

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
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BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207445F FIGHTER TACTICAL DATA LINK
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Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	115.818	112.755	39.545	74.312	91.577	0.000	0.000	0.000	135.373	TBD
5043 Fighter Tactical Data Link	115.818	112.755	39.545	74.312	91.577	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), Variable Message Format (VMF), Integrated Broadcast Service (IBS), Intra-Flight Data Link (IFDL), Multifunction Advanced Data Link (MADL), and Tactical Targeting Network Technology (TTNT). DoD has identified TTNT as the initial Joint Tactical Radio System (JTRS) Joint Airborne Network - Tactical Edge (JAN-TE) capability.

This effort provides for common development, integration, and interoperability of tactical data link aircraft, network, and weapon capabilities for all Air Force fighter platforms to include, but not limited to, A-10, F-15A-E, F-16 Blocks 30/40/50, F-22A, 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) beyond 2020. Also expands LOS and BLOS data link capabilities. 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 Program (OFP) upgrades due to TDL integration; support of data gathering processes; studying and incorporating data link technologies to ensure effectiveness and efficiency of the Global Strike and Global Persistent Attack 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 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	119.965	113.388	81.084	38.626
(U) Current PBR/President's Budget	115.818	112.755	39.545	74.312
(U) Total Adjustments	-4.147			
(U) Congressional Program Reductions		-0.205		
Congressional Rescissions	-0.004	-0.428		
Congressional Increases				
Reprogrammings	-0.806			
SBIR/STTR Transfer	-3.337			

(U) **Significant Program Changes:**

In FY08, \$26.7M was removed due to a decision to equip A-10 with SADL radios rather than JTRS radios

In FY08, \$15.2M was removed for higher DoD priorities

In FY09/10 funding was added for development and integration of F-22A Advanced Tactical Data Link capabilities

Exhibit R-2a, RDT&E Project Justification

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BUDGET ACTIVITY 07 Operational System Development					PE NUMBER AND TITLE 0207445F FIGHTER TACTICAL DATA LINK			PROJECT NUMBER AND TITLE 5043 Fighter Tactical Data Link		
Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5043 Fighter Tactical Data Link	115.818	112.755	39.545	74.312	91.577	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

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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 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Accomplishments/Planned Programs				
(U) Analysis, development and integration of common fighter data link technology and capabilities	52.863	19.336	5.445	18.488
(U) F-22A Advanced Tactical Data Link development, including integration of JAN-TE waveform	39.866	65.921	29.620	52.824
(U) Development and integration of A-10 SADL/Enhanced Precision Location Reporting System (EPLRS) capability	12.824	8.500	2.548	0.000

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(U) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Development and integration of A-10 Improved Data Modem (IDM) capability	4.465	15.370	0.432	0.000
(U) Fighter Tactical Data Link system engineering, testing, and technical support	5.000	3.628	1.500	3.000
(U) A-10 SADL/EPLRS and IDM Testing	0.800	0.000	0.000	0.000
(U) Total Cost	115.818	112.755	39.545	74.312

(U) <u>C. Other Program Funding Summary (\$ in Millions)</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>FY 2012</u>	<u>FY 2013</u>	<u>Cost to Complete</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>								
(U) AF RDT&E										
(U) 0207434F (Link 16 Sup & Sus)	156.851	173.216	199.363	207.268	166.987	184.448	201.611	193.745	Continuing	TBD
(U) 0207446F (Bomber TDL)	133.836	100.744	37.130	0.000	0.000	0.000	0.000	0.000		271.710
(U) 0207448F (C2ISR TDL)	14.219	4.322	1.809	1.741	1.711	1.643	1.675	1.709	Continuing	TBD
(U) 0401839F (Airlift TDL)	0.000	22.000	0.000	0.000	0.000	0.000	0.000	0.000		22.000
(U) Other APPN										
(U) Procurement (3010)										
(U) 0207434F (Link 16 Sup & Sus)	2.996	2.773	0.001	9.708	46.296	99.938	104.173	75.826	Continuing	TBD
(U) 0207445F (Fighter TDL)	89.222	61.399	35.676	5.865	9.879	0.785	0.783	0.000		203.609
(U) 0207446F (Bomber TDL)	21.940	11.775	4.518	0.000	0.000	0.000	0.000	0.000		38.233
(U) 0401839F (Airlift TDL)	24.118	11.497	14.818	12.744	26.521	26.853	27.384	27.929	Continuing	TBD
(U) O&M (3400)										
(U) 0207434F (Link 16 Sup & Sus 3400)	8.341	9.895	13.203	4.760	13.054	14.986	17.550	18.923		TBD
(U) 0207445F (Fighter TDL)	0.000	0.000	0.289	0.287	0.286	0.283	0.288	0.293		
(U) 0401839F (Airlift TDL)	3.220	5.445	5.726	6.603	17.381	17.460	17.815	18.177	Continuing	TBD
(U) Other Procurement (3080)										
(U) 0207434F (Link 16 Sup & Sus)	41.362	36.886	21.933	28.301	41.932	43.948	56.337	39.173	Continuing	TBD

(U) **D. Acquisition Strategy**

The 640th Electronic Systems Squadron (ELSS), formerly the Tactical Data Links System Program Office (SPO), provides for common development, integration and

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Exhibit R-2a (PE 0207445F)

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LINK**

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interoperability across all Air Force platforms and ensures that Tactical Data Links are procured and maintained as a joint, end-to-end, command and control system. Platform acquisition strategies vary by program, but the majority of development and integration is normally accomplished by the weapon system prime contractors

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Exhibit R-3, RDT&E Project Cost Analysis

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(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2006 Cost</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>		
(U) <u>Product Development</u>																
F-22A Advanced Tactical Data Link Development and Integration	MIPR/AF Form 616	Northrop Grumman, Lockheed Martin	0.000	39.866	Nov-05	65.921	Jan-07	29.620	Jan-08	52.824	Jan-09	Continuing	TBD	TBD		
Common Fighter Data Link Development *	MIPR	Various contractors managed by AFRL and ASC, WPAFB OH/SPAWA R, San Diego, CA		52.863	Jan-06	19.336	Apr-07	5.445	Apr-08	18.488	Apr-09	Continuing	TBD	TBD		
Development and Integration of A-10 SADL/EPLRS Capability	AF Form 616	WPAFB, OH		12.824	Feb-06	8.500	Jan-07	2.548	Feb-08	0.000		0.000	23.872			
Development and Integration of A-10 Improved Data Modem Capability	AF Form 616	WPAFB, OH		4.465	Sep-06	15.370	Jan-07	0.432	Feb-08	0.000		0.000	20.267			
MITRE	SS/FFP	MITRE, Bedford MA		2.660	Dec-05	0.928	Dec-06	1.000	Dec-07	0.836	Dec-08	Continuing	TBD	TBD		
Subtotal Product Development			0.000	112.678		110.055		39.045		72.148		Continuing	TBD	TBD		
Remarks:	*MIPR/AF Form 616 funding to Fighter platform program offices for scheduled contract awards and development efforts.															
(U) <u>Test & Evaluation</u>																
46th Development Test Facility and Lockheed Martin for A-10 SADL/EPLRS and IDM Test	MIPR to AFMC	46th Test Wing, Eglin AFB, FL and Lockheed Martin		0.800	Dec-05							0.000	0.800	TBD		
Subtotal Test & Evaluation			0.000	0.800		0.000		0.000		0.000		0.000	0.800	TBD		
Remarks:																
(U) <u>Management</u>																
Program Office and Contractor Support	C/FFP	Various		2.340	Dec-05	2.700	Dec-06	0.500	Dec-07	2.164	Dec-08	Continuing	TBD	TBD		
Subtotal Management			0.000	2.340		2.700		0.500		2.164		Continuing	TBD	TBD		
Remarks:																
(U) Total Cost			0.000	115.818		112.755		39.545		74.312		Continuing	TBD	TBD		

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Exhibit R-3 (PE 0207445F)

Exhibit R-4, RDT&E Schedule Profile

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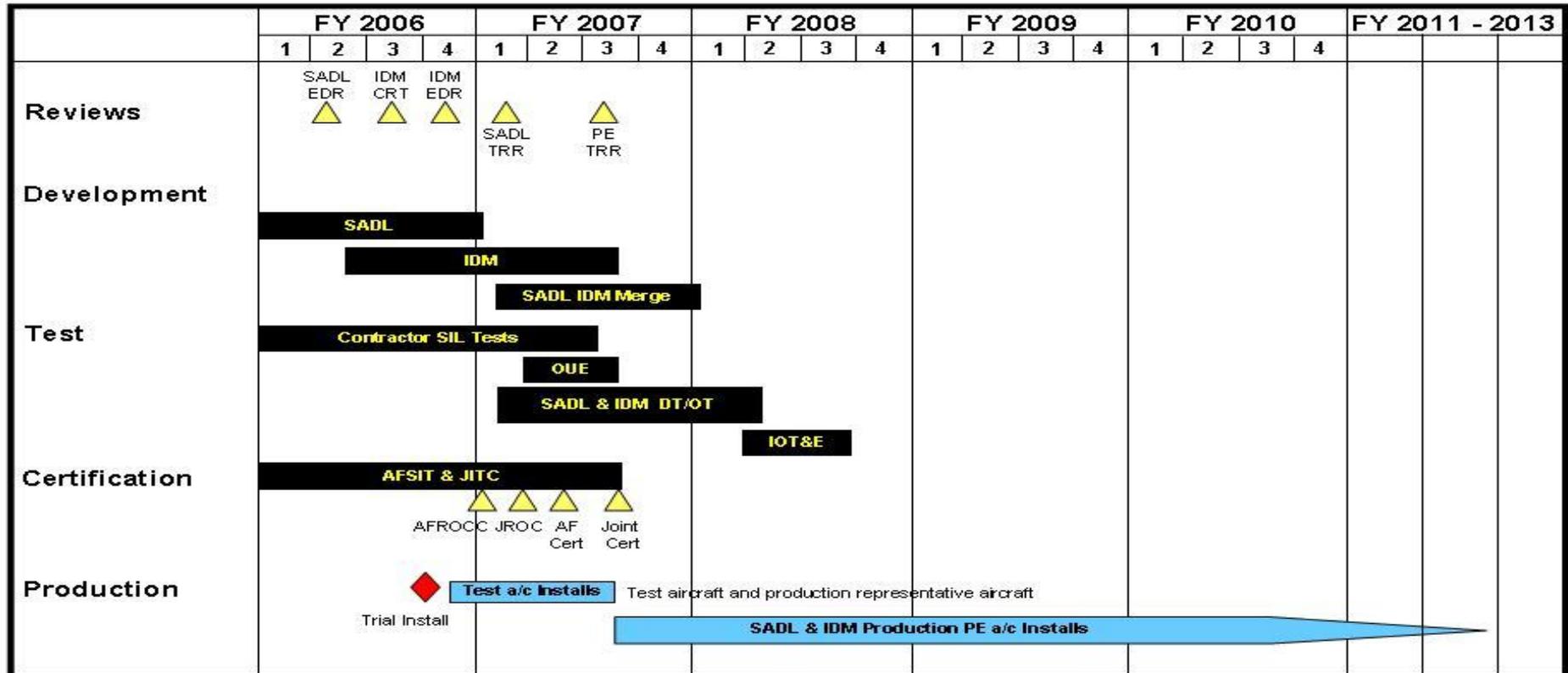


A-10 Data Link As of: 10 Jan 07



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Exhibit R-4a, RDT&E Schedule Detail	DATE February 2007
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(U) <u>Schedule Profile</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) A-10 SADL Development	1-4Q	1Q		
(U) A-10 SADL Engineering Design Review	2Q			
(U) A-10 SADL Test Readiness Review		1Q		
(U) A-10 IDM Development	2-4Q	1-3Q		
(U) A-10 IDM Certification	3Q			
(U) A-10 IDM Engineering Design Review	4Q			
(U) A-10 SADL/IDM Merge		1-4Q	1-2Q	
(U) A-10 Precision Engagement (SADL/IDM) Test Readiness Review		3Q		
(U) A-10 SADL/IDM DT/OT/IOT&E		1-4Q	1-3Q	
(U) A-10 SADL/IDM AFSIT & JITC Certification Activities	1-4Q	1-3Q		
(U) A-10 SADL/IDM Joint Certification		3Q		
(U) A-10 SADL/IDM Trial Install	4Q			
(U) A-10 SADL/IDM Production/Precision Engagement Aircraft Installs*		2-4Q	1-4Q	1-4Q
(U) F-22A ATDL Planning & Proposal Preparation	2-4Q	1-2Q		
(U) F-22A ATDL Definition & Requirements Analysis		2-4Q	1-4Q	1-3Q
(U) F-22A ATDL Systems Requirements Review			3Q	
(U) F-22A ATDL Systems Design Review				3Q
(U) F-22A ATDL Design				3-4Q
* APAF funded (PE 0207445F)				