

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
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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 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	14.219	4.322	1.809	1.741	1.711	1.643	1.675	1.709	Continuing	TBD
5045 C2ISR Tactical Data Link	14.219	4.322	1.809	1.741	1.711	1.643	1.675	1.709	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), Integrated Broadcast Service (IBS), and Tactical Targeting Network Technology (TTNT).

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, Predator, Rivet Joint, Combat Sent, Cobra Ball, 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.

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

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	14.627	4.338	1.801	1.731
(U) Current PBR/President's Budget	14.219	4.322	1.809	1.741
(U) Total Adjustments	-0.408			
(U) Congressional Program Reductions				
Congressional Rescissions		-0.016		
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer	-0.408			

(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 Full 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 from FY06-08 due to (1) JSTARS Attack Support Upgrade (ASU) completion in FY06, and (2) AWACS Block 40/45 CID and Data Link Infrastructure completion in FY07.

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Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5045 C2ISR Tactical Data Link	14.219	4.322	1.809	1.741	1.711	1.643	1.675	1.709	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), Integrated Broadcast Service (IBS), and Tactical Targeting Network Technology (TTNT).

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(U) B. Accomplishments/Planned Program (\$ in Millions)

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Support system integration for JSTARS Link 16 Attack Support Upgrade (ASU)	6.604			
(U) AWACS 40/45 Data Link Infrastructure (DLI)	2.120	0.602		
(U) AWACS 40/45 Combat ID (CID)	3.495	1.725		
(U) C2ISR data link integration and AWACS Block 30/35 Software Enhancements	2.000	1.995	1.809	1.741
(U) Total Cost	14.219	4.322	1.809	1.741

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

	<u>FY 2006</u>	<u>FY 2007</u>	<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>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)	156.851	173.216	199.363	207.268	166.987	184.448	210.611	193.745	Continuing	TBD
(U) 0207445F (Fighter TDL)	115.818	112.755	39.545	74.312	91.577	0.000	0.000	0.000	Continuing	TBD
(U) 0207446F (Bomber TDL)	133.836	100.744	37.130	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U) 0401839F (Airlift/Other TDL)	0.000	22.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U) Aircraft Procurement, AF (3010)										
(U) 0207434F (Link 16 Sup & Sus)	2.996	2.773	0.001	9.708	46.926	99.938	104.173	75.826	Continuing	TBD
(U) 0207445F (Fighter TDL)	89.222	61.399	35.676	5.865	9.879	0.785	0.783	0.000	Continuing	TBD
(U) 0207446F (Bomber TDL)	21.940	11.775	4.518	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U) 0401839F (Airlift TDL)	24.118	11.497	14.818	12.744	26.521	26.853	27.384	27.929	Continuing	TBD
(U) O&M (3400)										
(U) 0207434F (Link 16 Sup & Sus)	8.341	9.895	13.203	4.760	13.054	14.986	17.550	18.923	Continuing	TBD
(U) 0207445F (Fighter TDL)	0.000	0.000	0.289	0.287	0.286	0.283	0.288	0.293		
(U) 0401839F (Airlift 3400)	3.220	5.445	5.726	6.603	17.381	17.460	17.815	18.177	Continuing	TBD
(U) Other Procurement, AF (3080)										
(U) 0207434F (Link 16 Sup & Sus)	41.362	36.886	21.933	28.301	41.932	43.948	56.337	39.173	Continuing	TBD

(U) D. Acquisition Strategy

The 640th Electronic Systems Squadron (ELSS), formerly the Air Force Tactical Data Links Network (TDN) System Program Office (SPO), provides for common development, 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. 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) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2006 Cost</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u> Joint STARS	SS/CPAF	Northrop Grumman, Melbourne FL		6.604	Nov-05							0.000	6.604	48.504
AWACS	SS/FPIF/C PAF	Boeing, Seattle WA		7.615	Dec-05	4.322	Dec-06	1.809	Dec-07	1.741	Dec-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	14.219		4.322		1.809		1.741		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	0.000
Remarks:		Test requirements are funded by platforms												
(U) <u>Management</u> Program Office and Contractor Support												Continuing	TBD	TBD
Subtotal Management			0.000	0.000		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	14.219		4.322		1.809		1.741		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

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PE27448F Schedule
C2ISR Tactical Data Link
(as of 4 Jan 07)

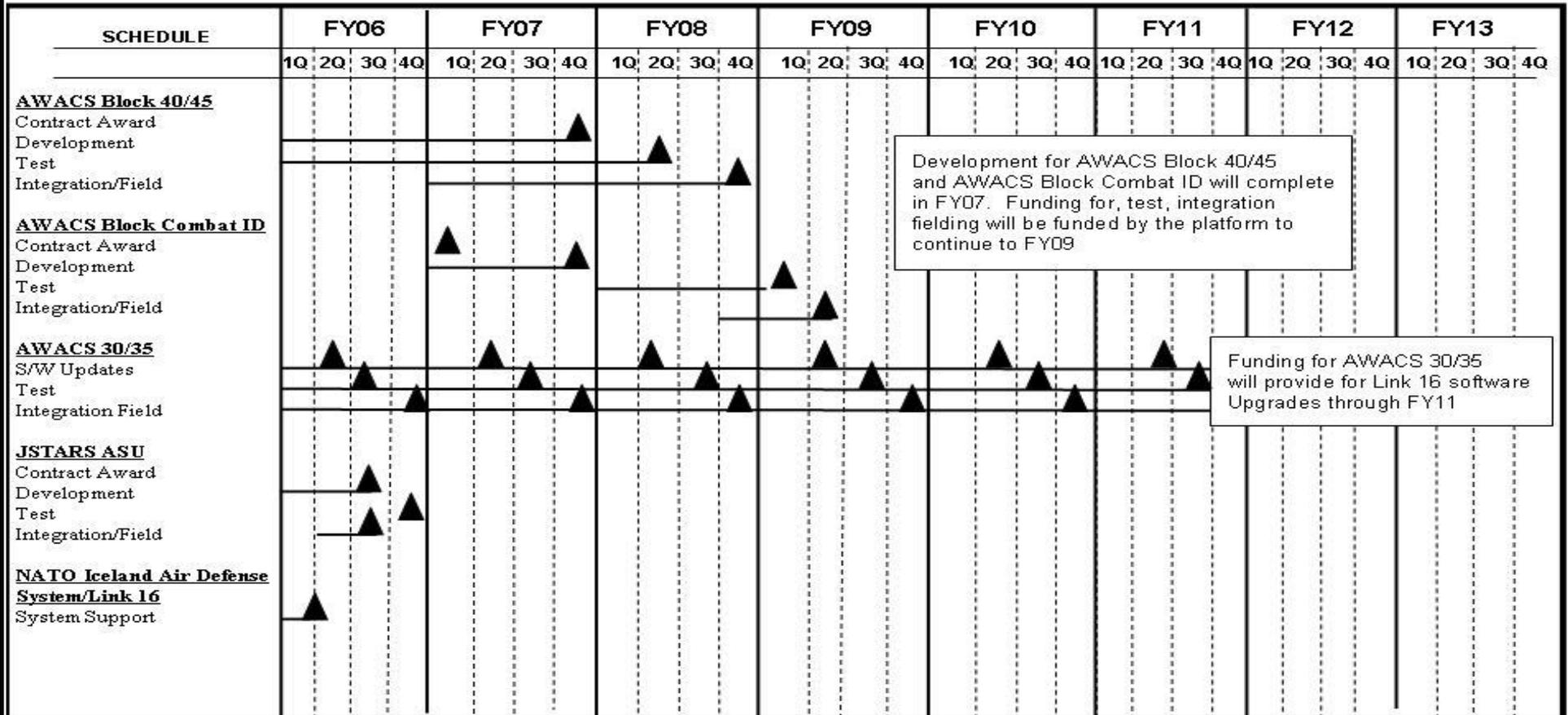


Exhibit R-4a, RDT&E Schedule Detail

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(U) Schedule Profile	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) AWACS Block 40/45 Initiative Development	1-4Q	1-4Q		
(U) AWACS Block 40/45 Combat ID Initiative Contract Award		1Q		
(U) AWACS Block 40/45 Combat ID Initiative Development		1-4Q		
(U) AWACS Block 30/35 Software Updates/Development	1-4Q	1-4Q	1-4Q	1-4Q
(U) AWACS Block 30/35 Test/Integration & Field	1-4Q	1-4Q	1-4Q	1-4Q
(U) JSTARS ASU Development	1-3Q			
(U) JSTARS ASU Test	4Q			
(U) JSTARS ASU Integration /Field	2-3Q			
(U) C2ISR NATO IADS Link 16 Integration	1Q			