

UNCLASSIFIED

PE NUMBER: 0207443F

PE TITLE: FAMILY OF INTEROP OPERATIONAL PIC (FIOP)

Exhibit R-2, RDT&E Budget Item Justification								DATE February 2005		
BUDGET ACTIVITY 05 System Development and Demonstration (SDD)					PE NUMBER AND TITLE 0207443F FAMILY OF INTEROP OPERATIONAL PIC (FIOP)					
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	0.000	46.607	29.296	20.450	0.000	0.000	0.000	0.000	Continuing	TBD
5137 Family of Interoperable Operational Pictures (FIOP)	0.000	46.607	0.000	0.000	0.000	0.000	0.000	0.000	0.000	46.607
5187 Single Integrated Air Picture (SIAP)	0.000	0.000	29.296	20.450	0.000	0.000	0.000	0.000	Continuing	TBD
In FY06, Project #655137, Family of Interoperable Operational Pictures (FIOP) has been terminated. The Air Force will leverage the Single Integrated Air Picture (SIAP) systems engineering process and the Joint Capabilities Integration and Development System (JCIDS) process to determine and implement the Common Operational Picture (COP) standard to inform the next development milestone for the Joint Command and Control program of record. In FY07, Project #655187, Single Integrated Air Picture (SIAP) funding will transfer to a new PE and Project number.										
In FY05, this is a new PE. In FY05, all funds from PE 0604754F, Tactical Data Links Integration, Project #654992, and some funds from PE 0207438F, (Theater Battle Management C4I, Project #654790 and from PE 0603850F, Integrated Broadcast System, Project #635151 were transferred into this new Program Element to facilitate FIOP program funding consolidation.										
(U) <u>A. Mission Description and Budget Item Justification</u>										
The Family of Interoperable Operational Pictures (FIOP) is a program designed to implement web-based technologies into Systems of Record, making their data, and thus the Common Operational and Tactical Pictures, consistent throughout the Services and at all echelons of Combat Operations. The Joint Requirements Oversight Council (JROC) directed the FIOP program to "...provide an all-source picture of the Battlespace containing actionable, decision quality information through the fusion of existing databases". Ultimately, the FIOP effort will lead to the underpinnings of Network Centric Operational Warfare. The FIOP program focus includes the following areas:										
Joint Blue Force Situational Awareness (JBFSa)										
Situational Awareness Data Interoperability (SADI)										
Tactical Data Link Integration										
Precision Fires Support										
Network Based Services										
Web Enabled Execution Management										
Red Force Situational Awareness Picture										
Ground Moving Target Indicators (GMTI)										
Meterology Oceanography (METOC)										
Targeting Interoperability										
R-1 Shopping List - Item No. 97-1 of 97-13										
Exhibit R-2 (PE 0207443F)										

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05 System Development and Demonstration (SDD)

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The air portion of the Common Tactical Picture (CTP), the Single Integrated Air Picture (SIAP), consists of common, continual and unambiguous tracks of airborne objects of interest in the surveillance area. SIAP is derived from real time and near real time data and consists of correlated air object tracks and associated information. SIAP systems integration efforts include, but are not limited to: defining the SIAP Platform Independent Model (PIM) functionality, the required SIAP architecture, and the integration methodology for AF C2 weapons systems.

These activities are in Budget Activity 5 (System Development and Demonstration) because they support development, integration solutions, fielding, operational support activities, and special projects.

(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	0.000	44.947	45.201	41.438
(U) Current PBR/President's Budget	0.000	46.607	29.296	20.450
(U) Total Adjustments	0.000	1.660		
(U) Congressional Program Reductions		-4.000		
Congressional Rescissions		-0.540		
Congressional Increases		6.200		
Reprogrammings				
SBIR/STTR Transfer				

(U) **Significant Program Changes:**

In FY06, Project #655137, Family of Interoperable Operational Pictures (FIOP) was terminated by an OSD budget decision. OSD directed the Under Secretary of Defense (AT&L) with the Chairman of the Joint Chiefs of Staff to leverage the Single Integrated Air Picture (SIAP) systems engineering process and the Joint Capabilities Integration and Development System (JCIDS) process to determine and implement the Common Operational Picture (COP) standard to inform the next development milestone for the Joint Command and Control program of record.

In FY05, Congress increased the program by \$6.2M: \$3.8M to fund Command and Control Enterprise Services (C2ES) and \$2.4M to fund Command and Control Service Level Management. Also in FY05, the FY05 Defense Appropriations Bill reduced the PE, eliminating \$4.0M for program growth.

The FY05 increase results from the consolidation of FIOP funds from PE 0604754F (Tactical Data Link Integration), #654992, PE 0207438F (Theater Battle Management C4I), #654790, and PE 0603850F (Integrated Broadcast System), #635151.

Exhibit R-2a, RDT&E Project Justification

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BUDGET ACTIVITY					PE NUMBER AND TITLE			PROJECT NUMBER AND TITLE		
05 System Development and Demonstration (SDD)					0207443F FAMILY OF INTEROP OPERATIONAL PIC (FIOP)			5137 Family of Interoperable Operational Pictures (FIOP)		
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
5137 Family of Interoperable Operational Pictures (FIOP)	0.000	46.607	0.000	0.000	0.000	0.000	0.000	0.000	0.000	46.607
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

In FY 2006, Project #655137, Family of Interoperable Operational Pictures was terminated. OSD directs the Under Secretary of Defense (AT&L) with the Chairman of the Joint Chiefs of Staff to leverage the Single Integrated Air Picture (SIAP) systems engineering and the Joint Capabilities Integration and Development System (JCIDS) process to determine and implement the Common Operational Picture (COP) standard to inform the next development milestone for the Joint Command and Control program of record.

In FY05, Congress increased the program by \$6.2M: \$3.8M to fund Command and Control Enterprise Services (C2ES) and \$2.8M to fund Command and Control Service Level Management. Also in FY05, the FY05 Defense Appropriations Bill reduced the PE, eliminating \$4.0M for program growth.

For FY03 Task 1 program details, see PE 0207434F, Link 16 Support and Sustainment, Project #655051. For FY04 Task 1 Details, see PE 0207438F, Theater Battle Management C4I, Project #654790. For FY04 Task 2 program details, see PE 0604754F, Tactical Data Link Integration, Project #654992 and PE 0603850F, Integrated Broadcast Service, #635151.

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

FIOP is comprised of the following ten integrated product teams. They are of varying size, scope and longevity.

- (1) Joint Blue Force Situational Awareness (JBFSa) - Many DoD systems provide data regarding friendly forces. There is no single system or mission application that provides a totally integrated (i.e., all blue force data) set of data to the warfighter. This task will perform the systems engineering, architecture development, and integration activities leading to a secure, web-based blue force data dissemination network service. This task is being led by the Army and is being done in coordination with the Blue Force Tracking and Single Integrated Ground Picture programs and the Joint Blue Force Situational Awareness Advanced Concept Technology Demonstration.
- (2) Situational Awareness Data Interoperability - This task will allow the bidirectional sharing of data with our coalition partners through the development of a Common Operational Environment (COE)-compliant, web-based network gateway mission application and development of an Interface Control Document.
- (3) Tactical Data Link Integration -Improves the integration of the multi-Tactical Data Link (TADIL) networks of the Joint Data Network (JDN) and the Global Command and Control Systems (GCCS) Family of Systems (FoS) of the Joint Planning Network (JPN). The evolving primary mechanism for supporting this type of integration is the Multi-TADIL Capability segment, which provides the ability to establish two-way interfaces between GCCS FoS and Link 11/16 (via the Air Defense Systems Integrator). The objective of this effort is to expand and strengthen this integration, with a focus on near-term delivery of warfighting capability, but is simultaneously designed to support a longer range transition to architectures that converge the JDN and JPN environments and evolve the GCCS FoS to Joint Command and Control and finally the Link processors to a converged implementation.
- (4) Precision Fires Support - Ground Fires systems require accurate target coordinates. This task will provide web-based Global Positioning Systems enhanced target

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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

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OPERATIONAL PIC (FIOP)

PROJECT NUMBER AND TITLE

5137 Family of Interoperable
Operational Pictures (FIOP)

coordinates to those systems. This is a critical element of the DoD's efforts to reduce fratricide while increasing combat effectiveness.

(5) Network Based Services - For several FIOP tasks, an implicit requirement is that the network infrastructure can support the information being promulgated in a warfighting environment. The collective set of infrastructure components that can provide the network based services support can be referred to as the common integrated infrastructure (CII). This task includes support for the development of those CII components that will be made part of the Command and Control (C2) Enterprise and enable the use of the web-based network services that were developed for the C2 Community of Interest. The CII provides smart adaptive services that allow warfighters to rapidly access, manipulate and display trusted data in a changing environment.

(6) Web Enabled Execution Management - This task provides new, web-based tools to Operations Center personnel that are used during the execution of the battle. These tools are comprised of mission managers and task coordination managers and use the standard DoD COE set of mission applications and segments. These tools will provide greater horizontal and vertical integration of the Joint Forces Commander's decisions.

(7) Red Force Situational Awareness Picture - Similar to JBFSA, there is no single information capability that provides an integrated picture of the enemy forces. This effort will provide an integrated Red Force information service that will be made available to DoD C2 systems.

(8) Ground Moving Target Indicators (GMTI) - The data pertaining to moving ground targets that is collected by the DoD's airborne sensors has limited promulgation throughout the C2 Community of Interest. The GMTI effort will transform the data into a web-based format and make it available to appropriate users via a web browser.

(9) Meteorology Oceanography (METOC) - There is currently no single repository in a standardized format for global weather services to include indigenous/local weather information. This effort develops a METOC common data format from a variety of sources such as Unmanned Aerial Vehicles (UAV), the National Imagery and Mapping Agency (NIMA), and the Air Force Weather Agency (AFWA). Commanders and warfighting systems require METOC data and information pertinent to the local geographical area, gathered and processed by both national and local systems and sensors. It will be available over the CII and provide weather information in a common format to the combatant commanders in a near real-time automated data push.

(10) Targeting Interoperability - There are a variety of efforts and systems that support the planning and execution of targeting processes both in the deliberate and time critical time domains. Multiple time critical targeting systems employed by the Services are not interoperable and do not share targeting information which affect fire support planning and execution. Also, targeting data is not sufficiently integrated across all Battle Management C2 Systems to the extent necessary to support actionable decision making.

This activity is in Budget Activity 5 (System Development and Demonstration) because it supports development, integration solutions, fielding, operational support activities, and special projects.

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Web Enabled Execution Management Spirals 4 & 5	0.000	15.660		0.000
(U) Situational Awareness Data Interoperability	0.000	1.410		0.000
(U) Network Based Services	0.000	7.047		

Project 5137

R-1 Shopping List - Item No. 97-4 of 97-13

Exhibit R-2a (PE 0207443F)

Exhibit R-2a, RDT&E Project Justification							DATE February 2005			
BUDGET ACTIVITY				PE NUMBER AND TITLE			PROJECT NUMBER AND TITLE			
05 System Development and Demonstration (SDD)				0207443F FAMILY OF INTEROP OPERATIONAL PIC (FIOP)			5137 Family of Interoperable Operational Pictures (FIOP)			
(U)	Precision Fires Support				0.000		4.920			
(U)	Joint Blue Force Situational Awareness				0.000		13.860			
(U)	Tactical Data Link Integration				0.000		3.710	0.000		0.000
(U)	Targeting Interoperability				0.000		0.000	0.000		
(U)	Ground Moving Target Indicators				0.000		0.000	0.000		
(U)	Red Force Picture Distribution				0.000					
(U)	Meteorology and Oceanographic									
(U)	Total Cost				0.000		46.607	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>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 RDT&E									
(U)	0604754F Tact. Data Link Integ.	22.376	0.000	0.000	0.000	0.000	0.000	0.000	0.000	22.376
(U)	0207438F TBMCS Ops	5.723	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.723
(U)	0603850F Integ. Bdcst Sys.	5.636	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.636
(U)	O&M (3400)									
(U)	0207443F (FIOP)	0.000	0.000	0.072	0.145	0.156	0.168	0.165	0.168	Continuing TBD
(U)	D. Acquisition Strategy									
	JROC-directed activity to spiral develop, integrate, and sustain web-enabled COP capabilities that are interoperable with existing Service systems by identifying execution-level requirements and candidate solutions which will be tested and then migrated to Service Systems of Record for sustainment using an acquisition strategy normally composed of pre-competed existing contracts.									

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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 0207443F FAMILY OF INTEROP OPERATIONAL PIC (FIOP)						PROJECT NUMBER AND TITLE 5137 Family of Interoperable Operational Pictures (FIOP)		
(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>Web Enabled Execution Management</u>	Various	Various				15.660	Dec-04			0.000			15.660	14.000
Subtotal Web Enabled Execution Management			0.000	0.000		15.660		0.000		0.000		0.000	15.660	14.000
Remarks:	The WEEMC effort has been planned, programmed and budgeted in prior years in PE0207438F. This is not a New Start													
(U) <u>Tactical Data Link Integration</u>	MIPR	Various contractors managed by SPAWAR PM-157, San Diego, CA		0.000		3.710	Dec-04	0.000		0.000			3.710	3.710
Subtotal Tactical Data Link Integration			0.000	0.000		3.710		0.000		0.000		0.000	3.710	3.710
Remarks:	This effort has been planned, programmed and budgeted in prior years in PE0604754F. This is not a new start.													
(U) <u>Situational Awareness Data Interoperability</u>	MIPR	Various contractors managed by CECOM PEO/C3T				1.410	Feb-05			0.000			1.410	1,410.000
Subtotal Situational Awareness Data Interoperability			0.000	0.000		1.410		0.000		0.000		0.000	1.410	1,410.000
Remarks:	This effort has been planned, programmed and budgeted in prior years in PE0604754F. This is not a new start.													
(U) <u>Network Based Services</u>	Various	Various contractors managed by HQ ESC/NI-2, Hanscom AFB, MA				7.047	Jan-05						7.047	7.047
Subtotal Network Based Services			0.000	0.000		7.047		0.000		0.000		0.000	7.047	7.047
Remarks:	This effort has been planned, programmed and budgeted in prior years in PE0604754F. This is not a new start.													
(U) <u>Joint Blue Force Situational Awareness</u>	MIPR	Various contractors managed by HQ Dept of Army/G8, Washington DC				13.860	Mar-05						13.860	13.860

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R-1 Shopping List - Item No. 97-6 of 97-13

Exhibit R-3 (PE 0207443F)

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Exhibit R-3, RDT&E Project Cost Analysis							DATE February 2005		
BUDGET ACTIVITY				PE NUMBER AND TITLE			PROJECT NUMBER AND TITLE		
05 System Development and Demonstration (SDD)				0207443F FAMILY OF INTEROP OPERATIONAL PIC (FIOP)			5137 Family of Interoperable Operational Pictures (FIOP)		
Subtotal Joint Blue Force Situational Awareness	0.000	0.000	13.860	0.000	0.000	0.000	0.000	13.860	13.860
Remarks:	This effort has been planned, programmed and budgeted in prior years in PE0603850F. This is not a new start.								
(U) <u>Precision Fires Support</u>									
	MIPR	Various contractors managed by USMC Systems Command, Quantico, VA	4.920	Jan-05				4.920	4.920
Subtotal Precision Fires Support	0.000	0.000	4.920	0.000	0.000	0.000	0.000	4.920	4.920
Remarks:	This effort has been planned, programmed and budgeted in prior years in PE0604754F. This is not a new start.								
(U) <u>Red Force Picture Distribution</u>								0.000	0.000
Subtotal Red Force Picture Distribution	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Remarks:									
(U) <u>Targeting Interoperability</u>								0.000	0.000
Subtotal Targeting Interoperability	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Remarks:									
(U) <u>Ground Moving Target Indicators</u>								0.000	0.000
Subtotal Ground Moving Target Indicators	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Remarks:									
(U) <u>Meteorology and Oceanographic</u>								0.000	0.000
Subtotal Meteorology and Oceanographic	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Remarks:									
(U) Total Cost	0.000	0.000	46.607	0.000	0.000	0.000	0.000	46.607	1,453.537

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Exhibit R-4, RDT&E Schedule Profile		DATE February 2005
BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0207443F FAMILY OF INTEROP OPERATIONAL PIC (FIOP)	PROJECT NUMBER AND TITLE 5137 Family of Interoperable Operational Pictures (FIOP)

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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

0207443F FAMILY OF INTEROP
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PROJECT NUMBER AND TITLE

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Operational Pictures (FIOP)

(U) <u>Schedule Profile</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) WEEMC Spiral 1 Delivery	1Q			
(U) WEEMC Spiral 2 Delivery	3Q			
(U) WEEMC Spiral 3 Delivery	4Q			
(U) WEEMC Spiral 4 Delivery		2Q		
(U) WEEMC Spiral 5 Delivery		4Q		
(U) Tactical COP Workstation Final Delivery	2Q			
(U) JBMC2 - FIOP Sys. Engineering Working Group (SEWG) and JFCOM Initial Engineering Plan Completed--Updates Follow	3Q	2Q		
(U) JBMC2 - Semi Annual Architectural Updates		1&3Q		
(U) JBFSA - CONOPS Complete		2Q		
(U) JBFSA - 1st iteration of Integrated and Operational Architectures feeding into Integrated Capability Delivery		4Q		
(U) TDL Integration - CONOPS	2Q			
(U) TDL Integration - Spiral 1 Delivery	3Q			
(U) TDL Integration - Spiral 2 Delivery		3Q		
(U) SADI - Spiral 1	4Q			
(U) SADI - Spiral 2		2Q		
(U) SADI - Spiral 3		3Q		
(U) NBS - Cross System Weapon Target Pairing Information Service	4Q			
(U) NBS - C2 Community of Interest Guidance published		2Q		
(U) Precision Fires Suppt. - Spiral 1	3Q			
(U) Precision Fires Suppt. - Spiral 2		3Q		

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TERMINATION OF INVESTMENT-RELATED PROGRAMS

FY 2006 President's Budget

(Dollars in Millions)																		
PE	BPAC	APPN	FY 2004		FY 2005		FY 2006		FY 2007		FY 2008		FY 2009		FY 2010		FY 2011	
			COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY	COST	QTY
0207443F	655137	3600	0.000		0.000		45.201		41.438		51.720		40.531		41.342		42.169	

Effort Title

Family of Interoperable Operational Pictures (FIOP)

Program Description

FIOP is a program designed to implement web-based technologies into Systems of Record, making their data, and thus the Common Operational and Tactical Pictures, consistent throughout the Services and at all echelons of Combat Operations. The Joint Requirements Oversight Council (JROC) directed the FIOP program to "...provide an all-source picture of the Battlespace containing actionable, decision quality information through the fusion of existing databases" in JROC Memorandum 156-02. The goal of FIOP is to provide the underpinnings of Network Centric Operational Warfare. FIOP program focus includes the following Integrated Product Team (IPT) areas:

- Web Enabled Execution Management Capability (WEEMC)
- Joint Blue Force Situational Awareness (JBFSa)
- Situational Awareness Data Interoperability (SADI)
- Tactical Data Link Integration
- Precision Fires Support
- Network Based Services
- Red Force Situational Awareness Picture
- Ground Moving Target Indicators (GMTI)
- Meteorology Oceanography (METOC)
- Targeting Interoperability

Status to Date

All IPTs are in exploratory phases. Exceptions are WEEMC and JBFSa: WEEMC capability is 75% complete and JBFSa effort is near 50% complete.

Rationale for Termination

OSD terminated the FIOP program, project #655137, for FY06-FY11. OSD also directed the Under Secretary of Defense (AT&L) with the Chairman of the Joint Chiefs of Staff to leverage the Single Integrated Air Picture (SIAP) systems engineering process and the Joint Capabilities Integration and Development System (JCIDS) process to determine and implement the Common Operational Picture (COP) standard to inform the next development milestone for the Joint Command and Control program of record.

Exhibit R-2a, RDT&E Project Justification

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BUDGET ACTIVITY					PE NUMBER AND TITLE			PROJECT NUMBER AND TITLE		
05 System Development and Demonstration (SDD)					0207443F FAMILY OF INTEROP OPERATIONAL PIC (FIOP)			5187 Single Integrated Air Picture (SIAP)		
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
5187 Single Integrated Air Picture (SIAP)	0.000	0.000	29.296	20.450	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

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

The implementation of the SIAP Block 0 (zero) consists of the implementation of three Interface Change Proposals (ICPs) [Correlation/Decorrelation, ID Taxonomy, and ID Conflict Resolution] across ten AF weapons systems. The Block 0 schedule for implementation has various completion dates across the ten weapons systems with all being completed in 2006.

The Model Driven Architecture (MDA) approach will provide enhanced interoperability by implementing Joint common Battle Management Command and Control (BMC2) functionality in weapons systems, thus enabling more accurate situational awareness, and reduced fratricide. The SIAP funding in PE 0207443F integrates the SIAP functionality into initial Air Force weapons system (e.g., E-3 AWACS, Battle Control System [BCS], RC-135V/W RIVET JOINT).

The Air Force is applying expertise in the various AF weapons System Program Offices (SPOs) to assist with defining the SIAP Platform Independent Model (PIM) functionality, the required SIAP architecture, and the integration methodology for AF C2 weapons systems. This effort funds AF specific, SIAP-related engineering efforts and the independent verification/validation efforts for AF weapon system-specific models used in SIAP integration. Also, the Air Force has staff working on site with the Joint SIAP Systems Engineering Office (JSSEO) to help define and develop the functional content of the SIAP PIM scheduled for delivery 2005. Air Force platforms will be integrating and implementing this product through 2008.

This activity is in Budget Activity 5 (System Development and Demonstration) because it supports development, integration solutions, fielding, operational support activities, and special projects.

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) BLOCK 0			6.200	
(U) MDA Integrating and Implementation			23.096	20.450
(U) Total Cost	0.000	0.000	29.296	20.450

(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>
(U) RDT&E										
(U) 0207434F Link 16 Support & Sustainment	61.150	134.547	157.677	184.100	151.289	155.710	159.298	162.024	Continuing	TBD

(U) **D. Acquisition Strategy**

The Air Force SIAP Program Office (SPO) provides for common development and integration across multiple Air Force platforms via existing contract mechanisms.

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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 0207443F FAMILY OF INTEROP OPERATIONAL PIC (FIOP)						PROJECT NUMBER AND TITLE 5187 Single Integrated Air Picture (SIAP)		
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2004 Cost	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) <u>Product Development</u>														
AWACS Block 30/35 Block 0 Corr/Decorr	CPIF	Boeing Seattle, WA						6.200	Nov-05				6.200	
Integration Resource Center	CPFF	Alphatech Burlington, MA						3.500	Nov-05	3.500	Nov-06	Continuing	TBD	
MDA Integration and Implementation	TBD	TBD						14.596	Nov-05	11.950	Nov-06	Continuing	TBD	
Subtotal Product Development			0.000	0.000		0.000		24.296		15.450		Continuing	TBD	0.000
Remarks:														
(U) <u>Support</u>														
ESC	C/FFP	Titan Corp, Odyssey Consulting Group, BTAS, Inc, MITRE						5.000	Oct-05	5.000	Oct-06	Continuing	TBD	
Subtotal Support			0.000	0.000		0.000		5.000		5.000		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	0.000
Remarks:														
(U) <u>Management</u>														
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U)														
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	0.000		0.000		29.296		20.450		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2005

BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

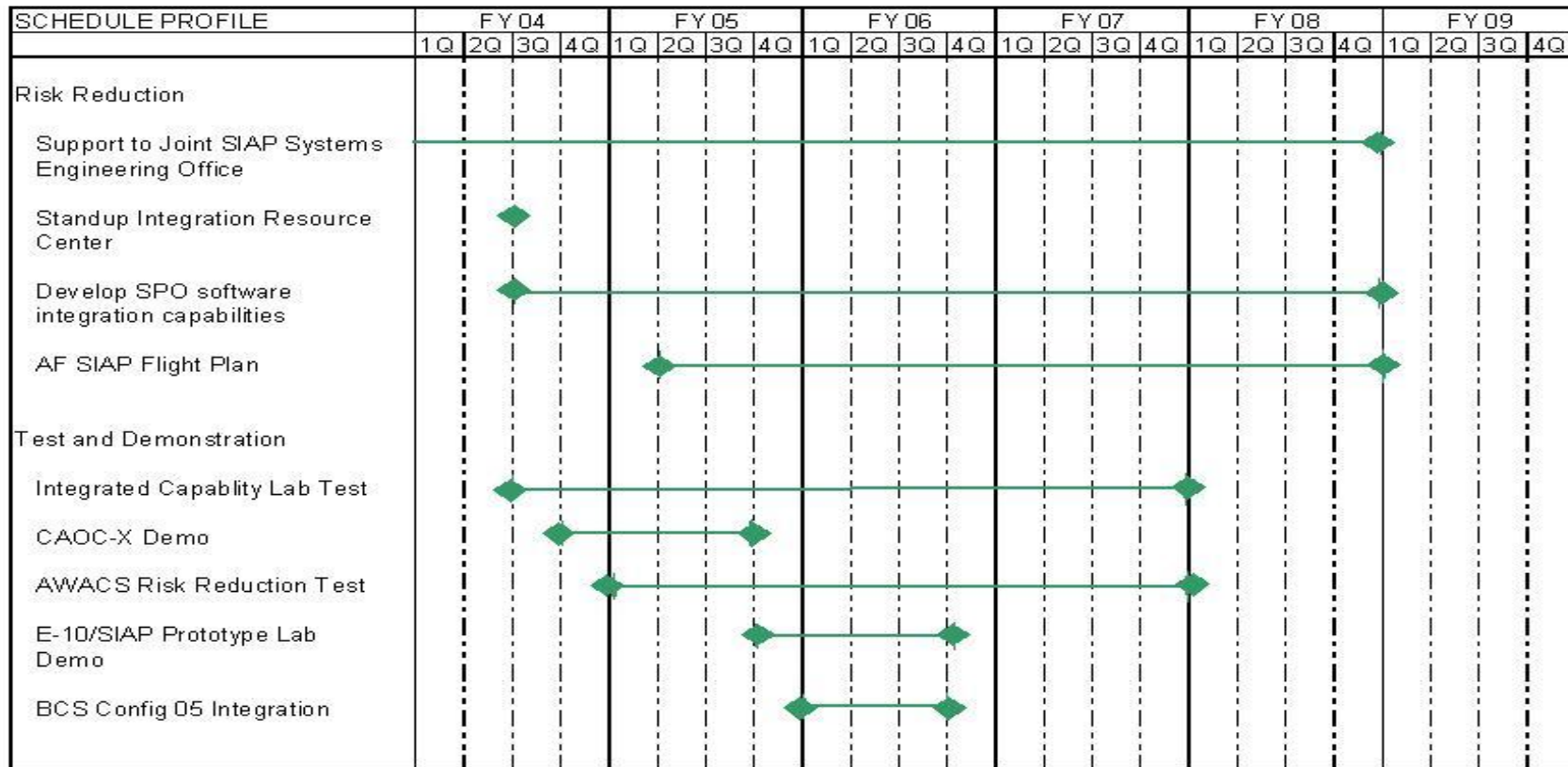
PE NUMBER AND TITLE

0207443F FAMILY OF INTEROP
OPERATIONAL PIC (FIOP)

PROJECT NUMBER AND TITLE

5187 Single Integrated Air Picture
(SIAP)

Single Intergated Air Picture (SIAP) Schedule



FY03-05 work performed in PE 0207434F BPAC 655050; FY06-08 performed in PE0207433F BPAC 655187

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Exhibit R-4a, RDT&E Schedule Detail			DATE	
			February 2005	
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE		
05 System Development and Demonstration (SDD)	0207443F FAMILY OF INTEROP OPERATIONAL PIC (FIOP)	5187 Single Integrated Air Picture (SIAP)		
(U) <u>Schedule Profile</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Support to Joint SIAP Systems Engineering Support Office	1-4Q	1-4Q	1-4Q	1-4Q
(U) Standup Integration Resource Center	2Q			
(U) Develop SPO software integration capabilities	3-4Q	1-4Q	1-4Q	1-4Q
(U) AF SIAP Flight Plan	2-4Q	1-4Q	1-4Q	1-4Q
(U) Integrated Capability Lab Test	2-4Q	1-4Q	1-4Q	1-4Q
(U) CAOC-X Demo	3-4Q	1-3Q		
(U) AWACS Risk Reduction Test		1-4Q	1-4Q	1-4Q
(U) E-10/SIAP Prototype Lab Demo		4Q	1-3Q	
(U) BCS Config 05 Integration		4Q	1-3Q	
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