

UNCLASSIFIED

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

Exhibit R-2, RDT&E Budget Item Justification	DATE May 2009
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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 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	57.424	57.264	72.106	0.000	0.000	0.000	0.000	0.000	0.000	607.872
5043 Fighter Tactical Data Link	57.424	57.264	72.106	0.000	0.000	0.000	0.000	0.000	0.000	607.872

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL) as a subset of the broader Airborne Network 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 new and standardized waveforms and data formats 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), Tactical Targeting Network Technology (TTNT), and Multifunction Advanced Data Link (MADL). The Joint Requirements Oversight Council (JROC) recently approved the MADL waveform for all low observable platforms, to include the F-22, B-2, and F-35 and the MADL Overarching Integrated Product Team (OIPT) approved enterprise level management and support for MADL Development.

This effort provides critical capability and enhancements to the Airborne Network by creating common development, integration and interoperability among 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 TDL message standards (e.g. MIL-STD-6016C) and applicable Interface Change Proposals (ICPs); future development of MADL waveform specification, message standards (MIL-STD-6019) and modeling and simulation; MADL enterprise level planning and testing; 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.

Activities also include studies and analysis to support both current program planning and execution and future program planning.

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 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Previous President's Budget	38.944	62.788	90.709
(U) Current PBR/President's Budget	57.424	57.264	72.106
(U) Total Adjustments	18.480	-5.524	
(U) Congressional Program Reductions		-5.368	
Congressional Rescissions		-0.156	
Congressional Increases			
Reprogrammings	19.563		
SBIR/STTR Transfer	-1.083		

(U) **Significant Program Changes:**

In FY08, Fighters PE was increased by \$20.05M to synchronize the current Advanced TDL development schedule with funding requirements (\$9.0M OMNIBUS and \$11.05M BTR). There were also two BTRs out (-\$0.126M NSSO and -\$0.361M GALAXY).

In FY09, F-22A was reduced by \$5.0M for Advanced Tactical Data Link Program Delay

Exhibit R-2a, RDT&E Project Justification	DATE May 2009
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Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
5043 Fighter Tactical Data Link	57.424	57.264	72.106	0.000	0.000	0.000	0.000	0.000	0.000	607.872
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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(U) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) F-22A Advanced Tactical Data Link development	40.764	33.726	68.030
(U) MADL Enterprise		10.165	
(U) F-15 Suite 6 Upgrades	3.491	5.228	
(U) Development and integration of A-10 SADL/Enhanced Precision Location Reporting System (EPLRS) and IDM capabilities	8.328	1.482	
(U) Fighter Tactical Data Link system engineering analysis, development, testing, integration, and technical support of common Fighter data link technology and capabilities	4.841	6.663	4.076
(U) Total Cost	57.424	57.264	72.106

(U) <u>C. Other Program Funding Summary (\$ in Millions)</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>FY 2014</u>	<u>FY 2015</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)	186.371	192.460	0.000						Continuing	TBD
(U) 0207446F (Bomber TDL)	38.280	11.603	0.000							49.883
(U) 0207448F (C2ISR TDL)	1.745	1.719	1.667						Continuing	TBD
(U) 0401839F (Airlift TDL)	4.300	7.923	0.000							
(U) 0604281F (TDN Enterprise)	0.000	0.000	88.444							
(U) Other APPN										
(U) Procurement (3010)										
(U) 0207434F (Link 16 Sup & Sus)	0.001	0.008	0.000						Continuing	TBD
(U) 0207445F (Fighter TDL)	24.877	5.788	9.616							40.281
(U) 0207446F (Bomber TDL)	4.426	0.000	0.000							4.426
(U) 0401839F (Airlift TDL)	12.394	0.000	0.000						Continuing	TBD
(U) O&M (3400)										
(U) 0207434F (Link 16 Sup & Sus)	29.405	22.104	0.359							TBD
(U) 0207445F (Fighter TDL)	0.300	0.281	0.219							
(U) 0401839F (Airlift TDL)	3.907	6.469	10.242						Continuing	TBD
(U) 0604281F (TDN Enterprise)	0.000	0.000	34.850							

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Exhibit R-2a (PE 0207445F)

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

(U) Other Procurement (3080)					
(U) 0207434F (Link 16 Sup & Sus)	22.980	16.079	0.000		Continuing TBD
(U) 0604281F (TDN Enterprise)	0.000	0.000	32.441		

(U) D. Acquisition Strategy

653rd Electronics Systems Group (ELSG) provides for common development, integration and 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										DATE May 2009		
BUDGET ACTIVITY 07 Operational System Development					PE NUMBER AND TITLE 0207445F FIGHTER TACTICAL DATA LINK					PROJECT NUMBER AND TITLE 5043 Fighter Tactical Data Link		
<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 2008 Cost</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>FY 2010 Cost</u>	<u>FY 2010 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	Lockheed Martin, Fort Worth, TX	0.000	40.764	Sep-08	33.726	Dec-08	68.030	Oct-09	Continuing	TBD	TBD
											0.000	0.000
MADL Enterprise	MIPR/AF 616	Lockheed Martin, Fort Worth, TX; Various contractors managed by ESC, AFRL, and ASC WPAFB, OH				10.165	Apr-09				10.165	
											0.000	
F-15 Suite 6 Upgrades	AF 616	Boeing, St. Louis, MO	0.000	3.491	Sep-08	5.228	Oct-08				8.719	
											0.000	
Development and Integration of A-10 SADL/EPLRS and IDM Capability	AF Form 616	WPAFB, OH	0.000	8.328	May-08	1.482	Dec-08				9.810	
											0.000	
Subtotal Product Development			0.000	52.583		50.601		68.030		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>												
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000			0.000	0.000
Remarks:												
<u>(U) Management</u>												
Common Fighter Data Link Support	MIPR/AF Form 616/AFMC Form 36	Various contractors managed by ESC, AFRL and ASC WPAFB, OH/SPAWAR, San Diego, CA	0.000	4.841	Sep-08	6.663	Oct-08	4.076	Oct-09	Continuing	TBD	TBD
											0.000	

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Exhibit R-3, RDT&E Project Cost Analysis

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BUDGET ACTIVITY				PE NUMBER AND TITLE		PROJECT NUMBER AND TITLE		
07 Operational System Development				0207445F FIGHTER TACTICAL DATA LINK		5043 Fighter Tactical Data Link		
Subtotal Management	0.000	4.841	6.663	4.076	Continuing	TBD	TBD	
Remarks:								
(U) Total Cost	0.000	57.424	57.264	72.106	Continuing	TBD	TBD	

Exhibit R-4, RDT&E Schedule Profile

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BUDGET ACTIVITY
07 Operational System Development

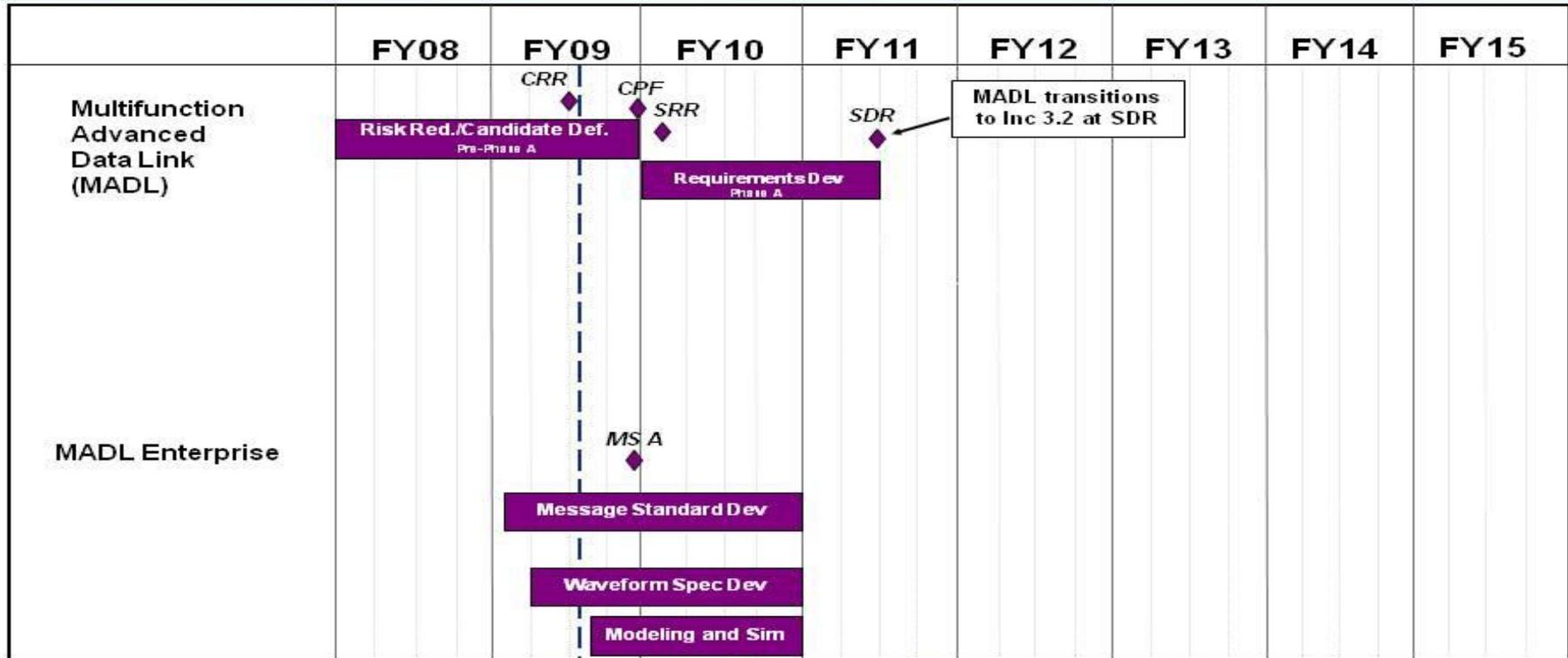
PE NUMBER AND TITLE
0207445F FIGHTER TACTICAL DATA LINK

PROJECT NUMBER AND TITLE
5043 Fighter Tactical Data Link



F-22 MADL/MADL Enterprise Schedule

as of 21 Apr 09



■ Concept
 ■ Design / Development
 ■ Production / Fielding
 ■ Integration / Test
 ■ Sustainment
◆ Key events

Integrity - Service - Excellence

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Exhibit R-4 (PE 0207445F)

Exhibit R-4, RDT&E Schedule Profile

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LINK

PROJECT NUMBER AND TITLE
5043 Fighter Tactical Data Link



F-15 Data Link Schedule

CAO 20 Apr 09



	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
OFP Suite Development	Suite 6 Integration & Testing							
OA: Operational Acceptance DT/OT: Combined Developmental and Operational Testing			IOT&E: Initial Operational Test & Evaluation FDE: Force Development Evaluation					

Design / development

Integration / test

Installs

Sustainment

Integrity - Service - Excellence

Exhibit R-4, RDT&E Schedule Profile

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BUDGET ACTIVITY
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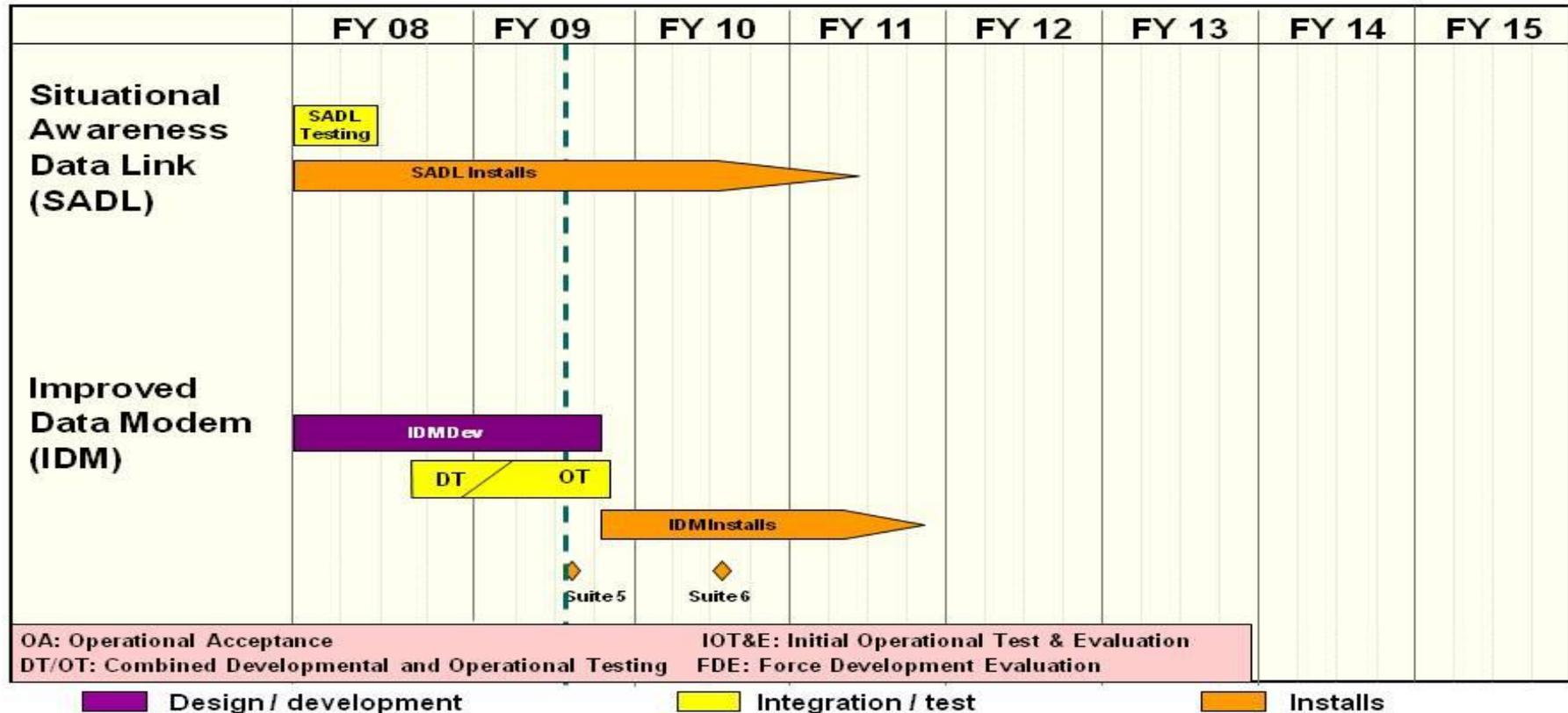
PE NUMBER AND TITLE
0207445F FIGHTER TACTICAL DATA
LINK

PROJECT NUMBER AND TITLE
5043 Fighter Tactical Data Link



A-10 Data Link Schedule

CAO 20 Apr 09



Integrity - Service - Excellence

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Exhibit R-4a, RDT&E Schedule Detail	DATE May 2009
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(U) <u>Schedule Profile</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) F-22A MADL Risk Reduction and Candidate Definition Pre-Phase A	1-4Q	1-4Q	
(U) F-22A MADL Requirements Development Phase A			1-4Q
(U) MADL Enterprise Message Standard Development		1-4Q	1-4Q
(U) MADL Enterprise Waveform Spec Development		2-4Q	1-4Q
(U) MADL Enterprise Modeling and Simulation		3-4Q	1-4Q
(U) F-15 Suite 6 Integration and Testing	1-4Q	1-4Q	1-2Q
(U) A-10 SADL Testing	1-2Q		
(U) A-10 SADL Installs	1-4Q	1-4Q	1-4Q
(U) A-10 IDM Development	1-4Q	1-4Q	
(U) A-10 IDM Developmental Testing/Operational Testing	3-4Q	1-4Q	
(U) A-10 IDM Installs		4Q	1-4Q
* APAF funded (PE 0207445F)			

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