



Ketchikan Public Utilities Makes Broadband A Top Attraction

CASE STUDY

Ketchikan is a popular destination for hundreds of thousands of tourists every summer. Nestled on an island on the lower Alaskan coast, the beautiful port city offers breathtaking views, exciting guided adventures and many other attractions unique to the region. A visit to Ketchikan enables people to escape to a majestic place, removed from the hustle and bustle of everyday life.

But, Ketchikan Public Utilities (KPU), a locally owned and operated communications provider, realized that any departure from everyday comforts is fleeting. Broadband services—including IPTV, advanced wireless and next-generation multimedia—have become part of the daily routine. As a result, officials sought to deploy a broadband network that would ensure Ketchikan visitors and residents remain connected anytime, anywhere.



The Challenges

- Migrate from aerial copper network to fiber optic Ethernet
- Minimal fiber optic experience
- Remote location

After extensive research, KPU realized that its aerial copper network was insufficient to manage broadband deployment. "Fiber was the only way to give our subscribers the HDTV and advanced gaming capabilities that they demand," said engineering manager, Steve Hunt.

KPU decided to deploy a fiber optic broadband network that could bring active Ethernet over fiber-to-the-home of every subscriber in Ketchikan, and wireless broadband services to every visitor to the city.

KPU also had significant real estate constraints at its central office (CO). Any new fiber technology solutions would have to fit into the existing footprint. As a result, KPU was limited to about five feet for new equipment in the CO.

In addition, the unique location and beautiful terrain that make the city a popular tourist destination also made deploying broadband services a logistical nightmare. Transporting equipment and technicians to the island would be arduous, time-consuming and expensive. And, KPU couldn't afford any mistakes.



Splicing contractors inspect the ADC OMX600 splice cabinet after installation. ADC's patented splice wheel design maintains bend radius and ensures limited congestion

The Solutions

- Comprehensive plan coordinated with industry-leading partner
- High-density fiber frames and splice panels
- Intuitive cable management

KPU's challenge was to deploy a robust network—featuring innovative technology for broadband connectivity, easy access and sound cable management—that could support broadband services, reduce network management costs and ensure fast service for every subscriber. As a result, it had only one option: team with respected outside vendors who could ensure that the active fiber deployment was completed on time and on budget.

KPU turned to Codale Electric Supply to recommend a manufacturer that could provide products to meet their strict criteria. Immediately, Codale recommended ADC for its wide range of high-density fiber frames and panels supported by clear, concise cable management options. ADC's equipment solutions are designed to provide optimal flexibility and reliability that can minimize downtime and turn up revenue-generating, advanced services quickly and efficiently. After a lengthy RFQ process, KPU turned to Codale Electric Supply to manage the ordering and delivery of the new equipment. Codale introduced a simplified procurement process to expedite deployment and reduce shipping costs to the remote city.

Because KPU had only one opportunity to ensure a cost-efficient deployment, comprehensive planning between representatives from the three organizations was critical. KPU and ADC engineers worked together to find end-to-end solutions that could migrate the network to fiber and ensure its viability for the foreseeable future.

The plan was to migrate subscribers off of copper via an active Ethernet network as advanced services were ordered. KPU equipped peripheral regions with remote fiber cabinets, and then continued deployment in high-density areas of the city. Every new subdivision and development would be deployed with fiber to the premises (FTTP) as well.

Ensure Network Integrity at the Central Office

The influx of fibers was a significant concern. The integrity of the entire network relies on the reliability of the termination and splice solutions back at the CO. Every time KPU technicians connect, terminate, route, splice, store and handle fiber cables, network performance, and subsequently, its profitability can be compromised.

Fortunately, in an active Ethernet-to-the-home network, every fiber needs to be spliced and assigned to a dedicated port one time only—if spliced correctly. Based on this requirement, KPU chose high-termination fiber frames and splicing panels that accommodated high-density specifications while adhering to footprint restrictions in the CO. The frames' back-to-back orientation and intuitive cable management simplified splicing and maintenance for KPU technicians.

ADC's panels and frames optimized rack space and its FiberGuide® optical raceway system protected and routed patch cords and assemblies between the network elements. Officials noted that with proper cable management, there was minimal concern about service interruptions.



ADC FiberGuide provides the overhead cable management for the NGF fiber termination frames in a KPU Central Office

Speeding Broadband Deployment for All

KPU is progressing toward an entire fiber network residing on an IP backbone. Subscribers receive broadband via FTTP or ADSL2+ technology. The thousands of cruise ship visitors have a “pay-as-you-go” WiFi platform for advanced multimedia services. And, all of it is run through fiber out of the CO.

The first stage of deployment, which delivered broadband to more than 1,500 subscribers, was completed in about three months. The next phase is progressing quickly. “We're ecstatic with the efficiency of the deployment,” said Hunt. “Reliability at the CO enables us to move forward with confidence and deliver bundled broadband services to every subscriber.”

With broadband services for everyone, this beautiful port city is about to become even more popular.

CASE STUDY



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