

UNCLASSIFIED

PE NUMBER: 0207434F
 PE TITLE: Link 16 Support and Sustainment

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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0207434F Link 16 Support and Sustainment
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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	50.535	70.481	141.012	218.743	228.009	161.909	153.606	Continuing	TBD
5049 JINTACCS	5.880	10.359	9.275	10.262	19.390	8.650	7.353	Continuing	TBD
5050 TDL System Integration	29.990	60.122	131.737	208.481	208.619	153.259	146.223	Continuing	TBD
5051 Family of Interoperable Operational Pictures (FIOP)	14.665	0.000	0.000	0.000	0.000	0.000	0.030	Continuing	TBD

On 17 April 2001, the Chief of Staff of the Air Force (CSAF) approved the management of Tactical Data Links (TDL) as a Major System Acquisition Program. In order to effectively manage the program, the Tactical Data Links System Program Office (SPO) was stood up at Electronic Systems Center (ESC), Hanscom AFB, MA on 29 May 2001. Funding for Tactical Data Links was contained in PE 0604754F, Tactical Data Link Integration; PE 0604779F, Tactical Data Link Interoperability; and PE 0207434, Link 16 Support and Sustainment. This funding was consolidated into this program element, PE 0207434F, for the purpose of supporting the Tactical Data Link Infrastructure.

In FY05, PE 0207434F, Link 16 Support and Sustainment, Project #655051 efforts were transferred to PE 0207443F, FIOP, Project #675137, in order to consolidate FIOP funding. For FY03 FIOP Task 1 program details, see PE 0207434F, Link 16 Support and Sustainment, Project #655051. For FY04 FIOP Task 1 Details, see PE 0207438F, Theater Battle Management C4I, Project #654790. For FY04 FIOP Task 2 program details, see PE 0604754F, Tactical Data Link Integration, Project #654992 and PE 0603850F, Integrated Broadcast Service, Project #635151. For FY05 FIOP Task 1 and 2 details, see PE 0207443F, FIOP, Project #675137.

In FY04, funding was provided to PE 0207434F, Link 16 Support and Sustainment, project #655050, TDL System Integration to support Single Integrated Air Picture Block 1 efforts.

(U) A. Mission Description and Budget Item Justification

TDLs are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs are used by the Air Force, Army, Navy, and Marine Corps theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include but are not limited to: Link 16, Link 11, Situational Awareness Data Link (SADL), and Variable Message Format (VMF).

The Joint Interoperability of Tactical Command and Control Systems (JINTACCS) Program ensures platform/system interoperability through the development and management of the joint/combined architecture, tactical information exchange requirements (IERs), interface definitions and protocols, platform/system implementations, employment concepts, and operating procedures. This includes the coordination of all TDL and United States Message Text format (USMTF) message standards configuration management, platform/system interoperability assessments and interoperability certification testing.

Utilization of Link 16 in a joint environment requires the integration of terminals (e.g., Joint Tactical Information Distribution System (JTIDS) or Multifunctional Information Distribution System (MIDS)) into these host platforms, and interoperability of Link 16 networks across all deployed joint and allied platforms. The TDL

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System Program Office (SPO) performs several cross-platform activities to help ensure proper integration of Link 16 capabilities and interoperability of Link 16 networks. In addition, the SPO has management responsibility for the Air Force's Air Defense Systems Integrator (ADSI) systems. The Single Integrated Air Picture (SIAP) efforts will lead to the joint development of improvements to TDLs to better support the warfighter by ensuring the air picture is composed of common, continual, unambiguous tracks of all airborne objects.

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. In FY05, PE 0207434F, Link 16 Support and Sustainment, Project #655051 efforts were transferred to PE 0207443F, Family of Interoperable Operational Pictures, Project 575137 in order to consolidate FIOP funding.

This program is in budget activity 5 (Engineering Manufacturing and Development) because it supports development, integration solutions, fielding, operational support activities, and support of special projects.

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Previous President's Budget	44.146	58.783	141.335
(U) Current PBR/President's Budget	50.535	70.481	141.012
(U) Total Adjustments	6.389	11.698	
(U) Congressional Program Reductions	-0.637	-0.602	
Congressional Rescissions			
Congressional Increases	7.000	12.300	
Reprogrammings	0.026		
SBIR/STTR Transfer			

(U) **Significant Program Changes:**

In FY03, there was a Congressional increase of \$7.0 M to fund Link 16 integration in the Alaskan Aerospace Surveillance and Range Operations Modernization (AASROM) Program. In FY04, there was a Congressional increase of \$12.3M: \$8.0 M to fund Enhanced TDL Data Displays, part of the Link 16 integration in the AASROM Program (now referred to as LAK 16) and \$4.3M to fund the Link 16 Pocket J Program.

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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)				PE NUMBER AND TITLE 0207434F Link 16 Support and Sustainment			PROJECT NUMBER AND TITLE 5049 JINTACCS			
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	
5049 JINTACCS	5.880	10.359	9.275	10.262	19.390	8.650	7.353	Continuing	TBD	
Quantity of RDT&E Articles	0	0	0	0	0	0	0			

(U) A. Mission Description and Budget Item Justification

The Joint Interoperability of Tactical Command and Control Systems (JINTACCS) Program is a Joint Staff-directed program that provides the sole Air Force (AF) activity responsible for ensuring the interoperability of AF Tactical Data Links (TDLs) [including, but not limited to Tactical Digital Information Links (TADILs) and Variable Message Formats (VMF)] and United States Message Text Format (USMTF) systems with the associated Joint and allied/coalition systems. The requirements for the program are delineated in DoDD 4630.5, DoDD 4630.8, CJCSI 6212.01B, and AFI 33-108. The program ensures platform/system interoperability through the development and management of the joint/combined architecture, tactical information exchange requirements (IERs), interface definitions and protocols, platform/system implementations, employment concepts, and operating procedures. This includes the coordination of all TDL and USMTF message standards configuration management, platform/system interoperability assessments and interoperability certification testing. Air Force platforms/systems participating in, and affected by, this program include, but are not limited to: Airborne Warning and Control System (AWACS); Modular Control Element (MCE); Air Operations Center (AOC); Joint Surveillance Target Attack Radar System (JSTARS); F-15 A/B/C/D/E; F-16 B30/40/50; F/A-22; A/OA-10; Joint Strike Fighter (JSF); Airborne Laser (ABL); B-1; B-2; B-52; F-117; RC-135; Regional/Sector Air Operations Center (RAOC/SAOC), Command & Control Information Processing System (C2IPS); Space Based Infrared System (SBIRS); Air Support Operations Center (ASOC); and Tactical Air Control Parties (TACPs), Theater Battle Management Core Systems (TBMCS), Contingency Automated Theater Automated Planning System (CTAPS), Combat Intelligence System (CIS), Air Defense System Integrator (ADSI), Distributed Common Ground System (DCGS), North American Aerospace Defense Command (NORAD)/United States Space Command (USSPACECOM) Warfighting Support System (N/UWSS), Region/Sector Air Operations Center (R/SAOC) AWACS Digital Information Link, and Global Command and Control System (GCCS)-Air Force. The Air Force JINTACCS program supports the Assistant Secretary of Defense (ASD) directive on harmonization of US and NATO messages (e.g., ATO and ACO).

This program is in budget activity 5 (Engineering Manufacturing and Development) because it supports development, integration solutions, fielding, operational support activities, and support of special projects.

(U) B. Accomplishments/Planned Program (\$ in Millions)	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Accomplishments/Planned Program	0.000	0.000	
(U) Interoperability Certification Testing. Specific platforms will be determined based on Link 16 message implementation software upgrade, and system modification	0.650	0.633	0.645
(U) US Message Text Formats Management and Updates	1.463	1.583	1.603
- Support Joint, Allied/Coalition meetings and working groups			
- Support technology maturation for joint standards and DoD policy			
(U) Tactical Data Link Management and Architecture Development.	3.767	6.982	7.027
- Support multi TADIL and VMF meetings and working groups			

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- Consultations regarding implementation and interoperability with the F-16, B-52, B-1, B-2, F-117, and other weapon systems
- Consultations regarding software updates and interoperability with the F-15C, E-3, E-8, Control and Reporting Center/Control and Reporting Element (CRC/CRE), interoperable Systems Management and Requirements Transformation (iSMART), and other weapon systems

(U) Tactical Data Link Roadmap Requirements and Configuration Management.		1.161	
(U) Total Cost	5.880	10.359	9.275

(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									
(U) 0207445F (Fighter TDL)	28.955	42.318	50.976	67.805	27.437	55.473	41.179		
(U) 0207446F (Bomber TDL)	0.000	12.849	120.256	166.082	88.827	0.000	0.000		
(U) 0207448F (C2ISR TDL)	0.000	26.503	25.441	7.234	0.743	0.000	0.000		
(U) 0401839F (Airlift TDL)	0.000	0.000	0.000	0.000	31.466	0.000	0.000		
(U) 0604754F (TDL Integration)	0.000	14.550	0.000	0.000	0.000	0.000	0.000		
(U) Other APPN									
(U) Aircraft Procurement, AF (3010)									
(U) 0207434F (Link 16 Sup & Sus)	36.013	0.040	6.555	2.980	2.683	0.000	9.486		
(U) 0207445F (Fighter TDL)	0.000	29.300	97.417	122.079	94.050	44.218	32.598		
(U) 0207446F (Bomber TDL)	0.000	0.000	44.929	21.827	33.149	30.586	28.219		
(U) 0207448F (C2ISR TDL)	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
(U) 0401839F (Airlift TDL)	0.000	0.000	28.087	42.270	52.767	29.583	24.765		
(U) O&M, AF (3400)									
(U) 0207434F (Link 16 Sup & Sus)	13.357	12.873	12.613	13.916	14.056	14.606	15.131		
(U) 0401839F (Airlift 3400)	0.000	0.000	2.230	2.972	5.964	12.067	16.853		
(U) Other Procurement, AF (3080)									
(U) 0207434F (Link 16 Sup & Sus)	0.000	0.000	25.805	28.433	25.668	7.423	6.435		

(U) D. Acquisition Strategy

As the Air Force lead agent for a jointly directed program, JINTACCS provides level of effort technical support for increasing interoperability of AF programs through message text and data link standards implementation.

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Exhibit R-3, RDT&E Project Cost Analysis

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<u>(U) Cost Categories</u>	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>Cost to</u>	<u>Total</u>	<u>Target</u>
(Tailor to WBS, or System/Item Requirements) (\$ in Millions)			<u>Prior to FY</u>	<u>2003</u>	<u>2003</u>	<u>2004</u>	<u>2004</u>	<u>2005</u>	<u>2005</u>	<u>Complete</u>	<u>Cost</u>	<u>Value of</u>
			<u>2003</u>	<u>Cost</u>	<u>Award</u>	<u>Cost</u>	<u>Award</u>	<u>Cost</u>	<u>Award</u>			<u>Contract</u>
			<u>Cost</u>		<u>Date</u>		<u>Date</u>		<u>Date</u>			
<u>(U) Product Development</u>												
MITRE	SS/FFP	MITRE, Bedford MA		3.165	Oct-02	6.381	Oct-03	6.442	Dec-04	Continuing	TBD	
USMTF Standards Support	C/CPFF	B3H, Hampton VA		1.925	Oct-02	1.940	Oct-03	0.625	Dec-04	Continuing	TBD	
TDL Integration and Requirements	C/CPFF	Odyssey, Hampton VA				1.200	Oct-03	1.368	Dec-04	Continuing	TBD	
Subtotal Product Development			0.000	5.090		9.521		8.435		Continuing	TBD	0.000
Remarks:												
<u>(U) Test & Evaluation</u>												
AF Participating Test Unit (PTU)	MIPR	ACC/SC, Langley AFB VA		0.450	Jan-03	0.483	Jan-04	0.480	Jan-05	Continuing	TBD	
Subtotal Test & Evaluation			0.000	0.450		0.483		0.480		Continuing	TBD	0.000
Remarks:												
<u>(U) Management</u>												
Program Office and Contractor Support	C/FFP	Various		0.340	Dec-02	0.355	Dec-03	0.360	Dec-04		1.055	
Subtotal Management			0.000	0.340		0.355		0.360		0.000	1.055	0.000
Remarks:												
<u>(U) Total Cost</u>			0.000	5.880		10.359		9.275		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile

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PROJECT NUMBER AND TITLE
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SCHEDULE PROFILE	FY03				FY04				FY05				FY06				FY07				FY08				FY09							
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q				
FIGHTER PLATFORMS																																
E-3 AWACS																																
Interop Consultations				▲																												
Block 30/35 AFSIT		▲				▲				▲																						
Block 30/35 JIT			▲				▲				▲																					
E-8 JSTARS																																
Interop Consultations																																
AFSIT			▲				▲					▲																				
JIT				▲				▲								▲																
F-15																																
Interop Consultations				▲																												
F-15C/D AFSIT				▲				▲				▲																				
F-15C/D JIT									▲																							
F-15E AFSIT											▲																					
F-15E JIT												▲																				
B-1B																																
Interop Consultations			▲																													
Block 30/35 AFSIT									▲																							
Block 30/35 JIT											▲																					

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2004		
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE		
05 System Development and Demonstration (SDD)	0207434F Link 16 Support and Sustainment	5049 JINTACCS		
(U) <u>Schedule Profile</u>		<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) E-8 - Complete ASU Spiral 1 Implementation/Interoperability		3Q		
(U) AOC - Complete baseline Implementation/Interoperability			4Q	
(U) F-15C - Interoperability consultation for Software upgrades.		4Q		
(U) F-16 - Interoperability consultation for Software upgrades.			3Q	
(U) E-3 - Interoperability consultation for Software upgrades.		4Q		
(U) E-8 - Interoperability consultation for Software upgrades.		2Q		
(U) CRC/CRE - Interoperability consultation for Software upgrades.		4Q		
(U) AOC - Interoperability consultation for Software upgrades.		4Q		
(U) F-15E - Interoperability consultation for Software upgrades.		3Q		
(U) ABL - Interoperability consultation for Software upgrades.		2Q		
(U) B-1 - Interoperability consultation for Software upgrades.		3Q		
(U) B-2 - Interoperability consultation for Software upgrades.		3Q		
(U) B-52 - Interoperability consultation for Software upgrades.		3Q		
(U) F/A-22 - Interoperability consultation for Software upgrades.		3Q		
(U) F-117 - Interoperability consultation for Software upgrades.		3Q		
(U) Joint Strike Fighter (JSF) - Interoperability consultation for Software		1Q		
(U) R/SAOC - Interoperability consultation for Software upgrades.		2Q		
(U) TACP/ASOC - Interoperability consultation for Software upgrades.		4Q		
(U) Iceland Air Defense System Interoperability Tests			1-2Q	
(U) Joint Range Extension Interoperability Tests			1-2Q	
(U) F-16 Block 50 Interoperability Tests				1-2Q
(U) F-16 Pre-Block 40 Interoperability Tests			1-2Q	
(U) B-1 Interoperability Tests				1-2Q
(U) B-2 Interoperability Tests				3-4Q
(U) E-3 AWACS Interoperability Tests		2-3Q	2-3Q	1-2Q
(U) E-8 JSTARS Interoperability Tests		3-4Q	3-4Q	3-4Q
(U) F-15C/D Interoperability Tests		4Q	4Q	1Q
(U) F-15E Interoperability Tests				2-3Q

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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	
5050 TDL System Integration	29.990	60.122	131.737	208.481	208.619	153.259	146.223	Continuing	TBD	
Quantity of RDT&E Articles	0	0	0	0	0	0	0			

On 17 April 2001, the Chief of Staff of the Air Force (CSAF) approved the management of Tactical Data Links (TDL) as a Major System Acquisition Program. In order to effectively manage the program, the Tactical Data Links System Program Office (SPO) was stood up at Electronic Systems Center (ESC), Hanscom AFB, MA on 29 May 2001. Funding for the Tactical Data Link Infrastructure was contained in PE 0604754F, Tactical Data Link Integration; PE 0604779F, Tactical Data Link Interoperability; and PE 0207434, Link 16 Support and Sustainment. This funding was consolidated in PE 0207434F in FY03 for the purpose of supporting the Tactical Data Link Infrastructure.

In FY03 there was a Congressional increase of \$7.0 M to fund the Link 16 integration in the Alaskan Aerospace Surveillance and Range Operations Modernization (AASROM) Program

In FY04, there was a Congressional increase of \$12.3M: \$8.0 M to fund Enhanced TDL Data Displays, part of the Link 16 integration in the AASROM Program (now referred to as Link 16 Alaska (LAK-16)) and \$4.3M to fund the Link 16 "Pocket J" Program. Also in FY04, funding was provided to PE0207434F, Link 16 Support and Sustainment, project #655050, TDL System Integration to support SIAP Block 1 efforts.

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDLs) are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and mission assignments. TDLs provide interoperable data exchange, local and global connectivity, and situational awareness to the tactical user when operating under rapidly changing operational conditions. TDLs are used by the Air Force, Army, Navy, and Marine Corps theater Command and Control (C2) elements, weapons and sensor platforms. TDLs include but are not limited to: Link 16, Link 11, Situational Awareness Data Link (SADL), and Variable Message Format (VMF).

The number of Air Force platforms hosting TDLs are expanding from C2 aircraft (E-3, E-8, etc.) into the fighter, bomber, sensor, tanker, airlift and other tactical fleets (F-15, F-16, F/A-22, Rivet Joint, B-1, B-2, B-52, etc.). Utilization of TDLs in a joint environment requires the integration of terminals into these host platforms and interoperability of TDL networks across all deployed joint and allied platforms. Cross-platform activities performed by the TDL System Program Office (SPO) include, but are not limited to; integration efforts encompassing hardware, software, operational Link 16 enhancements, and logistics development; certification of individual TDL implementations to joint and allied standards; establishment of Service-wide network management procedures and operations; system wide enhancements and improvements; and test and sustainment activities. In addition, the SPO is supporting the integration of the Joint Interface Control Officer (JICO) - Support System (JSS) and TDL Gateways including, but not limited to, the Joint Air Defense System Integrator (ADSI), the family of Joint Range Extension (JRE) functionality (which includes the JRE Transparent Multi-Platform Gateway (TMPG) Equipment Package (JTEP)), and Beyond Line of Sight (BLOS) capabilities (such as the Roll-on BLOS Enhancement (ROBE)). The Single Integrated Air Picture (SIAP) efforts will lead to the joint development of near real-time and real-time data from multiple sensors and TDLs. This will enhance the air picture provided to the warfighter by ensuring common, continual, and unambiguous, tracks of all airborne objects.

This program is in budget activity 5 (Engineering, Manufacturing and Development) because it supports development, integration solutions, fielding, operational support

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activities, and support of special projects.

(U) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Accomplishments/Planned Program	0.000	0.000	0.000
(U) LINK 16 INTEGRATION: Efforts associated with hardware and software integration of Link 16 terminals into Air Force platforms. -- (U) On-going engineering integration support to platforms; technical improvements; field support; technical assistance to related tactical data link demonstration programs.	6.626	5.740	18.325
(U) LINK 16 EMD SUPPORT: Efforts associated with fielding terminals. -- (U) Maintain developmental equipment; test support; fielding/non-recurring training; network support; crypto support; spectrum support; gateway support; data link tool support; and support operational working groups.	1.771	3.385	14.395
(U) SINGLE INTEGRATED AIR PICTURE LINKAGE: -- (U) AF system engineering and infrastructure cost to support SIAP recommendations.	14.695	30.790	32.886
(U) ALASKA AEROSPACE SURVEILLANCE AND RANGE OPERATIONS MODERNIZATION (AASROM) PROGRAM	6.898	7.833	
(U) TACTICAL DATA LINK CONNECTIVITY: Efforts associated with Link 16 network management and network capability improvements. -- (U) Includes Link 16 and other TDL Gateways and Interfaces, ADSI Management, JICO Support Tools, BLOS Support Systems (such as ROBE), Objective gateway development, and Common Link Integration Processor (CLIP).		5.999	45.152
(U) SYSTEM TESTING & SUPPORT: Cross-platform test and evaluation and system level testing.		0.475	14.854
(U) TACTICAL DATA LINK ACQUISITION MANAGEMENT		5.900	6.125
(U) Total Cost	29.990	60.122	131.737

(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									
(U) 0207445F (Fighter TDL)	28.955	42.318	50.976	67.805	27.437	55.473	41.179		
(U) 0207446F (Bomber TDL)	0.000	12.849	120.256	166.082	88.827	0.000	0.000		
(U) 0207448F (C2ISR TDL)	0.000	26.503	25.441	7.234	0.743	0.000	0.000		
(U) 0401839F (Airlift TDL)	0.000	0.000	0.000	0.000	31.466	0.000	0.000		
(U) 0604754F (TDL Integration)	0.000	14.550	0.000	0.000	0.000	0.000	0.000		
(U) Other APPN									
(U) Aircraft Procurement, AF (3010)									TBD

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0207434F Link 16 Support and
Sustainment

PROJECT NUMBER AND TITLE

5050 TDL System Integration

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

(U) 0207434F (Link 16 Sup & Sus)	36.013	0.040	6.555	2.980	2.683	0.000	9.486
(U) 0207445F (Fighter TDL)	0.000	29.300	97.417	122.079	94.050	44.218	32.598
(U) 0207446F (Bomber TDL)	0.000	0.000	44.929	21.827	33.149	30.586	28.219
(U) 0401839F (Airlift TDL)	0.000	0.000	28.087	42.270	52.767	29.583	24.765
(U) O&M, AF (3400)							
(U) 0207434F (Link 16 Sup & Sus)	13.357	12.873	12.613	13.916	14.056	14.606	15.131
(U) 0401839F (Airlift 3400)	0.000	0.000	2.230	2.972	5.964	12.067	16.853
(U) Other Procurement, AF (3080)							
(U) 0207434F (Link 16 Sup & Sus)	0.000	0.000	25.805	28.433	25.668	7.423	6.435

(U) D. Acquisition Strategy

The Air Force Tactical Data Links System Program Office (SPO) provides for common development of integration and interoperability across all Air Force platforms and ensures that Link 16 is procured and maintained as a joint, end-to-end, command and control system.

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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 0207434F Link 16 Support and Sustainment					PROJECT NUMBER AND TITLE 5050 TDL System Integration		
(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> <u>Prior to FY</u> <u>2003</u> <u>Cost</u>	<u>FY</u> <u>2003</u> <u>Cost</u>	<u>FY</u> <u>2003</u> <u>Award</u> <u>Date</u>	<u>FY</u> <u>2004</u> <u>Cost</u>	<u>FY</u> <u>2004</u> <u>Award</u> <u>Date</u>	<u>FY</u> <u>2005</u> <u>Cost</u>	<u>FY</u> <u>2005</u> <u>Award</u> <u>Date</u>	<u>Cost to Complete</u>	<u>Total</u> <u>Cost</u>	<u>Target</u> <u>Value of</u> <u>Contract</u>
(U) <u>Product Development</u>												
Terminal Engineering Support	MIPR	SPAWAR, San Diego CA		0.687	Jul-03	1.290	Feb-04	2.010	Feb-05	Continuing	TBD	
JSS, CLIP, Objective Gateway, and Fielding/Integration Contractor Support	Various	TBD		2.427	Oct-02	6.939	May-04	76.813	Apr-05	Continuing	TBD	
MITRE	SS/FFP	MITRE, Bedford MA		7.530	Oct-02	7.860	Dec-03	8.188	Dec-04	Continuing	TBD	
Single Integrated Air Picture	Various	Various		11.695	Jan-03	30.590	Jan-04	32.886	Jan-05	Continuing	TBD	
Alaskan Aerospace Surveillance and Range Operations Modernization (AASROM) Program	SS/CPFF	Pro-Logic, Inc., Manassas VA		6.898	Oct-03	7.833	Mar-04				14.731	
Link 16 Pocket J Program*	SS/TBD	Pro-Logic, Inc., TBD				4.300	Mar-04				4.300	
Subtotal Product Development			0.000	29.237		58.812		119.897		Continuing	TBD	0.000
Remarks: * Supports the Congressional Add - is a Small Business Set-Aside program award.												
(U) <u>Test & Evaluation</u>												
46th Test Squadron	MIPR	46th Test Squadron, Eglin AFB FL		0.321	Oct-03	0.625	Oct-04	10.865	Dec-05	Continuing	TBD	
Subtotal Test & Evaluation			0.000	0.321		0.625		10.865		Continuing	TBD	0.000
Remarks:												
(U) <u>Management</u>												
Program Office and Contractor Support	C/FFP	Various		0.432	Dec-02	0.685	Dec-03	0.975	Dec-04		2.092	
Subtotal Management			0.000	0.432		0.685		0.975			0.000	2.092
Remarks:												
(U) Total Cost			0.000	29.990		60.122		131.737		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile

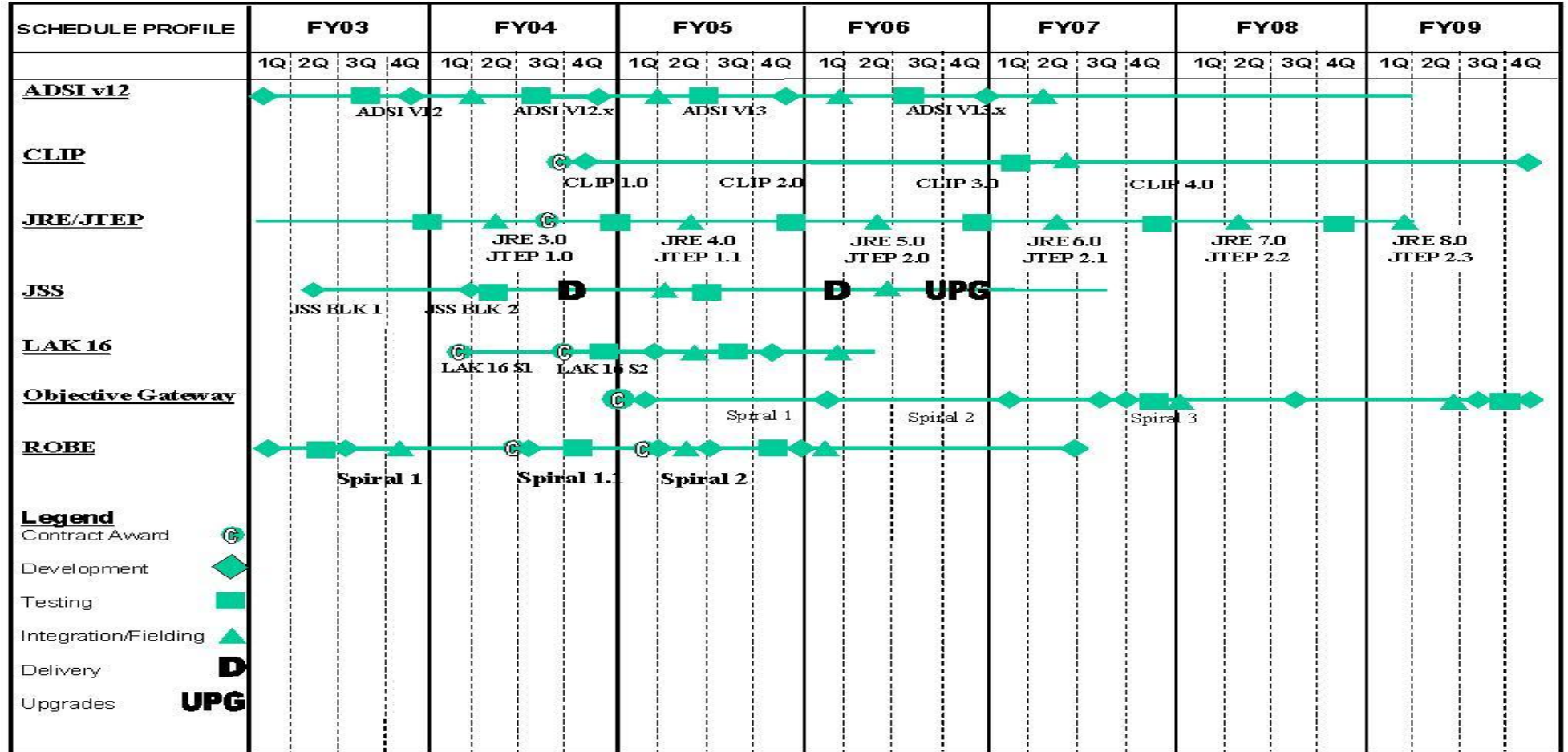
DATE

February 2004

BUDGET ACTIVITY
05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE
0207434F Link 16 Support and Sustainment

PROJECT NUMBER AND TITLE
5050 TDL System Integration



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Exhibit R-4a, RDT&E Schedule Detail		DATE
		February 2004
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
05 System Development and Demonstration (SDD)	0207434F Link 16 Support and Sustainment	5050 TDL System Integration
	<u>FY 2003</u>	<u>FY 2004</u>
		<u>FY 2005</u>
(U) Schedule Profile		
(U) ADSI v12 Development	1-4Q	
(U) ADSI v 12 Test	3-4Q	1Q
(U) ADSI v12 Integration/Fielding		1-4Q
(U) ADSI v12.x Development	4Q	1-4Q
(U) ADSI v 12.x Test		3-4Q
(U) ADSI v12.x Integration/Fielding		1-4Q
(U) ADSI v13 Development		4Q
(U) ADSI v 13 Test		1-4Q
(U) ADSI v13.x Development		2-4Q
(U) ROBE Spiral v1 Development	1-2Q	
(U) ROBE Spiral v1 Test	2-3Q	
(U) ROBE Spiral v1 Integration/Fielding	4Q	1-2Q
(U) ROBE Spiral v1 Support	4Q	1-4Q
(U) ROBE Spiral v1.1 Development		1-4Q
(U) ROBE Spiral v1.1 Test		1Q
(U) ROBE Spiral v1.1 Integration/Fielding		3-4Q
(U) ROBE Spiral v1.1 Support		1Q
(U) ROBE Spiral v2 Development		1-4Q
(U) ROBE Spiral v2 Test		3-4Q
(U) CLIP Contract Award		3Q
(U) CLIP Development Spiral 1		3-4Q
(U) CLIP Test & Certification Spiral 1		1-4Q
(U) CLIP Integration/Fielding Spiral 1		2-4Q
(U) CLIP Development Spiral 2		3-4Q
(U) LAK-16 Contract Award Spiral 1		2-4Q
(U) LAK-16 Development Spiral 1		1Q
(U) LAK-16 Test Spiral 1		1-4Q
(U) LAK-16 Contract Award Spiral 2		4Q
(U) LAK-16 Development Spiral 2		1-3Q
(U) LAK-16 Test Spiral 2		3Q
(U) JSS BLK 1 Development	2-4Q	3-4Q
(U) JSS BLK 1 Test & Eval		1-4Q
		2-3Q
		1-4Q

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2004
BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0207434F Link 16 Support and Sustainment	PROJECT NUMBER AND TITLE 5050 TDL System Integration
(U) JSS BLK 1 Delivered		4Q 1-4Q
(U) JSS BLK 1 Integration/Fielding		2-4Q
(U) JSS BLK 2 Development		1-4Q 1-4Q
(U) JSS BLK 2 Test & Eval		2-4Q
(U) JRE/JTEP Contract Award		4Q
(U) JRE/JTEP Development	1-4Q	1-4Q 1-4Q
(U) JRE/JTEP Test v3.0/JTEP 1.0		1-2Q
(U) JRE/JTEP v3.0/JTEP 1.0 Integration/Fielding		2-3Q
(U) JRE/JTEP Test v4.0/JTEP 1.1		1-2Q
(U) JRE/JTEP v4.0/JTEP 1.1 Integration/Fielding		2-3Q
(U) Objective Gateway Contract Award		1Q
(U) Objective Gateway Development Spiral 1		2-4Q

Exhibit R-2a, RDT&E Project Justification

DATE
February 2004

BUDGET ACTIVITY 05 System Development and Demonstration (SDD)				PE NUMBER AND TITLE 0207434F Link 16 Support and Sustainment			PROJECT NUMBER AND TITLE 5051 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
5051 Family of Interoperable Operational Pictures (FIOP)	14.665	0.000	0.000	0.000	0.000	0.000	0.030	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

In FY05, PE 0207434F, Link 16 Support and Sustainment, Project #655051 efforts were transferred to PE 0207443F, FIOP, Project #675137, in order to consolidate FIOP funding.

For FY03 FIOP Task 1 program details, see PE 0207434F, Link 16 Support and Sustainment, Project #655051. For FY04 FIOP Task 1 Details, see PE 0207438F, Theater Battle Management C4I, Project #654790. For FY04 FIOP Task 2 program details, see PE 0604754F, Tactical Data Link Integration, Project #654992 and PE 0603850F, Integrated Broadcast Service, Project #635151. For FY05 FIOP Task 1 and 2 details, see PE 0207443F, FIOP, Project #675137.

(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.

This program is in budget activity 5 (Engineering Manufacturing, and Development) because it supports development, integration solutions, fielding, operational support activities, and support of special projects.

(U) B. Accomplishments/Planned Program (\$ in Millions)	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Accomplishments/Planned Program			
(U) No Activity		0.000	0.000
(U) PERFORM REQUIREMENTS & ENGINEERING MANAGEMENT:	2.850		
--(U) Provide requirement management (AF Exec Agent \$750, \$300 each USA, USN, USMC; AF \$600, and DISA Mgt \$600).			
(U) IMPLEMENT EXECUTION MANAGEMENT CAPABILITY:	5.739		
--(U) Provide integration support, execution management, and visualization capabilities.			
(U) DEVELOP TACTICAL COE WORKSTATION:	3.038		
--(U) Migrate USMC/USA C2PC to COP infrastructure. Provide integration support, engineering, hardware/software and travel.			
(U) COE SUPPORT FOR JOINT VARIABLE MSG FORMAT:	3.038		
--(U) Implement COE processing of JVFMF messages among USMC/USN/USA with scalable COP infrastructure in			

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 0207434F Link 16 Support and Sustainment	PROJECT NUMBER AND TITLE 5051 Family of Interoperable Operational Pictures (FIOP)
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limited bandwidth environments. Provide integration support, engineering, hardware/software, and travel

(U) No Activity		0.000		
(U) Total Cost	14.665	0.000	0.000	0.000

(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 Complete</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) AF RDT&E									
(U) 0207438F (TBMC4I)	33.304	32.505	37.210	37.990	34.079	34.579	35.287		
(U) 0207443F (FIOP)	0.000	0.000	44.947	45.201	41.438	51.720	40.531		
(U) 0603850F (Integrated Broadcast System)	0.000	8.415	2.294	0.000	0.000	0.000	0.000		

(U) **D. Acquisition Strategy**

JROC-directed activity to implement spiral develop, integration 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 be migrated to Service SOR systems for sustainment.

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Exhibit R-3, RDT&E Project Cost Analysis

DATE

February 2004

BUDGET ACTIVITY			PE NUMBER AND TITLE					PROJECT NUMBER AND TITLE				
05 System Development and Demonstration (SDD)			0207434F Link 16 Support and Sustainment					5051 Family of Interoperable Operational Pictures (FIOP)				
<u>(U) Cost Categories</u>	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>Cost to</u>	<u>Total</u>	<u>Target</u>
(Tailor to WBS, or System/Item Requirements) (\$ in Millions)			<u>Prior to FY</u>	<u>2003</u>	<u>2003</u>	<u>2004</u>	<u>2004</u>	<u>2005</u>	<u>2005</u>	<u>Complete</u>	<u>Cost</u>	<u>Value of</u>
			<u>2003</u>	<u>Cost</u>	<u>Award</u>	<u>Cost</u>	<u>Award</u>	<u>Cost</u>	<u>Award</u>			<u>Contract</u>
			<u>Cost</u>		<u>Date</u>		<u>Date</u>		<u>Date</u>			
<u>(U) Product Development</u>												
Execution Management Contractor	C/CPFF	Lockheed Martin, Colorado Springs, CO		3.239	Apr-03					Continuing	TBD	
Tactical Coe WS Contractors*	MIPR	Various		3.038	Jan-03					Continuing	TBD	
JVMF Contractors**	MIPR	Various		3.038	Jan-03					Continuing	TBD	
Subtotal Product Development			0.000	9.315		0.000		0.000		Continuing	TBD	0.000
Remarks: *Funding MIPR'd to Marine Corps Systems Command. **Funding MIPR'd to Army Communication Electronics Command												
<u>(U) Support</u>												
Requirements and Engineering Support*	MIPR	Various		2.850	Jan-03						2.850	
Contractor Support	MIPR	Various		2.500	Jan-03					Continuing	TBD	
Subtotal Support			0.000	5.350		0.000		0.000		Continuing	TBD	0.000
Remarks: *Funding is provided to other Services for engineering and management support at their HQs												
<u>(U) Total Cost</u>			0.000	14.665		0.000		0.000		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile

DATE

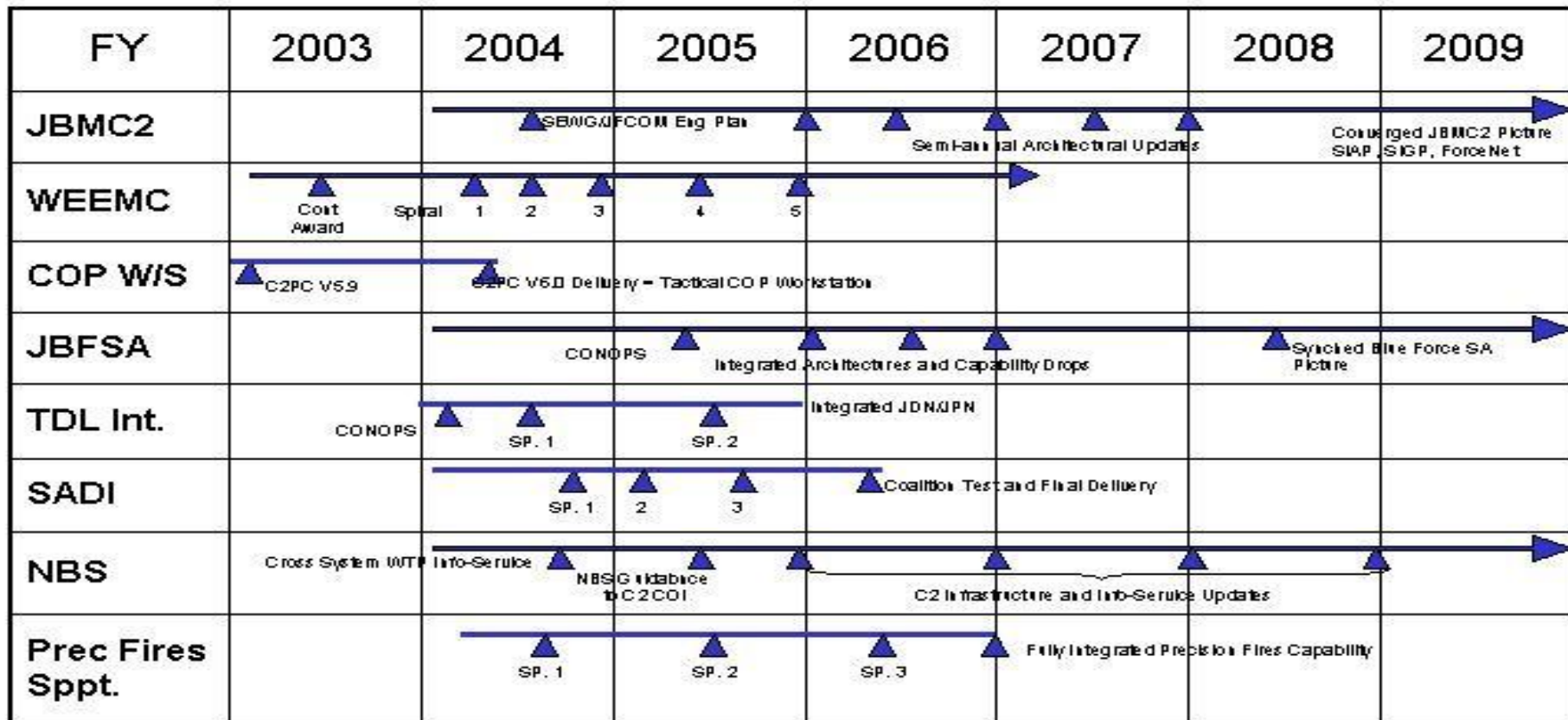
February 2004

BUDGET ACTIVITY
05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE
0207434F Link 16 Support and Sustainment

PROJECT NUMBER AND TITLE
5051 Family of Interoperable Operational Pictures (FIOP)

FIOP Milestone 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 0207434F Link 16 Support and Sustainment	PROJECT NUMBER AND TITLE 5051 Family of Interoperable Operational Pictures (FIOP)
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	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) <u>Schedule Profile</u>			
(U) Execution Management Capability	1-4Q		
(U) Tactical COE Workstation Development	1-4Q	1-2Q	
(U) Tactical COE Initial Workstation Delivery	2Q		
(U) Tactical COE V6.0 Workstation Delivery		2Q	
(U) Web-Based Execution Management Spiral 1		1Q	
(U) Web-Based Execution Management Spiral 2		3Q	