U.S. Army Communications-Electronic Life Cycle Management Command Logistics Readiness Center Telemaintenance Program

Highly responsive Army command provides war fighters with instant access to vital support services using Adobe® Acrobat® Connect™ Professional

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Challenges
- Speed resolution of system problems at field locations
- Secure communications between personnel worldwide
- Address bandwidth limitations

Solution
- Web Conferencing

  The U.S. Army Logistics Readiness Center is using Adobe Acrobat Connect Professional to enable real-time, secure collaboration between support staff and war fighters worldwide.

Results
- Reduce travel and support costs by hundreds of thousands of dollars annually
- Accelerate repairs for many problems from days to less than an hour
- Improve responsiveness to war fighters
- Maximize support staff resources

Systems At A Glance
- Adobe Acrobat Connect Professional
- Adobe Flash Player
- Platform: Microsoft® Windows® XP

Round the clock support

U.S. Army soldiers serve worldwide, often in dangerous, difficult-to-reach locations. As a result, secure, reliable communications are critically important to war fighters, particularly when it comes to troubleshooting problems with core systems such as radar and mapping. "Our war fighters need the assurance that they are supported 24x7," says Jim Duxbury, team leader within the Telemaintenance Program at the U.S. Army Communications-Electronic Life Cycle Management Command (C-E LCMC) Logistics Readiness Center (LRC).

To achieve this goal, the U.S. Army provides soldiers with continued access to subject-matter experts (SMEs) skilled at solving a wide range of system problems. The challenge is that these experts are stationed in facilities worldwide, often several thousand miles away from a soldier and the problem that he or she is encountering. For LRC, adopting a secure, reliable web conferencing application would provide the immediacy and help that field soldiers require.

Meeting complex challenges

Traditionally, if war fighters encountered a technical problem with a system, they called their Support Services via a help line. Yet, as field soldiers and support staff frequently encountered, some problems were too complex to be described and resolved by phone. When this happened, SMEs had to travel to the location to fix the problems, creating additional challenges for a remote unit.

First, the unit not only had to ensure the ongoing safety of its soldiers but also protect SMEs, many of whom are civilians. In addition, onsite repairs typically resulted in delays of several days as personnel arranged travel and addressed security issues. If the problems were with radar, communication, or other essential systems, the consequences of delayed repairs could be dire.

Equally challenging was managing the high costs of sending SMEs into the field. For instance, sending a radar systems specialist to the Middle East could cost tens of thousands of dollars in travel and per diem expenses. "With support demands coming in from units worldwide, our focus was on finding a way to reliably and cost effectively address their needs," says Duxbury.

Innovative field communications boxes

The Telemaintenace group initially used Microsoft NetMeeting to connect field soldiers with centralized SMEs. Unfortunately, the solution required too much bandwidth and was difficult to manage because client software had to be continually updated on soldiers' remote systems. War fighters also encountered problems as they tried to communicate details about complex systems using only their voice and static onscreen images.

"Our idea for durable field communications boxes grew directly out of interactions with war fighters and our aim to provide more dynamic, secure communications," explains Rich Howard, an Engineering Professional Services (EPS) contractor and telemaintenance network engineer at LRC. The communications boxes include a portable phone, a satellite dish, a laptop computer, and wires—all stored inside a rugged, portable box.

"With Adobe Acrobat Connect, we can connect in real-time with war fighters and quickly walk them through problem resolution."

Tom Wasnesky,
Computer scientist,
Telemaintenance Support Services,
U.S. Army C-E LCMC, LRC

On the laptop computer are several applications, including a standard Internet browser and the freely available Adobe Flash® player. Currently, more than 100 Field Communication Boxes are used by war fighters worldwide.

Real-time support

When a war fighter encounters a system problem, he can use the laptop within the communications box to launch a web browser that connects instantly via satellite to the Telemaintenance group's secure server in the U.S. On the server is Adobe Acrobat Connect Professional software, which launches automatically for the war fighter.

Through Adobe Acrobat Connect, soldiers can create meetings and invite the SMEs needed to resolve their problems. The versatile web conferencing application enables soldiers to share their computer screens, so SMEs can view screens and relevant documents in real time. Cameras can also be used so SMEs can view field equipment in question. In both cases, SMEs see the exact same thing that war fighters would previously have had to try to describe by phone.

"The benefits to war fighters and to our group have been phenomenal," says Tom Wasnesky, a computer scientist at the LRC. "With Adobe Acrobat Connect, we can connect in real-time with war fighters and quickly walk them through problem resolution."

Meeting security and bandwidth requirements

Communication via the powerful telemaintenance boxes and Adobe Acrobat Connect Professional addresses Joint Interoperability Test Command (JITC) security standards, helping ensure that soldier-to-SME communications are protected at all times. Equally important is the low bandwidth required—64 kbs or less—by Acrobat Connect, which is essential for keeping secure lines open for other military communications.

To date, the communications boxes have been used to support repairs on weapons, radar, computing, and other systems used daily by soldiers. "We can often work virtually with war fighters to handle repairs in an hour or less," explains Duxbury. "Previously, the same repair could have taken days or even weeks to complete as SMEs traveled to remote locations."

An added advantage of the dynamic web conferencing application is that field soldiers and SMEs are sharing the same content—voice, video, documents, screen images—at the same time. Also, the Munitions New Equipment Branch at the Picatinny Arsenal in New Jersey, has taken advantage of the ability to do distance learning and to record classes/training for later sessions. Whether it is a system screen, training, or video, Acrobat Connect enables users to collaborate instantly and reliably through the ubiquitous Flash Player software.

"The field communications boxes have been an all-around success because we standardized on secure, dynamic, easy-to-use solutions," says Duxbury. "Most importantly, we are there for war fighters where and when they need us."

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