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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207448F: <i>C2ISR Tactical Data Link</i>
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COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013[#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	1.489	1.633	1.431	-	1.431	1.805	1.791	1.732	1.763	Continuing	Continuing
675045: <i>C2ISR Tactical Data Link</i>	-	1.489	1.633	1.431	-	1.431	1.805	1.791	1.732	1.763	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

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 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. 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), and Tactical Targeting Network Technology (TTNT). TDL efforts include incorporating changes and additions to the Link-16 message standard (MIL-STD-6016D) and applicable Interface Change Proposals (ICPs), assisting with Air Force and joint interoperability certification testing with the Air Force Command and Control Integration Center (AFC2IC) 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.

This effort provides critical capability and enhancements to the airborne network by creating common development, integration and interoperability among ground and C2 platforms and responds to quick reaction capability integration and demonstration 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 to enable Global Strike, Global Persistent Attack, offensive and defensive counterair (OCA and DCA) and Suppression of Enemy Air Defenses (SEAD) missions.

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

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This program is in Budget Activity 7, Operational System Development, these budget activities include development efforts to upgrade systems currently fielded or has approval for full rate production and anticipate production funding in the current or subsequent fiscal year.						
B. Program Change Summary (\$ in Millions)		FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget		1.522	1.633	1.650	-	1.650
Current President's Budget		1.489	1.633	1.431	-	1.431
Total Adjustments		-0.033	0.000	-0.219	-	-0.219
• Congressional General Reductions		-	0.000			
• Congressional Directed Reductions		-	0.000			
• Congressional Rescissions		0.000	0.000			
• Congressional Adds		-	0.000			
• Congressional Directed Transfers		-	0.000			
• Reprogrammings		0.000	0.000			
• SBIR/STTR Transfer		-0.033	0.000			
• Other Adjustments		0.000	0.000	-0.219	-	-0.219
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2012	FY 2013	FY 2014
Title: AWACS Block 30/35 Software Enhancements				0.112	0.000	0.000
Description: Improve AWACS Block 30/35 Link 16 interoperability and compatibility by incorporating key changes to communications software baseline.						
FY 2012 Accomplishments: Developed and released Request for Proposal (RFP) Package, evaluated proposal and awarded contract for AWACS Block 30/35 Identification Friend or Foe/Selective Identification Features (IFF/SIF) Interface Change Proposal (ICP) Delta Change Package (DCP).						
Title: AWACS Block 40/45 Mode 5 Link 16 Enhancements				0.772	0.437	0.000
Description: Improve AWACS Block 40/45 Link 16 interoperability and compatibility by incorporating key changes to communications software baseline.						
FY 2012 Accomplishments: Developed and released Request for Proposal (RFP) Package, evaluated proposal and awarded contract for AWACS Block 40/45 mode 5 implementation.						
FY 2013 Plans:						

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2012	FY 2013	FY 2014
Continuing development, test, and integration of FY12 AWACS Block 40/45 effort. Funding C2-focused airborne networking studies supporting data link enhancements to include, but not limited to, Link-16 Pathfinder and strength track reporting and correlation.				
Title: Aerial Network Engineering Lab Description: Fund C2 focused airborne networking studies supporting data link enhancements to include, but not limited to Link-16 Pathfinder and strength track reporting and correlation. FY 2012 Accomplishments: Developed AWACS 40/45 efforts. Funded C2 focused airborne networking studies supporting data link enhancements to include, but not limited to Link-16 Pathfinder and strength track reporting and correlation. FY 2013 Plans: Continuing development, test, and integration of AWACS 40/45 efforts. Funding C2 focused airborne networking studies supporting data link enhancements to include, but not limited to Link-16 Pathfinder and strength track reporting and correlation. FY 2014 Plans: Will continue to develop, test, and integrate AWACS 40/45 efforts. Funding C2 focused airborne networking studies supporting data link enhancements to include, but not limited to Link-16 Pathfinder and strength track reporting and correlation.		0.207	0.756	0.200
Title: AWACS Block 40/45 User Identified Critical ICP's Description: AWACS Block 40/45 User Identified Critical ICPs will be implemented such as time slot reallocation, strength track reporting and correlation, global area reference system, and MIL-STD updates. FY 2014 Plans: Will continue to improve AWACS Block 40/45 Link 16 interoperability and compatibility by incorporating key ICPs to the software baseline.		0.000	0.000	0.856
Title: Program Management Administration (PMA) Description: Program Management Administration costs provide management with the necessary engineering, technical, and administrative support needed to facilitate development and implementation. FY 2012 Accomplishments: Supported MITRE, PASS, Waveform Branch PMA ETASS and HNAPMA funding. FY 2013 Plans:		0.398	0.440	0.375

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C. Accomplishments/Planned Programs (\$ in Millions)										FY 2012	FY 2013	FY 2014
Supporting MITRE, PASS, Division Assessments and ESC Assessments.												
FY 2014 Plans: Will support MITRE and PASS.												
Accomplishments/Planned Programs Subtotals										1.489	1.633	1.431
D. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost	
• RDTE:BA05:PE 0604281F: <i>TDN Enterprise</i>	45.104	24.534	51.456		51.456	46.999	35.686	21.863	22.257	Continuing	Continuing	
• APAF:BA05:Line Item #A01000: <i>A-10</i>	0.674	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing	
• APAF:BA05:Line Item #F01500: <i>F-15</i>	0.000	0.000	0.000		0.000	6.290	18.946	44.593	45.393	Continuing	Continuing	
• APAF:BA05:Line Item #F01600: <i>F-16</i>	0.000	0.000	0.000		0.000	8.303	7.994	8.137	8.283	Continuing	Continuing	
• APAF:BA05:Line Item #B00200: <i>B-2A</i>	0.000	0.000	0.257		0.257	0.488	0.477	0.102	0.000	Continuing	Continuing	
• APAF:BA05:Line Item #B01B00: <i>B-1B</i>	0.000	0.000	0.696		0.696	1.273	1.144	0.129	0.000	Continuing	Continuing	
• APAF:BA05: Line Item #OTHACF: <i>Other Aircraft</i>	0.957	0.000	0.192		0.192	1.590	2.561	1.608	0.617	Continuing	Continuing	
• OPAF:BA03:Line Item #834010: <i>General Information Technology</i>	10.388	0.269	0.248		0.248	0.169	0.170	0.173	0.176	Continuing	Continuing	
Remarks												
E. Acquisition Strategy												
The Airborne Networking Division 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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<u>F. Performance Metrics</u> Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development						R-1 ITEM NOMENCLATURE PE 0207448F: C2ISR Tactical Data Link				PROJECT 675045: C2ISR Tactical Data Link					
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
C2ISR Tactical Data Link Software Enhancements	SS/ Various	Boeing:Seattle, WA	-	1.091	Feb 2012	1.193	Feb 2013	1.056	Dec 2013	-		1.056	Continuing	Continuing	TBD
Subtotal			0.000	1.091		1.193		1.056		0.000		1.056			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA - Program Office and Contractor Support	Various	Various:Various,	-	0.398	Sep 2012	0.440	Feb 2013	0.375	Oct 2013	-		0.375	Continuing	Continuing	TBD
Subtotal			0.000	0.398		0.440		0.375		0.000		0.375			
			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	1.489		1.633		1.431		0.000		1.431			
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

3600: *Research, Development, Test & Evaluation, Air Force*
BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE

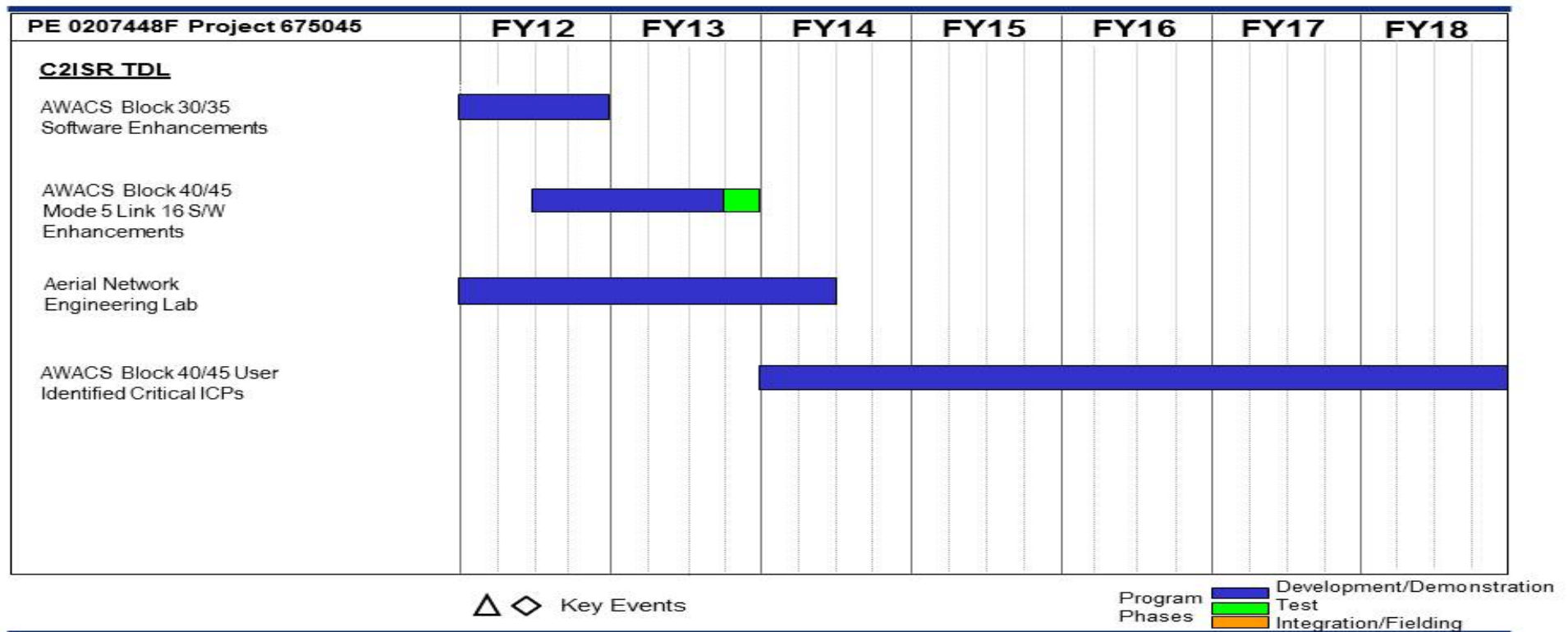
PE 0207448F: *C2ISR Tactical Data Link*

PROJECT

675045: *C2ISR Tactical Data Link*



PE 0207448F C2ISR TDL Program Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force			DATE: April 2013
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
AWACS Block 30/35 Software Enhancements	1	2012	4	2012
AWACS Block 40/45 Mode 5 Link 16 Software Enhancements	2	2012	4	2013
Aerial Network Engineering Lab	1	2012	2	2014
AWACS Block 40/45 User Identified Critical ICPs	1	2014	4	2018