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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604281F: <i>TACTICAL DATA NETWORKS ENTERPRISE</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	192.882	47.057	24.534	-	24.534	25.116	17.268	19.105	22.138	Continuing	Continuing
655050: <i>TDL System Integration</i>	67.362	32.636	20.310	-	20.310	19.604	17.268	19.105	22.138	Continuing	Continuing
655262: <i>Family of Gateways</i>	125.520	14.421	4.224	-	4.224	5.512	-	-	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Tactical Data Networks Enterprise (TDNE) contributes to the development, delivery and deployment of the next generation aerial layer network through a portfolio of legacy and advanced waveform and network management development/management efforts that advance interoperability and connectivity. This will be accomplished via fielded and future ground and gateway investments while addressing warfighter urgent demands through the establishment of Quick Reaction Capabilities (QRC). The TDNE conceptualizes, acquires and fields aerial networking capabilities to support legacy, current, in-development, and future systems across all domains of information exchange that enables strike, mobility, special operations, Command and Control (C2), Intelligence, Surveillance and Reconnaissance (ISR), air, surface, subsurface and space operations. These capabilities ensure a robust and agile extension of the global information domain down to the tactical edge in support of the warfighter.

Funding will provide for the study, analysis, enhancement, development, integration, demonstration, test, and evaluation of Tactical Data Links (TDLs) as a subset of the broader Aerial Layer Network. TDLs are used in both peace time and combat environments to exchange information such as character-oriented and fixed-formatted messages, data, radar tracks, target information, platform status, imagery, free-text messaging and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs increase mission effectiveness by providing enhanced situational awareness, positive combat identification of aircraft in the network, correlation of on- and off-board sensor data, digital sharing of machine to machine target and threat information, thereby, enabling time critical targeting and other mission assignment tasking. 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), Intra-Flight Data Link (IFDL), and other Advanced Tactical Data Link technologies, such as Tactical Targeting Network Technology (TTNT), and Multifunction Advanced Data Link (MADL).

Funding also supports Family of Gateway study, analysis, enhancement, development, integration, demonstration, test, and evaluation efforts that will allow joint combat forces to exchange information quickly and accurately by bridging discrete airborne, terrestrial, maritime, and space-based C4ISR networks to produce operational effects not possible within individual networks. Gateway functions include enabling interoperability between data formats, protocols, and communication mediums. Additionally, gateway functions extend the range of connectivity, consolidate data from multiple networks into high capacity links for transmission to key C4ISR nodes, routes information between disadvantaged users, and correlates data from multiple sources to improve accuracy. Gateway functions also provide application hosting, shared data storage, on-demand information access, smart data forwarding, and system monitoring/network management. Funding will also support Quick Reaction Response capability requests by the warfighter and support activities associated with the Joint Aerial Layer Network (JALN) Analysis of Alternatives.

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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604281F: <i>TACTICAL DATA NETWORKS ENTERPRISE</i>
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This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.

B. Program Change Summary (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	132.941	52.355	32.351	-	32.351
Current President's Budget	192.882	47.057	24.534	-	24.534
Total Adjustments	59.941	-5.298	-7.817	-	-7.817
• Congressional General Reductions	-	-1.048			
• Congressional Directed Reductions	-	-4.250			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	59.941	-	-7.817	-	-7.817

Change Summary Explanation

FY11 Congressional General Reduction of 0.658M in Other Adjustment row.

FY11 OMNIBUS increase of 60.599M in Other Adjustment row.

FY12 Congressional General Reduction (FFRDC, Sec. 8023) of 1.048M.

FY12 Congressional Directed Reduction of 4.25M from FY12 Defense Appropriation Act (incl. 3.0M for STRATCOM DNC2 and 1.25M for CLIP)

FY13 funding decrease is due to programs transitioning to sustainment.

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604281F: <i>TACTICAL DATA NETWORKS</i> <i>ENTERPRISE</i>	PROJECT 655050: <i>TDL System Integration</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
655050: <i>TDL System Integration</i>	67.362	32.636	20.310	-	20.310	19.604	17.268	19.105	22.138	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Funding will provide for the study, analysis, enhancement, development, integration, demonstration, test, and evaluation of Tactical Data Links (TDL) as a subset of the broader Aerial Layer Network. TDLs are used in both peacetime and combat environments to exchange information such as character-oriented and fixed-formatted messages, data, radar tracks, target information, platform status, imagery, free-text messaging and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs increase mission effectiveness by providing enhanced situational awareness, positive combat identification of aircraft in the network, correlation of on- and off-board sensor data, digital sharing of machine to machine target and threat information and, thereby, enabling time critical targeting and other mission assignment tasking. TDLs are used by all Service Theater Command and Control (C2) elements, weapons platforms, and sensors.

The number of Air Force platforms hosting TDLs has expanded from C2 aircraft (E-3, E-8, etc.) to the fighter, bomber, Intelligence, Surveillance and Reconnaissance (ISR), tanker, airlift and other tactical fleets (F-15, F-16, F-22A, Rivet Joint, B-1, B-2, B-52, etc.), as well as to precision guided munitions. Utilization of TDLs in a joint environment requires the integration of terminals into host platforms and interoperability of TDL networks across all deployed joint and coalition platforms.

Efforts in this project include waveform and integration activities.

Waveform:
Waveform activities include, but are not limited to, enabling and supporting Joint Interoperability of Tactical Command and Control Systems (JINTACCS), interoperable System Management and Requirements Transformation (iSMART), Coalition Interoperability, Cursor on Target, Tactical Edge Network C2 efforts, and Link 16 Enhancements. Funding will provide training, logistics development, certification of individual TDL implementations to joint/allied standards, establishment of service-wide network management procedures/operations, and system wide enhancements/testing.

Integration:
Integration activities include, but are not limited to, the Joint Aerial Layer Network (JALN) Analysis of Alternatives (AoA), Data Link Test Facility (DTF), Air Force Participating Test Unit (AFPTU), Network Centric Capability Assessment (NCCA), the Joint Warfighting Integrated NetOps (JWIN) Joint Concept Technology Demonstration (JCTD), and Tactical Communications Suite (TCS). Funding will ensure continued enhanced interoperability of Air Force and joint assets through efforts such as the development/coordination of all TDN standards and management capabilities, configuration management, platform/system interoperability assessments, participation in the Future Airborne Capability Environment (FACE) consortium, and interoperability certification testing.

Activities also include studies and analysis to support both current program planning and execution and future program planning efforts for Tactical Data Networks.

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This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
<p>Title: Link 16 Enhancements</p> <p>Description: Link 16 Support and Sustainment efforts include enhancements to Link 16.</p> <p>FY 2011 Accomplishments: Funding supported and enabled enhancements to the Link 16 network to include the development and prototyping of the Enhanced 1553 bus chipset.</p> <p>FY 2012 Plans: N/A</p> <p>FY 2013 Plans: N/A</p>		4.683	-	-
<p>Title: Network Enabled Weapons (NEW)</p> <p>Description: Network Enabled Weapons efforts standardize weapon additions to the tactical data network; enhance precision-guided munitions effectiveness through target updates, in-flight tracking, hit indication, and abort messages; and improves operational assessment, re-strike decisions, and ISR tasking decisions.</p> <p>FY 2011 Accomplishments: Completed Link 16 message standard updates allowing for the future integration of network enabled weapons into current and future warfighting capabilities.</p> <p>FY 2012 Plans: N/A</p> <p>FY 2013 Plans: N/A</p>		0.744	-	-
<p>Title: TDN Integration</p> <p>Description: TDN Integration efforts include JSS, IFS, DTF, NCCA, JAN-TE, Coalition Interoperability, JALN AoA, and JWIN JCTD.</p> <p>FY 2011 Accomplishments:</p>		14.965	9.832	7.050

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Funding provided training, logistics, development, and certification to individual TDL implementations to joint/allied standards. FY 2012 Plans: Funding provides training, logistics, development, and certification to individual TDL implementations to joint/allied standards. FY 2013 Plans: Funding will provide training, logistics, development, and certification to individual TDL implementations to joint/allied standards.				
Title: Joint Interoperability of Tactical Command and Control Systems (JINTACCS) Description: JINTACCS efforts include JINTACCS, iSMART, and AFPTU. JINTACCS ensures interoperability of AF TDL systems with associated joint, allied, and coalition systems and includes development, interoperability certification, TDL message standard implementation (e.g., Links 11A/B, 16, 22, VMF, IBS, MADL), and configuration management of standards. FY 2011 Accomplishments: Ensured compatibility and interoperability of Tactical Data Links by conducting necessary joint compatibility and interoperability tests. FY 2012 Plans: Ensuring compatibility and interoperability of Tactical Data Links by conducting necessary joint compatibility and interoperability tests. FY 2013 Plans: Funding will ensure compatibility and interoperability of Tactical Data Links by conducting necessary joint compatibility and interoperability tests.		6.217	7.353	6.387
Title: Cursor on Target (CoT) Description: CoT is a simple, extensible, 'What, When, Where' (W3) XML message format for interconnecting tactical information systems. The CoT suite consists of the W3 base schema, 14 tailored sub-schemas, and a set of S/W plug-ins and translators that facilitate machine to machine (M2M) transmission of C2, ISR, and situational awareness data at reduced cost compared with traditional integration methods. FY 2012 Plans: Funding supports development, test, certification and accreditation of new CoT apps/plug-ins/schema and transitioning of apps/plug-ins/schema to sustainment. FY 2013 Plans:		-	1.495	1.528

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
Funding will support development, test, certification and accreditation of new CoT apps/plugin-schema and transitioning of apps/plugin-schema to sustainment.			
Title: Gateways Integration	40.753	13.956	5.345
Description: Supporting integration efforts including CLIP, Quick Reaction Capabilities (QRC), that cover work to support AF and Joint Urgent Operational Needs, CABLE, and Other Gateways.			
FY 2011 Accomplishments: Supported integration efforts including CLIP, Quick Reaction Capabilities (QRC), that cover work to support AF and Joint Urgent Operational Needs, CABLE, and Other Gateways.			
FY 2012 Plans: Supporting integration efforts including CLIP, Quick Reaction Capabilities (QRC), that cover work to support AF and Joint Urgent Operational Needs, and Other Gateways.			
FY 2013 Plans: Funding will support integration efforts including QRC, that cover work to support AF and Joint Urgent Operational Needs, and Other Gateways.			
Accomplishments/Planned Programs Subtotals	67.362	32.636	20.310

C. Other Program Funding Summary (\$ in Millions)												
<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2013</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u>		
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>	
• RDT&E AF, PE 0207445F: <i>Fighter TDL</i>	22.756	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• RDT&E AF, PE 0207448F: <i>C2ISR TDL</i>	1.528	1.522	1.633	0.000	1.633	1.650	1.691	1.736	1.755		Continuing	Continuing
• APAF, PE 0207445F: <i>Fighter TDL</i>	0.920	0.741	0.000	0.000	0.000	13.148	14.704	14.572	14.721		Continuing	Continuing
• APAF, PE 0207446F: <i>Bomber TDL</i>	0.000	0.000	0.000	0.000	0.000	1.616	1.696	1.429	0.000		Continuing	Continuing
• APAF, PE 0207448F: <i>C2ISR TDL</i>	0.000	0.957	0.000	0.000	0.000	0.832	1.921	1.963	1.973		Continuing	Continuing
• APAF, PE 0604281F: <i>TDN Enterprise</i>	50.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		Continuing	Continuing

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

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPAF, PE 0604281F: <i>TDN Enterprise</i>	21.622	10.388	0.269	0.000	0.269	0.248	0.169	0.170	0.173	Continuing	Continuing
• O&M AF, PE 0207445F: <i>Fighter TDL</i>	0.200	0.210	0.249	0.000	0.249	0.254	0.258	0.265	0.276	Continuing	Continuing
• O&M AF, PE 0401839F: <i>Air Mobility TDL</i>	6.937	2.025	6.989	0.000	6.989	4.031	3.974	2.925	3.000	Continuing	Continuing
• O&M AF, PE 0604281F: <i>TDN Enterprise</i>	288.541	434.330	37.132	0.000	37.132	35.058	36.952	37.128	37.521	Continuing	Continuing

D. Acquisition Strategy

The Airborne Networking Directorate provides for common development, integration, and interoperability across the entire Airborne Network and ensures that data links are procured and maintained as a joint, end-to-end command and control systems. Platform acquisition strategies vary by program, but the majority of development and integration is normally accomplished by the weapon system prime contractor.

E. 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 2013 Air Force		DATE: February 2012
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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force		DATE: February 2012
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
NEW	1	2011	4	2011
JSS	1	2011	4	2011
TDN Integration/Fielding	1	2011	4	2011
Joint Interoperability of Tactical Command and Control Systems (JINTACCS)	1	2011	4	2017
Interoperable System Management and Requirements Transformation (iSMART)	1	2011	4	2017
Data Link Test Facility/Air Force Participating Test Unit (DTF/AFPTU)	1	2011	4	2017
Cursor on Target (CoT)	1	2012	4	2017

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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
655262: <i>Family of Gateways</i>	125.520	14.421	4.224	-	4.224	5.512	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note
FY 2011 funding totals include \$30.0M appropriated for Overseas Contingency Operations.

A. Mission Description and Budget Item Justification

Funding supports Family of Gateway study, analysis, enhancement, development, integration, demonstration, test, and evaluation efforts that will allow joint combat forces to exchange information quickly and accurately by bridging discrete airborne, terrestrial, maritime, and space-based C4ISR networks to produce operational effects not possible within individual networks. Gateway functions include enabling interoperability between data formats, protocols, and communication mediums. Additionally, gateway functions extend the range of connectivity, consolidate data from multiple networks into high capacity links for transmission to key C2ISR nodes, route information between disadvantaged users, and correlate data from multiple sources to improve accuracy. Gateway functions also provide application hosting, shared data storage, on-demand information access, smart data forwarding, and system monitoring/network management. Funding in this project will also support Quick Reaction Capability requests by the warfighter such as the Battlefield Airborne Communications Node (BACN), 5th to 4th Generation efforts, and the STRATCOM Distributed Nuclear Command and Control (DNC2) capabilities. Additionally, funding will support activities associated with the Joint Aerial Layer Network (JALN) Analysis of Alternatives.

Efforts in this project include waveform, ground, and quick reaction capability activities.

Waveforms:

Waveform activities include, but are not limited to Common Link Integration Processing (CLIP), Situational Awareness Data Link (SADL), and 5th to 4th Generation efforts. CLIP is a software-only, platform-independent middleware application that provides gateway services between diverse message sets and waveforms. CLIP will initially be fielded on the B-1 and B-52 platforms. SADL integrates US Air Force close air support aircraft with the digitized battlefield via the US Army's Enhanced Position Location Reporting System (EPLRS).

Ground:

Ground activities include, but are not limited to the Joint Air Defense System Integrator (JADSI), Joint Range Extension (JRE) functionality [which includes the JRE Transparent Multi-Platform Gateway (TMPG) Equipment Package (JTEP)], Pocket J, and Link 16 Alaska (LAK). Funding will support enhancements to the interoperability and capabilities of fielded gateways through processing capability upgrades, operating system updates, display/graphical user interface upgrades, incorporation of additional messaging standards and protocols, and completion of gateway architecture fielding.

Quick Reaction Capability:

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Quick Reaction Capability activities include, but are not limited to, BACN, Communications Airborne Layer Expansion (CABLE), and STRATCOM DNC2. Funding will support AF rapid acquisition requirements for communications bridging of waveforms through Gateway technology. Additionally, funding will be utilized for STRATCOM classified capabilities.

Activities also include studies and analysis to support both current program planning and execution and future program planning efforts for Family of Gateways.

This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
<p>Title: J-Range Ext/Transparent Equip Pkg (JRE/JTEP)</p> <p>Description: JRE efforts provide for TDL translation, routing, and forwarding between Link 16 and SADL networks. JTEP efforts provide for connection of line-of-sight networks and long-haul beyond-line-of-sight networks using serial and satellite links.</p> <p>FY 2011 Accomplishments: Completed fielding and technical activities in preparation for transition to sustainment.</p>	1.555	-	-
<p>Title: Common Link Integration Processing (CLIP)</p> <p>Description: Common Link Integration Processing efforts provide Link 16 and Joint Range Extension Application Protocol (JREAP) A & C message processing to the B-1B FIDL and B-52 CONECT Platforms via a software upgrade.</p> <p>FY 2011 Accomplishments: Provided an enterprise solution for Link-16 and Joint Range Extension Application Protocol (JREAP) message processing.</p> <p>FY 2012 Plans: Providing an enterprise solution for Link-16 and Joint Range Extension Application Protocol (JREAP) message processing.</p>	11.847	3.187	-
<p>Title: Situational Awareness Data Link (SADL)</p> <p>Description: Situational Awareness Data Link is the Link 16 gateway for exchange of situational awareness and command & control data based on U.S. Army Enhanced Position Location and Reporting System (EPLRS) radio. This activity develops and integrates capability enhancements to update crypto, facilitate imagery exchange, and support multiple tactical user groups within the network.</p> <p>FY 2011 Accomplishments: Provided a secure, robust Air-Air and Air-Ground data link and a means to interoperate with Link 16 through a gateway.</p> <p>FY 2012 Plans:</p>	1.960	0.261	-

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Providing a secure, robust Air-Air and Air-Ground data link and a means to interoperate with Link 16 through a gateway.				
Title: Link 16 Pocket J Description: Pocket J efforts provide for the primary ground-based TDL gateway supporting North American Aerospace Defense Command (NORAD) air sovereignty mission for Continental United States (CONUS) and President of the United States support. FY 2011 Accomplishments: Funding updated technical documents for the primary ground-based TDL gateway supporting North American Aerospace Defense Command (NORAD) air sovereignty mission for Continental United States (CONUS) and Presidential support.		1.442	-	-
Title: Joint Air Defense System Integrator (JADSI) Description: Joint Air Defense System Integrator efforts provide command & control centers a common tactical picture by receiving, processing, and correlating TDL, intelligence, and radar feeds. FY 2011 Accomplishments: Funding provided testing of a software and hardware package that connects and translates between multiple communication devices and provides situational awareness. FY 2012 Plans: Funding providing testing of a software and hardware package that connects and translates between multiple communication devices and provides situational awareness, permitting the program to transition to sustainment.		1.961	1.599	-
Title: Other Gateways Description: Other Gateways includes the Link-16 Alaska effort that provides communications infrastructure modernization for the Alaskan AOR through line-of-sight and beyond-line-of-sight Link 16 communications to facilitate early detection, identification, and intercept of potential threat aircraft. FY 2011 Accomplishments: Provided for integration of communications infrastructure modernization for the Alaskan AOR through LOS and beyond LOS Link 16 communications. FY11 funding for this program is accounted for in BPAC 655050. FY 2012 Plans: Providing for integration of communications infrastructure modernization for the Alaskan AOR through LOS and beyond LOS Link 16 communications. FY12 funding for this program is accounted for in BPAC 655050.		-	-	-
Title: Quick Reaction Capabilities		30.000	-	-

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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604281F: <i>TACTICAL DATA NETWORKS</i> <i>ENTERPRISE</i>	PROJECT 655262: <i>Family of Gateways</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
<p>Description: Quick Reaction Capabilities that include the execution of the BACN JUON, BLOS C2 TACPOD and TTNT ISR Net.</p> <p>FY 2011 Accomplishments: OCO funding supported BACN pre-planned product improvement (P3I), development, integration, and testing of multiple, high-capacity voice and data links.</p>				
<p>Title: BLOS C2</p> <p>Description: Support of the Beyond Line of Sight (BLOS) Command and Control (2) architecture. Incorporates seven Tactical Airborne Communication Pods (TACPods) into the BLOS C2 architecture on the MQ-9 vehicle and support the bi-directional movement of full motion video and collaboration between air and ground forces.</p> <p>FY 2011 Accomplishments: Funding supports the Beyond Line of Sight (BLOS) Command and Control (2) architecture. One Battlefield Airborne Communications Node (BACN) will be incorporated into the BLOS (C2) architecture and will provide the capability to receive over 50 channels of Full Motion and other C2 and intelligence, surveillance, reconnaissance information within its footprint for aggregation and subsequent transmission and provide in-theater data access. Funds also support the incorporation of seven Tactical Airborne Communication Pods (TACPods) into the BLOS C2 architecture on the MQ-9 vehicle and support the bi-directional movement of full motion video and collaboration between air and ground forces.</p>		41.000	-	-
<p>Title: TTNT ISR Net</p> <p>Description: Install Battlefield Airborne Communications Node Intelligence, Surveillance, and Reconnaissance Net (BACN ISR Net) (TTNT with C-band) on currently fielded BACN aircraft 3xBD-700 and 2xRQ-4 aircraft.</p> <p>FY 2011 Accomplishments: Funding provides an aerial layer extension to Army relevant ISR to the Edge 3G (R3G) and ISR Net and will extend the range of R3G and ISR Net beyond line-of-sight of the Persistent Threat Detection Systems (PTDS), and can provide R3G/ISR Net connectivity between forward operational bases when PTDS are non-operational due to maintenance or weather.</p>		19.600	-	-
<p>Title: STRATCOM DNC2</p> <p>Description: STRATCOM DNC2 efforts provide for the distribution of data from airborne assets to ground components for analysis, decision-making and re-tasking of critical assets.</p> <p>FY 2011 Accomplishments:</p>		16.155	9.374	4.224

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604281F: <i>TACTICAL DATA NETWORKS</i> <i>ENTERPRISE</i>	PROJECT 655262: <i>Family of Gateways</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
Funding supported development, test, and fielding of operational-hardened, wideband Ground Entry Points (GEPs) and testing with up to three aircraft to ensure functionality of the system in an operational environment.			
FY 2012 Plans: Funding supporting development, test, and fielding of operational-hardened, wideband Ground Entry Points (GEPs) and testing with up to three aircraft to ensure functionality of the system in an operational environment			
FY 2013 Plans: Funding will support development, test, and fielding of operational-hardened, wideband Ground Entry Points (GEPs) and testing with up to three aircraft to ensure functionality of the system in an operational environment.			
Accomplishments/Planned Programs Subtotals	125.520	14.421	4.224

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• RDT&E AF, PE 0207445F: <i>Fighter TDL</i>	22.756	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• RDT&E AF, PE 0207448F: <i>C2ISR TDL</i>	1.528	1.522	1.633	0.000	1.633	1.650	1.691	1.736	1.755	Continuing	Continuing
• APAF, PE 0207445F: <i>Fighter TDL</i>	0.920	0.741	0.000	0.000	0.000	13.148	14.704	14.572	14.721	Continuing	Continuing
• APAF, PE 0207446F: <i>Bomber TDL</i>	0.000	0.000	0.000	0.000	0.000	1.616	1.696	1.429	0.000	Continuing	Continuing
• APAF, PE 0207448F: <i>C2ISR TDL</i>	0.000	0.957	0.000	0.000	0.000	0.832	1.921	1.963	1.973	Continuing	Continuing
• APAF, PE 0604281F: <i>TDN Enterprise</i>	50.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• OPAF, PE 0604281F: <i>TDN Enterprise</i>	21.622	10.388	0.269	0.000	0.269	0.248	0.169	0.170	0.173	Continuing	Continuing
• O&M AF, PE 0207445F: <i>Fighter TDL</i>	0.200	0.210	0.249	0.000	0.249	0.254	0.258	0.265	0.276	Continuing	Continuing
• O&M AF, PE 0401839F: <i>Air Mobility TDL</i>	6.937	2.025	6.989	0.000	6.989	4.031	3.974	2.925	3.000	Continuing	Continuing
• O&M AF, PE 0604281F: <i>TDN Enterprise</i>	288.541	434.330	37.132	0.000	37.132	35.058	36.952	37.128	37.521	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604281F: <i>TACTICAL DATA NETWORKS</i> <i>ENTERPRISE</i>	PROJECT 655262: <i>Family of Gateways</i>

D. Acquisition Strategy

The Airborne Networking Directorate provides for common development, integration and interoperability across the entire Airborne Network and ensures that data links 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.

E. 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 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604281F: <i>TACTICAL DATA NETWORKS</i> <i>ENTERPRISE</i>	PROJECT 655262: <i>Family of Gateways</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604281F: <i>TACTICAL DATA NETWORKS</i> <i>ENTERPRISE</i>	PROJECT 655262: <i>Family of Gateways</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
JRE/JTEP Test	1	2011	1	2011
JRE/JTEP Integration	2	2011	4	2011
JRE/JTEP Transition to WR-ALC	4	2011	4	2011
CLIP Test	1	2011	4	2012
CLIP Transition to WR-ALC	4	2012	4	2012
SADL Integration/Fielding	1	2011	4	2012
SADL Transition to WR-ALC	3	2012	3	2012
Pocket J Test	1	2011	1	2011
Pocket J Integration/Fielding	2	2011	4	2012
Pocket J Transition to WR-ALC	4	2012	4	2012
Joint Air Defense System Integrator (JADSI) Development	1	2011	3	2011
JADSI Test	3	2011	4	2012
JADSI Ver 15 Delivery	3	2011	3	2011
JADSI Transition to WR-ALC	4	2012	4	2012
Link 16 Alaska (LAK) Development	1	2011	1	2012
LAK Test	1	2012	4	2012
LAK Transition to WR-ALC	1	2013	1	2013
BACN JUON Operational Improvements	2	2012	1	2013
BLOS C2	1	2012	1	2013
TTNT ISR Net	3	2012	3	2013
STRATCOM Risk-Reduction Activities	1	2011	4	2012
STRATCOM Insertion and Modeling and Simulation	1	2013	2	2015