



Case Study

Telecom Namibia Upgrades Broadband Services across Etosha National Park using Ceragon's FiberAir® Solutions

Ceragon provides full turnkey services enabling Telecom Namibia to deliver reliable voice and data amidst Wildlife

Background

Etosha National Park is a Namibian treasure and one of Africa's oldest wildlife sanctuaries. First established in 1907, it covers an area of 22,270 square kilometers and is home to a wide variety of animals including the endangered Black Rhinoceros and the endemic Black Impala. Visitors can choose from various safari options and a host of game lodges.

Most of the Park's routes and all of the lodges are covered by cellular service for voice and data via a network operated and maintained by Telecom Namibia. The growing number of visitors using advanced mobile applications to stay connected, share images and videos of their experiences was putting a strain on the existing infrastructure. Furthermore the park's businesses are dependent upon wireless broadband for booking/reservations, banking and internet access.

To enable high-capacity voice and data services with improved service quality, Telecom Namibia selected Ceragon's FiberAir platform to set up a powerful, high capacity communication network which it on-leases to mobile operators. Ceragon was also the first microwave supplier to be completely integrated and accepted by Telecom Namibia's TNM/ Network Operations Center "Netcool" platform. This achievement is welcomed and is in line with the company's strategy of enabling its Network Operations Center to perform end-to-end service and network operations.

The Challenge: Overcoming Terrain And 'Wild Life' Factors

In addition to the usual requirements of a high-capacity microwave backhaul solution there were the challenges of deployment in a vast natural terrain. Telecom Namibia sought a simple and risk-free migration path from their legacy SDH technology to an all-IP network. After evaluating several vendors, the company selected Ceragon's FibeAir because of its technical versatility, efficient utilization of radio link budgets and pricing.

The Solution: A Reliable, High Capacity Solution

Ceragon's advanced FibeAir platform was implemented using a combination of indoor units coupled with the FibeAir RFU-HP outdoor units. The network utilizes 6GHz frequency band and the radio links were designed in 1+1 configuration using space diversity. This optimizes link quality and overcomes multipath issues that result from the long distance links running over flat surfaces and water.

Delivered with an integrated cross-connect, the FiberAir platforms enable Telecom Namibia to use installed radios for nodal applications without having to replace the equipment or deploy additional hardware.



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Mr. Laban Hiwilepo, General Manager Network Provisioning and Assurance.



The FibeAir RFU-HP outdoor units deliver high quality wireless communication over long distances with the use of small antennas. The FibeAir RFU-HP units ensure that no excess energy is used while the network operates in "steady state". Telecom Namibia's new wireless backhaul network automatically controls both power consumption and transmission power.

Implementation

Implementing and installing equipment infrastructure within a wildlife park presented unique challenges. For example engineers needed protection from wild lions and elephants so game wardens accompanied the team during the installation process. Work was only carried out during day-light so as not disturb the animals or their natural habitats. Some of the solar power sites house equipment on platforms eight meters above the ground to avoid damage from the elephants who like to rub against them. Large rocks were placed around all mast bases to prevent animal damage!

Ceragon's service professionals assisted Telecom Namibia throughout the deployment process; from planning each and every link, through the selection and training of a local installation partner to commissioning and first-line maintenance.

"The Etosha Park network poses a number of challenges ranging from topography and the proximity to wild-life to the technical aspects of upgrading a network seamlessly and economically," said Mr. Laban Hiwilepo, General Manager Network Provisioning and Assurance. "The benefit of selecting Ceragon as our backhaul equipment provider was two-fold. We were able to take advantage of a powerful radio design that allows us to get more bandwidth out of our existing resources. Furthermore, Ceragon's backhaul professionals helped us to plan, install and quickly bring into service an upgraded, high-quality, wireless network."

Conclusion

The vast, high-visibility Etosha national park project was successful, allowing one operator to "go live" and start generating revenue within weeks. Ceragon's FibeAir indoor platforms and powerful RFUs allowed Telecom Namibia to quickly replace its legacy equipment while laying the ground for further improvements in both capacity and migration to all-IP.

"The combination of Ceragon's advanced technology, in-depth radio expertise and superb service-offering allowed us to complete the first phase of the Etosha project on time – and on budget," concluded Mr. Laban Hiwilepo, General Manager Network Provisioning and Assurance, Namibia Telecom.



FibeAir IDUs with ODU-HP radios

About Telecom Namibia

Telecom Namibia Limited is Namibia's national telecommunications operator, wholly owned by the Government of the Republic of Namibia. Running the largest digital telecommunication network in Namibia and supplying voice, text, data and video services. Telecom Namibia serves more than 145 thousand customers and has annual revenues of more than N\$ 1,0 Billion.

Telecom Namibia changes telecommunication products and services to suite the demand of its customers. Today customers want fast, reliable and advance services and Telecom Namibia strives to make this possible.

About Ceragon

Ceragon Networks Ltd. (NASDAQ: CRNT) is a leading provider of high capacity LTE/4G-ready wireless backhaul solutions that enable cellular operators and other wireless service providers to deliver voice and data services, enabling smart-phone applications such as Internet browsing, music and video. With unmatched technology and cost innovation, Ceragon's advanced point-to-point microwave systems allow wireless service providers to evolve their networks from circuit-switched and hybrid concepts to all IP networks. Ceragon solutions are designed to support all wireless access technologies, delivering more capacity over longer distances under any given deployment scenario. Ceragon's solutions are deployed by more than 200 service providers of all sizes, and hundreds of private networks in more than 130 countries. Visit Ceragon at www.ceragon.com.

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