

UNCLASSIFIED

PE NUMBER: 0604233F
 PE TITLE: Specialized Undergraduate Pilot Training

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2004
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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604233F Specialized Undergraduate Pilot Training
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Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	1.772	3.239	3.359	8.548	3.629	3.701	3.773	Continuing	TBD
4102 Joint Primary Aircraft Training System (JPATS)	1.772	1.881	1.943	7.103	2.142	2.174	2.205	Continuing	TBD
4376 T-38 Avionics Upgrade Program (AUP)	0.000	1.358	1.416	1.445	1.487	1.527	1.568	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Supports Air Education and Training Command's (AETC) implementation of Specialized Undergraduate Pilot Training (SUPT) and the Department of Defense initiative for joint pilot training. The Joint Primary Aircraft Training System (JPATS) is a joint USAF/USN venture to replace the Services' fleets of primary trainer aircraft (T-37 and T-34 respectively) and associated Ground Based Training Systems (GBTS). The Air Force is the Executive Service. The T-38 AUP is an integrated modernization of the T-38A and AT-38B cockpits to support mission ready fighter and bomber training. Additionally, there are funds in this project for Phase I testing of propulsion enhancements for the T-38 aircraft and to update T-38 flight performance models, Technical Orders, and AUP software for both aircraft and Aircrew Training Devices for changes brought about by the T-38 Propulsion Modernization Program (PMP). T-38 FY02 and FY04 - FY09 funding is for software block updates driven by FAA-mandated changes, National Aerospace System (NAS) requirements, and enhancements identified during test and evaluation.

This program element is in Budget Activity 5, System Development and Demonstration (SDD) because it primarily involves the missionization of commercial derivative aircraft, equipment, and components.

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Previous President's Budget	1.867	3.267	3.368
(U) Current PBR/President's Budget	1.772	3.239	3.359
(U) Total Adjustments	-0.095	-0.028	
(U) Congressional Program Reductions	-0.021	-0.028	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	-0.020		
SBIR/STTR Transfer	-0.054		

(U) Significant Program Changes:

No significant changes since FY2004 President's Budget submission.

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Exhibit R-2a, RDT&E Project Justification

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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)				PE NUMBER AND TITLE 0604233F Specialized Undergraduate Pilot Training			PROJECT NUMBER AND TITLE 4102 Joint Primary Aircraft Training System (JPATS)		
Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
4102 Joint Primary Aircraft Training System (JPATS)	1.772	1.881	1.943	7.103	2.142	2.174	2.205	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Joint Primary Aircraft Training System (JPATS) is a joint USAF/USN venture to replace the Services' fleets of primary trainer aircraft (T-37 and T-34, respectively) and associated Ground Based Training Systems (GBTS). The aircraft and GBTS will be used to train entry-level student aviators in the fundamentals of flying so they can transition into advanced training tracks leading to qualification as military pilots, navigators, and naval flight officers. The program includes the purchase of aircraft, simulators, and other associated ground-based training devices, Training Integration Management System (TIMS), instructional courseware, and logistics support.

Budget Activity Justification: This program element is in Budget Activity 5, System Development and Demonstration (SDD) because it primarily involves the missionization of commercial derivative aircraft, equipment, and components.

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Studies & development efforts.	1.772	1.881	1.943
(U) Total Cost	1.772	1.881	1.943

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

	<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>Complete</u>	
(U) AF RDT&E	1.772	1.881	1.943	7.103	2.142	2.174	2.205	Continuing	TBD
(U) Other APPN									
(U) Aircraft Procurement, Air Force, BA-3									
(U) JPATS	204.689	275.987	307.072	327.270	293.262	204.745	3.144	6.400	2,421.991
(U) JPATS, BA-6	39.933	6.925	7.707	0.257	7.405	30.516	0.000	0.000	92.743
(U) JPATS Mod Funding		4.201	3.850	4.709	5.747	13.402	11.739	26.320	69.968
(U) Military Construction, Air Force									
(U) PE 0804741F, JPATS	6.000	0.000	2.200	2.000	0.000	0.000	0.000	0.000	19.050
(U) RDT&E, Navy, BA-7									
(U) PE 0603208N, Training System Aircraft, H1150, JPATS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11.300

Exhibit R-2a, RDT&E Project Justification	DATE February 2004
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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604233F Specialized Undergraduate Pilot Training	PROJECT NUMBER AND TITLE 4102 Joint Primary Aircraft Training System (JPATS)
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(U) **C. Other Program Funding Summary (\$ in Millions)**

(U) Aircraft Procurement, Navy, BA-3										
(U) JPATS	27.570	21.736	2.534	0.956	147.684	295.627	301.665	1,192.200	2,160.094	
(U) APN 5 Mod Funding		0.530	0.648	0.714	1.640	1.305	1.490	24.700	31.027	
(U) APN 6 Spares	1.914	0.000	0.000	0.000	3.956	7.921	0.000	46.651	69.975	
(U) Military Construction, Navy	2.000	0.000	11.000	13.900	0.000	6.200	0.000	0.000	46.900	

(U) **D. Acquisition Strategy**

JPATS was competitively awarded with the intent of maximizing the use of commercially available equipment and best commercial practices. Initially, the JPATS Program competitively awarded two contracts: a Firm Fixed Price Contractor Logistics Support (CLS) - Operations and Maintenance funds - contract and a Fixed Price Incentive Firm Target (FPIF) manufacturing development (MD)/production contract with seven options. The FY2002 (Lots 9-13) production contract for both the air vehicle and GBTS is Firm Fixed Price, FAR Part 12 (commercial).

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Exhibit R-3, RDT&E Project Cost Analysis										DATE February 2004		
BUDGET ACTIVITY 05 System Development and Demonstration (SDD)					PE NUMBER AND TITLE 0604233F Specialized Undergraduate Pilot Training					PROJECT NUMBER AND TITLE 4102 Joint Primary Aircraft Training System (JPATS)		
(U) Cost Categories	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total</u> Prior to FY 2003 <u>Cost</u>	<u>FY</u> 2003 <u>Cost</u>	<u>FY</u> 2003 <u>Award</u> <u>Date</u>	<u>FY</u> 2004 <u>Cost</u>	<u>FY</u> 2004 <u>Award</u> <u>Date</u>	<u>FY</u> 2005 <u>Cost</u>	<u>FY</u> 2005 <u>Award</u> <u>Date</u>	<u>Cost to Complete</u>	<u>Total</u> <u>Cost</u>	<u>Target</u> <u>Value of Contract</u>
(U) <u>Product Development</u>												
Raytheon Aircraft Company (RAC) */****C/FPI		RAC, Wichita KS	214.129	1.772	Jan-03	1.881	Apr-04	1.943	Oct-04	Continuing	TBD	TBD
Subtotal Product Development			214.129	1.772		1.881		1.943		Continuing	TBD	TBD
* RAC contract Total Program includes contract value, 'to ceiling,' Engineering Change Order (ECO), and Production Incentive												
Remarks: RAC EAC includes subcontracted GBTS effort, which is not individually reported												
****EACs based on GBTS Only: Lots 1, 6, 7 and 8.												
(U) <u>Support</u>												
Various	Various		44.210							Continuing	TBD	
Subtotal Support			44.210	0.000		0.000		0.000		Continuing	TBD	0.000
Remarks:												
(U) <u>Test & Evaluation</u>												
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) <u>Management</u>												
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			258.339	1.772		1.881		1.943		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

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BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604233F Specialized Undergraduate Pilot Training

PROJECT NUMBER AND TITLE

4102 Joint Primary Aircraft Training System (JPATS)

ID	Task Name	'03				'04				'05				'06				'07				'08				'09			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	System-Level Multi-Service OT&E	■																											
2	Durability & Damage Tolerance Testing	■																											
3	RM&A Verification							■																					
4	Follow-on OT&E					■	■	■	■	■	■	■	■																

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Exhibit R-4a, RDT&E Schedule Detail

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BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

**0604233F Specialized Undergraduate
Pilot Training**

PROJECT NUMBER AND TITLE

**4102 Joint Primary Aircraft Training
System (JPATS)**

(U) Schedule Profile

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Complete System-level Multi-Service OT&E	2Q		
(U) Durability & Damage Tolerance Testing Complete	2Q		
(U) Begin FOT&E		1Q	
(U) Begin RM & A Verification		2Q	
(U) Complete RM & A Verification		3Q	
(U) Complete FOT&E			1Q

Exhibit R-2a, RDT&E Project Justification

DATE
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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)				PE NUMBER AND TITLE 0604233F Specialized Undergraduate Pilot Training			PROJECT NUMBER AND TITLE 4376 T-38 Avionics Upgrade Program (AUP)		
Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
4376 T-38 Avionics Upgrade Program (AUP)	0.000	1.358	1.416	1.445	1.487	1.527	1.568	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The T-38 Avionics Upgrade Program (AUP) is an integrated modernization of the T-38A and AT-38B cockpits to support mission-ready fighter training and converts all T-38A and AT-38B aircraft to T-38C configuration. The modernized digital cockpit will include Global Positioning System (GPS), Head-Up Display (HUD), Inertial Navigation System (INS), Multi-Function Displays (MFDs), Up-Front Control Panel (UFCP), Data Transfer System (DTS), No-Drop Bombing System (NDBS), and Hands-On Throttle and Stick (HOTAS) switchology. HUD symbology is the new USAF standard recently certified as a primary flight reference. Also included is the acquisition of two types of Aircrew Training Devices (ATDs) to replace the existing T-51 simulators. The program includes the design, integration, test, and installation of the cockpit prototype in aircraft, ATDs, and other training devices, as well as engineering services, studies, analysis and support to determine the feasibility of incorporating changes for purposes of making informed life-cycle cost business decisions. Additionally, funds were included in FY00 and FY01 for Phase I testing of engine operability/suitability for the T-38 Propulsion Modernization Program (PMP) and to update T-38 flight performance models, Technical Orders, and AUP software for changes brought about by the T-38 PMP. FY02 and FY04 - FY09 funding is for AUP block software updates driven by FAA-mandated changes; National Aerospace System (NAS) requirements such as Global Air Traffic Management (GATM), Joint Precision Approach and Landing System (JPALS), GPS, GPS Embedded Module (GEM) issues (Selective Availability Anti-Spoofing Module (SAASM), precision and GPS approaches); and/or enhancements identified during Development Testing, Operational Testing and Force Development Evaluation (FDE), and AETC operations such as scratch pad, improvements to UFCP, HUD, Built In Test (BIT), mechanization of menus/modes and mission planning/debriefing system, ATD HUD projectors, and Companion Aircraft Model (CAM) operations.

Budget Activity Justification. This project is in Budget Activity 5, System Development and Demonstration (SDD) because it primarily involves the missionization of commercial derivative aircraft, equipment, and components.

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) No Activity as a result of no FY03 Funding	0.000	0.000	0.000
(U) Develop and test Block 4 T-38C AUP aircraft and ATD software for requirements driven by FAA/NAS mandates and improvements identified during Test and Evaluation and AETC operations.	0.000	1.322	0.000
(U) Develop and test Block 5 T-38C AUP aircraft and ATD software for requirements driven by FAA/NAS mandates and improvements identified during Test and Evaluation and AETC operations.	0.000	0.000	1.366
(U) Other Government Cost and Test		0.036	0.050
(U) Total Cost	0.000	1.358	1.416

Exhibit R-2a, RDT&E Project Justification

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BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604233F Specialized Undergraduate
Pilot Training

PROJECT NUMBER AND TITLE

4376 T-38 Avionics Upgrade Program
(AUP)**(U) C. Other Program Funding Summary (\$ in Millions)****(U) D. Acquisition Strategy**

The T-38 AUP competitively awarded three contracts to a single prime: a) a cost plus award fee EMD contract with six firm fixed price production options; b) a firm fixed price CLS contract for avionics including Contractor Owned and Maintained Base Supply (COMBS) (O&M funds); and c) a fixed price award fee maintenance contract for the current and new Aircrew Training Devices (ATDs). During FY04 new firm fixed priced contract will be negotiated to complete the AUP modification, and unpriced delivery orders for the period FY05-08 will be negotiated for the aircraft CLS contract. The T-38 PMP is comprised of four contractual efforts: a J85-5 engine modification and ejector nozzle will be sole source additions to a current contract with General Electric, b) the inlet/former/bulkhead kits will be a competitive award; c) a task order will be established on the existing Contractor Field Team (CFT) contract for kit installation; and d) the T-38 software changes required by the PMP will be added to the existing Boeing contract for the AUP. FY02 and FY04 software block updates will be changes to existing contracts, and FY05-09 block updates will be performed on the new contract.

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Exhibit R-3, RDT&E Project Cost Analysis										DATE February 2004		
BUDGET ACTIVITY 05 System Development and Demonstration (SDD)					PE NUMBER AND TITLE 0604233F Specialized Undergraduate Pilot Training				PROJECT NUMBER AND TITLE 4376 T-38 Avionics Upgrade Program (AUP)			
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total</u> Prior to FY 2003 Cost	<u>FY</u> 2003 Cost	<u>FY</u> 2003 Award Date	<u>FY</u> 2004 Cost	<u>FY</u> 2004 Award Date	<u>FY</u> 2005 Cost	<u>FY</u> 2005 Award Date	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u> The Boeing Corporation	C/CPAF	The Boeing Corporation St. Louis MO	64.860	0.000	Nov-02	1.322	Dec-03	1.366	Jan-05	Continuing	TBD	
ASC/YT	Various	ASC/YT WPAFB OH	9.651	0.000		0.016		0.020		Continuing	TBD	
GE	CPFF	GE, Lynn MA	0.738	0.000		0.000		0.000		0.000	0.738	
ASC/LP	Various	ASC/LP, WPAFB OH	0.039	0.000		0.000		0.000		0.000	0.039	
Subtotal Product Development			75.288	0.000		1.338		1.386		Continuing	TBD	0.000
Remarks:												
(U) <u>Support</u> OO-ALC/LCT	Various	OO-ALC/LCT Hill AFB UT	0.194	0.000		0.000		0.000		Continuing	TBD	
AETC	Various	AETC Randolph AFB TX	0.200	0.000		0.000		0.000		Continuing	TBD	
OO-ALC/YWT	Various	OO-ALC/YWT Ogden AFB UT	0.345	0.000		0.000		0.000		Continuing	TBD	
Subtotal Support			0.739	0.000		0.000		0.000		Continuing	TBD	0.000
Remarks:												
(U) <u>Test & Evaluation</u> 416 FLTS	PO	416 FLTS Edwards AFB CA	3.382	0.000		0.020		0.030		Continuing	TBD	
AFOTEC	PO	AFOTEC Kirtland AFB NM	0.331	0.000		0.000		0.000		Continuing	TBD	
Subtotal Test & Evaluation			3.713	0.000		0.020		0.030		Continuing	TBD	0.000
Remarks:												
(U) <u>Management</u> Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												

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Exhibit R-3, RDT&E Project Cost Analysis	DATE February 2004
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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604233F Specialized Undergraduate Pilot Training	PROJECT NUMBER AND TITLE 4376 T-38 Avionics Upgrade Program (AUP)
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(U) Total Cost	79.740	0.000	1.358	1.416	Continuing	TBD	0.000
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Exhibit R-4, RDT&E Schedule Profile

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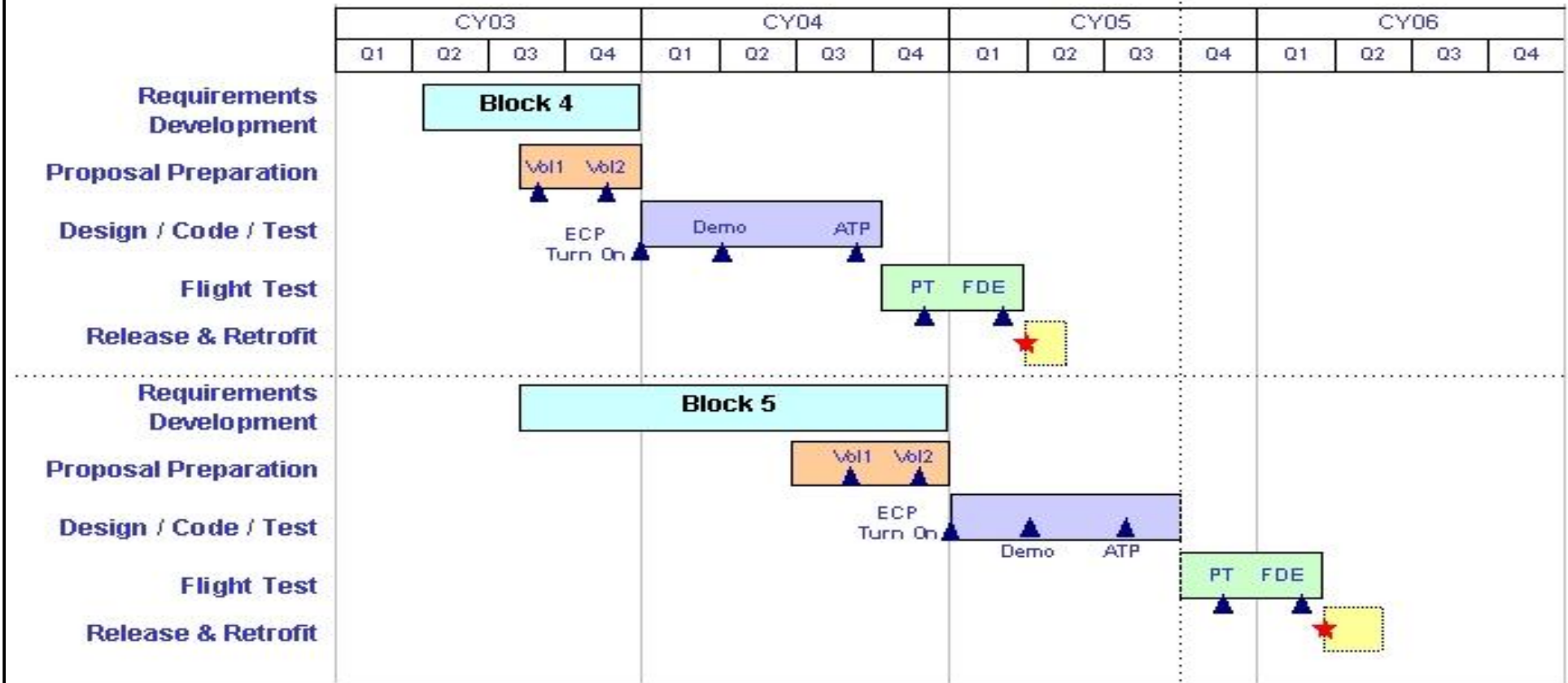
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BUDGET ACTIVITY
05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE
0604233F Specialized Undergraduate
Pilot Training

PROJECT NUMBER AND TITLE
4376 T-38 Avionics Upgrade Program
(AUP)

Schedule



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Exhibit R-4a, RDT&E Schedule Detail	DATE February 2004
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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604233F Specialized Undergraduate Pilot Training	PROJECT NUMBER AND TITLE 4376 T-38 Avionics Upgrade Program (AUP)
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(U) <u>Schedule Profile</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Required Assets Available (RAA), Columbus AFB	2Q		
(U) Field Software Block 3	4Q		
(U) Required Assets Available (RAA), Vance AFB		1Q	
(U) Initiate Software Block 4 on AUP		1Q	
(U) Required Assets Available (RAA), Randolph AFB		3Q	
(U) Field Software Block 4			1Q
(U) Required Assets Available (RAA), Laughlin AFB			2Q
(U) Initiate Software Block 5 on AUP			2Q