

UNCLASSIFIED

PE NUMBER: 0207446F
 PE TITLE: Bomber Tactical Data Link

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
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BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207446F Bomber Tactical Data Link
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Cost (\$ in Millions)	FY 2007 Actual	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	87.613	36.875	11.702	0.000	0.000	0.000	0.000	Continuing	TBD
5041 Bomber Tactical Data Link	87.613	36.875	11.702	0.000	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL), as a subset of the broader, crucial 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 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), Multifunction Advanced Data Link (MADL), and Tactical Targeting Network Technology (TTNT).

This effort provides critical capability and enhancements to the Airborne Network by creating common development, integration, and interoperability among all Air Force bomber platforms to include, but not limited to B-1B, B-2, and B-52 aircraft. Keeps all bomber platforms and datalinked weapons current, interoperable in the network, and compatible with the USAF Global Strike Task Force (GSTF) concept beyond 2020. Also expands LOS and BLOS data link capabilities. TDLs increase mission effectiveness, provide situational awareness, provide positive identification of aircraft in the network, correlate on- and off-board sensor data sharing, target, and threat information, and provide the data link to accomplish time critical targeting and other mission update functions. The BLOS data link capability works with Link 16 to extend the range of local Link 16 networks to other areas/theaters. 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 CONOPS 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.

Bomber 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 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	100.744	37.130	0.000
(U) Current PBR/President's Budget	87.613	36.875	11.702
(U) Total Adjustments	-13.131		
(U) Congressional Program Reductions		-0.019	
Congressional Rescissions		-0.236	
Congressional Increases			
Reprogrammings	-10.328		
SBIR/STTR Transfer	-2.803		

(U) **Significant Program Changes:**

In FY09, funding was added to complete B-1 Fully Integrated Data Links (FIDL) System Development and Demonstration (SDD) and to align with the aircraft programmed depot maintenance schedule.

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BUDGET ACTIVITY 07 Operational System Development				PE NUMBER AND TITLE 0207446F Bomber Tactical Data Link			PROJECT NUMBER AND TITLE 5041 Bomber Tactical Data Link		
Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5041 Bomber Tactical Data Link	87.613	36.875	11.702	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL), as a subset of the broader, crucial 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 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), Multifunction Advanced Data Link (MADL), and Tactical Targeting Network Technology (TTNT).

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Bomber 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 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Common Bomber Tactical Data Link (TDL) analysis, systems engineering, testing, and technical support	5.036	7.563	0.850
(U) B-1 FIDL System Development and Demonstration (SDD)	52.677	29.312	10.852
(U) B-52 CONECT/Integrated Data Link System Development and Demonstration (SDD)	29.900	0.000	0.000
(U) Total Cost	87.613	36.875	11.702

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

	<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</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) 0207434F (Link 16 Sup & Sus)	156.169	194.652	186.213	151.735	164.954	175.223	191.891	Continuing	TBD
(U) 0207445F (Fighter TDL)	88.094	38.944	62.788	90.709	0.000	0.000	0.000		343.735
(U) 0207448F (C2ISR TDL)	4.126	1.795	1.727	1.695	1.627	1.659	1.693	Continuing	TBD
(U) 0401839F (Airlift TDL)	6.785	0.000	0.000	0.000	0.000	0.000	0.000		31.466
(U) Other APPN									
(U) Procurement (3010)									
(U) 0207434F (Link 16 Sup & Sus)	0.735	0.001	0.008	35.674	88.253	92.337	64.443	Continuing	TBD
(U) 0207445F (Fighter TDL)	51.047	35.434	5.804	9.790	0.778	0.776	0.000		419.662
(U) 0207446F (Bomber TDL)	11.775	4.488	0.000	0.000	0.000	0.000	0.000		16.263
(U) 0401839F (Airlift TDL)	2.000	12.394	12.612	26.284	26.616	27.138	27.679	Continuing	TBD
(U) O&M (3400)									
(U) 0207434F (Link 16 Sup & Sus)	16.156	12.998	22.364	12.947	14.825	17.383	18.784	Continuing	TBD
(U) 0207445F (Fighter TDL)	0.000	0.276	0.286	0.284	0.281	0.285	0.291		
(U) 0401839F (Airlift TDL)	4.301	5.468	6.537	11.351	17.311	17.673	18.037	Continuing	TBD
(U) Other Procurement (3080)									
(U) 0207434F (Link 16 Sup & Sus)	36.886	25.756	16.126	39.612	41.093	22.144	7.110	Continuing	TBD

(U) **D. Acquisition Strategy**

The 653rd Electronic Systems Group (ELSG), formerly the Tactical Data Links System Program Office, provides for common development, integration and interoperability across the entire Airborne Network and ensures that 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 contractor.

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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)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract	
(U) Product Development													
B-1 FIDL System Development and Demonstration (SDD) *	SS/CPIF	Boeing		50.394	Nov-06	29.312	Nov-07	9.452	Nov-08	0.000	89.158	194.234	
B-52 System Development and Demonstration (SDD) *	CPFF	Boeing, Wichita, KS		20.700	Nov-06	0.000		0.000		0.000	20.700		
Bomber TDL analysis, systems engineering & technical support/MITRE	Various	Various		0.310	Dec-06	0.550	Nov-07	0.550	Oct-08	Continuing	TBD	TBD	
B-1 Training System	C/FPIF	Rockwell Collins		2.141	Mar-07	0.000		0.000		0.000	2.141		
											0.000		
B-52 Training System				9.200	Mar-07	0.000		0.000		0.000	9.200		
Subtotal Product Development			0.000	82.745		29.862		10.002		Continuing	TBD	TBD	
Remarks:	*MIPR funding to Bomber platform program offices for scheduled contract awards and development efforts.												
(U) Management													
Program Office and Contractor Support	C/FFP	Various		2.161	Dec-06	1.545	Dec-07	0.300	Dec-08	Continuing	TBD	TBD	
Subtotal Management			0.000	2.161		1.545		0.300		Continuing	TBD	TBD	
Remarks:													
(U) Test & Evaluation													
B-1 Lab Development	CPFF	Tinker AFB, OK		0.000		1.590	Dec-07				1.590		
B-1 FIDL Testing	Project Order	AF Flight Test Center, Edwards AFB, CA		2.707	Nov-06	3.878	Jan-08	1.400	Jan-09	0.000	7.985		
Subtotal Test & Evaluation			0.000	2.707		5.468		1.400		0.000	9.575	0.000	
Remarks:													
(U) Total Cost			0.000	87.613		36.875		11.702		Continuing	TBD	TBD	

Exhibit R-4, RDT&E Schedule Profile

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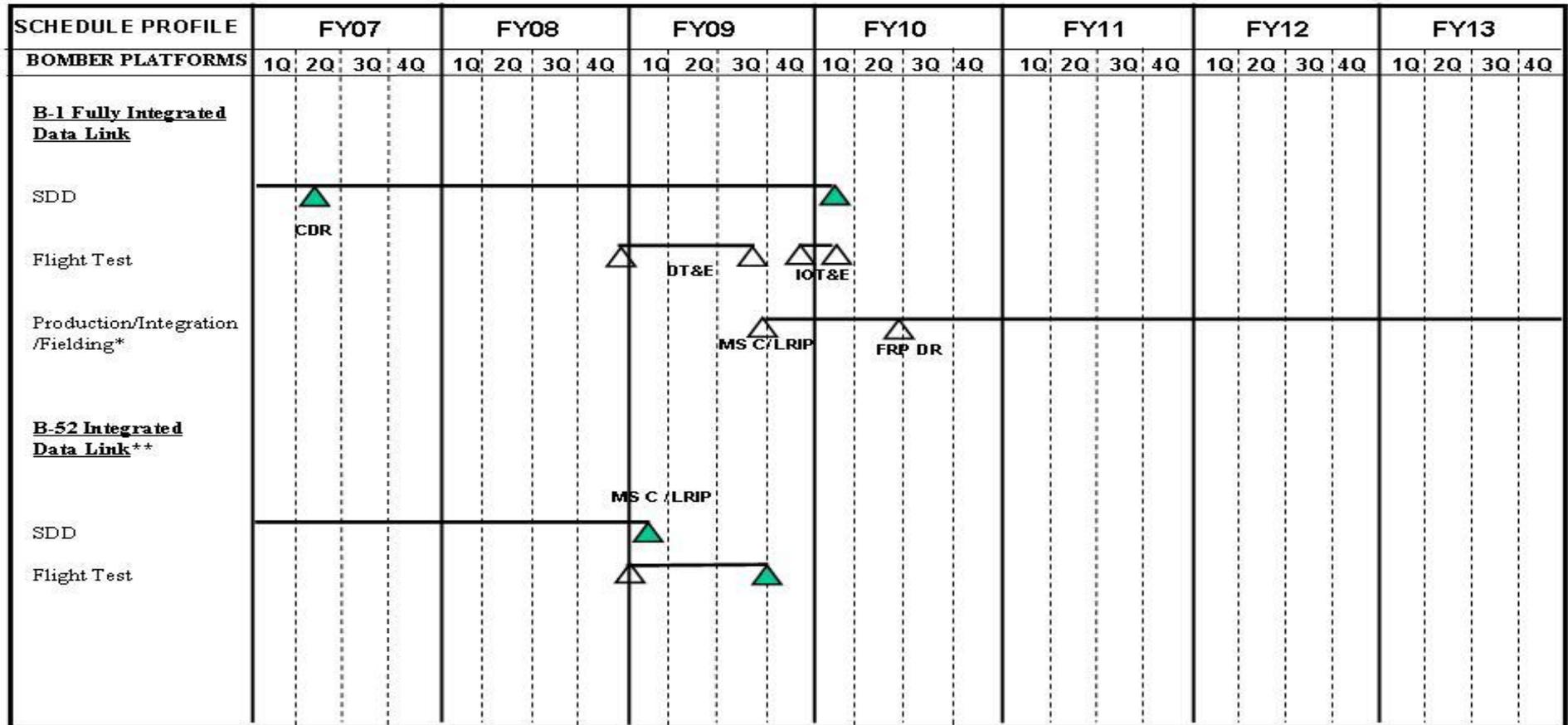
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PROJECT NUMBER AND TITLE
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BOMBER TACTICAL DATA LINK SCHEDULE
(As of 2 JANUARY 2008)



* Production/Integration/Fielding are funded in JTRS & B-1 PE

** Efforts in FY08 and beyond are funded in the B-52 PE's

Exhibit R-4a, RDT&E Schedule Detail

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(U) <u>Schedule Profile</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) B-1 Fully Integrated Data Link SDD	1-4Q	1-4Q	1-4Q
(U) B-1 Fully Integrated Data Link MS C/LRIP			3Q
(U) B-1 Fully Integrated Data Link Flight Test (DT&E and IOT&E)		4Q	1-4Q
(U) B-1 Fully Integrated Data Link/Production/Integration*			3-4Q
(U) B-52 Integrated Data Link SDD**	1-4Q	1-4Q	1Q
(U) B-52 Integrated Data Link MS C/LRIP **			1Q
(U) B-52 Integrated Data Link Flight Test**			1-3Q

*Production/Integration/Fielding are funded in B-1 PE starting in FY09

** Funded in B-52 PE starting FY08