

EXHIBIT R-2, RDT&E Budget Item Justification						DATE: February 2006	
APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE				
RDT&E Defense-Wide/BA-5			0604771D8Z Common Joint Tactical Information				
COST (\$ in Millions)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	17.075	10.899	8.177	17.079	21.057	21.389	21.864
P771 Link-16 Tactical Data Link (TDL) Transformation							
Subtotal Cost	13.743	10.899	8.177	17.079	21.057	21.389	21.864
P 773 Multifunctional Information Distribution System-Low Volume Terminal (MIDS-LVT)							
Subtotal Cost	3.332						

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The P771 program was developed to transform Joint Tactical Data Links (TDLs) (primarily the J Series of Link 16, Link 22, and the Variable Message Format) to comply with the Department's Net-Centric Operations Warfare (NCOW) vision. The program encapsulates the Department's needs for joint and combined network-enabled capabilities for all primary tactical and common data link (CDL) communications. The implementation of these network capabilities into the TDL and CDL environments will enhance the decision cycle between sensor-to-shooter providing an information-superior, shared environment that will enhance combat power by increasing speed of command, higher tempo of operations, greater lethality, increased survivability, and self synchronization. To ensure the timely implementation, these network-enabling capabilities are being incorporated into the Joint Tactical Data Enterprise Services (TDES) Migration Plan (JTMP). The documentation of these network-enabling capabilities in the JTMP has been identified by the Joint Requirements Oversight Council (JROC), Allied/Coalition partners and the NATO C3 Board as critical to transformation of the data links.

The funds provided by this budget request will be used to update the JTMP to reflect the Services' migration plans towards the NCOW objectives. This plan in turn will be used by the Services and our Allied/Coalition partners in developing future acquisitions and fielding plans. In addition, funding will be used to expand the JTMP to incorporate the CDL family of tactical Intelligence, Surveillance, and Reconnaissance (ISR) communications systems, including the systems in used with Unmanned Aerial Vehicles (UAVs) and the Integrated Broadcast Service (IBS). Starting this funding period, the Allied TDES migration will be added to the JTMP to ensure combined network interoperability in future conflicts and training exercises. This international effort will begin by adding the UK and Australia; both of which are currently operating the same TDL systems as the US and are actively participating in the TDES migration. A final area to be added will focus on the development of network-enabled weapons.

The program will continue to fund the development of spectrum management and oversight for the TDES systems, and to fund for the coordination of these development efforts with the Services and other US and International spectrum management agencies, including the Federal Aviation Agency (FAA) and National Telecommunications and Information Administration (NTIA), to obtain Link 16 spectrum certification. In addition, funding will continue to be used to support the Defense Information System's Agency's (DISA's) and Services' interoperable improvement efforts and processes in the development of common NCOW standards and protocols. This effort includes initiating the Joint Interoperability Enhancement Process (IEP) that allows operators, engineers, and program managers to verify capabilities and identify issues in a design with Joint /Allied units prior to system fielding, or with fielded systems to identify required systems changes for systems upgrade planning. DISA will lead the effort to transform the current standards and interoperability management tools to a common set of Joint network-enabled standards for the implementation of future TDES capabilities. These joint standards, protocols, and processes will be used for implementation and testing to ensure the TDES capabilities are synchronized with the development and integration timelines of other planned network-enabled Global Information Grid (GIG) initiatives.

A new initiative under this funding, will include the transition of the Net-Centric Operations Enterprise (NCOE) roadmap to include performing a detailed metrics evaluation and comparative analysis on the net-centricity of each of the DoD communications programs. This NCOE work will follow the guidelines of the OSD Net-Centric Checklist and aid programs transition into the NCOW environment of the GIG. The associated metrics will be updated as standards and protocols are approved in the Joint Technical Architecture or the NCOW and be used to derive the best alternative for spiral delivery of net-centricity into the GIG, including the TDES segment. During this process, policy, program oversight, and architectures for the wireless and mobility aspects of networking will also be updated or developed to ensure the best enterprise-wide solution(s). This will include funding the development of a joint-interoperable, net-centric, mobile ad-hoc networking (MANET) wireless architecture for the Joint Operations Area (JOA) in 2020 and a detailed GIG program synchronization roadmap.

The P773 program supported the RDT&E of MIDS-LVT. The last year of funding, FY 2005, supported the close out of the MIDS-LVT development as DoD started to plan the migration to the Joint Tactical Radio System (JTRS) Wideband Networking Waveform (WNW) which will field an interconnected end-to-end set of networking capabilities throughout the JOA in support of the NCOW objectives. Both the P771 and P773 were and are funded under BA-5, System Development and Demonstration, because the programs encompass engineering, manufacturing development, and demonstration of new end-items prior to production approval decision.

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<p>B. Program Change Summary:</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>FY 2005</u></th> <th style="text-align: center;"><u>FY 2006</u></th> <th style="text-align: center;"><u>FY 2007</u></th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget</td> <td style="text-align: center;">18.515</td> <td style="text-align: center;">11.075</td> <td style="text-align: center;">8.050</td> </tr> <tr> <td>Current BES/President's Budget</td> <td style="text-align: center;">17.075</td> <td style="text-align: center;">10.899</td> <td style="text-align: center;">8.177</td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: center;">-1.440</td> <td style="text-align: center;">-0.176</td> <td style="text-align: center;">0.127</td> </tr> <tr> <td> Congressional program reductions</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Congressional rescissions, Inflation Adjustments</td> <td style="text-align: center;">-1.440</td> <td style="text-align: center;">-0.176</td> <td style="text-align: center;">0.127</td> </tr> <tr> <td> Congressional increases</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Reprogrammings</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Program Change Explanation: FY2005: SBIR -.463 million; STTR -.056 million; Atomic Energy -.014 million; WHS Reduction -.011 million. FY 2006: FFRDC -.018 million; Economic Assumptions -.048 million; Rescission -.110 million. FY 2007: Non-pay Purchase Inflation .127 million.</p> <p>C. Other Program Funding Summary: N/A</p> <p>D. Acquisition Strategy: In Executing JTDL tasking, existing cost-plus contracts will be utilized.</p> <p>E. Performance Metrics: Program metrics will be developed in support of requests for program resources. The metrics will follow the guidelines of the OSD Net-Centric Checklist and aid programs in the move into the Net-Centric environment in the GIG. Metrics will be updated as standards and protocols and approved in the Joint Technical Architecture or the NCOW RM.</p>				<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	Previous President's Budget	18.515	11.075	8.050	Current BES/President's Budget	17.075	10.899	8.177	Total Adjustments	-1.440	-0.176	0.127	Congressional program reductions				Congressional rescissions, Inflation Adjustments	-1.440	-0.176	0.127	Congressional increases				Reprogrammings			
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EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2006		
APPROPRIATION/BUDGET ACTIVITY					PROJECT NUMBER AND NAME			
RDT&E Defense-Wide/BA-5					P771 Link-16 Tactical Data Link (TDL) Transformation			
COST (\$ in Millions)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	
P771 Link-16 Tactical Data Link (TDL) Transformation	13.743	10.899	8.177	17.079	21.057	21.389	21.864	
Subtotal Cost								
RDT&E Articles Qty								
A. Mission Description and Budget Item Justification:								
<p>The P771 program was developed to transform Joint Tactical Data Links (TDLs) (primarily the J Series of Link 16, Link 22, and the Variable Message Format) to comply with the Department's Net-Centric Operations Warfare (NCOW) vision. The program encapsulates the Department's needs for joint and combined network-enabled capabilities for all primary tactical and common data link (CDL) communications. The implementation of these network capabilities into the TDL and CDL environments will enhance the decision cycle between sensor-to-shooter; providing an information-superior, shared environment that will enhance combat power by increasing speed of command, higher tempo of operations, greater lethality, increased survivability, and self synchronization. To ensure the timely implementation, these network-enabling capabilities are being incorporated into the Joint Tactical Data Enterprise Services (TDES) Migration Plan (JTMP). The documentation of these network-enabling capabilities in the JTMP has been identified by the Joint Requirements Oversight Council (JROC), Allied/Coalition partners and the NATO C3 board as critical to transformation of the data links.</p>								
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APPROPRIATION/BUDGET ACTIVITY RDT&E Defense-Wide/BA-5	PROJECT NUMBER AND NAME P771 Link-16 Tactical Data Link (TDL) Transformation	
B. Accomplishments/Planned Program		
FY 2005 ACCOMPLISHMENTS (\$13.743 million):		
<ul style="list-style-type: none">- Developed initial draft Joint TDES Migration Plan (JTMP) to NCOW objectives- Led Joint team with OSD, JCS, DISA, Services, and Agencies for TDES migration- Initiated the revision of June 2000 Joint Tactical Data Link Management Plan (JTDLMP) to TDES transformation to NCOW objectives- Worked on Joint, Allied, and Coalition Tactical Interoperability and Net-Centric Transformation Initiatives- Provided Joint oversight for Joint TDL interoperability and transformation initiatives (e.g., Joint Electro Magnetic Compatibility Features DoD Performance Specification, Service TDES migrations)- Supported the GIG End-to-End Systems Engineering teams with TDL expertise- Developed transformational solutions for dissemination of tactical data within the GIG Enterprise- Initiated development of approved standards, protocols, and processes for implementation and testing across programs from end to end including end-to-end testing.		
FY 2006 PLANNED (\$10.899 million):		
<ul style="list-style-type: none">- Publish JTMP documenting Joint TDES migration to NCOW objectives- Lead Joint team with OSD, JCS, DISA, Services, and Agencies for TDES migration- Revise and update 2000 Joint Tactical Data Link Management Plan (JTDLMP) into the Joint TDES Migration Plan (JTMP) in the transformation toward NCOW for publication in 2006 and begin preparations for 2008 update to JTMP- Lead required TDES teams to address transformation of the tactical gateways and the Joint Interoperability of Tactical Command and Control Systems (JINTACCS)- Act as the Joint subject matter experts for Joint, Allied, and Coalition Tactical Near-Term Interoperability and Net-Centric Transformation Initiatives- Provide technical oversight, planning, and coordination of Joint TDL interoperability and transformation initiatives (e.g., Joint Electro Magnetic Compatibility Features DoD Performance Specification, Service TDES migrations)- Act as Joint TDL subject matter experts and participate with GIG End-to-End Systems Engineering teams- Complete tactical network loading and topology study to support migration to NCOW operations- Identify transformational solutions for dissemination of tactical data within the GIG Enterprise- Provide insight into operationally driven, technical functionalities needed to meet tactical data exchange requirements within a critical and/or warfighting environment (e.g., safety of life, tactical targeting)- Conduct analytic evaluations to define and plan implementation of key technologies to include tactical information integration and configuration management- Demonstrate TDES being accessible to other web servers/systems via extensible markup language (XML) translation for Advanced Waveforms initiatives- Update program metrics that follow the OSD Net-Centric Checklist- Continue development of approved standards, protocols, and processes for implementation and testing across programs from end-to-end- Complete Joint warfighter utilization of networked Internet Protocol (IP) data in tactical cockpits- Initiate the integration of the Common Data Link (CDL) family of waveforms into the JTMP roadmap- Initiate the integration of the Integrated Broadcast Service (IBS) into the JTMP roadmap- Plan and composite net-centric capability assessment- Establish policy, provide oversight, and develop net-centric architectures which will address the wireless and mobility aspects of IP		

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APPROPRIATION/BUDGET ACTIVITY RDT&E Defense-Wide/BA-5		PROJECT NUMBER AND NAME P771 Link-16 Tactical Data Link (TDL) Transformation
<p>B. Accomplishments/Planned Program</p> <p>FY 2007 PLANS (\$8.177 million):</p> <ul style="list-style-type: none"> - Update the Joint TDES Migration Plan (JTMP) documenting the TDES migration toward the Department's NCOW objectives - Lead Joint team with OSD, JCS, DISA, Services, and Agencies for TDES migration - Revise and update 2006 TDES transformation to NCOW in preparation for 2007 edition - Lead required TDES teams to address transformation of the tactical gateways and the Joint Interoperability of Tactical Command and Control Systems (JINTACCS) - Act as the Joint subject matter experts for Joint, Allied, and Coalition Tactical Near-Term Interoperability and Net-Centric Transformation Initiatives - Provide technical oversight, planning, and coordination of Joint TDL interoperability and transformation initiatives (e.g., Joint Electro Magnetic Compatibility Features DoD Performance Specification, Service TDES migrations) - Act as Joint TDL subject matter experts and participate with GIG End-to-End Systems Engineering teams - Complete tactical network loading and topology study to support migration to NCOW operations - Identify transformational solutions for dissemination of tactical data within the GIG Enterprise - Provide insight into operationally driven, technical functionalities needed to meet tactical data exchange requirements within a critical and/or warfighting environment (e.g., safety of life, tactical targeting) - Conduct analytic evaluations to define and plan implementation of key technologies to include tactical information integration and configuration management - Demonstrate TDES being accessible to other web servers/systems via extensible markup language (XML) translation for Advanced Waveforms initiatives - Update program metrics that follow the OSD Net-Centric Checklist - Continue development of approved standards, protocols, and processes for implementation and testing across programs from end to end including end-to-end testing. - Complete Joint warfighter utilization of networked Internet Protocol (IP) data in tactical systems - Initiate the Joint Interoperability Enhancement Process (IEP) to improve Joint and Allied TDL/TDES capabilities and provide Operators, Engineers, and Program Managers the ability to determine systems interoperability and define work-arounds and required systems improvements - Provide the initial drafts for the integration of the Common Data Link (CDL) family of waveforms into the JTMP roadmap - Provide the initial drafts for the Integrated Broadcast System (IBS) into the JTMP roadmap - Initiate the integration of Allied participants into the Joint JTMP starting with United Kingdom (UK) - Develop policy-based network management preferred system concept and methodology for enterprise situational awareness. Current Programs of record are developed autonomously and need a common interface and visualization approach. - Develop an ad hoc mobile net-centric tactical wireless architecture for 2020 that interfaces with the GIG 		

EXHIBIT R-2a. RDT&E Project Justification		DATE: February 2006
APPROPRIATION/BUDGET ACTIVITY		PROJECT NUMBER AND NAME
RDT&E Defense-Wide/B&A-5		P771 Link-16 Tactical Data Link (TDL) Transformation

B. Accomplishments/Planned Program

- FY 2008 PLANS (\$170.79 million):
- Publish the 2008 version of the Joint TDES Migration Plan (JTMP) documenting the TDES migration toward the Department's NCOW objectives
 - Lead joint team with OSD, JCS, DISA, Services, and Agencies for TDES migration
 - Execute a Joint Demonstration of the Joint TDES Interoperability Enhancement Process (IEP)
 - Revise and update 2007 TDES transformation to NCOW
 - Lead required TDES teams to address transformation of the tactical gateways and the Joint Interoperability of Tactical Command and Control Systems (JINTACCS)
 - Act as the Joint subject matter experts for Joint, Allied, and Coalition Tactical Near-Term Interoperability and Net-Centric Transformation Initiatives
 - Provide technical oversight, planning, and coordination of Joint Tactical Data Link (TDL) interoperability and transformation initiatives (e.g., Joint Electro Magnetic Compatibility Features DoD Performance Specification, Service TDES migrations)
 - Act as Joint TDL subject matter experts and participate with GIG End-to-End Systems Engineering teams
 - Identify transformational solutions for dissemination of tactical data within the GIG Enterprise
 - Provide insight into operationally driven, technical functionalities needed to meet tactical data exchange requirements within a critical and/or warfighting environment (e.g., safety of life, tactical targeting)
 - Conduct analytic evaluations to define and plan implementation of key technologies to include tactical information integration and configuration management
 - Update program metrics that follow the OSD Net-Centric Checklist
 - Continue development of approved standards, protocols, and processes for implementation and testing across programs including end-to-end testing
 - Publish the first JTMP with the incorporation of the Common Data Link (CDL) family of waveforms
 - Publish the first JTMP with the incorporation of the Integrated Broadcast Service (IBS)
 - Initial drafts of UK integration into the JTMP
 - Initiate the integration of Australian participants into the Joint JTMP
 - Joint C4I Exercise participation to demonstrate warfighter net-centric capabilities and integrated these into the JTMP

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EXHIBIT R-3, Cost Analysis									DATE: February 2006	
APPROPRIATION/BUDGET ACTIVITY RDT&E Defense-Wide/BA-5			PROGRAM ELEMENT 0604771D8Z				PROJECT NUMBER AND NAME P771 Link-16 Tactical Data Link (TDL) Transformation			
Cost Categories (\$ in millions)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Product Development										
Spectrum Support	Various	Various	12.248	1.140	Various	1.000	Various	Continuing	Continuing	Continuing
Data Link Migration Engineering Support	Various	Various	14.227						14.227	
Net-Centric Engineering	Various	Various	1.604	2.227	Various	1.015	Various	Continuing	Continuing	Continuing
GIG Engineering Support	Various	Various	6.682	2.929	Various	0.912	Various	Continuing	10.523	Continuing
Enhancements	Various	Various	0.626	0.300					0.926	
JICO Toolset (JSS) Development	Various	Various	0.529						0.529	
Joint Initiatives	Various	Various	2.157	0.969	Various	1.000	Various	Continuing	Continuing	Continuing
Joint TDES Migration and Technology Insertion Plan	Various	Various	6.092	0.740	Various	3.070	Various	Continuing	Continuing	Continuing
Joint and International Engineering	Various	Various	2.691	2.094	Various	0.130	Various	Continuing	Continuing	Continuing
Joint Interoperability Enhancement Process	Various	Various	0.000	0.490	Various	1.050	Various	Continuing	Continuing	Continuing
Weapons Networks	Various	Various	1.403						1.403	
Web Enabled Cockpit	Various	Various	1.280						1.280	
Subtotal Product Development			49.539	10.889		8.177				
Total Cost			49.539	10.889		8.177				

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EXHIBIT R-4, Schedule Profile																DATE:		February 2006															
APPROPRIATION/BUDGET ACTIVITY					PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME																
RDT&E Defense-Wide/BA-5					0604771D8Z Common Joint Tactical Information												P771 Link-16 Tactical Data Link (TDL) Transformation																
Fiscal Year	2004				2005				2006				2007				2008				2009				2010				2011				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
TDES migration to NCOW - Joint TDES Migration Plan (JTMP)								Data Call △				Publish 2006 △				Data Call △				Publish 2008 △				Data Call △				Publish 2010 △				Data Call △	
GIG End-to-End Testbed				Initiate △				Operational △																									
Joint Web Enabled Cockpit					Initiate △			Airborne Demonstration △				Joint C4I Exercise △																					
Joint Networked Weapons Concept of Operations				Initiate △				CONOPS △																									
Joint Networked Unmanned Air/Ground/Maritime Vehicles Integrated into JTMP										Initiate △				Draft △			Integrate to JTMP △			First JTMP with UAVs △				Update △								Update △	
Integrated Broadcast Service (IBS), and Common Data Link (CDL) integration to JTMP										Initiate △				Draft △			Integrate to JTMP △			First JTMP with IBS/CDL △				Update △								Update △	
Integrate selected Allied TDES Migration into JTMP																	Initiate US Effort △		Initiate UK △					Draft UK to JTMP △			Initiate Aus △			Update UK △		Draft Aus to JTMP △	
Interoperability Enhancement Process (IEP)														Initiate △			Joint Demonstration △																
GIG Capability Delivery Plan								Initiate △				Plan Delivery △																					
Wireless Architecture Policy								Initiate △				Policy Developed △																					
Tactical Wireless Architecture								Initiate △				Architecture Delivered △																					
Network Management								Initiate △				Architecture Delivered △																					



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