PE NUMBER: 0207443F
PE TITLE: FAMILY OF INTEROP OPERATIONAL PIC (FIOP)

				DATE
Exhibit R-2, RDT&E Budget Item Justification				**February 2004**

| BUDGET ACTIVITY **05 System Development and Demonstration (SDD)** | | | PE NUMBER AND TITLE **0207443F FAMILY OF INTEROP OPERATIONAL PIC (FIOP)** | | | | | | |

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	0.000	0.000	44.947	45.201	41.438	51.720	40.531	0.000	0.000
5137 Family of Interoperable Operational Pictures (FIOP)	0.000	0.000	44.947	45.201	41.438	51.720	40.531	0.000	0.000

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 PE 0603850F, Integrated Broadcast System, Project #635151 were transferred into this Program Element in order to consolidate FIOP program funding.

 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**

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" in JROC Memorandum 156-02. 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) - 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.

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.

Tactical Data Link Integration - There is a lack of integration between 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

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and Control and finally the Link processors to a converged implementation.

Precision Fires Support - Ground Fires systems require accurate target coordinates. This task will provide web-based Global Positioning Systems enhanced target coordinates to those systems. This is a critical element of the DoD's efforts to reduce fratricide while increasing combat effectiveness.

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.

Web Enabled Execution Management - This task began in FY02 and 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.

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.

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.

Meterology Oceanography (METOC) - There is currently no single repository for global weather services, which includes indigenous/local weather information. Commanders require weather information pertinent to the local geographical area not available on national systems. The weather information would have to be provided in a common format to the combatant commanders in a near real-time automated data push. This task will address this deficiency.

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.

The Family of Interoperable Operational Pictures is in Budget Activity 5 (System Development and Demonstration) because it support development, integration solutions, fielding, operational support activities, and support of special projects.

Exhibit R-2, RDT&E Budget Item Justification	DATE
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BUDGET ACTIVITY	PE NUMBER AND TITLE
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(U) **B. Program Change Summary ($ in Millions)**

		FY 2003	FY 2004	FY 2005
(U)	Previous President's Budget	0.000	0.000	0.000
(U)	Current PBR/President's Budget	0.000	0.000	44.947
(U)	Total Adjustments	0.000	0.000	
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

The FY05 increase results from the consolidation of FIOP funds from PE0604754F (Tactical Data Link Integration), #654992, PE0207438F (Theater Battle Management C4I), #654790, and PE0603850F (Integrated Broadcast System), #635151.

Exhibit R-2a, RDT&E Project Justification							DATE February 2004		

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)		

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
5137	Family of Interoperable Operational Pictures (FIOP)	0.000	0.000	44.947	45.201	41.438	51.720	40.531	0.000	0.000
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U)   A. Mission Description and Budget Item Justification

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Exhibit R-2a, RDT&E Project Justification	DATE February 2004

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)

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.

Web Enabled Execution Management - This task began in FY02 and 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.

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The Family of Interoperable Operational Pictures is in Budget Activity 5 (System Development and Demonstration) because it support development, integration solutions, fielding, operational support activities, and support of special projects.

(U) **B. Accomplishments/Planned Program ($ in Millions)**	FY 2003	FY 2004	FY 2005
(U) No Activity	0.000	0.000	
(U) Web Enabled Execution Management Spirals 4 & 5			13.936
(U) Situational Awareness Data Interoperability			5.638
(U) Network Based Services			5.516
(U) Precision Fires Support Spiral 3 and Phase III			6.864
(U) Joint Blue Force Situational Awareness			12.135
(U) Tactical Data Link Integration			0.858
(U) Total Cost	0.000	0.000	44.947

Project 5137	R-1 Shopping List - Item No. 96-6 of 96-11	Exhibit R-2a (PE 0207443F)

Exhibit R-2a, RDT&E Project Justification	DATE
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(U) **C. Other Program Funding Summary ($ in Millions)**

(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.

Exhibit R-3, RDT&E Project Cost Analysis											DATE **February 2004**		

| BUDGET ACTIVITY
05 System Development and Demonstration (SDD) | | | | | | | PE NUMBER AND TITLE
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(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2003 Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Web Enabled Execution Management												
	Various	Various						13.936	Dec-04	Continuing	TBD	
Subtotal Web Enabled Execution Management			0.000	0.000		0.000		13.936		Continuing	TBD	0.000
Remarks: The WEEMC effort has been planned, programmed and budgeted in prior years in PE0207438F. This is not a New Start												
(U) Tactical Data Link Integration												
	MIPR	SPAWAR PM-157, San Diego, CA	0.000	0.000		0.000		0.858	Dec-04	Continuing	TBD	
Subtotal Tactical Data Link Integration			0.000	0.000		0.000		0.858		Continuing	TBD	0.000
Remarks: This effort has been planned, programmed and budgeted in prior years in PE0604754F. This is not a new start.												
Situational Awareness Data												
(U) Interoperability												
	MIPR	CECOM PEO/C3T						5.638	Feb-05	Continuing	TBD	
Subtotal Situational Awareness Data Interoperability			0.000	0.000		0.000		5.638		Continuing	TBD	0.000
Remarks: This effort has been planned, programmed and budgeted in prior years in PE0604754F. This is not a new start.												
(U) Network Based Services												
	Various	HQ ESC/NI-2, Hanscom AFB, MA						5.516	Jan-05	Continuing	TBD	
Subtotal Network Based Services			0.000	0.000		0.000		5.516		Continuing	TBD	0.000
Remarks: This effort has been planned, programmed and budgeted in prior years in PE0604754F. This is not a new start.												
(U) Joint Blue Force Situational Awareness												
	MIPR	HQ Dept of Army/G8, Washington DC						12.135	Mar-05	Continuing	TBD	
Subtotal Joint Blue Force Situational Awareness			0.000	0.000		0.000		12.135		Continuing	TBD	0.000
Remarks: This effort has been planned, programmed and budgeted in prior years in PE0603850F. This is not a new start.												
(U) Precision Fires Support												
	MIPR	USMC Systems						6.864	Jan-05	Continuing	TBD	

Exhibit R-3, RDT&E Project Cost Analysis	DATE February 2004

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Command, Quantico, VA

Subtotal Precision Fires Support	0.000	0.000	0.000	6.864	Continuing	TBD	0.000

Remarks: This effort has been planned, programmed and budgeted in prior years in PE0604754F. This is not a new start.

(U) Total Cost	0.000	0.000	0.000	44.947	Continuing	TBD	0.000

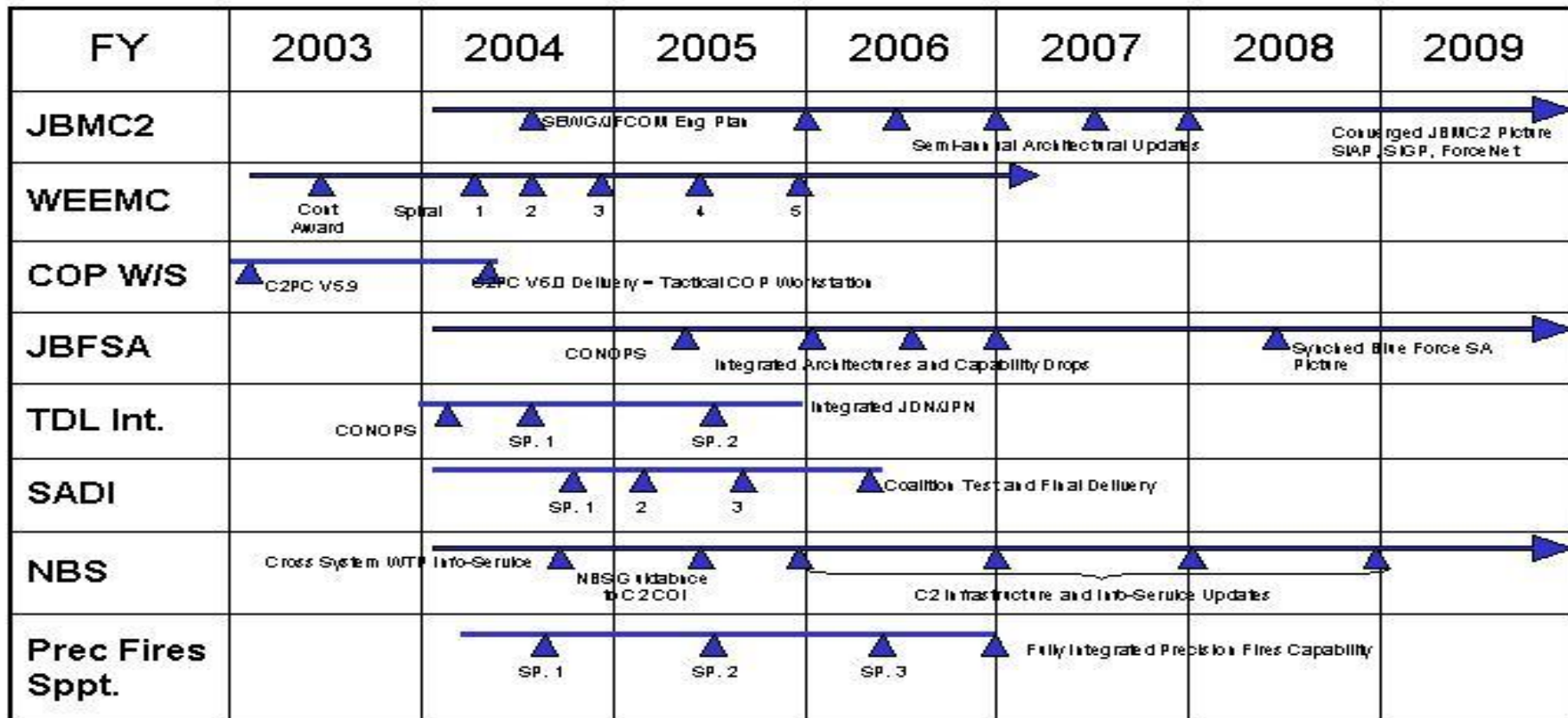| Exhibit R-4, RDT&E Schedule Profile		DATE **February 2004**
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FIOP Milestone Schedule

Exhibit R-4a, RDT&E Schedule Detail	DATE February 2004

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(U) **Schedule Profile**	FY 2003	FY 2004	FY 2005
(U) WEEMC Contract Award	3Q		
(U) WEEMC Spiral 1 Delivery		1Q	
(U) WEEMC Spiral 2 Delivery		3Q	
(U) WEEMC Spiral 3 Delivery		4Q	
(U) WEEMC Spiral 4 Delivery			3Q
(U) WEEMC Spiral 5 Delivery			4Q
(U) Tactical COP Workstation Initial Delivery	2Q		
(U) Tactical COPWorkstation Final Delivery		3Q	
(U) JBMC2 - FIOP Sys. Engineering Working Group (SEWG) and JFCOM Intial Engineering Pla 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			4Q
(U) NBS - Cross System Weapon Target Pairing Information Service		4Q	
(U) NBS - C2 Community of Interest Guidance published			3Q
(U) Pre. Fires Suppt. - Spiral 1		3Q	
(U) Pre. Fires Suppt. - Spiral 2			3Q