

# CASE STUDY

## Fort Leavenworth, Kansas



### Mercury Data Systems uses Fortress to Create Secure Wireless Network

#### MDS Links Remote Intelligence, Surveillance and Reconnaissance Assets

Established by Col. Henry Leavenworth in 1827, Fort Leavenworth stands as the oldest continuously active Army post west of the Mississippi River. Today, the Fort Leavenworth Garrison supports the U.S. Army Training and Doctrine Command (TRADOC), managing and maintaining the home of the U.S. Army Combined Arms Center (CAC). CAC's mission involves leader development, collective training, Army doctrine, and battle command. Fort Leavenworth also accommodates the Department of Defense's only maximum security prison, the U.S. Disciplinary Barracks.

The Fort Leavenworth Integrated Base Operations Center (IBOC) project aims to link remote Intelligence, Surveillance, and Reconnaissance, (ISR) assets, which do not have access to the current wired network infrastructure, to the IBOC facility. The most efficient way to achieve this is through the use of wireless networking, provided that the proposed solution meets Department of Defense (DoD) policy and can provide close to 99% availability.

Mercury Data Systems' solution was to provide a secure, robust and high availability wireless network using Fortress ES520 Wireless Access Bridges. These bridges have dual radios, so the 802.11a radio can be used for node-to-node communications, while simultaneously providing an 802.11g access cloud or "hotspot" for each of the ISR sites. Directional antennas were used to provide the point-to-point links and an omni-directional antenna was used to provide network access for each of the ten service areas.

At the "Pony Express" location, a root node was mast-mounted on the side of the building. This Bridge uses Power over Ethernet (POE) for the electrical connection and is connected to an Ethernet switch inside the building. One directional antenna provides the point-to-point link to the radar tower.

Being a tactical network which must meet DoD policy, it was necessary for the solution to meet all criteria for handling Sensitive But Unclassified (SBU) information. The communications network was also required to provide superior availability and robustness. The Fortress ES520 Secure Wireless Access Bridges were chosen because they met all the requirements. The Fortress solution provides FIPS 140-2 certified security, separate access and backhaul communication channels, as well as both user and device authentication.

With the Fortress solution in place, the remote sites now have secure and reliable access to the wired network infrastructure. Base personnel can also securely access the network via the secure 802.11g "hotspots" at any of the ten remote locations. All of this was possible while still adhering to strict DoD guidelines for networks handling Sensitive But Unclassified (SBU) information.

#### About the Fortress ES520 Secure Wireless Access Bridge

Fortress Secure Wireless Access Bridges are all-in-one network access devices with built-in security. The ES520 is ideally suited to work as a self-contained network or as a secure access point and wireless bridge in environments with no available infrastructure. The Fortress ES520 enables secure on-demand voice, video and data communication.

#### Challenges

- Provide strong security that meets DoD policy
- Support high-bandwidth multimedia applications
- Create a backhaul network with 99 percent availability
- Provide Wi-Fi client coverage at two gate areas and eight other locations

#### Solution

- Ten Fortress ES520 Wireless Access Bridges
- Commercially available antennas
- PoE equipment
- Fortress Secure Clients
- Fortress Management and Policy Server (MaPS)

#### Results

- Strong, FIPS 140-2 validated security in place for wireless network
- All applications are supported
- Secure Wi-Fi access available for clients at ten locations
- Solution meets DoD policy



For more information about Fortress:  
[www.fortresstech.com](http://www.fortresstech.com)

Fortress Technologies, Inc.  
4023 Tampa Road, Suite 2200  
Oldsmar, FL 34677  
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FTI Doc#: CS 002 060809 V02