

**UNCLASSIFIED**

PE NUMBER: 0207445F  
 PE TITLE: FIGHTER TACTICAL DATA LINK

<b>Exhibit R-2, RDT&amp;E Budget Item Justification</b>								<b>DATE</b> <b>February 2004</b>	
<b>BUDGET ACTIVITY</b> <b>07 Operational System Development</b>				<b>PE NUMBER AND TITLE</b> <b>0207445F FIGHTER TACTICAL DATA LINK</b>					
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	28.955	42.318	50.976	67.805	27.439	55.473	51.179	0.000	0.000
5043 Fighter Tactical Data Link	28.955	42.318	50.976	67.805	27.439	55.473	51.179	0.000	0.000

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. Four new program elements were created in FY03 to consolidate the platform integration funding. This includes PE 0207445F, Fighter Tactical Data Link; PE 0207446F, Bomber Tactical Data Link; PE 0207448F, Command, Control, Intelligence, Surveillance, and Reconnaissance (C2ISR) Tactical Data Link; and PE 0401839F, Airlift/Other Tactical Data Link. Funding from platform PEs was transferred to the appropriate TDL platform PE.

**(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 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).

This effort provides for common development, integration, and interoperability of tactical data link capability to 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, F-117, and F-35 aircraft. Keeps all fighter platforms current and compatible with the USAF Global Strike Task Force (GSTF) concept through 2020. Link 16 provides a jam-resistant, secure digital data transfer network capability with a standardized waveform and data format allowing intra- and inter-flight communications. Link 16 will 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. Link 16 efforts include incorporating MIL-STD-6016 additions and changes, and applicable Interface Change Proposals (ICPs), and interoperability certification testing with the Joint Interoperability Test Center (JITC). Continues to support future development, integration, and verification of Operational Flight Program (OFP) upgrades due to TDL integration and supports data gathering processes for future network centric assessments for all fighter platforms.

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

Exhibit R-2, RDT&E Budget Item Justification

DATE

February 2004

BUDGET ACTIVITY

07 Operational System Development

PE NUMBER AND TITLE

0207445F FIGHTER TACTICAL DATA LINK

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Previous President's Budget	38.168	42.877	67.617
(U) Current PBR/President's Budget	28.955	42.318	50.976
(U) Total Adjustments	-9.213	-0.559	
(U) Congressional Program Reductions		-0.194	
Congressional Rescissions		-0.365	
Congressional Increases			
Reprogrammings	-9.213		
SBIR/STTR Transfer			

(U) **Significant Program Changes:**

FY03 program changes reflect reprogrammings to support higher Air Force priorities. FY05 program changes are due to the delay of the initiation of F-117 Link 16 integration by one year, allowing better synchronization with Joint Tactical Radio System (JTRS) terminal availability.

**Exhibit R-2a, RDT&E Project Justification**

DATE  
**February 2004**

BUDGET ACTIVITY <b>07 Operational System Development</b>				PE NUMBER AND TITLE <b>0207445F FIGHTER TACTICAL DATA LINK</b>			PROJECT NUMBER AND TITLE <b>5043 Fighter Tactical Data Link</b>		
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
5043 Fighter Tactical Data Link	28.955	42.318	50.976	67.805	27.439	55.473	51.179	0.000	0.000
Quantity of RDT&E Articles	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 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).

This effort provides for common development, integration, and interoperability of tactical data link capability to 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, F-117, and F-35 aircraft. Keeps all fighter platforms current and compatible with the USAF Global Strike Task Force (GSTF) concept through 2020. Link 16 provides a jam-resistant, secure digital data transfer network capability with a standardized waveform and data format allowing intra- and inter-flight communications. Link 16 will 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. Link 16 efforts include incorporating MIL-STD-6016 additions and changes, and applicable Interface Change Proposals (ICPs), and interoperability certification testing with the Joint Interoperability Test Center (JITC). Continues to support future development, integration, and verification of Operational Flight Program (OFP) upgrades due to TDL integration and supports data gathering processes for future network centric assessments for all fighter platforms.

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 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Accomplishments/Planned Programs	0.000	0.000	
(U) Perform Tactical Data Link studies	2.250	1.510	3.000
(U) Develop and integrate Link 16 capability across all fighter platforms	23.705	37.808	44.976
(U) Provide Link 16 system engineering, testing, and technical support	3.000	3.000	3.000
(U) Total Cost	28.955	42.318	50.976

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

	<u>FY 2003</u> <u>Actual</u>	<u>FY 2004</u> <u>Estimate</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>Cost to</u> <u>Complete</u>	<u>Total Cost</u>
(U) AF RDT&E									
(U) 0207434F (Link 16 Sup & Sus)	50.535	70.481	141.012	218.743	228.009	161.909	153.606		

**UNCLASSIFIED**

**Exhibit R-2a, RDT&E Project Justification**

DATE

**February 2004**

BUDGET ACTIVITY <b>07 Operational System Development</b>	PE NUMBER AND TITLE <b>0207445F FIGHTER TACTICAL DATA LINK</b>	PROJECT NUMBER AND TITLE <b>5043 Fighter Tactical Data Link</b>
---	---	--

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

(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) Procurement (3010)							
(U) 0207434F (Link 16 Sup & Sus)	36.013	0.040	6.550	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 (3400)							
(U) 0207434F (Link 16 Sup & Sus 3400)	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 (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.

**UNCLASSIFIED**

<b>Exhibit R-3, RDT&amp;E Project Cost Analysis</b>	DATE <b>February 2004</b>
---	------------------------------

<b>BUDGET ACTIVITY</b> <b>07 Operational System Development</b>	<b>PE NUMBER AND TITLE</b> <b>0207445F FIGHTER TACTICAL DATA LINK</b>	<b>PROJECT NUMBER AND TITLE</b> <b>5043 Fighter Tactical Data Link</b>
--	--	---

<u>(U) Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; 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 Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
			<u>Prior to FY</u>	<u>2003</u>	<u>2003</u>	<u>2004</u>	<u>2004</u>	<u>2005</u>	<u>2005</u>			
			<u>2003</u>	<u>Cost</u>	<u>Award</u>	<u>Cost</u>	<u>Award</u>	<u>Cost</u>	<u>Award</u>			
			<u>Cost</u>		<u>Date</u>		<u>Date</u>		<u>Date</u>			
<u>(U) Product Development</u>												
Link 16 EMD Terminal Purchases	MIPR	SPAWAR, San Diego CA		0.000		1.500	Jan-04	3.000	May-05	Continuing	TBD	
Fighter Link 16 Development Contractors **	MIPR	ASC, WPAFB OH		23.705	Jan-03	37.808	Jan-04	44.976	Jan-05	Continuing	TBD	
MITRE	SS/FFP	MITRE, Bedford MA		1.300	Dec-02	1.400	Dec-03	1.330		Continuing	TBD	
Subtotal Product Development			0.000	25.005		40.708		49.306		Continuing	TBD	0.000
Remarks: **MIPR funding to Fighter Platform System Program Offices for scheduled contract awards and development efforts.												
<u>(U) Test &amp; Evaluation</u>												
46th Development Test Facility	MIPR	46th Development Test Facility, Eglin AFB FL		2.500	Sep-03						2.500	
Subtotal Test & Evaluation			0.000	2.500		0.000		0.000		0.000	2.500	0.000
Remarks:												
<u>(U) Management</u>												
Program Office and Contractor Support	C/FFP	Various		1.450	Dec-02	1.610	Dec-03	1.670	Dec-04		4.730	
Subtotal Management			0.000	1.450		1.610		1.670		0.000	4.730	0.000
Remarks:												
<u>(U) Total Cost</u>			0.000	28.955		42.318		50.976		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2004

BUDGET ACTIVITY  
07 Operational System Development

PE NUMBER AND TITLE  
0207445F FIGHTER TACTICAL DATA LINK

PROJECT NUMBER AND TITLE  
5043 Fighter Tactical Data Link

FIGHTER TACTICAL DATA LINK  
SCHEDULE

SCHEDULE PROFILE	FY03				FY04				FY05				FY06				FY07				FY08				FY09			
FIGHTER PLATFORMS	1Q	2Q	3Q	4Q																								
<b>F/A-22 Link 16</b>				▲																								
Contract Award				▲																								
MIDS/LVT1 Delivery																▲												
Development					—	—	—	—	—	—	—	—	—	—	—	—												
MIDS/JTRS Test									—	—	—	—	—	—	—	—												
Terminal Deliveries																	—	—	—	—	—	—	—	—	—	—	—	—
Integration/Field																									—	—	—	—
<b>A/O-10 Link 16</b>																												
Contract Award								▲																				
Development					—	—	—	—	—	—	—	—																
Terminal Deliveries																												
Integration/Field																												

**UNCLASSIFIED**

<b>Exhibit R-4a, RDT&amp;E Schedule Detail</b>	DATE <b>February 2004</b>
--	------------------------------

BUDGET ACTIVITY <b>07 Operational System Development</b>	PE NUMBER AND TITLE <b>0207445F FIGHTER TACTICAL DATA LINK</b>	PROJECT NUMBER AND TITLE <b>5043 Fighter Tactical Data Link</b>
---	---	--

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) <b><u>Schedule Profile</u></b>			
(U) F/A-22 Link 16 Transmit Contact Award Date	4Q		
(U) F/A-22 Link 16 Transmit Development		1-4Q	1-4Q
(U) A/O-10 Link 16 Contract Award		2Q	
(U) A/O-10 Link 16 Development		2-4Q	1-4Q