

UNCLASSIFIED

PE NUMBER: 0207445F

PE TITLE: FIGHTER TACTICAL DATA LINK

Exhibit R-2, RDT&E Budget Item Justification								DATE February 2005		
BUDGET ACTIVITY 07 Operational System Development					PE NUMBER AND TITLE 0207445F FIGHTER TACTICAL DATA LINK					
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	36.418	50.093	122.160	84.513	50.860	0.000	0.000	0.000	135.373	TBD
5043 Fighter Tactical Data Link	36.418	50.093	122.160	84.513	50.860	0.000	0.000	0.000	135.373	TBD

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

Tactical Data Links (TDL) 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 provide a jam-resistant; secure digital data transfer network capability with a standardized waveform and data format allowing Line of Sight (LOS) and Beyond Line of Sight (BLOS) intra- and inter-flight communications. TDLs are used by all Service 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).

This effort provides for common development, integration, and interoperability of tactical data link aircraft, network, and weapon capability for all Air Force fighter platforms to include, but not limited to, A/OA-10, F-15A-E, F-16 Blocks 30/40/50, F/A-22, and F-35 aircraft. Keeps all fighter platforms and datalinked weapons current, interoperable in the network, and compatible with the USAF Global Strike Task Force (GSTF) concept beyond 2020. TDLs increase mission effectiveness, provide situational awareness, and provide positive identification of aircraft in the network, correlate on- and off-board sensor data sharing, target, and threat information, and provide the datalink to accomplish time critical targeting and other mission update functions. TDL efforts include incorporating changes and additions to the TDL message standard (MIL-STD-6016C) and applicable Interface Change Proposals (ICPs); assisting with AF and Joint interoperability certification testing; future development, integration, and verification of Operational Flight Programs (OFP) upgrade due to TDL integration and supports data gathering processes; studying and incorporating data link technologies to ensure effectiveness and efficiency of the Global Strike CONOPS; and incorporating Interoperable Systems Management and Requirements Transformation (iSMART), a process which enables network centric interoperability assessments to be made more quickly and effectively.

Fighter Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

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(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	42.318	50.976	122.160	84.513
(U) Current PBR/President's Budget	36.418	50.093	122.160	84.513
(U) Total Adjustments	-5.900	-0.883		
(U) Congressional Program Reductions				
Congressional Rescissions		-0.883		
Congressional Increases				
Reprogrammings	-4.400			
SBIR/STTR Transfer	-1.500			

(U) **Significant Program Changes:**

In FY06, additional funds were programmed to support two additional TDL requirements: (1) Development and integration of a Link 16 radio capable of implementing in the F/A-22 advanced avionics system; (2) Development of a Link 16 and Enhanced Position Location and Reporting (EPLRS) capability for A/OA-10 aircraft to increase interoperability/coordination with ground forces.

Previously planned funding to develop a F-117 TDL capability was removed.

Exhibit R-2a, RDT&E Project Justification

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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
5043 Fighter Tactical Data Link	36.418	50.093	122.160	84.513	50.860	0.000	0.000	0.000	135.373	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

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

Tactical Data Links (TDL) 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 provide a jam-resistant; secure digital data transfer network capability with a standardized waveform and data format allowing Line of Sight (LOS) and Beyond Line of Sight (BLOS) intra- and inter-flight communications. TDLs are used by all Service 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).

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Fighter Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Accomplishments/Planned Programs				
(U) Develop and incorporate Tactical Data Link technologies	1.510	3.000	3.000	3.000
(U) Develop and integrate Link 16 capability across fighter platforms	31.908	44.093	64.546	30.248
(U) Link 16 integration into F/A-22 avionics suite			26.483	27.541
(U) Development of A/OA-10 EPLRS capability			25.131	17.724
(U) Provide Link 16 system engineering, testing, and technical support	3.000	3.000	3.000	6.000
(U) Total Cost	36.418	50.093	122.160	84.513

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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>	
(U) AF RDT&E										
(U) 0207434F (Link 16 Sup & Sus)	61.150	134.547	157.677	184.100	151.289	155.710	159.298	162.024	Continuing	TBD
(U) 0207446F (Bomber TDL)	12.049	78.721	144.863	136.624	57.556	0.000	0.000	0.000		429.813
(U) 0207448F (C2ISR TDL)	25.003	25.150	14.838	4.479	1.952	1.948	1.953	1.939	Continuing	TBD
(U) 0401839F (Airlift TDL)	0.000	0.000	0.000	31.967	0.000	0.000	0.000	0.000		31.967
(U) Other APPN										
(U) Procurement (3010)										
(U) 0207423F (JTRS I&I)	0.000	0.000	17.192	43.445	52.032	53.650	49.645	53.695	Continuing	TBD
(U) 0207434F (Link 16 Sup & Sus)	0.040	6.455	3.036	2.737	0.000	9.464	9.703	9.806	Continuing	TBD
(U) 0207445F (Fighter TDL)	29.300	95.934	90.430	60.614	12.507	0.000	0.000	0.000		288.785
(U) 0207446F (Bomber TDL)	0.000	44.245	22.237	11.624	4.392	0.000	0.000	0.000		82.498
(U) 0401839F (Airlift TDL)	0.000	3.091	24.443	11.350	14.407	12.427	25.882	26.175	Continuing	TBD
(U) O&M (3400)										
(U) 0207434F (Link 16 Sup & Sus 3400)	12.877	13.055	21.360	18.590	16.301	16.320	16.862	15.964	Continuing	TBD
(U) 0401839F (Airlift TDL)	0.000	1.812	2.776	5.883	12.073	16.843	17.105	17.397	Continuing	TBD
(U) Other Procurement (3080)										
(U) 0207434F (Link 16 Sup & Sus)	0.000	27.810	32.446	30.656	12.758	8.376	8.413	8.460	Continuing	TBD

(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 2005		
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(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2004 Cost</u>	<u>FY 2004 Cost</u>	<u>FY 2004 Award Date</u>	<u>FY 2005 Cost</u>	<u>FY 2005 Award Date</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u> Link 16 EMD Terminal Purchases	MIPR to Navy	BAe Systems, Rockwell Collins DLS, Cedar Rapids, IA; Via-Sat, Carlsbad, CA managed by SPAWAR, San Diego CA		1.500	Jan-04								1.500	TBD
Link 16 Integration into F/A-22 avionics	MIPR to Navy	SPAWAR, San Diego, CA						26.483	Nov-05	27.541	Nov-06	Continuing	TBD	TBD
Fighter Link 16 Development Contractors **	MIPR to AFMC	Various contractors managed by ASC, WPAFB OH		31.908	Jan-04	47.093	Jan-05	90.677	Jan-06	47.802	Jan-07	Continuing	TBD	TBD
MITRE	SS/FFP	MITRE, Bedford MA	Dec03	1.400	Dec-03	1.700	Dec-04	2.660	Dec-05	2.000	Dec-06	Continuing	TBD	TBD
Subtotal Product Development			0.000	34.808		48.793		119.820		77.343		Continuing	TBD	TBD
Remarks:	**MIPR funding to Fighter Platform System Program Offices for scheduled contract awards and development efforts.													
(U) <u>Test & Evaluation</u> 46th Development Test Facility	MIPR to AFMC	46th Development Test Facility, Eglin AFB FL		0.000		0.000		0.000		5.500	Apr-07	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		5.500		Continuing	TBD	TBD
Remarks:														
(U) <u>Management</u> Program Office and Contractor Support	C/FFP	Various	Dec03	1.610	Dec-03	1.300	Dec-04	2.340	Dec-05	1.670	Dec-06	Continuing	TBD	TBD
Subtotal Management			0.000	1.610		1.300		2.340		1.670		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	36.418		50.093		122.160		84.513		Continuing	TBD	TBD
Project 5043			R-1 Shopping List - Item No. 151-6 of 151-9								Exhibit R-3 (PE 0207445F)			

Exhibit R-4, RDT&E Schedule Profile

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A/O-10 Link 16- Long Term Schedule

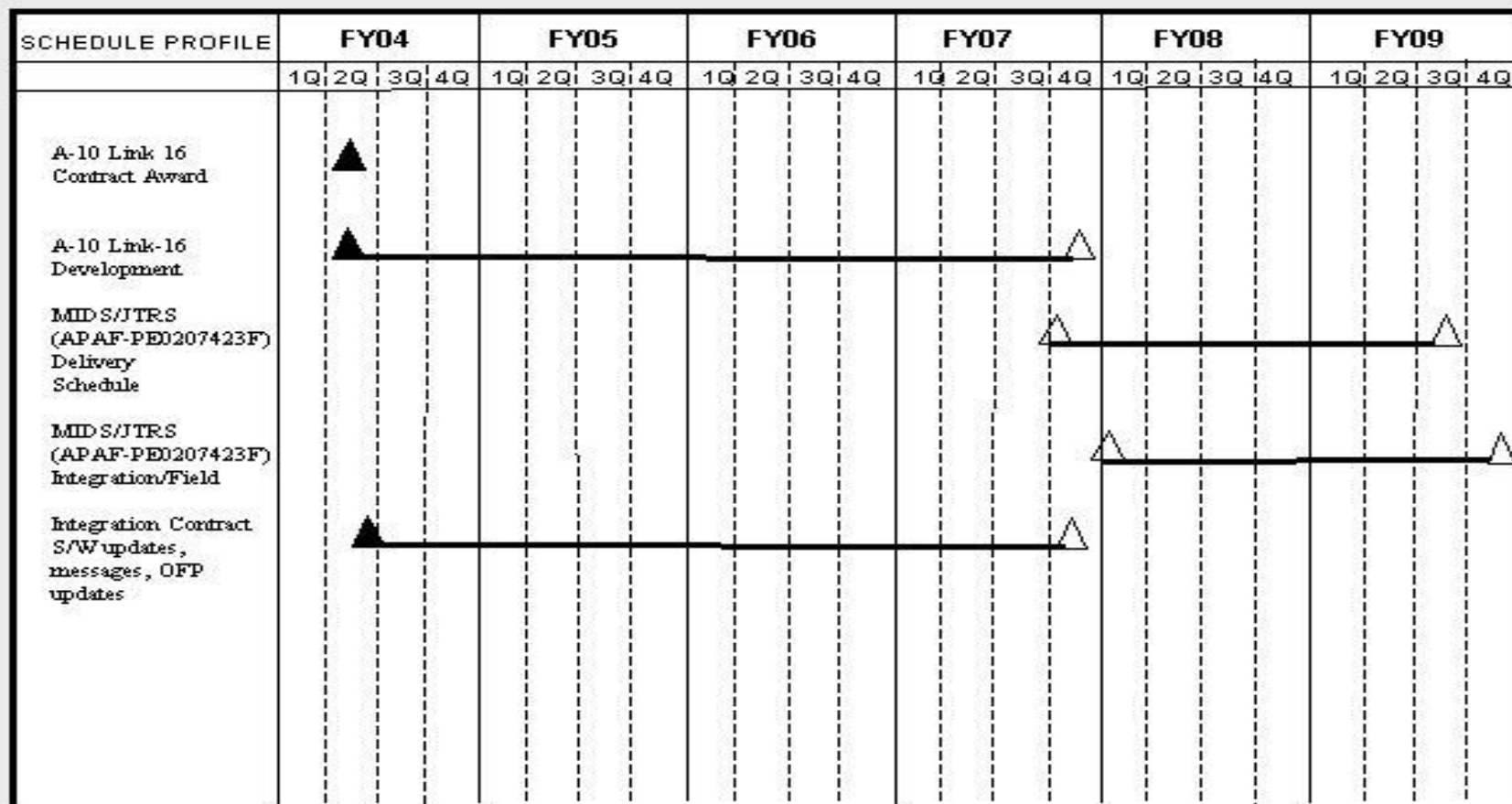


Exhibit R-4, RDT&E Schedule Profile

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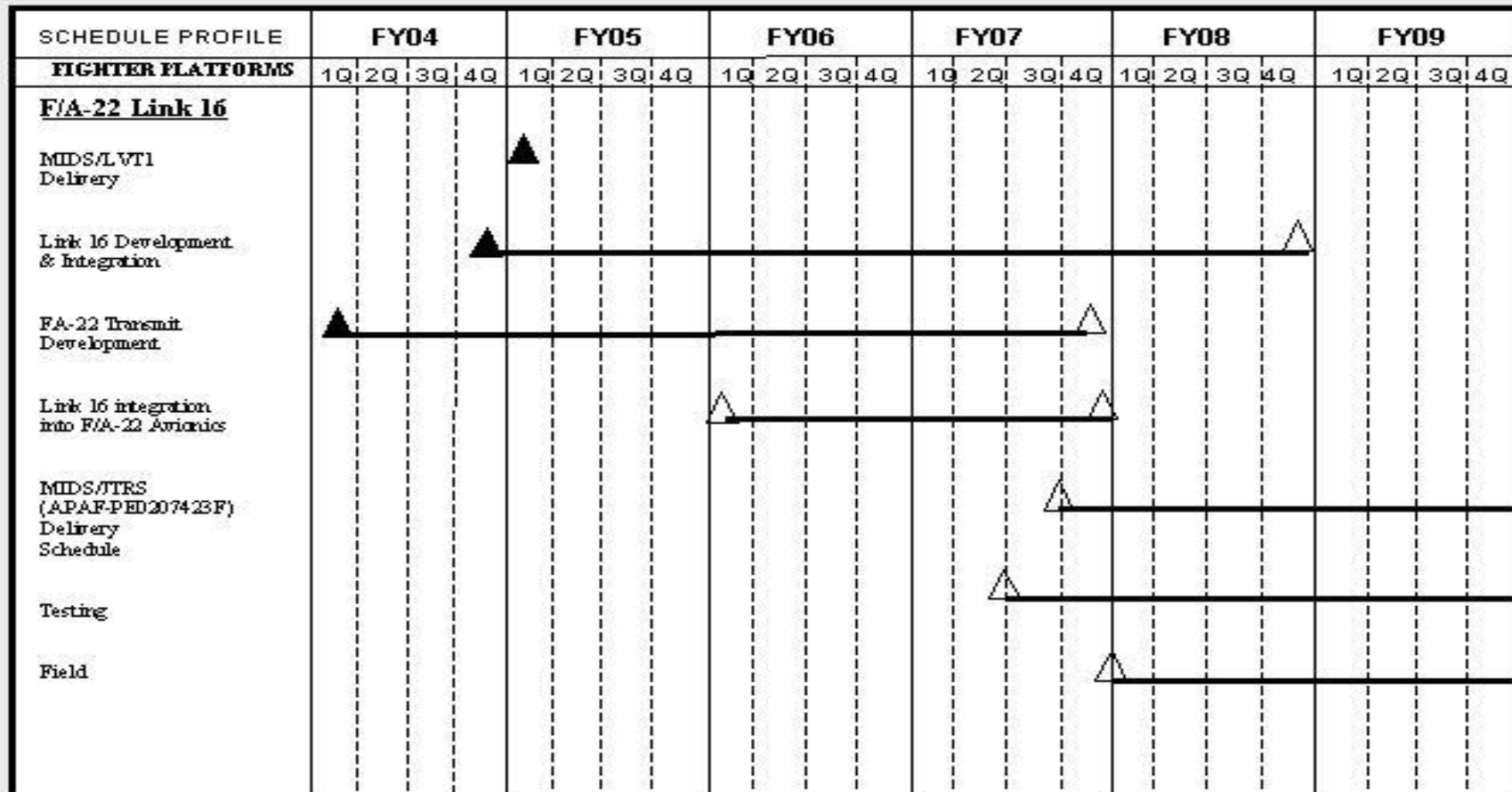
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F/A-22 Link 16- Long Term
Schedule

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Exhibit R-4a, RDT&E Schedule Detail

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

(U) F/A-22 MIDS LVT Delivery

1Q

(U) Link 16 Development and Integration

4Q

1-4Q

1-4Q

1-4Q

(U) F/A-22 Link 16 Transmit Capability Development

1-4Q

1-4Q

1-4Q

1-4Q

(U) Link 16 Integration development into F/A-22 Avionics

1-4Q

1-4Q

(U) A/O-10 Link 16 Contract Award

2Q

(U) A/O-10 Link 16 Development

2-4Q

1-4Q

1-4Q

1-4Q