



Case Study

Digitel Mobile Philippines Inc. Deploys an All-IP 3G Wireless Backhaul Network with Ceragon's FibeAir[®] IP-MAX²

Background

Digitel Mobile Philippines Inc. (DMPI) is one of the three major wireless carriers in the Philippines. Operating under the brand-name 'Sun Cellular', DMPI offers the latest in GSM technology, including voice services, messaging services, outbound and inbound international roaming, and value-added services. In early 2008, Digitel began deploying a new network designed to carry 3G (HSPA) services. The operator chose to utilize Ceragon's FibeAir IP-MAX² wireless Ethernet solution in order to construct an all-IP backhaul network.

Overview

Digitel Mobile launched its cellular services under the brand name of Sun Cellular in 2003. Since then the operator has evolved its 2G network reaching most of the main urban centers in the Philippines – including the capital, Manila.

Digitel's 2G backhaul network relies on E1s to carry TDM traffic to aggregation sites using PDH microwave. From there, a wireless SDH ring designed in a variety of nxSTM1 configurations is used for backhauling high-volumes of traffic to the operator's core.

In 2008, Digitel began to deploy a new 3G network in order to enhance its service offering and provide a range of data and multimedia applications on top of its voice-centric package. In support of the new deployment, the operator chose to migrate the aggregation segment of its backhaul network to IP. Ceragon Networks, already a long time vendor of wireless SDH solutions to Digitel, was selected to provide its high-capacity FibeAir IP-MAX² wireless backhaul solution to this project.

The Challenge: Cost-effective Delivery of Data Services

3G data services generate much more traffic over the network than voice services, but produce far less revenue per transported bit. When designing their new backhaul network, Digitel was faced with the challenge of supporting the growing amount of data traffic in a cost effective manner. One option was to continue to use its existing SDH network however, SDH does not offer the best utilization of the network's capacity. The second, which was eventually selected, was to construct a new all-IP Ethernet backhaul network and take advantage of the technology's flexibility, and scalability features.



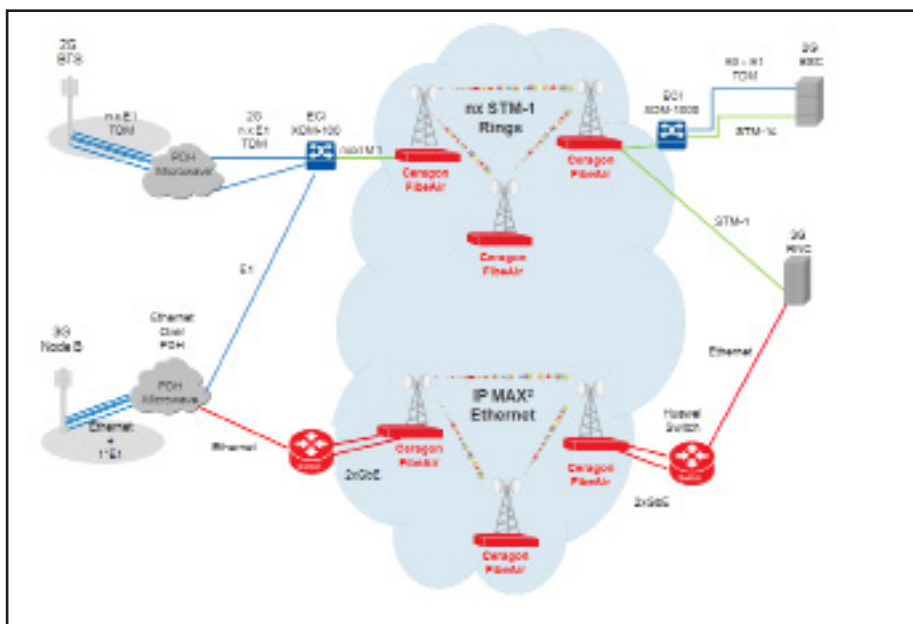
"Ceragon FibeAir solutions support native TDM on top of native Ethernet and allow us to reach ultra-high speeds" (Digitel Mobile company official)



Required: A High-Capacity, IP Backhaul Solution for Smooth Migration

Digitel's approach to IP migration makes use of its existing wireless SDH backhaul network (based on Ceragon's FibeAir 1500 systems) for carrying voice, while diverting data traffic to a new all-IP network based on Ceragon's FibeAir IP-MAX². In doing so, the operator offloads best-effort HSPA traffic over Ethernet, while continuing to transmit voice and premium data over E1s. This brings huge benefits in terms of network utilization and cost savings through statistical multiplexing.

Digitel's 2G and 3G network architecture is depicted in the diagram below.



FibeAir IP-MAX², Carrier Ethernet Wireless Solution

"We have a proven and successful track record using Ceragon solutions throughout our network," said a Digitel Mobile company official. "Ceragon systems allow us to reach ultra-high speeds using wide-band channels at the 56MHz range. In addition, FibeAir solutions support native TDM on top of native Ethernet. All these factors played an important role in our selection of Ceragon."

Ceragon's FibeAir IP-MAX² platform is designed to provide a fast and reliable Ethernet transmission solution for mobile, WiMAX, private and metro area networks. Supporting the entire licensed spectrum, from 6GHz – 38GHz, the solution incorporate comprehensive Ethernet networking capabilities including advanced QoS for differentiated services, flow control and sophisticated traffic balancing. Utilizing full range dynamic adaptive modulation, Ceragon's IP solutions help maximize capacity over all available frequency channel bandwidths – from 7MHz up to 56MHz.

About Digitel Mobile Philippines Inc.

Digitel Mobile Philippines Inc. (DMPI) is the wireless subsidiary of Digital Telecommunications Philippines Inc. (Digitel), which, in turn, is 47%-owned by JG Summit Holdings. DMPI commercially launched its wireless service operations under the brand name of Sun Cellular on March 2003. Sun Cellular is the country's third and newest mobile phone service provider. It offers the latest in GSM technology, providing voice services, messaging services, outbound and inbound international roaming, and value-added services.

About Ceragon

Ceragon Networks Ltd. (NASDAQ: CRNT) is a leading provider of high capacity wireless backhaul solutions that enable fiber-like connectivity for SONET/SDH networks, next generation IP-based networks and hybrid networks. Ceragon's FibeAir® family of products support all wired and wireless access technologies and address Service Providers' need to cost-effectively build-out and scale their networks to meet increasing demands for bandwidth and premium services. Ceragon solutions are deployed by more than 150 service providers of all sizes, as well as in hundreds of private networks, in nearly 100 countries. More information is available at www.ceragon.com.