

UNCLASSIFIED

PE NUMBER: 0207410F

PE TITLE: Air and Space Operations Center - Weapon System (AOC-WS)

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2005

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0207410F Air and Space Operations Center - Weapon System (AOC-WS)

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	26.982	27.130	68.099	89.430	91.330	96.047	104.652	90.173	Continuing	TBD
4372 Time Critical Targeting	2.306	2.286	0.000	0.000	0.000	0.000	0.000	0.000	0.000	26.752
5117 Integration Development	24.676	24.844	68.099	89.430	91.330	96.047	104.652	90.173	Continuing	TBD

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

The Air & Space Operations Center-Weapons System (AOC-WS), AN/USQ-163 Falconer, is the senior element of the Theater Air Control System (TACS). The Joint Forces Air Component Commander (JFACC) provides air and space support to the Joint Forces Commander (JFC) by coordinating, deconflicting, and assessing the progress of various weapon systems to advance the JFC's campaign. The JFACC uses the weapon system for planning, executing, and assessing theater-wide air and space operations. The AOC-WS develops operational strategy and planning documents. The weapon system also disseminates tasking orders, executes day-to-day peacetime and combat air and space operations, and provides rapid reaction to immediate situations by exercising positive control of friendly forces. The AOC-WS also provides Time Critical Targeting Functionality (TCTF), which improves the existing C2 capabilities of the AOC-WS by leveraging technology to modernize current systems and automate C2 and Intelligence, Surveillance, and Reconnaissance (ISR) processes.

The AOC-WS program develops system hardware, software, technical documents and technology refresh. The program consists of Falconer AOCs, Tailored Falconer AOCs, Functional AOCs, and AOC Support (e.g. Formal Training Unit, Help Desk, Combined Air and Space Operations Center-eXperimental [CAOC-X]). This development program will also provide a single integrated technical manual package to the user. To keep the future AOC-WS evolving and match warfighter needs, the AOC-WS program plans to build on its current capability and develop a series of new capability increments.

This program is Budget Activity 7 - Operation System Development because it provides funding for the modernization of a currently existing and operating system.

(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	27.887	27.695	32.763	58.499
(U) Current PBR/President's Budget	26.982	27.130	68.099	89.430
(U) Total Adjustments	-0.905	-0.565		
(U) Congressional Program Reductions	-0.374			
Congressional Rescissions		-0.565		
Congressional Increases				
Reprogrammings	0.292			
SBIR/STTR Transfer	-0.823			

(U) **Significant Program Changes:**

In FY06 & FY07 there was a realignment of Project 834530 Other Procurement to increase RDT&E AF PE 0207410F, Project 675117 (in the amount of \$35M in FY06 and \$31M in FY07) to fund Chief of Staff, Air Force, directed Modernization and Integration efforts. Time Critical Targeting Functionality (TCTF) Project 674372 will not be

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supported after FY05.

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0207410F Air and Space Operations
Center - Weapon System (AOC-WS)

PROJECT NUMBER AND TITLE

4372 Time Critical Targeting

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
4372 Time Critical Targeting	2.306	2.286	0.000	0.000	0.000	0.000	0.000	0.000	0.000	26.752
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

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

The Time Critical Targeting Functionality (TCTF) is an integrated set of automated decision aids / tools that enable successful prosecution of Time Sensitive Targets (TSTs) with key functionalities to include Terrain Analysis (TA), Intelligence Preparation of the Battlespace (IPB), tracking and nominating multiple TSTs, and Weapon Target Pairing (WTP). Current systems do not meet warfighter requirements for identifying TCTs and tasking strike assets within the limited window of vulnerability. TCTF funding supports development of enhanced Command and Control (C2) capabilities to find, fix, track, target, engage, and assess time critical targets (TCTs).

The primary program objective of the TCTF program is to provide capabilities to collect, share and aggregate decision quality data between Command and Control Centers of Operation, ISR assets and attack aircraft; correlate/fuse information; reduce AOC forward footprint; improve deployability; and make improvements in information sharing among coalition partners.

The Air Force has made the decision to complete Spiral 9 of TCTF and then transition requirements and functionality of TCTF into the AOC Increment 10.2 integration development project (PE 0207410F, Project 675117).

This program is in budget activity 7 - Operation System Development because it provides funding for the modernization of a currently existing and operating system.

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Complete development of Spiral 9 (including but not limited to: software patches and fixes and test and evaluation activities)	2.306	2.286	0.000	0.000
(U) Total Cost	2.306	2.286	0.000	0.000

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

	<u>FY 2004</u> <u>Actual</u>	<u>FY 2005</u> <u>Estimate</u>	<u>FY 2006</u> <u>Estimate</u>	<u>FY 2007</u> <u>Estimate</u>	<u>FY 2008</u> <u>Estimate</u>	<u>FY 2009</u> <u>Estimate</u>	<u>FY 2010</u> <u>Estimate</u>	<u>FY 2011</u> <u>Estimate</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>
Other Procurement, AF										
(U) (3080) PEC: 27410F BPAC: 83453B	1.627	1.801	0.625	1.472	0.000	0.000	0.000	0.000	0.000	5.525

(U) **D. Acquisition Strategy**

The acquisition strategy horizontally integrates legacy C2ISR; emerging technologies, and introduces a revolutionary C2ISR warfighting capability; the strategy also includes a 8(a) set aside contract award to design, develop, test, integrate, install, train and support TCT Functionality software; separate contractors are being used to procure communication and computer hardware.

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Exhibit R-3, RDT&E Project Cost Analysis												DATE February 2005		
BUDGET ACTIVITY 07 Operational System Development						PE NUMBER AND TITLE 0207410F Air and Space Operations Center - Weapon System (AOC-WS)						PROJECT NUMBER AND TITLE 4372 Time Critical Targeting		
(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract</u> <u>Method &</u> <u>Type</u>	<u>Performing</u> <u>Activity &</u> <u>Location</u>	<u>Total</u> <u>Prior to FY</u> <u>2004</u> <u>Cost</u>	<u>FY 2004</u> <u>Cost</u>	<u>FY 2004</u> <u>Award</u> <u>Date</u>	<u>FY 2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Award</u> <u>Date</u>	<u>FY 2006</u> <u>Cost</u>	<u>FY 2006</u> <u>Award</u> <u>Date</u>	<u>FY 2007</u> <u>Cost</u>	<u>FY 2007</u> <u>Award</u> <u>Date</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>	<u>Target</u> <u>Value of</u> <u>Contract</u>
(U) <u>Product Development</u> Software Development	CPAF	Zel Technologies, Hampton, VA	12.327	1.558	Oct-03	1.505	Oct-04					0.000	15.390	TBD
Engineering/Requirements	CPFF	MITRE, Bedford, MA	3.280	0.000								0.000	3.280	TBD
Subtotal Product Development Remarks:			15.607	1.558		1.505		0.000		0.000		0.000	18.670	TBD
(U) <u>Support</u> Systems Engineering	FFP	MITRE, Bedford, MA	2.380	0.000								0.000	2.380	TBD
Program Support	FFP	A&AS, AFMC/ESC	3.248	0.000								0.000	3.248	TBD
Subtotal Support Remarks:			5.628	0.000		0.000		0.000		0.000		0.000	5.628	TBD
(U) <u>Test & Evaluation</u> Test Engineering	CPFF	A&AS, AFMC/ESC	0.000	0.248	Sep-04	0.281	Sep-05					0.000	0.529	TBD
Test Support	MIPR	46 TS, Eglin AFB, FL	0.500	0.100	May-04	0.100	May-05					0.000	0.700	TBD
Test Support	CPAF	Zel Technologies, Hampton, VA	0.425	0.400	Jun-04	0.400	Jun-05						1.225	TBD
Subtotal Test & Evaluation Remarks:			0.925	0.748		0.781		0.000		0.000		0.000	2.454	TBD
(U) Total Cost			22.160	2.306		2.286		0.000		0.000		0.000	26.752	TBD

Project 4372

R-1 Shopping List - Item No. 144-5 of 144-12

Exhibit R-3 (PE 0207410F)

Exhibit R-4, RDT&E Schedule Profile

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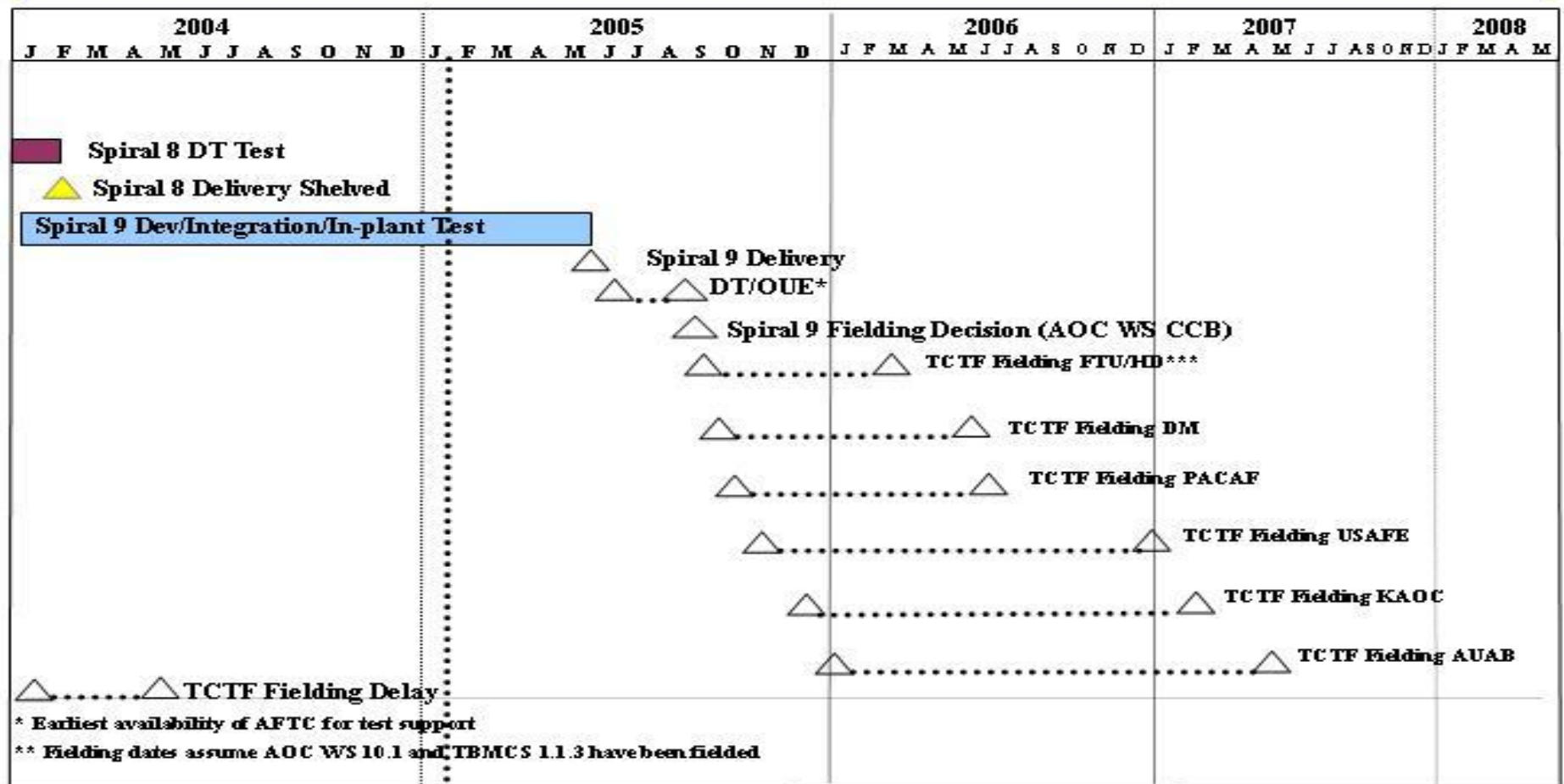
PROJECT NUMBER AND TITLE

4372 Time Critical Targeting

As of 12 Jan



TCTF Program Integrated Master Schedule



1

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Exhibit R-4a, RDT&E Schedule Detail

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4372 Time Critical Targeting

(U) Schedule ProfileFY 2004FY 2005FY 2006FY 2007

(U) TCT Spiral 8 DT/OT

1-3Q

(U) TCT Spiral 9 DT/OT

3-4Q

(U) TCT Spiral 9 Fielding Decision

4Q

(U) TCT Spiral 9 Fielding (FTU/Help Desk/ DM/ PACAF/ USAFE/ KAOC/AUAB)

4Q

3-4Q

1-4Q

1-2Q

(U) TCT Complete development/pre-programmed product improvement for Spiral 9

1-4Q

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PROJECT NUMBER AND TITLE

5117 Integration Development

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
5117 Integration Development	24.676	24.844	68.099	89.430	91.330	96.047	104.652	90.173	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

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

Air and Space Operations Center - Weapon System (AOC-WS) Program: The AOC-WS Integration Development project provides system hardware, software and documentation, to make the AOC-WS a viable weapons system. The program consists of Falconer AOCs, Tailored Falconer AOCs, Functional AOCs, and Support AOCs; that are configured according to mission need. The project will develop and integrate C2ISR capabilities to upgrade all sites to a software baseline. To keep the future AOC weapon system evolving to meet warfighter needs, the AOC-WS Program plans to spirally develop the AOC with capability increments. The December 2003 Acquisition Decision Memorandum directed the Air and Space Operations Center Weapon System to use a Lead System Integrator to ensure system of system perspective and systems engineering rigor; move AOC Modernization to Network Centric Operations (NCO) through spirally developed increments; to make recommendations on transitions to the "to be" architecture; and to conduct other weapon system standardization activities as defined in AOC WS requirements documents. This direction is driving significantly increased program funding. The AOC-WS Integration Development program provides a structure to transition and act as the focal point for systems integration, technical transition, and process refinement for rapidly evolving C2 programs, process and concepts.

The program is in budget activity 7 - Operation System Development because it provides funding for the modernization of a currently existing and operating system.

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Continue AOC development and integration of items to include, but not limited to, legacy systems, multi-level security, visualization, coalition interoperability, airspace management and deconfliction, strategy and assessment, information management, and predictive battlespace awareness for air and space operations.	15.176	15.344		
(U) Integration to include, but not limited to, legacy systems, multi-level security, visualization, coalition interoperability, airspace management and deconfliction, strategy and assessment, information management, and predictive battlespace awareness for air and space operations.			22.430	39.700
(U) Modernization & Integration Systems Engineering Program Management and Data			14.800	18.100
(U) Integration Training (Type 1, Part Task Trainer, Distributed Mission Training)			5.200	9.200
(U) Modernization Integration Test and Evaluation			9.400	6.410
(U) Government Support to include but not limited to, Government Systems Engineering, Government Test	5.000	5.000	11.469	11.420
(U) Program Management Support	4.500	4.500	4.800	4.600
(U) Total Cost	24.676	24.844	68.099	89.430

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(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>	
Other Procurement, AF										
(U) (3080) PEC: 27410F; BPAC: 83453A	39.294	39.534	19.677	23.417	38.318	34.923	46.303	29.569	Continuing	TBD

(U) **D. Acquisition Strategy**

The December 2003 Acquisition Decision Memorandum directed the Air and Space Operations Center Weapon System (AOC WS) to hire a Lead System Integrator through full and open competition; to ensure system of system perspective and systems engineering rigor; move AOC Modernization to Network Centric Operations (NCO) through spirally developed increments; the acquisition strategy builds on existing capabilities, using evolutionary acquisition and spiral development to standardize, modernize and sustain AOC-WSs.

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(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract</u> <u>Method &</u> <u>Type</u>	<u>Performing</u> <u>Activity &</u> <u>Location</u>	<u>Total</u> <u>Prior to FY</u> <u>2004</u> <u>Cost</u>	<u>FY 2004</u> <u>Cost</u>	<u>FY 2004</u> <u>Award</u> <u>Date</u>	<u>FY 2005</u> <u>Cost</u>	<u>FY 2005</u> <u>Award</u> <u>Date</u>	<u>FY 2006</u> <u>Cost</u>	<u>FY 2006</u> <u>Award</u> <u>Date</u>	<u>FY 2007</u> <u>Cost</u>	<u>FY 2007</u> <u>Award</u> <u>Date</u>	<u>Cost to</u> <u>Complete</u>	<u>Total Cost</u>	<u>Target</u> <u>Value of</u> <u>Contract</u>
(U) <u>Product Development</u> AOC Software Development	CPAF	LMMS, Colorado Spring, CO	9.400										9.400	
Modernization & Integration	CPAF	TBD				4.541	Jul-05	14.400	Jul-06	71.000	Nov-06	Continuing	TBD	
Integration & Version Upgrades 10.1.X								37.530	Nov-05	2.410	Nov-06	Continuing	TBD	
Training	MIPR	AFMC/ESC	1.500	9.000	Jan-04	3.600	Jan-05	1.000	Jan-06	0.300	Jan-07	Continuing	TBD	TBD
Other Contracts (GSA, ETC)	MIPR	Various	17.400	3.672	Nov-03	3.796	Nov-04	2.526	Nov-05	2.956	Nov-06	Continuing	TBD	TBD
Increment 10.1 Development	MIPR	AFMC/ESC	9.363					2.000	Jan-06	2.000	Jan-07	Continuing	TBD	TBD
Subtotal Product Development			37.663	12.672		11.937		57.456		78.666		Continuing	TBD	TBD
Remarks:														
(U) <u>Support</u> Systems Engineering	CPFF	MITRE, Bedford, MA	2.500	3.500	Dec-03	3.700	Oct-04	3.823	Oct-05	4.600	Oct-06	Continuing	TBD	TBD
Program Support	FFP	A&AS AFMC/ESC	5.567	6.580	Feb-04	6.961	Dec-04	4.520	Dec-05	3.864	Dec-06	Continuing	TBD	TBD
Program Office Support	Various	AFMC/ESC	0.500	0.900	Oct-03	0.900	Oct-04	0.700	Oct-05	0.700	Oct-06	Continuing	TBD	TBD
Subtotal Support			8.567	10.980		11.561		9.043		9.164		Continuing	TBD	TBD
Remarks:														
(U) <u>Test & Evaluation</u> 46TS	MIPR	Eglin AFB, FL	0.500	1.024	Dec-03	1.346	Nov-04	1.600	Nov-05	1.600	Nov-06	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.500	1.024		1.346		1.600		1.600		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			46.730	24.676		24.844		68.099		89.430		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

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BUDGET ACTIVITY

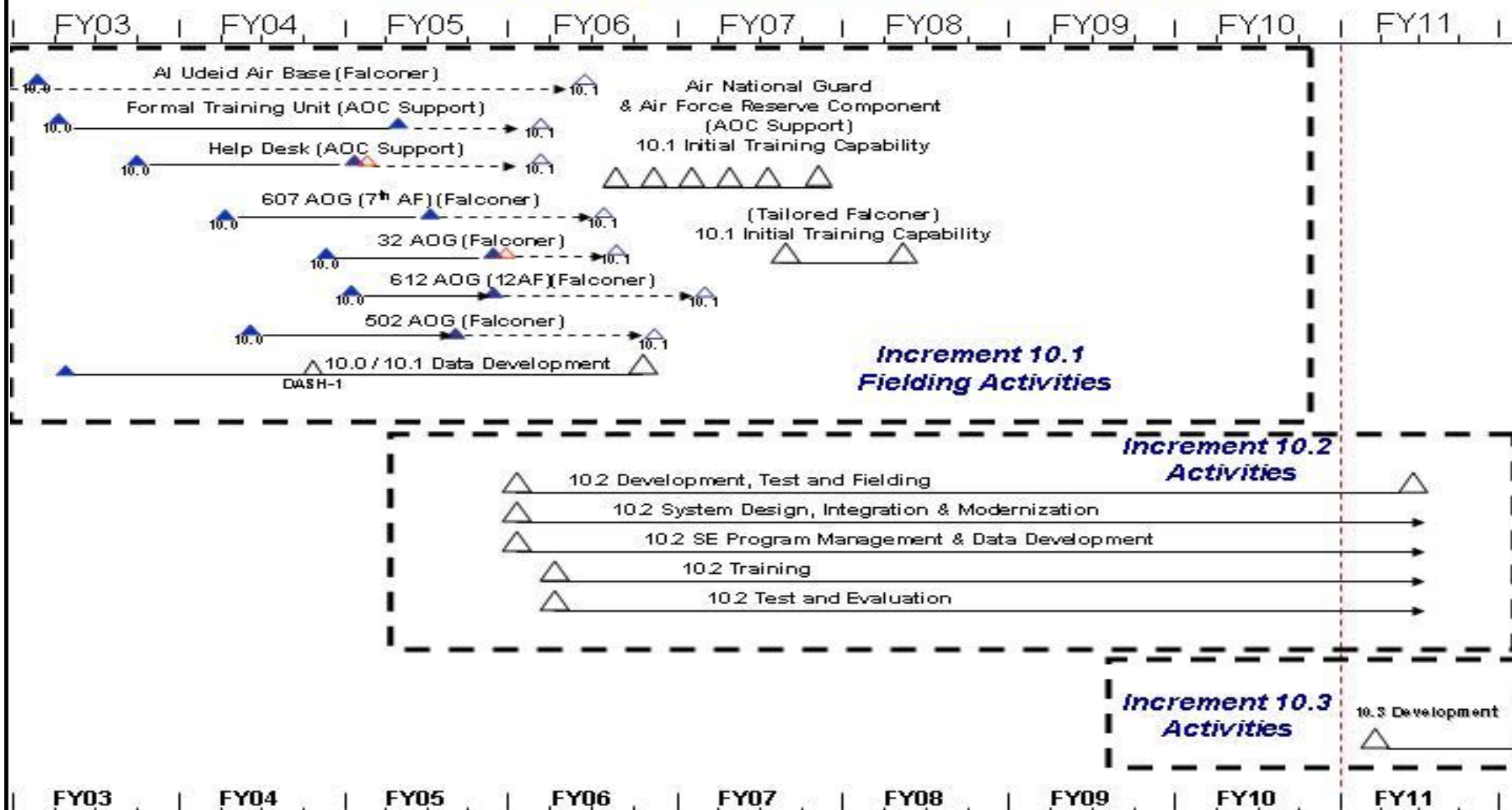
07 Operational System Development

PE NUMBER AND TITLE

0207410F Air and Space Operations
Center - Weapon System (AOC-WS)

PROJECT NUMBER AND TITLE

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AOC WS Integrated Master Schedule (IMS)

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(U) Schedule ProfileFY 2004FY 2005FY 2006FY 2007

(U) Continued Block 10.1 Spiral Development

1Q

(U) FTU 10.1 Spiral Development

2-4Q

1-4Q

1Q

(U) Help Desk 10.1 Spiral Development

3-4Q

1-4Q

1Q

(U) Field Falconer Site 2 - (7th AF) 607th AOG

3-4Q

1-4Q

1-3Q

(U) Field Falconer Site 3 - 32nd AOG

1-4Q

1-3Q

(U) Field Falconer Site 4 - 12AF (612 AOG)

1-4Q

1-4Q

1-2Q

(U) Field Falconer Site 5 - 502 AOG

2-4Q

1-4Q

(U) Field Air National Guard/Air Reserve Components (ANG/ARCs)

1-4Q

(U) Field Tailored Falconers

2-4Q

(U) 10.2 Spiral 1 Development / Test

1-4Q

1-4Q