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

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2005

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207448F C2ISR Tactical Data Link

	Cost ($ in Millions)	FY 2004 Actual	FY 2005 Estimate	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	25.003	25.150	14.838	4.479	1.952	1.948	1.953	1.939	Continuing	TBD
5045	C2ISR Tactical Data Link	25.003	25.150	14.838	4.479	1.952	1.948	1.953	1.939	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 2005
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207448F C2ISR Tactical Data Link

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

		FY 2004	FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	26.503	25.441	7.234	0.743
(U)	Current PBR/President's Budget	25.003	25.150	14.838	4.479
(U)	Total Adjustments	-1.500	-0.291		
(U)	Congressional Program Reductions				
	Congressional Rescissions	-0.057	-0.291		
	Congressional Increases				
	Reprogrammings	-0.543			
	SBIR/STTR Transfer	-0.900			

(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.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2005

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 2004 Actual	FY 2005 Estimate	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	25.003	25.150	14.838	4.479	1.952	1.948	1.953	1.939	Continuing	TBD
	Quantity of RDT&E Articles	0	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.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007
(U)	AWACS Blocks 40/45 Upgrades	1.153	1.986		
(U)	Support system integration for JSTARS Link 16 Attack Support Upgrade (ASU) capability	20.678	22.807	7.222	
(U)	AWACS 40/45 Data Link Infrastructure (DLI)			2.120	0.743
(U)	AWACS 40/45 Combat ID (CID)			3.496	1.741
(U)	AWACS Block 30/35			2.000	1.995
(U)	C2ISR Integration	3.172	0.357		
(U)	Total Cost	25.003	25.150	14.838	4.479

Exhibit R-2a, RDT&E Project Justification		DATE: February 2005
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 2004 Actual	FY 2005 Estimate	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)	61.150	134.547	157.677	184.100	151.289	155.710	159.298	162.024	Continuing	TBD
(U)	0207445F (Fighter TDL)	36.418	50.093	122.160	84.513	50.860	0.000	0.000	0.000	Continuing	TBD
(U)	0207446F (Bomber TDL)	12.049	78.721	144.863	136.624	57.556	0.000	0.000	0.000	Continuing	TBD
(U)	0401839F (Airlift/Other TDL)	0.000	0.000	0.000	31.967	0.000	0.000	0.000	0.000	Continuing	TBD
(U)	Aircraft Procurement, AF (3010)										
(U)	0207423F (JTRS I&I)	0.000	0.000	17.192	43.445	52.032	53.650	49.645	53.695		
(U)	0207434F (Link 16 Sup & Sus)	0.040	6.455	3.036	2.737	0.000	9.464	9.703	9.806	Continuing	TBD
(U)	0207445F (Fighter TDL)	29.300	95.934	90.430	60.614	12.507	0.000	0.000	0.000	Continuing	TBD
(U)	0207446F (Bomber TDL)	0.000	44.245	22.237	11.624	4.392	0.000	0.000	0.000	Continuing	TBD
(U)	0401839F (Airlift TDL)	0.000	3.091	24.443	11.350	14.407	12.427	25.882	26.175	Continuing	TBD
(U)	O&M (3400)										
(U)	0207434F (Link 16 Sup & Sus)	12.877	13.055	21.360	18.590	16.301	16.320	16.862	15.964	Continuing	TBD
(U)	0401839F (Airlift 3400)	0.000	1.812	2.776	5.883	12.073	16.843	17.105	17.397	Continuing	TBD
(U)	Other Procurement, AF (3080)										
(U)	0207434F (Link 16 Sup & Sus)	0.000	27.810	32.446	30.656	12.758	8.376	8.413	8.460	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 2005

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 2004 Cost	FY 2004 Cost	FY 2004 Award Date	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		18.475	Nov-03	22.807	Nov-04	7.222	Nov-05				48.504	48.504
AWACS	SS/FPIF/CPAF	Boeing, Seattle WA		1.153	Dec-03	1.986	Dec-04	7.616	Dec-05	4.479	Dec-06	Continuing	TBD	TBD
Subtotal Product Development			0.000	19.628		24.793		14.838		4.479		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
46th Test Squadron	MIPR	46th Test Sqdn, Eglin AFB FL		1.246	Jul-04								1.246	1.246
JTIC Testing				0.092									0.092	0.092
605th Test Squadron	MIPR	605th Test Sqdn, Hurlburt Field, FL		0.106	Aug-04								0.106	0.106
Subtotal Test & Evaluation			0.000	1.444		0.000		0.000		0.000		0.000	1.444	1.444
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		3.931	Dec-03	0.357	Dec-04					Continuing	TBD	TBD
Subtotal Management			0.000	3.931		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	25.003		25.150		14.838		4.479		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2005
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207448F C2ISR Tactical Data Link	PROJECT NUMBER AND TITLE: 5045 C2ISR Tactical Data Link

C2ISR Schedule

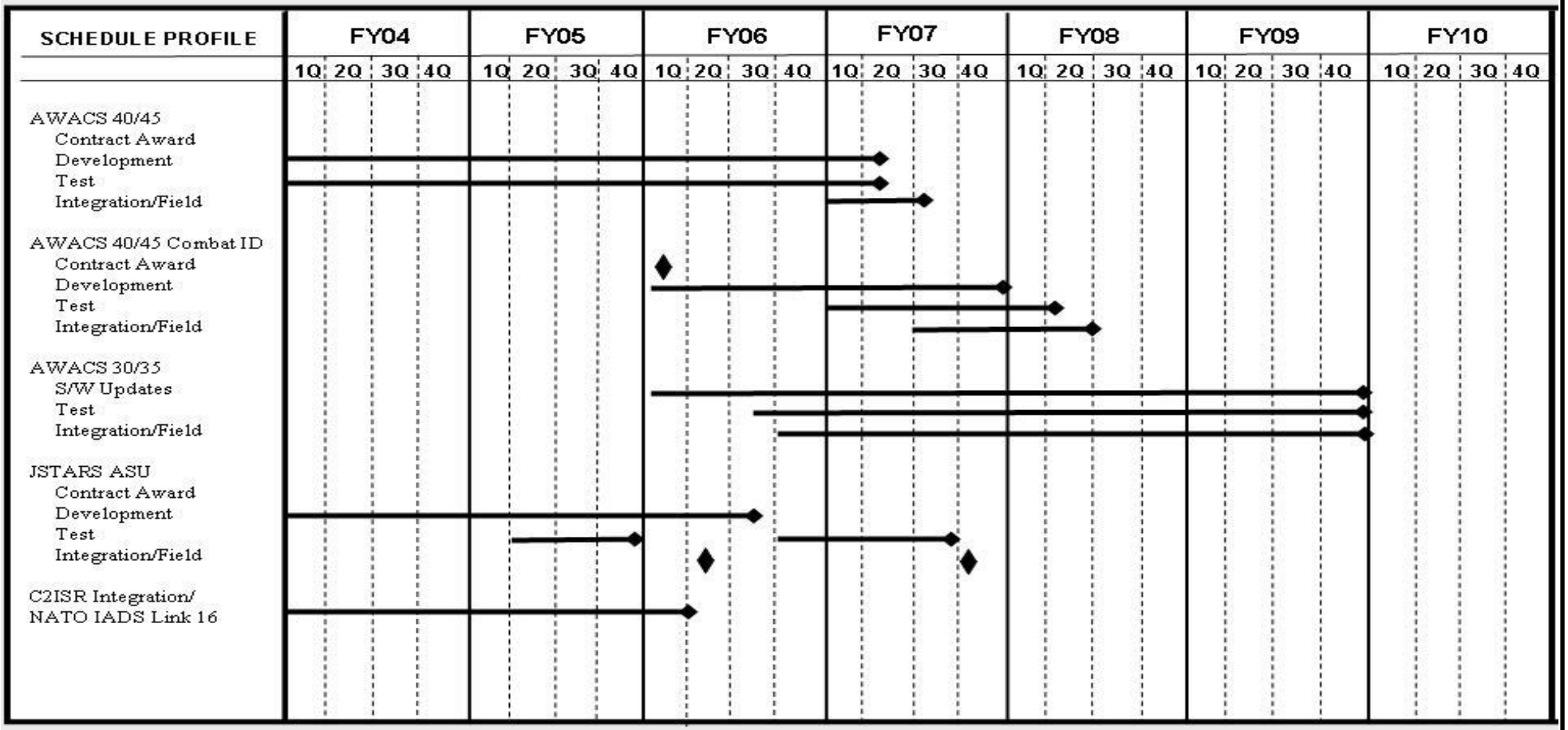

Exhibit R-4a, RDT&E Schedule Detail			DATE: February 2005
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207448F C2ISR Tactical Data Link	PROJECT NUMBER AND TITLE: 5045 C2ISR Tactical Data Link	

(U) Schedule Profile	FY 2004	FY 2005	FY 2006	FY 2007
(U) AWACS Block 40/45 Initiative Development	1-4Q	1-4Q	1-4Q	1-2Q
(U) AWACS Block 40/45 Initiative Test	1-4Q	1-4Q	1-4Q	1-2Q
(U) AWACS Block 40/45 Initiative Integration/Field				1-2Q
(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			3-4Q	1-4Q
(U) AWACS Block 30/35 Integration/Field			4Q	1-4Q
(U) JSTARS ASU Development	1-4Q	1-4Q	1-3Q	
(U) JSTARS ASU Test		2-4Q	4Q	1-3Q
(U) JSTARS ASU Integration /Field			2Q	4Q
(U) C2ISR NATO IADS Link 16 Integration	1-4Q	1-4Q	1Q	