



Rural Access to Broadband Technology (RABT)

Fort Indiantown Gap National Guard Training Center

The Challenge

The Fort Indiantown Gap National Guard (FTIG) Training Center, located in Pennsylvania, is one of the nation's premier training installations. More than 1,900 full-time employees and active duty military personnel, and approximately 3,200 part-time National Guard and other military members are assigned to FTIG. The training center is one of the busiest in the country, educating more than 144,000 soldiers, airmen, marines and civilians in 2005 alone. The 17,000 acre site also has an outstanding record of environmental excellence in achieving its goals for conservation of resources and compliance to environmental standards, making it an ideal site for a non-intrusive, wireless network.

FTIG sought to provide its staff with wireless local area network (WLAN) data access among numerous buildings and outdoor areas within the massive complex. The network needed to provide secure access to the Internet, including the National Guard Portal (Guard Knowledge Online), and to meet all current Department of Defense security standards, including FIPS 140-2 Validation™.

3eTI — as a subcontractor to Booz, Alan, Hamilton (BAH) — was challenged to develop a wireless network design that met the military's stringent requirements, ultimately leading to the delivery of products to be deployed throughout the base. BAH led the charge in establishing the certification requirements for the wireless network, determined operational guidelines on how the network would be utilized by staff working at FTIG, and provided the ability to test the network's operation in a real-world, real-time environment.

Fiber rings only existed in some buildings, requiring the solution to use wireless bridges to enable seamless connection back to the network from either wired or wireless personal computers.

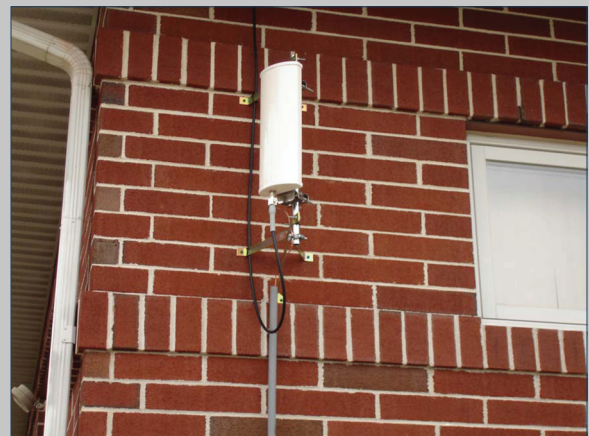
The Solution

The project — coined Rural Access to Broadband Technology (RABT) — commenced with a site survey performed on all buildings and outdoor areas where WLAN coverage would be required.

3eTI's site survey provided the basis for the pre-installation package and was used to identify the recommended RF

Products Used

- FIPS 140-2 / 802.11 Cryptographic Client Software for Atheros-based WLAN Cards (3e-010F-A-2)
- FIPS 140-2 / 802.11 Cryptographic Client Software for Centrino mPCI (3e-010F-C-2)
- FIPS 140-2 Outdoor Dual Radio Wireless Mesh Node (3e-525A-3)



infrastructure sites and to determine the installation locations. The pre-installation package — completed in February 2007 — specified the materials, equipment and personnel needed to complete the WLAN equipment installation. It also outlined how equipment would be mounted and connected to electrical power and the WLAN, and specified how equipment needed to be configured to make it operational.

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The 3eTI design included the installation of 3e-525A-3 FIPS 140-2 Validated wireless access points for wireless bridging between buildings, warehouses and outdoor areas; omni-directional antennas to enhance connectivity and performance were also used. Additionally, 3eTI FIPS 140-2 client supplicant software would be installed on personal computers to ensure end-to-end network security.

Phase I of the project included 65 3eTI wireless access points and approximately 500 licenses of the client supplicant software, covering 25 buildings and six defined areas of the base. Phase II, which commenced in August 2007, included 35 additional 3eTI wireless access points to provide for commercial Internet access to soldiers and staff working at the base.

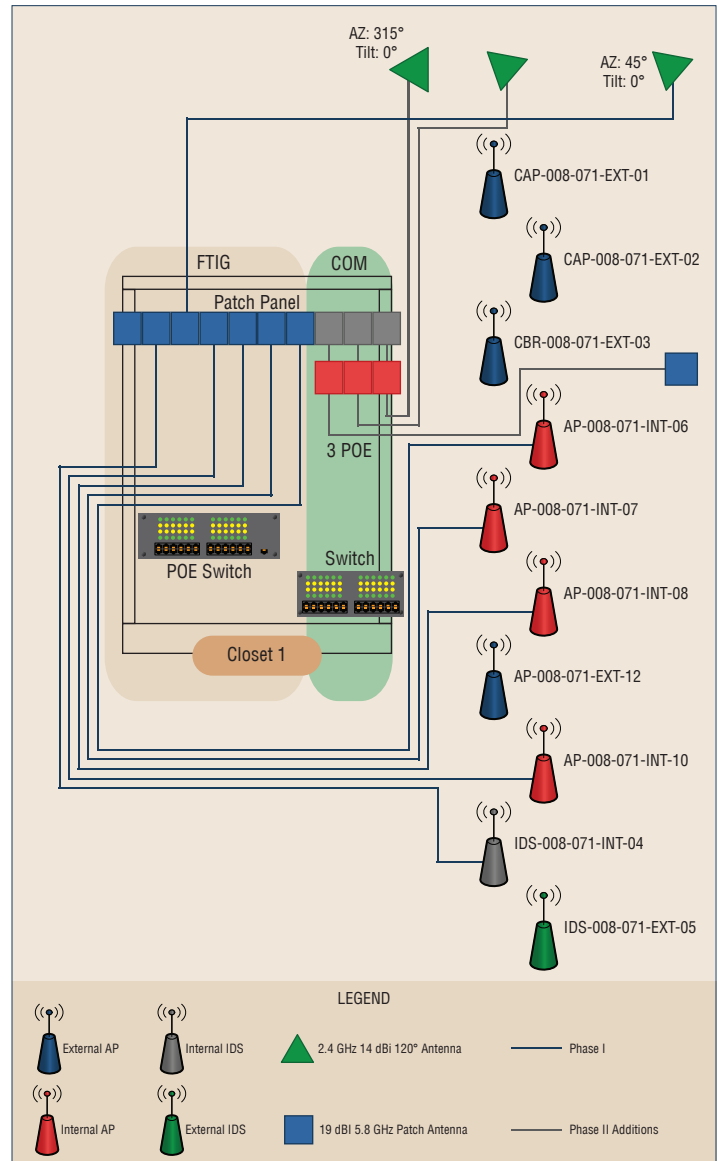
The Benefits

The 3eTI-designed RABT network is a wireless communications solution that provides staff the ability to access data whether they are in buildings or outdoor areas — either stationary or while moving about the base. Testing of the network met the throughput and coverage standards established by BAH, ensuring data gets where it is needed, when it is needed.

The RABT network provides officers with the ability to work while moving about the base, maintaining access to critical data that can be essential to making informed decisions. Staff can now refer to inventory databases while traveling around warehouses, saving valuable time and reducing the need for redundant paperwork. In times of crisis or during emergencies, this wireless network provides real-time data that can be used to enhance force protection and anti-terrorism activities.

The wireless devices and software installed at FTIG utilize 3eTI commercial off-the-shelf products and are field proven, affordable and highly secure. FIPS 140-2 Validation ensures tested and certified security that protects vital and confidential information from unwanted eavesdroppers. The Phase II implementation enables staff to stay connected with family and friends over weekends, during training or when deployed away from home.

The wireless solution — which eliminates obtrusive wires — is easier to install than fiber networks, and is consistent



Detailed network layout for one of the buildings at Fort Indiantown Gap National Guard Training Center.

with FTIG's mission of environmental excellence. It is also more affordable than wired infrastructure. The solution deployed at FTIG can be replicated cost-effectively in any of the nation's National Guard facilities or other government and military installations worldwide.