Meeting Federal Connectivity Challenges with Ericsson's Fixed Wireless Access

Ericsson's enterprise wireless solutions enable organizations to innovate, operate, and grow anywhere — without constraints. Ericsson NetCloud, Cradlepoint routers, and Enterprise 5G solutions provide the flexibility of public and private 5G, with the zero trust security of simplified SASE.



RESOURCES

Ericsson Solutions for Government
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Ericsson Cradlepoint E3000
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Ericsson Cradlepoint W1855
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Technical Summary

Fixed Wireless Access (FWA) is a type of Wi-Fi network that utilizes existing cellular services to provide internet access. Ericsson deploys a type of antenna called an adapter onto the exterior of the building in question. Through this device and their relationship with major cellular providers such as Verizon, AT&T and T-Mobile, Ericsson converts that cellular signal to internet handoff inside the building.

The technology works on a dual Subscriber Identity Module (SIM) system, meaning that the adapter can convert cellular signal from two different carriers without having to have multiple modems. This is especially beneficial in case of an outage. Should, for example, Verizon experience a temporary outage, the adapter automatically switches from the Verizon SIM in slot one to the second carrier SIM in slot two without any interruption to the users.

The Challenge

Unlike civilian domestic households, many Federal and military buildings were not constructed with the capacity for internet connectivity. When these branches are unable to execute day-to-day mission critical tasks, even some as simple as email, in the buildings they are based in, it interferes with workplace efficiency. Traditional fiber optic internet cable must be physically wired into a location through trenches. The process of installing a new cable in a previously unwired location is both time-consuming and expensive.

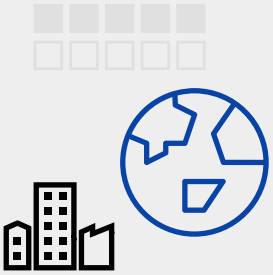
Hypothetically, if a building has fiber optic tunnels dug and the cable installed, a lengthy and costly process must follow to get the service up and running. A circuit has to be ordered, delivered, installed, configured, tested and activated. This entire process usually takes approximately 120 days, cutting into valuable time that could be used to further the mission of the relative Government agency.

With the constraints that installing traditional fiber optic Wi-Fi can place on a Government agency, teams may turn to other wireless technologies, such as satellite or hotspots, for their internet needs. However, each of these solutions come with their own critical drawbacks. Satellite wireless technology is very cost prohibitive and sometimes cumbersome to deploy, depending on which satellite the agency chooses to utilize. While hotspots are usually cheaper, they have serious gaps in security that make them virtually unfit for Federal purpose.

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The Solution

Aside from the installation of the adapter, FWA utilizes infrastructure that is already in place, cutting down significantly on set-up time and cost. While fiber optic internet takes more than 120 days from trenching to achieve full functionality, Ericsson's FWA system can establish a fully functional Wi-Fi network the same day the adapter is installed.

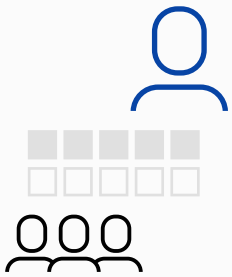




Ericsson's FWA network meets Federal requirements for both hardware and encryption, achieving tight security standards not seen in Wi-Fi hotspots. These adapters are both Trade Agreements Act (TAA) and Federal Information Processing Standards (FIPS) 140-3 compliant. Additionally, Ericsson's FWA has the capacity to manage multiple Wide Area Networks (WANs) through one centralized platform, further improving efficiency for IT professionals working for Government agencies.

Ericsson has several successful proof-of-concept deployments of FWA adapters. One notable example took place at Keesler Air Force Base in Biloxi, Mississippi. The Air Force Education and Training Command (AETC) had multiple assets, including digital whiteboards, that they were unable to use due to lack of an internet connection. Ericsson deployed FWA, providing AETC with a large enough internet circuit to utilize previously unused training tools. Ericsson also deployed FWA for the Air Force on other occasions, enabling flight technicians to utilize tablets on the flight line, an area where aircraft are parked, serviced and prepared for missions.





While FWA deployments are beneficial to the facilities used in daily operations of Government, they also play a fundamental role in temporary structures used in humanitarian efforts. In 2021, Ericsson was directly responsible for deploying an FWA network via Verizon's cellular network at a refugee camp on the Marine Corps base in Quantico, Virginia. The Marine Corps was able to quickly establish efficient interconnectivity between these structures, enabling separated family members to communicate and reunite.

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