

**UNCLASSIFIED**

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)									DATE June 2001		
BUDGET ACTIVITY 03 - Advanced Technology Development				PE NUMBER AND TITLE 0603245F Flight Vehicle Technology Integration					PROJECT 2568		
COST (\$ in Thousands)		FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
2568	Flight Vehicle Technology Integration	7,710	17,960	0	0	0	0	0	0	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0
<p>Note: Beginning in FY 2002, this program element (PE) has been eliminated. The ongoing technical efforts from Project 2568 have been transferred to PE 0603211F, Aerospace Structures, Project 4920, Flight Vehicle Tech Integration.</p> <p>(U) <b><u>A. Mission Description</u></b>            This program integrates and demonstrates advanced flight vehicle technologies that will improve the performance and supportability of existing and future manned and unmanned aerospace vehicles. System level integration brings together the aerospace vehicle technologies along with avionics, propulsion, and weapon systems to flight demonstrate them in a near-realistic operational environment. Integration and flight test demonstrations reduce the risk and time required to transition technologies into operational aircraft. This program provides proven aerospace vehicle technologies for all-weather, day or night operations, and technologies for improved affordability. Note: In FY 2001, Congress added \$2.0 million for explosion resistant fuel tank lining materials and \$4.0 million for the conduct of a Trans-Atmospheric Aerospace Plane (TAAP) study.</p> <p>(U) <b><u>FY 2000 (\$ in Thousands)</u></b></p> <p>(U) \$2,180      Developed and integrated advanced aeromechanics, propulsion, and flight control technologies that will increase combat effectiveness for Air Force aircraft systems. Completed fabrication of next generation exhaust nozzle and airframe structural critical components.</p> <p>(U) \$1,882      Developed and flight-tested control strategies to extend range, ensure safe operation, and allow precision close operations of mixed manned and unmanned aerospace vehicles. Continued development and flight-test control strategies to extend range, ensure safe operation, and allow precision close operations of mixed manned and unmanned aerospace vehicles. Continued unmanned aerospace vehicle technology development.</p> <p>(U) \$3,648      Developed flight test units of electric actuator stabilators for reducing weight and manufacturing technologies as they relate to the unmanned aerospace vehicle mission. Integrated and demonstrated advanced electric actuator technologies to demonstrate air-to-air combat effectiveness for aerospace vehicles.</p> <p>(U) \$7,710      Total</p>											
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<b>(U) A. Mission Description Continued</b>					
<b>(U) FY 2001 (\$ in Thousands)</b>					
(U)	\$10,845	Develop and demonstrate technologies to support the joint Air Force/Defense Advanced Research Projects Agency unmanned combat air vehicle goals. Demonstrate lightweight/low-cost composite structures, multifunction apertures, compact low-observable inlets and exhaust, and advanced materials technologies for affordable low-observables. Demonstrate advanced weapons suspension and release technologies, and the integration of human system interface technologies for advanced manned and unmanned operations.			
(U)	\$1,115	Develop and demonstrate advanced flight control techniques for affordable and reliable autonomous control. Integrate, develop, and test advanced vehicle management technology with advanced system prognostics and autonomous control software to achieve reliability and affordability goals. Complete integrated flight control technology specification for unmanned air vehicles.			
(U)	\$2,000	Initiate Congressionally directed effort to address advanced technology development of explosion issues associated with integration of explosion resistant fuel tank lining materials.			
(U)	\$4,000	Initiate Congressionally directed efforts to conduct a Trans-Atmospheric Aerospace Plane (TAAP) study, to provide a comprehensive evaluation of future strike military utility in order to identify technologies that must be pursued by the Air Force.			
(U)	\$17,960	Total			
<b>(U) FY 2002 (\$ in Thousands)</b>					
(U)	\$0	Efforts transferred to PE 0603211F, Aerospace Structures, Project 4920, Flight Vehicle Tech Integration.			
(U)	\$0	Total			
<b>(U) B. Budget Activity Justification</b>					
This program is in Budget Activity 3, Advanced Technology Development, since it develops and demonstrates technologies for existing system upgrades and/or new system developments that have military utility and address warfighter needs.					
<b>(U) C. Program Change Summary (\$ in Thousands)</b>					
		<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Total Cost</u>
(U)	Previous President's Budget (FY 2001 PBR)	8,289	13,184	13,937	
(U)	Appropriated Value	8,335	18,126		
(U)	Adjustments to Appropriated Value				
	a. Congressional/General Reductions	-1			
	b. Small Business Innovative Research				
	c. Omnibus or Other Above Threshold Reprogram	-537			
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				June 2001
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(U) <b><u>C. Program Change Summary (\$ in Thousands) Continued</u></b>				
	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Total Cost</u>
d. Below Threshold Reprogram	-54			
e. Rescissions	-33	-166		
(U) Adjustments to Budget Years Since FY 2001 PBR			-13,937	
(U) Current Budget Submit/FY 2002 PBR	7,710	17,960	0	TBD
(U) <b><u>Significant Program Changes:</u></b>	Changes to this program since the previous President's Budget are due to Program Element realignment in the Science and Technology Program.			
(U) <b><u>D. Other Program Funding Summary (\$ in Thousands)</u></b>				
(U) Related Activities:				
(U) PE 0602201F, Aerospace Flight Dynamics				
(U) PE 0603106F, Logistics Systems Technology.				
(U) PE 0603211F, Aerospace Structures.				
(U) PE 0604237F, Variable Stability In-Flight Simulation Test Aircraft.				
(U) This project has been coordinated through the Reliance process to harmonize efforts and eliminate duplication.				
(U) <b><u>E. Acquisition Strategy</u></b>	Not Applicable.			
(U) <b><u>F. Schedule Profile</u></b>	Not Applicable.			