

# Product Manager Defense Wide Transmission Systems (PM DWTS) Provides Multiple Capabilities for Warfighters

Stephen Larsen

**O**n March 6, 2009, at the Armed Forces Communications and Electronics Association Belvoir Industry Days in National Harbor, MD, Gary Winkler, the U.S. Army's Program Executive Officer Enterprise Information Systems (EIS), told an assembled audience of some 1,000 industry partners that Program Executive Office (PEO) EIS had, as of that day, 722 personnel deployed to the war zones of Iraq and Afghanistan—more personnel deployed than any other Army PEO.

A worker watches the digging for the grounding ring outside one of the transportable shelters that make up the Army's first-ever shelterized MCF at Camp Speicher. PM DWTS followed that up with a second shelterized MCF at NKC. (U.S. Army photo by Cory Hanes, PM DWTS contractor.)

More than 300 of those deployed personnel are from PM DWTS, part of the Team Defense Communications and Army Transmission Systems (DCATS) Project Office. PM DWTS is more than a typical PM office. According to LTC Clyde Richards, PM DWTS manages more than 50 critical warfighter communications projects and products with a total annual executable budget of more than \$500 million.

“We manage diverse worldwide projects that are direct and immediate enablers for combat units and support more than 50,000 warfighters, multinational forces, and federal agencies in Iraq and Afghanistan,” said Richards. “These projects span the product areas of terrestrial transmission systems, very small aperture terminal (VSAT) satellite communications systems, fiber-optic networks, microwave networks, communications facilities, critical power infrastructure, and wireless networks.”

According to Richards, much of PM DWTS’ work is to bring the “Defense Information Systems Network cloud” of voice, video, and data services to personnel fighting and supporting the overseas contingency operations. These services include the Defense Switch Network (DSN), Voice-over Internet Protocol (VoIP), Non-secure Internet Protocol Router Network (NIPRNET),

Secret Internet Protocol Router Network (SIPRNET), video teleconferencing (VTC), and other services.

### Main Communications Facility (MCF) and Technical Control Facility (TCF)

In 2007, in response to an urgent warfighter requirement, PM DWTS provided the Army’s first-ever shelterized MCF at Camp Speicher, Iraq, achieving initial operational capability in less than 6 months. PM DWTS followed that up with a second shelterized MCF at New Kabul Compound (NKC), Afghanistan.

“These shelterized MCFs are modular and portable. They can be moved to other locations by military airlift as mission priorities shift, and they can be implemented several months faster than fixed facilities,” said Richards. “Plus, they cost 60 percent less than fixed MCFs, for which buildings must be constructed or renovated.” The success of PM DWTS’ shelterized MCF solution is underscored by the fact that the Army is making it the standard for all future MCF implementations in Iraq and Afghanistan.

During the same time that PM DWTS provided the NKC MCF, they also transformed an area distribution node into a full-blown TCF at the

International Security Assistance Force Headquarters in Kabul, Afghanistan—completing both projects in 6 months.

### International Zone (IZ) Support

PM DWTS has more than 200 personnel, most of them deployed to the IZ in Baghdad, Iraq, supporting Multi-National Forces-Iraq (MNF-I) and the U.S. Department of State. These personnel provide a total command, control, communications, and computers (C4) capability and services including installation, operation, management, maintenance, network operations, information assurance, communications security, and system administration for MNF-I and the State Department.

“The best way to describe that mission is that we’re like the DOIM [Directorate of Information Management] for the IZ,” said Richards. “Whatever communications support MNF-I and the State Department need to do business in the IZ, we provide it.”

An example of PM DWTS support occurred when the U.S. Embassy at Baghdad recently relocated from the IZ Republican Palace into the new U.S. Embassy compound, to allow handover of the IZ Republican Palace to the Iraqi government. PM DWTS relocated a

TCF from the IZ Republican Palace to another location, providing voice, NIPRNET, and SIPRNET capabilities to personnel in and around the Baghdad area; installed a 500-kilovolt-ampere uninterrupted power supply system at the new TCF; and installed communications infrastructure for multiple buildings at the new embassy compound.

### Central Iraq Microwave System (CIMS)

The TCF that PM DWTS relocated from the IZ Republican Palace is part of the CIMS, which PM DWTS provided in 2005 and 2006. “CIMS provides near-real-time point-to-point, point-to-multipoint, and multipoint-to-multipoint data transmission services with multiple layers of redundancy for MNF-I,” said Richards.

CIMS includes synchronous optical network communications links across Iraq and provides OC-3 (155 megabytes-per-second) bandwidth to support warfighters’ critical C4 and intelligence missions. CIMS allows MNF-I personnel to tap into services including voice, VTC, NIPRNET, SIPRNET, the Combined Enterprise Regional Information Exchange System, and the Joint Worldwide Intelligence Communications System. “Because CIMS is a low-latency,

high-speed, high-bandwidth system, it allows MNF-I personnel to transmit near-real-time data,” said Richards. “CIMS is a good alternative in providing lower-cost and higher-speed connectivity versus satellite connectivity.”

### Joint Telemedicine Network (JTMN)

The JTMN, a worldwide, long-haul IP-based telemedicine network used by medical personnel providing care for warfighters in Iraq and Afghanistan, was also provided by PM DWTS. The JTMN includes nine VSATs that provide satellite connectivity and brings VTC, NIPRNET, and VoIP capabilities for medical personnel.

According to Richards, the JTMN was recently upgraded to provide increased bandwidth to JTMN remote sites in Iraq and Afghanistan to allow additional voice and VTC capabilities, plus the ability to use MedWeb—an inpatient clinical system that allows the collection of medical imaging data from diagnostic imaging devices, such as

computed tomography (CT), magnetic resonance imaging (MRI), ultrasound, and computed radiography devices.

“This upgrade allows medical personnel to send very large medical files, such as CT scans, X-rays, and MRI films, back and forth and consult with specialists to provide the best care possible for our wounded warriors,” said Richards.

In the first operational use of VTC capabilities provided

by PM DWTS, the U.S. Army Surgeon General conducted a 4.5-hour VTC with deployed medical elements in Afghanistan.

### Joint Explosive Ordnance Disposal (JEOD) VSAT Network

PM DWTS established a VSAT network, including more than 100 VSATs in remote locations, to provide satellite connectivity for U.S. Central Command JEO operations in Iraq and Afghanistan. The network brings DSN, VoIP, NIPRNET, SIPRNET, and VTC to JEO personnel. “We are also supporting CONUS JEO training sites with remote VSATs that are dispersed throughout the country and we’ve provided train-the-trainer training to JEO personnel,” said Richards.

### Communications System

For the U.S. Army Materiel Command’s (AMC’s) Army Field Support Command (AFSC), PM DWTS provides the Multi-Media Communications System (MMCS) at numerous sites in Iraq and Afghanistan. MMCS is a modular, rapidly deployable, mobile system that provides forward-deployed logistics elements with DSN, NIPRNET, SIPRNET, VoIP, and secure and non-secure VTC services.

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As LTC Clyde Richards, PM DWTS, inspects the MCF at Camp Speicher, Robert Griffiths, project leader with General Dynamics C4 Systems, points out the facility’s features. (U.S. Army photo by Ernest Baker, PM DWTS contractor.)

“We previously deployed MMCS to support *Operation Restore Democracy* in Haiti, *Operation Joint Endeavor* in Bosnia, *Operation Allied Force* in Kosovo, and even Hurricane Katrina relief efforts in Louisiana and Mississippi,” said Richards. “MMCS is the system we send when a site has absolutely nothing in the way of communications.”

MMCS keeps AMC’s logisticians deployed to Iraq, Afghanistan, and Kuwait—including Logistics Assistance Representatives (LARs), Soldiers, Department of the Army civilians, and contractors—connected. “Without MMCS, AFSC couldn’t support their LARs and Soldiers with the data they need to order equipment and supplies,” Richards said. “These logistics personnel can stay connected with e-mail, NIPRNET, SIPRNET, and telephone, and it’s all coming off the MMCS network.”

### Defense Contract Management Agency (DCMA) VSAT Support

For DCMA, PM DWTS provides satellite connectivity via VSATs that bring services including DSN, NIPRNET, VoIP, and secure and non-secure VTC to seven DCMA locations in Iraq and two in Afghanistan. The DCMA VSAT system is Ku-band and includes connectivity to the DCMA Data Center in Boston, MA.

### Logistics Systems That Protect Soldiers

PM DWTS provides two information technology systems that enhance the effectiveness of Combat Service Support (CSS) Soldiers: the CSS Automated Information Systems Interface (CAISI) and the CSS VSATs. CAISI provides secure wireless network connectivity for Soldiers’ Standard Army Management Information Systems and CSS VSAT provides



Embedded Training Team members in Afghanistan such as SGT Nick Brodaczynsky, shown here providing marksmanship training to Afghan National Auxiliary Police recruits, can stay in touch from remote areas thanks to the communications infrastructure provided in Afghanistan by PM DWTS. (U.S. Navy photo by PO1 Scott Cohen, Combined Security Transition Command, Afghanistan.)

NIPRNET access via satellite for the CAISI network, connecting remote users to one of four teleports located strategically around the world.

“The CAISI and CSS VSAT tandem saves Soldiers’ lives by eliminating the ‘sneaker net’—the need for Soldiers to get in convoys and go in harm’s way to place requisitions,” said Richards. “Now, Soldiers in Iraq and Afghanistan can stay inside the wire and securely transmit requisitions wirelessly.”

Recently, PM DWTS leveraged advanced technologies to refresh the legacy version, CAISI 1.1, with a better, faster, and cheaper solution: CAISI 2.0. “CAISI 2.0 doubled the throughput, increased the range from 3 miles to more than 35 miles, and lowered the unit cost by 40 percent,” said Richards.

To date, PM DWTS has fielded 8,000 CAISI 2.0 modules to more than 100 Army units—2,000 of these ahead of the Army Resourcing Priority List schedule—and has fielded more than 2,000 CSS VSAT systems to

warfighters worldwide with an Army Acquisition Objective of 3,300. “We field CAISI and CSS VSATs to units and their home stations, and at the same time, we provide New Equipment Training,” said Richards. “Those units then deploy with their CAISI and CSS VSAT systems as organic equipment.” Currently, PM DWTS is supporting hundreds of CSS VSATs in Iraq and Afghanistan with deployed technical personnel.

What’s on tap for CAISI and CSS VSAT? “We’re exporting the CAISI and CSS VSAT solutions to the medical, biometrics, [Department of] Homeland Security, and personnel communities, and we’re increasing the bandwidth and the coverage to more areas of Afghanistan,” Richards concluded.

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