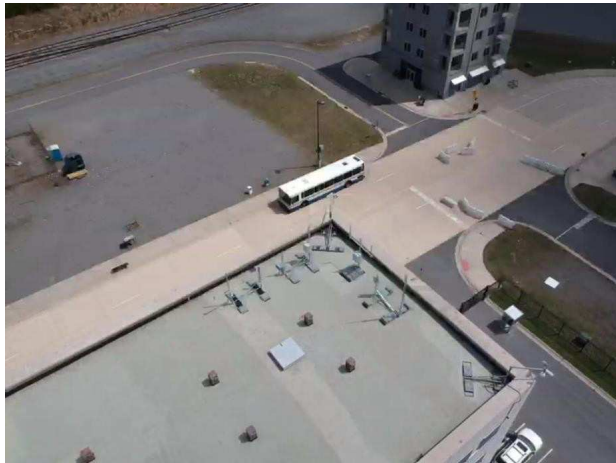




Asymmetric Warfare Training Center Cross Domain Training Environment Fort A.P. Hill, Virginia

In November of 2017 the US Army awarded RIVA Networks a contract to build a Cross Domain Training Environment at the Asymmetric Warfare Training Center - Fort A.P. Hill, Virginia.

The contract required the installation of multiple cellular networks, in-building Wi-Fi access points, Wi-Fi cameras, outdoor FLIR cameras and a Network Operations Center to manage all of the systems. System design, project management, documentation, training and installation were all performed by personnel from RIVA Networks.



Based on RIVA's cellular network call control platform, the Cross Domain Training Environment is a private self-contained, secure network with fiber connectivity. All handheld devices (cellphones and tablets), are equipped with private SIM cards to ensure that only devices with these private SIM cards have access to the cellular networks. Using RIVA's cellular network platform, the DoD customer has full control over which networks (2G, CDMA, 3G, LTE and in future 5G) are operational, whitelists, blacklists, DOS and many other features.



RIVA provided an EPC core (Evolved Packet Core) server installed in the customer's Network Operations Center server rack. Output power levels for the cellular base stations can be monitored and controlled via the RIVA platform GUI; to ensure the network radiation is contained within the confines of the training area.

After RIVA conducted a site survey and tested the signal environment to assess RF coverage, RIVA installed 27 Wi-Fi Access Points in the various training buildings provided on site and throughout the campus. The Wi-Fi network access points provide coverage in each building. Additionally, 60 Wi-Fi cameras and 4 FLIR Pan Tilt Day/Night/Thermal Cameras were installed in various outdoor locations.

Wi-Fi Hot Spots, Cameras and Outdoor FLIR Cameras



All of the cellular and Wi-Fi nodes are controlled and monitored from a remote site where the Army has set up their Network Operations Center (NOC). The cameras are monitored and controlled via a Video Management Server located in the Network Operations Center.

The complete system was designed to provide flexibility for the many different organizations that use the site for training.

The complete system supports ATAK devices and was designed with the capability for expansion as future technology and threats evolve.