding was moved to PEs 0603400D8Z and 0604400D8Z. The program will be moving to PEs 0603400F and 0604400F in FY 2006.

This is a BA 05 program, System Development and Demonstration, to develop and demonstrate unmanned combat air system 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	174.449			
(U) Current PBR/President's Budget	160.551	0.000		
(U) Total Adjustments	-13.898	0.000		
(U) Congressional Program Reductions				
Congressional Rescissions	-15.000			
Congressional Increases				
Reprogrammings	6.373			
SBIR/STTR Transfer	-5.271			

(U) **Significant Program Changes:**

FY06: The program is undergoing a restructure and will realign the adjusted resources in the next budget cycle to advance the J-UCAS program. Funding is being realigned from PEs 0603400D8Z and 0604400D8Z to PEs 0603400F and 0604400F, respectively.

Exhibit R-2a, RDT&E Project Justification

DATE

February 2005

BUDGET ACTIVITY 05 System Development and Demonstration (SDD)					PE NUMBER AND TITLE 0604731F Joint Unmanned Combat Air System (J-UCAS)			PROJECT NUMBER AND TITLE 5058 Unmanned Combat Air Vehicle (UCAV)		
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
5058 Unmanned Combat Air Vehicle (UCAV)	160.551	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

Note: In FY06 the Joint Unmanned Combat Air Systems (J-UCAS) program was transferred from the Defense Advanced Research Projects Agency (DARPA) to be a joint program led by the Air Force with Navy representation. The program is undergoing a restructure and will realign the adjusted resources in the next budget cycle to advance the J-UCAS program. Funding is being realigned from PEs 0603400D8Z and 0604400D8Z to PEs 0603400F and 0604400F, respectively.

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

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This PE only has FY 2004 funding. In FY 2005 funding was moved to PEs 0603400D8Z and 0604400D8Z. The program will be moving to PEs 0603400F and 0604400F in FY 2006.

This is a BA 05 program, System Development and Demonstration, to develop and demonstrate unmanned combat air system capabilities.

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

FY 2004 FY 2005 FY 2006 FY 2007

(U) Accomplishments/Planned Program

0.000

(U) Continuation of Spiral 0 and Spiral 1 of the Unmanned Combat Air Vehicle (UCAV) System Demonstration Program

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

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

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Exhibit R-2a, RDT&E Project Justification								DATE February 2005		
BUDGET ACTIVITY 05 System Development and Demonstration (SDD)				PE NUMBER AND TITLE 0604731F Joint Unmanned Combat Air System (J-UCAS)			PROJECT NUMBER AND TITLE 5058 Unmanned Combat Air Vehicle (UCAV)			
- Requirements definition and development of advanced system software										
(U)	Other Government Cost									
- Mission Support of the SPO; travel, computer costs, misc contracts, etc.										
(U)	Continuation of Joint Unmanned Combat Air System (J-UCAS) Demonstration Program						148.660			
- Continue design and component fabrication of the J-UCAS demonstrator air vehicle and mission control system										
- Continue development/integration of the J-UCAS demonstrator's advanced avionics and communications										
- Continue development of advanced system software										
(U)	Early Operational Assessment System planning and design (formerly referred to as Spiral 2)						5.894			
(U)	Other Government Cost						5.997			
- Mission Support of the SPO, travel, computer costs, misc contracts, test, etc.										
(U)	Total Cost						160.551		0.000 0.000 0.000	
(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)	AF S&T (PE0603333F)									
(U)	DARPA (PE0603765E)									
(U)	41.385	0.000								
(U)	2.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000		TBD
(U)	117.865	0.000	0.000	0.000	0.000	0.000	0.000	0.000		TBD
(U)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		TBD
(U)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		TBD
(U)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		TBD
(U)	0.000	354.794	0.000	0.000	0.000	0.000	0.000	0.000		TBD
(U)	0.000	217.401	0.000	0.000	0.000	0.000	0.000	0.000		TBD
(U)	0.000	0.000	77.800	0.000	0.000	0.000	0.000	0.000		
(U)	0.000	0.000	272.300	400.100	554.100	785.500	955.200	1064.100	Continuing	TBD
(U)	D. Acquisition Strategy									
The J-UCAS program blends the advantages of both the Advanced Technology Demonstration (ATD) and the Advanced Concept Technology Demonstration (ACTD)										
Project 5058 R-1 Shopping List - Item No. 59-5 of 59-9 Exhibit R-2a (PE 0604731F)										

Exhibit R-2a, RDT&E Project Justification		DATE February 2005
BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604731F Joint Unmanned Combat Air System (J-UCAS)	PROJECT NUMBER AND TITLE 5058 Unmanned Combat Air Vehicle (UCAV)
<p>concepts to facilitate rapid development and integration of advanced technologies in an experimental system that addresses operational needs. Using the next generation of demonstrator air vehicle families, together with common subsystems and a Common Operating System, this nontraditional approach also incorporates key acquisition considerations (i.e., user requirements, comprehensive system lifecycle perspective, and rigorous risk mitigation processes) to provide the necessary insights, operational data, and identified options for the services to make an informed decision for accelerated acquisition near the end of the decade.</p>		
Project 5058	R-1 Shopping List - Item No. 59-6 of 59-9	Exhibit R-2a (PE 0604731F)

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Exhibit R-3, RDT&E Project Cost Analysis												DATE February 2005		
BUDGET ACTIVITY 05 System Development and Demonstration (SDD)						PE NUMBER AND TITLE 0604731F Joint Unmanned Combat Air System (J-UCAS)						PROJECT NUMBER AND TITLE 5058 Unmanned Combat Air Vehicle (UCAV)		
(U) <u>Cost Categories</u> (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> Boeing Phantom Works, St. Louis, MO.	Section 845, Other Transactions Authority (OTA) Agreement	Boeing Phantom Works, St. Louis, MO.		154.554	Dec-04							Continuing	TBD	TBD
Subtotal Product Development Remarks:			0.000	154.554		0.000		0.000		0.000		Continuing	TBD	TBD
(U) <u>Support</u> Various				5.997								Continuing	TBD	
Subtotal Support Remarks:			0.000	5.997		0.000		0.000		0.000		Continuing	TBD	0.000
(U) <u>Test & Evaluation</u>														
Subtotal Test & Evaluation Remarks:			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
(U) <u>Management</u>														
Subtotal Management Remarks:			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
(U) Total Cost			0.000	160.551		0.000		0.000		0.000		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2005
BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604731F Joint Unmanned Combat Air System (J-UCAS)	PROJECT NUMBER AND TITLE 5058 Unmanned Combat Air Vehicle (UCAV)
<p>N/A – This PE provides funds to develop and demonstrate unmanned combat capabilities for high-threat missions.</p>		
Project 5058	R-1 Shopping List - Item No. 59-8 of 59-9	Exhibit R-4 (PE 0604731F)

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Exhibit R-4a, RDT&E Schedule Detail

DATE

February 2005

BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604731F Joint Unmanned Combat
Air System (J-UCAS)

PROJECT NUMBER AND TITLE

5058 Unmanned Combat Air Vehicle
(UCAV)(U) Schedule ProfileFY 2004FY 2005FY 2006FY 2007

(U) Common Systems development begins

3Q

(U) J-UCAS Demonstrator begins

1Q

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The program is undergoing a restructure and will realign the adjusted resources in the next budget cycle to advance the J-UCAS program.