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

Exhibit R-2, RDT&E Budget Item Justification						DATE February 2004			
BUDGET ACTIVITY 07 Operational System Development					PE NUMBER AND TITLE 0207446F Bomber Tactical Data Link				
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	0.000	12.849	120.256	166.082	88.827	0.000	0.000	0.000	0.000
5041 Bomber Tactical Data Link	0.000	12.849	120.256	166.082	88.827	0.000	0.000	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 bomber platforms to include, but not limited to B1-B, B-2, and B-52 aircraft. Keeps all bomber platforms current and compatible with the USAF Global Strike Task Force (GSTF) concept through 2020. Adds Link 16 line-of-sight (LOS) and beyond line-of-sight (BLOS) datalink capabilities. Link 16 provides a jam-resistant, secure digital data transfer network capability with a standardized waveform and data format allowing LOS intra- and inter-flight communications. Link 16 will 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 datalink to accomplish time critical targeting and other mission update functions. The BLOS datalink capability works with Link 16 to extend the range of local Link 16 network to other areas/theaters. 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 Programs (OFP) upgrades due to TDL integration and supports data gathering processes for future network centric assessments for all bomber platforms.

Bomber 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 (PE 0207446F)

Exhibit R-2, RDT&E Budget Item Justification	DATE **February 2004**

BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207446F Bomber Tactical Data Link**

(U) <u>**B. Program Change Summary ($ in Millions)**</u>

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Previous President's Budget	0.000	12.959	120.571
(U) Current PBR/President's Budget	0.000	12.849	120.256
(U) Total Adjustments	0.000	-0.110	
(U) Congressional Program Reductions			
Congressional Rescissions		-0.110	
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer			

(U) <u>Significant Program Changes:</u>

Not Applicable

Exhibit R-2a, RDT&E Project Justification		DATE February 2004

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 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
5041 Bomber Tactical Data Link	0.000	12.849	120.256	166.082	88.827	0.000	0.000	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 bomber platforms to include, but not limited to B1-B, B-2, and B-52 aircraft. Keeps all bomber platforms current and compatible with the USAF Global Strike Task Force (GSTF) concept through 2020. Adds Link 16 line-of-sight (LOS) and beyond line-of-sight (BLOS) datalink capabilities. Link 16 provides a jam-resistant, secure digital data transfer network capability with a standardized waveform and data format allowing LOS intra- and inter-flight communications. Link 16 will 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 datalink to accomplish time critical targeting and other mission update functions. The BLOS datalink capability works with Link 16 to extend the range of local Link 16 network to other areas/theaters. 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 Programs (OFP) upgrades due to TDL integration and supports data gathering processes for future network centric assessments for all bomber platforms.

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)	FY 2003	FY 2004	FY 2005
(U) Accomplishments/Planned Program	0.000	0.000	0.000
(U) No Activity	0.000		
(U) Contract for LOS Link 16 terminals and BLOS radios for development labs and aircraft.		1.800	3.066
(U) Provide Link 16 system engineering, testing, and technical support		0.500	12.230
(U) Develop and integrate of LOS and BLOS datalink capability		10.549	104.960
(U) Total Cost	0.000	12.849	120.256

Exhibit R-2a, RDT&E Project Justification	DATE February 2004

BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207446F Bomber Tactical Data Link	PROJECT NUMBER AND TITLE 5041 Bomber Tactical Data Link

(U) C. Other Program Funding Summary ($ 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 Cost
(U) AF RDT&E									
(U) 0207434F (Link 16 Sup & Sus)	50.535	70.481	141.012	218.743	228.009	161.909	153.606		
(U) 0207445F (Fighter TDL)	28.955	42.318	50.976	67.805	27.437	55.473	41.179		
(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	6.555	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)	13.357	12.873	12.613	13.916	14.056	14.606	15.131		
(U) 0401839F (Airlift 3400)			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.

Exhibit R-3, RDT&E Project Cost Analysis		DATE February 2004

BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207446F Bomber Tactical Data Link	PROJECT NUMBER AND TITLE 5041 Bomber Tactical Data Link

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2003 Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Link 16 Terminal EMD Terminal Purchases	MIPR	SPAWAR, San Diego CA				2.500	Jan-04	3.066	May-05	Continuing	TBD	
Bomber Development Contractors**	MIPR	ASC, WPAFB, OH				9.539	Mar-04	116.380	Mar-05	Continuing	TBD	
MITRE	SS/FFP	MITRE, Bedford MA				0.200	Dec-03	0.200	Dec-04	Continuing	TBD	
Subtotal Product Development			0.000	0.000		12.239		119.646		Continuing	TBD	0.000
Remarks: **MIPR funding to Bomber Platform System Program Offices for scheduled contract awards and development efforts.												
(U) Management												
Program Office and Contractor Support	C/FFP	Various				0.610	Dec-03	0.610	Dec-04		1.220	
Subtotal Management			0.000	0.000		0.610		0.610		0.000	1.220	0.000
Remarks:												
(U) Total Cost			0.000	0.000		12.849		120.256		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile	DATE **February 2004**

BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207446F Bomber Tactical Data Link**	PROJECT NUMBER AND TITLE **5041 Bomber Tactical Data Link**

BOMBER TACTICAL DATA LINK SCHEDULE

SCHEDULE PROFILE	FY03	FY04	FY05	FY06	FY07	FY08	FY09
BOMBER PLATFORMS	1Q 2Q 3Q 4Q	1Q 2Q 3Q 4Q	1Q 2Q 3Q 4Q	1Q 2Q 3Q 4Q	1Q 2Q 3Q 4Q	1Q 2Q 3Q 4Q	1Q 2Q 3Q 4Q

B-1 Fully Integrated Data Link

Contract Award

Development

Test

Integration/Field

B-52 Integrated Data Link

Contract Award

Development

Test

Integration/Field

Project 5041	R-1 Shopping List - Item No. 149-7 of 149-8	Exhibit R-4 (PE 0207446F)

Exhibit R-4a, RDT&E Schedule Detail	DATE **February 2004**

BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207446F Bomber Tactical Data Link**	PROJECT NUMBER AND TITLE **5041 Bomber Tactical Data Link**

(U) **Schedule Profile**	FY 2003	FY 2004	FY 2005
(U) B-1 Fully Integrated Data Link Contract Award		2Q	
(U) B-1 Fully Integrated Data Link Development		2-4Q	1-4Q
(U) B-52 Integrated Data Link Contract Award			2Q
(U) B-52 Integrated Data Link Development			2-4Q