

UNCLASSIFIED

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

Exhibit R-2, RDT&E Budget Item Justification	DATE May 2009
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BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207448F C2ISR Tactical Data Link
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Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	1.745	1.719	1.667	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5045 C2ISR Tactical Data Link	1.745	1.719	1.667	0.000	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 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 new and standardized waveforms and data formats 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), Intra-Flight Data Link (IFDL), 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 ground and 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, Predator, Reaper, Rivet Joint, Combat Sent, and Cobra Ball. TDLs keep all C2ISR Platforms and data linked weapons current/interoperable in the Airborne Network, and compatible with the USAF Global Strike Task Force (GSTF) beyond 2020. TDLs 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 Global Cyberspace Integration Center (GCIC) and Joint Interoperability Test Center (JITC); 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 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.

Activities also include studies and analysis to support both current program planning and execution and future program planning.

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 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Previous President's Budget	1.795	1.727	1.695
(U) Current PBR/President's Budget	1.745	1.719	1.667
(U) Total Adjustments	-0.050	-0.008	
(U) Congressional Program Reductions			
Congressional Rescissions		-0.008	
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer	-0.050		
(U) <u>Significant Program Changes:</u>			

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Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
5045 C2ISR Tactical Data Link	1.745	1.719	1.667	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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Activities also include studies and analysis to support both current program planning and execution and future program planning.

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 2008	FY 2009	FY 2010
(U) C2ISR data link integration and AWACS Block 30/35 Software Enhancements	1.537	1.719	1.667
(U) C2ISR data link integration and AWACS Block 40/45 Software Enhancements	0.208		
(U) Total Cost	1.745	1.719	1.667

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

	<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>FY 2014</u>	<u>FY 2015</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Complete</u>							
(U) AF RDT&E										
(U) 0207434F (Link 16 Sup & Sus)	186.371	192.460	0.000						Continuing	TBD
(U) 0207445F (Fighter TDL)	57.424	57.264	72.106						Continuing	TBD
(U) 0207446F (Bomber TDL)	38.280	11.603	0.000						Continuing	TBD
(U) 0401839F (Airlift TDL)	4.300	7.923	0.000							
(U) 0604281F (TDN Enterprise)	0.000	0.000	88.444							
(U) Aircraft Procurement, AF (3010)										
(U) 0207434F (Link 16 Sup & Sus)	0.001	0.008	0.000						Continuing	TBD
(U) 0207445F (Fighter TDL)	24.877	5.788	9.616						Continuing	TBD
(U) 0207446F (Bomber TDL)	4.426	0.000	0.000						Continuing	TBD
(U) 0401839F (Airlift TDL)	12.394	0.000	0.000						Continuing	TBD
(U) O&M (3400)										
(U) 0207434F (Link 16 Sup & Sus)	29.405	22.104	0.359						Continuing	TBD
(U) 0207445F (Fighter TDL)	0.300	0.281	0.219							
(U) 0401839F (Airlift 3400)	3.907	6.469	10.242						Continuing	TBD
(U) 0604281F (TDN Enterprise)	0.000	0.000	34.850							
(U) Other Procurement, AF (3080)										
(U) 0207434F (Link 16 Sup & Sus)	22.980	16.079	0.000						Continuing	TBD
(U) 0604281F (TDN Enterprise)	0.000	0.000	32.441							

(U) D. Acquisition Strategy

The 653rd Electronics Systems Group (ELSG) provides for common development, integration and interoperability across the entire Airborne Network and ensures that TDLs 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) <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 Prior to FY 2008 Cost</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>FY 2010 Cost</u>	<u>FY 2010 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>	
(U) <u>Product Development</u> AWACS	SS/FFP/CP AF	Boeing, Seattle WA		1.293	Mar-08	1.276	Mar-09	1.360	Dec-09	Continuing	TBD	TBD	
Subtotal Product Development			0.000	1.293		1.276		1.360		Continuing	TBD	TBD	
Remarks:													
(U) <u>Test & Evaluation</u>													
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000	
Remarks:	Test requirements are funded by platforms												
(U) <u>Management</u>													
Program Office and Contractor Support				0.452	Nov-07	0.443	Nov-08	0.307	Nov-09	Continuing	TBD	TBD	
Subtotal Management			0.000	0.452		0.443		0.307		Continuing	TBD	TBD	
Remarks:													
(U) Total Cost													
			0.000	1.745		1.719		1.667		Continuing	TBD	TBD	

Exhibit R-4, RDT&E Schedule Profile

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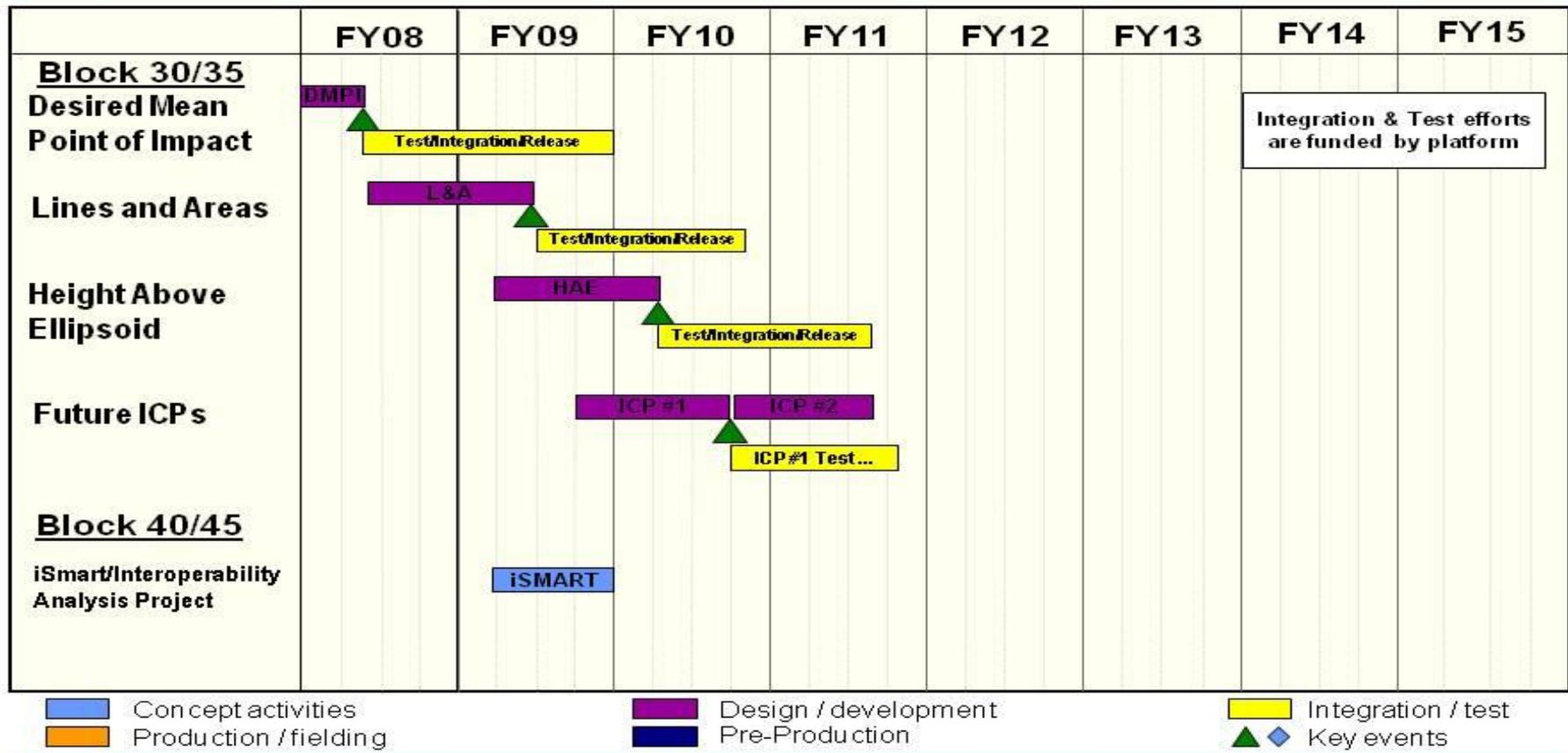
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PE 0207448F C2ISR Tactical Data Link Schedule (as of 20 Apr 2009)



PB10 R-Docs

Depicted by installation/production flow

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Exhibit R-4a, RDT&E Schedule Detail

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(U) <u>Schedule Profile</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) AWACS 30/35 Desired Mean Point of Impact Design/Development	1-2Q		
(U) AWACS 30/35 Desired Mean Point of Impact Test/Integration/Release	2-4Q	1-4Q	
(U) AWACS 30/35 Lines & Areas Design/Development	2-4Q	1-2Q	
(U) AWACS 30/35 Lines & Areas Test/Integration/Release		3-4Q	1-4Q
(U) AWACS 30/35 Height Above Ellipsoid Design/Development		2-4Q	1-2Q
(U) AWACS 30/35 Height Above Ellipsoid Test/Integration/Release			2-4Q
(U) AWACS 30/35 Future ICP Design/Development		4Q	1-4Q
(U) AWACS 30/35 Future ICP Test/Integration/Release			4Q
(U) AWACS Block 40/45 iSMART Database Updates		1-4Q	

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