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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force										Date: March 2014		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0207448F I C2ISR Tactical Data Link							
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	1.447	1.406	1.782	-	1.782	1.770	1.715	1.748	1.782	Continuing	Continuing
675045: C2ISR Tactical Data Link	-	1.447	1.406	1.782	-	1.782	1.770	1.715	1.748	1.782	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

# The FY 2015 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 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), Multifunction Advanced Data Link (MADL) 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-6016E) and applicable Interface Change Proposals (ICPs), assisting with Air Force and joint interoperability certification testing with the Air Combat Command (ACC) 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.

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.

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B. Program Change Summary (\$ in Millions)		FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget		1.633	1.431	1.805	-	1.805
Current President's Budget		1.447	1.406	1.782	-	1.782
Total Adjustments		-0.186	-0.025	-0.023	-	-0.023
• Congressional General Reductions		-0.003	-0.025			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-0.041	-			
• Other Adjustments		-0.142	-	-0.023	-	-0.023
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2013	FY 2014	FY 2015
Title: E-3 AWACS Block 40/45 Mode 5 and MIL-STD- 6016E Link 16 Enhancements				0.842	0.774	-
Description: Improve E-3 AWACS Block 40/45 Link 16 interoperability and compatibility by incorporating key changes to communications software baseline.						
FY 2013 Accomplishments: Continued to develop, test and integrate the E-3 AWACS Block 40/45 effort.						
FY 2014 Plans: Completed developing, testing and integrating the E-3 AWACS Block 40/45 effort.						
FY 2015 Plans: N/A						
Title: Aerial Network Engineering Lab				0.605	0.293	0.700
Description: Funded Command and Control (C2) focused airborne networking studies supporting data link enhancements to include, but not limited to Link-16 Pathfinder and strength track reporting and fusion/correlation.						
FY 2013 Accomplishments: Funded Command and Control (C2) focused airborne networking studies supporting data link enhancements to include, but not limited to, Advanced Link-16 Network planning concepts, L-16 Pathfinder and strength track reporting and correlation with						

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<b>Appropriation/Budget Activity</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force I BA 7: Operational Systems Development</i>		<b>R-1 Program Element (Number/Name)</b> PE 0207448F / <i>C2ISR Tactical Data Link</i>		
<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>
translation and correlation of Sensor data, Multi-function Advanced Data Link (MADL), and Intra- Flight Data Link (IFDL) into enhanced command and control situational awareness to command and control platforms and infrastructure.  <b>FY 2014 Plans:</b> Funding Command and Control (C2) focused airborne networking studies supporting data link enhancement to include, but not limited to integration and implementation impacts of mandatory upgrades for crypto modernization and frequency remapping, Advanced Link-16 Network planning concepts, L-16 Pathfinder and strength track reporting and fusion/correlation with translation and correlation of Sensor data, Multi-function Advanced Data Link (MADL), and Intra-Flight Data Link (IFDL) into enhanced command and control situational awareness to command and control platforms and infrastructure.  <b>FY 2015 Plans:</b> Will continue to fund Command and Control (C2) focused airborne networking studies supporting data link enhancements to include, but not limited to, Advanced Link-16 Network planning concepts, L-16 Pathfinder and strength track reporting and fusion/ correlation with translation and correlation of Sensor data, Multi-function Advanced Data Link (MADL), and Intra-Flight Data Link (IFDL) into enhanced command and control situational awareness to command and control platforms and infrastructure. Supports C2 platform terminal upgrade under lab impacts to system integration.				
<b>Title:</b> E-3 AWACS Block 40/45 User Identified Critical Interface Change Proposals (ICPs)  <b>Description:</b> E-3 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.  <b>FY 2013 Accomplishments:</b> N/A.  <b>FY 2014 Plans:</b> Improving E-3 AWACS Block 40/45 Link 16 interoperability and compatibility by incorporating key MIL-STD 6016E improvements to the software baseline including additional mission assignment and fighter control capabilities.  <b>FY 2015 Plans:</b> Activity will implement E-3 AWACS Block 40/45 User Identified Interface Change Proposals (ICPs) that include time slot reallocation, strength track reporting and correlation, Global Area Reference System (GARS), and MIL-STD updates.		-	0.339	1.082
<b>Accomplishments/Planned Programs Subtotals</b>		1.447	1.406	1.782

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D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• RDTE:BA05:PE	21.355	42.745	39.110	-	39.110	50.373	36.250	36.943	24.608	Continuing	Continuing
0604281F: TDN Enterprise											
• APAF:BA05:Line	-	-	0.002	-	0.002	18.789	44.245	45.071	58.835	Continuing	Continuing
Item #F01500: F-15											
• APAF:BA05:Line	-	-	-	-	-	7.928	8.073	8.226	8.380	Continuing	Continuing
Item #F01600: F-16											
• APAF:BA05:Line	-	0.257	0.049	-	0.049	0.474	0.400	0.497	0.199	Continuing	Continuing
Item #B00200: B-2A											
• APAF:BA05:Line	-	0.696	1.261	-	1.261	1.133	1.319	1.490	-	Continuing	Continuing
Item #B01B00: B-1B											
• APAF:BA05: Line Item	-	0.192	0.037	-	0.037	2.541	1.595	1.506	1.518	Continuing	Continuing
#OTHACF: Other Aircraft											
• OPAF:BA03:Line Item #834010:	-	0.153	0.168	-	0.168	1.959	1.664	0.175	0.178	Continuing	Continuing
General Information Technology											
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.											
F. Performance Metrics											
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-4, RDT&E Schedule Profile: PB 2015 Air Force

Date: March 2014

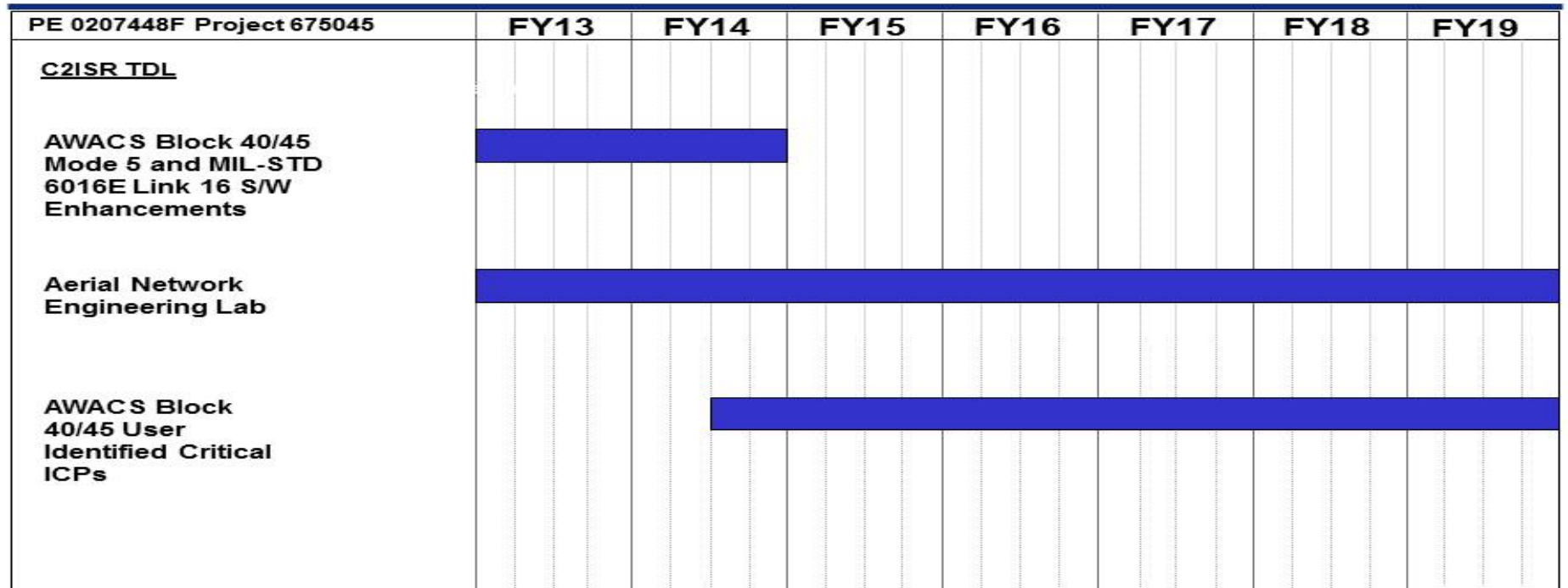
Appropriation/Budget Activity  
3600 / 7

R-1 Program Element (Number/Name)  
PE 0207448F / C2ISR Tactical Data Link

Project (Number/Name)  
675045 / C2ISR Tactical Data Link



## PE 0207448F C2ISR TDL Program Schedule



△ ◇ Key Events

Program Phases  
■ Development/Demonstration  
■ Test  
■ Integration/Fielding

*Integrity - Service - Excellence*

1