PE NUMBER: 0207448F
PE TITLE: C2ISR Tactical Data Link

			DATE
Exhibit R-2, RDT&E Budget Item Justification			**February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE
07 Operational System Development	**0207448F C2ISR Tactical Data Link**

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	24.420	14.627	4.338	1.801	1.731	1.697	1.633	Continuing	TBD
5045 C2ISR Tactical Data Link	24.420	14.627	4.338	1.801	1.731	1.697	1.633	Continuing	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 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).

This effort provides for common development, upgrade, integration, and interoperability of tactical data link capability to ground and air C2 platforms including, but not limited to, Airborne Warning and Control System (AWACS), Joint Surveillance Target Attack Radar System (JSTARS), the Air and Space Operations Center (AOC), Global Hawk, Rivet Joint, Combat Sent, Cobra Ball, E-10, and the North Atlantic Treaty Organization (NATO) Iceland Air Defense System (IADS). TDLs provide a jam-resistant, secure digital data transfer network capability with a standardized waveform and data format allowing intra- and inter-flight communications. TDLs 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. TDL efforts include incorporating changes and additions to the Link-16 message standard (MIL-STD-6016C) and applicable Interface Change Proposals (ICPs), assisting with AF and Joint interoperability certification testing with the Air Force Command and Control Intelligence Surveillance and Reconnaissance Center (AFC2ISRC) and Joint Interoperability Test Center (JITC); future development, integration, and verification of Operational Flight Program (OFP) upgrades due to TDL integration and supporting data gathering processes; and incorporating Interoperable Systems Management and Requirements Transformation (iSMART), a process which enables network centric interoperability assessments to be made more quickly and effectively.

C2ISR 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 2006**

BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207448F C2ISR Tactical Data Link**

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	25.150	14.838	4.479
(U)	Current PBR/President's Budget	24.420	14.627	4.338
(U)	Total Adjustments	-0.730	-0.211	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.730	-0.211	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

Beginning in FY06, funds were programmed to develop AWACS Block 30/35 TDL upgrades to address capability shortfalls in theater command and control and battle management identified during combat, which enables an enhanced TDL capability until AWACS Block 40/45 Final Operational Capability.

In FY06-07, funding was added to provide AWACS Block 40/45 Data Link Infrastructure (DLI) and Combat Identification (CID) capabilities. DLI and CID address recent combat lessons learned related to rapid exchange of fleeting target information, inter-service combat identification, and providing weapons-quality coordinates.

C2ISR Tactical Data Link baseline funding decreases across FY06-07 due to (1) JSTARS Attack Support Upgrade (ASU) completion in FY06, and (2) AWACS Block 40/45 Data Link Infrastructure completion in FY07.

		DATE
Exhibit R-2a, RDT&E Project Justification		**February 2006**

BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207448F C2ISR Tactical Data Link**	PROJECT NUMBER AND TITLE **5045 C2ISR Tactical Data Link**

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5045 C2ISR Tactical Data Link	24.420	14.627	4.338	1.801	1.731	1.697	1.633	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) 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 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).

This effort provides for common development, upgrade, integration, and interoperability of tactical data link capability to ground and air C2 platforms including, but not limited to, Airborne Warning and Control System (AWACS), Joint Surveillance Target Attack Radar System (JSTARS), the Air and Space Operations Center (AOC), Global Hawk, Rivet Joint, Combat Sent, Cobra Ball, E-10, and the North Atlantic Treaty Organization (NATO) Iceland Air Defense System (IADS). TDLs provide a jam-resistant, secure digital data transfer network capability with a standardized waveform and data format allowing intra- and inter-flight communications. TDLs 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. TDL efforts include incorporating changes and additions to the Link-16 message standard (MIL-STD-6016C) and applicable Interface Change Proposals (ICPs), assisting with AF and Joint interoperability certification testing with the Air Force Command and Control Intelligence Surveillance and Reconnaissance Center (AFC2ISRC) and Joint Interoperability Test Center (JITC); future development, integration, and verification of Operational Flight Program (OFP) upgrades due to TDL integration and supporting data gathering processes; and incorporating Interoperable Systems Management and Requirements Transformation (iSMART), a process which enables network centric interoperability assessments to be made more quickly and effectively.

C2ISR 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 2005	FY 2006	FY 2007
(U) AWACS Blocks 40/45 Upgrades	1.986		
(U) Support system integration for JSTARS Link 16 Attack Support Upgrade (ASU) capability	22.077	7.011	
(U) AWACS 40/45 Data Link Infrastructure (DLI)		2.120	0.602
(U) AWACS 40/45 Combat ID (CID)		3.496	1.741
(U) AWACS Block 30/35		2.000	1.995
(U) C2ISR Integration	0.357		
(U) Total Cost	24.420	14.627	4.338

Project 5045   R-1 Shopping List - Item No. 154-4 of 154-8   Exhibit R-2a (PE 0207448F)

Exhibit R-2a, RDT&E Project Justification		DATE February 2006

BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207448F C2ISR Tactical Data Link	PROJECT NUMBER AND TITLE 5045 C2ISR Tactical Data Link

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) 0207434F (Link 16 Sup & Sus)	120.633	161.345	172.625	142.449	152.320	154.994	156.665	Continuing	TBD
(U) 0207445F (Fighter TDL)	35.668	119.965	113.388	81.084	38.626	34.714	0.000	Continuing	TBD
(U) 0207446F (Bomber TDL)	76.568	142.800	168.168	94.889	0.000	0.000	0.000	Continuing	TBD
(U) 0401839F (Airlift/Other TDL)	0.000	0.000	32.099	0.000	0.000	0.000	0.000	Continuing	TBD
(U) Aircraft Procurement, AF (3010)									
(U) 0207423F (JTRS I&I)	0.000	0.000	0.000	19.472	26.521	66.948	42.346		
(U) 0207434F (Link 16 Sup & Sus)	2.046	2.996	2.783	0.000	9.598	9.846	9.962	Continuing	TBD
(U) 0207445F (Fighter TDL)	95.934	89.222	61.623	12.688	0.000	0.000	0.000	Continuing	TBD
(U) 0207446F (Bomber TDL)	44.245	21.940	11.818	4.456	0.000	0.000	0.000	Continuing	TBD
(U) 0401839F (Airlift TDL)	0.000	24.118	11.539	14.616	12.603	26.263	26.591	Continuing	TBD
(U) O&M (3400)									
(U) 0207434F (Link 16 Sup & Sus)	9.549	21.112	10.156	12.279	16.177	16.629	16.975	Continuing	TBD
(U) 0401839F (Airlift 3400)	0.596	2.731	5.708	11.783	16.499	17.178	17.271	Continuing	TBD
(U) Other Procurement, AF (3080)									
(U) 0207434F (Link 16 Sup & Sus)	26.231	42.462	30.740	12.777	8.435	8.508	8.612	Continuing	TBD

(U) D. Acquisition Strategy

The Air Force Tactical Data Links Network (TDN) 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 2006
BUDGET ACTIVITY 07 Operational System Development	**PE NUMBER AND TITLE** 0207448F C2ISR Tactical Data Link	**PROJECT NUMBER AND TITLE** 5045 C2ISR Tactical Data Link

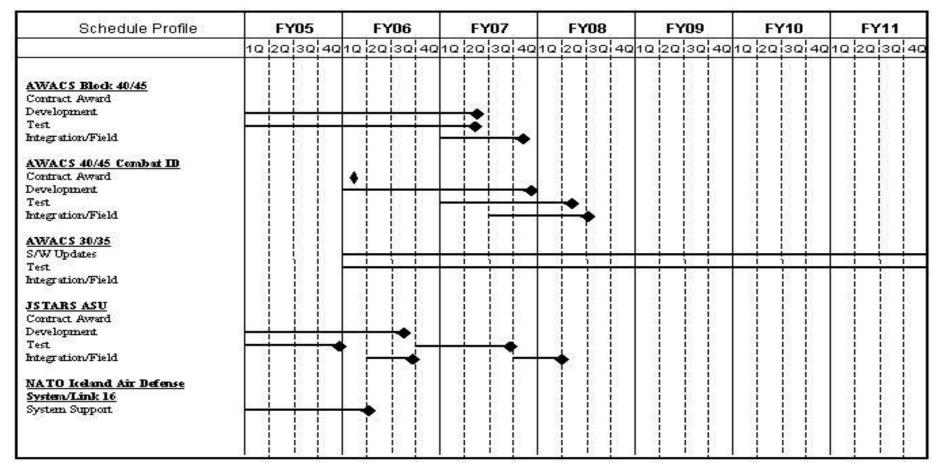| (U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Joint STARS	SS/CPAF	Northrop Grumman, Melbourne FL		22.077	Nov-04	7.011	Nov-05				29.088	48.504
AWACS	SS/FPIF/CPAF	Boeing, Seattle WA		1.986	Dec-04	7.616	Dec-05	4.338	Dec-06	Continuing	TBD	TBD
Subtotal Product Development			0.000	24.063		14.627		4.338		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation										0.000		
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks: FY05-07 test requirements are rolled to the platform level (i.e. E-3 AWACS, E-8 Joint STARS)												
(U) Management												
Program Office and Contractor Support	C/FFP	Various		0.357	Dec-04					Continuing	TBD	TBD
Subtotal Management			0.000	0.357		0.000		0.000		Continuing	TBD	TBD
Remarks: Joint STARS and TDL Program Office via Memorandum of Agreement (MOA) transfer on/off year support costs. The Joint STARS Program picks up responsibility in FY06-07.												
(U) Total Cost			0.000	24.420		14.627		4.338		Continuing	TBD	TBD

Project 5045   R-1 Shopping List - Item No. 154-6 of 154-8   Exhibit R-3 (PE 0207448F)

Exhibit R-4, RDT&E Schedule Profile	DATE February 2006

BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207448F C2ISR Tactical Data Link	PROJECT NUMBER AND TITLE 5045 C2ISR Tactical Data Link

PE27448F Schedule
C2ISR Tactical Data Link

Schedule Profile	FY05	FY06	FY07	FY08	FY09	FY10	FY11
	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

AWACS Block 40/45
Contract Award
Development
Test
Integration/Field

AWACS 40/45 Combat ID
Contract Award
Development
Test
Integration/Field

AWACS 30/35
S/W Updates
Test
Integration/Field

JSTARS ASU
Contract Award
Development
Test
Integration/Field

NATO Iceland Air Defense System/Link 16
System Support

As of 13 January 06

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006

BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207448F C2ISR Tactical Data Link	PROJECT NUMBER AND TITLE 5045 C2ISR Tactical Data Link

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) AWACS Block 40/45 Initiative Development	1-4Q	1-4Q	1-2Q
(U) AWACS Block 40/45 Initiative Test	1-4Q	1-4Q	1-2Q
(U) AWACS Block 40/45 Initiative Integration/Field			1-3Q
(U) AWACS Block 40/45 Combat ID Initiative Contract Award		1Q	
(U) AWACS Block 40/45 Combat ID Initiative Development		1-4Q	1-4Q
(U) AWACS Block 40/45 Combat ID Initiative Test			1-4Q
(U) AWACS Block 40/45 Combat ID Initiative Integration/Field			3-4Q
(U) AWACS Block 30/35 Software Updates/Development		1-4Q	1-4Q
(U) AWACS Block 30/35 Test		1-4Q	1-4Q
(U) JSTARS ASU Development	1-4Q	1-3Q	
(U) JSTARS ASU Test	1-4Q	4Q	1-3Q
(U) JSTARS ASU Integration /Field		2-3Q	4Q
(U) C2ISR NATO IADS Link 16 Integration	1-4Q	1Q	

Project 5045   R-1 Shopping List - Item No. 154-8 of 154-8   Exhibit R-4a (PE 0207448F)