

UNCLASSIFIED

PE NUMBER: 0207448F

PE TITLE: C2ISR Tactical Data Link

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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	26.503	25.441	7.234	0.743	0.000	0.000	0.000	0.000
5045 C2ISR Tactical Data Link	0.000	26.503	25.441	7.234	0.743	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), 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, Multi-Sensor Command and Control Aircraft (MC2A), and the North Atlantic Treaty Organization (NATO) Iceland Air Defense System (IADS). Link 16 provides a jam-resistant, secure digital data transfer network capability with a standardized waveform and data format allowing intra- and inter-flight communications. Link 16 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. 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 Program (OFF) upgrades due to TDL integration and supports data gathering processes for future network centric assessments for all C2 platforms.

C2ISR 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 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Previous President's Budget		26.927	26.713
(U) Current PBR/President's Budget	0.000	26.503	25.441
(U) Total Adjustments	0.000	-0.424	
(U) Congressional Program Reductions		-0.195	
Congressional Rescissions		-0.229	
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer			
(U) <u>Significant Program Changes:</u>			

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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
5045 C2ISR Tactical Data Link	0.000	26.503	25.441	7.234	0.743	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), 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, Multi-Sensor Command and Control Aircraft (MC2A), and the North Atlantic Treaty Organization (NATO) Iceland Air Defense System (IADS). Link 16 provides a jam-resistant, secure digital data transfer network capability with a standardized waveform and data format allowing intra- and inter-flight communications. Link 16 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. 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 Program (OFP) upgrades due to TDL integration and supports data gathering processes for future network centric assessments for all C2 platforms.

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)

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Accomplishments/Planned Program	0.000	0.000	0.000
(U) No Activity	0.000		
(U) AWACS Blocks 40/45 Upgrades		1.228	1.986
(U) Support system integration for JSTARS Link 16 Attack Support Upgrade (ASU) capability		21.923	23.098
(U) Support C2ISR Integration		3.352	0.357
(U) Total Cost	0.000	26.503	25.441

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

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</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)	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) 0207446F (Bomber TDL)	0.000	12.849	120.256	166.082	88.827	0.000	0.000		
(U) 0401839F (Airlift/Other 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) Aircraft Procurement, AF (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, AF (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.

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Exhibit R-3, RDT&E Project Cost Analysis

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(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</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>Cost to</u>	<u>Total</u>	<u>Target</u>
			<u>Prior to FY</u>	<u>2003</u>	<u>2003</u>	<u>2004</u>	<u>2004</u>	<u>2005</u>	<u>2005</u>	<u>Complete</u>	<u>Cost</u>	<u>Value of</u>
			<u>2003</u>	<u>Cost</u>	<u>Award</u>	<u>Cost</u>	<u>Award</u>	<u>Cost</u>	<u>Award</u>			<u>Contract</u>
			<u>Cost</u>		<u>Date</u>		<u>Date</u>		<u>Date</u>			
(U) <u>Product Development</u>												
Joint STARS	SS/CPAF	Northrop Grumman, Melbourne FL	0.000			19.393	Nov-03	22.896	Nov-04	31.493	73.782	
AWACS	SS/FPIF/CPAF	Boeing, Seattle WA	0.000			1.228	Jan-04	1.991	Dec-04	4.325	7.544	
C2ISR / NATO IADS	C/FFP	Various	0.000			2.030	Dec-03	0.364	Dec-04	0.000	2.394	
Subtotal Product Development			0.000	0.000		22.651		25.251		35.818	83.720	0.000
Remarks:												
(U) <u>Test & Evaluation</u>												
46th Test Squadron	MIPR	46th Test Sqdn, Eglin AFB FL				1.246	Dec-03				1.246	
605th Test Squadron	MIPR	605th Test Sqdn, Hurlburt Field, FL				0.106	Dec-03				0.106	
Subtotal Test & Evaluation			0.000	0.000		1.352		0.000		0.000	1.352	0.000
Remarks:												
(U) <u>Management</u>												
Program Office and Contractor Support	C/FFP	Various	0.000			2.500	Dec-03	0.190	Dec-04		2.690	
Subtotal Management			0.000	0.000		2.500		0.190		0.000	2.690	0.000
Remarks:												
(U) Total Cost			0.000	0.000		26.503		25.441		35.818	87.762	0.000

Exhibit R-4, RDT&E Schedule Profile

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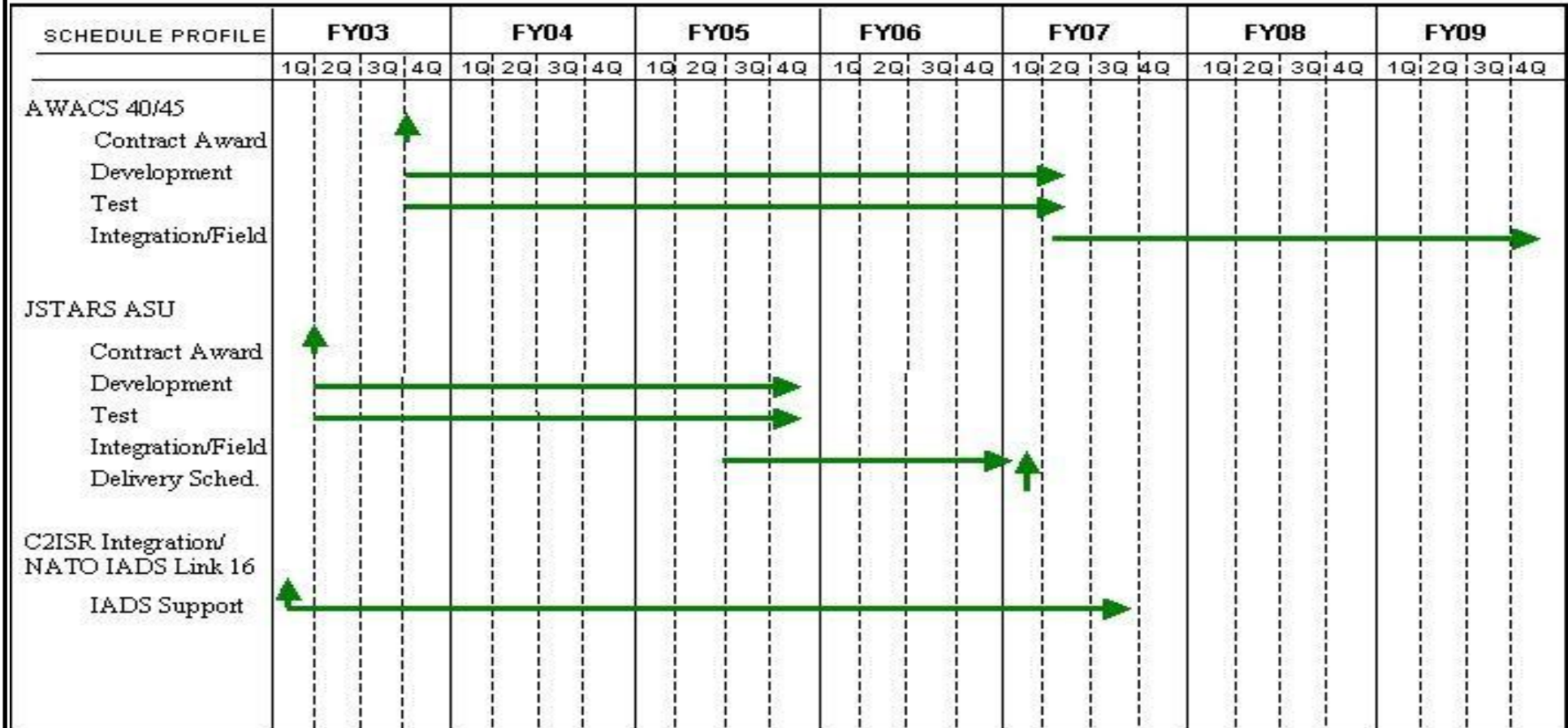
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C2ISR Schedule



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Exhibit R-4a, RDT&E Schedule Detail

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	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) <u>Schedule Profile</u>			
(U) AWACS Block 40/45 Upgrade Contract Award	4Q		
(U) AWACS Block 40/45 Upgrade Development	4Q	1-4Q	1-4Q
(U) AWACS Block 40/45 Upgrade Test	4Q	1-4Q	1-4Q
(U) JSTARS ASU Contract Award	2Q		
(U) JSTARS ASU Development	2-4Q	1-4Q	1-3Q
(U) JSTARS ASU Test	2-4Q	1-4Q	1-3Q
(U) JSTARS ASU Integration / Fielding			3-4Q
(U) NATO IADS Integration / Fielding	1-4Q	1-4Q	1-4Q