CASE STUDY

TRANSPORTATION

Proxim Enables Wireless Video and Bandwidth Throughout Tunnel in Spain

The village of Bulnes, situated among the Picos de Europa mountains in northern Spain, is an isolated village with no motorized access until September 2001 when a funicular (inclined) railway was engineered to provide transportation to and from this remote area.

Prior to 2001, the only means of transportation to and from the village was via foot or donkey, trekking across a 2.2 km mountain to the nearest populated town of Poncebos. Today, the village is a popular destination which transports tourists on the railway through a tunnel. Hiking and mountain climbing is a popular sport for travelers seeking to hike to the top of Naranjo de Bulnes which has an elevation of 2.5 km. However, the railway needed a reliable communications and security network to ensure the safety of its residents and tourists alike.

Bulnes Funicular Railway operators, Consejeria de Asturias and ALSA, tested and evaluated several types of systems ranging from WiFi to basic trunking radios, without success. The railway chose Proxim's Tsunami MP.11 5054 outdoor system which included both the base stations as well as subscriber units. As tourism to the village rapidly increases, the new wireless system not only provides the railway with video security surveillance, it also offers a state-of-the-art communications network for both visitors and residents of Bulnes.

Tourists from all over the world visit the village of Bulnes and a reliable communications network is a necessity for any public transportation system. Proxim's wireless system enables the transmission of uninterrupted video, bandwidth and communications on the railway and within the tunnel system.

"Proxim's equipment is playing a major role in providing public service entities with a critical communications network in major metropolitan areas as well as smaller towns and jurisdictions with challenging terrains," said Ramon Lumnitz, Vice President of European and African Sales for Proxim Wireless. "The Bulnes Funicular Railway is an example of how well our equipment performs in such remote, rugged and difficult to reach areas."

Challenge:

- Bulnes Funicular Railway operators needed a reliable communications system on its 2.2 km railway through the Picos de Europa mountains
- A height difference of 400 meters between stations at both ends of the railway
- Other wireless solutions were tested but failed to transmit interrupted communications due to the tunnel characteristics
- Provide enough bandwidth for both voice and video surveillance

Proxim solution:

- Proxim MP.11 Series (base station and subscriber units); panel antennas in the base station units and omni antennas in the subscriber units.

Results:

- Security in the railway has increased dramatically
- Uninterrupted voice and video surveillance

ABOUT PROXIM

Proxim Wireless Corporation (OTCQX: PRXM) provides Wi-Fi®, WiMAX, Point-to-Multipoint and Point-to-Point Backhaul technologies for a complete indoor and outdoor wireless broadband ecosystem. Our systems enable service providers, governments and enterprises to deploy fixed and mobile security and video surveillance, indoor and outdoor Wi-Fi, business and residential internet access and cell tower backhaul. Proxim has shipped more than 2 million wireless devices to more than 250,000 customers in over 65 countries worldwide. Proxim is ISO 9001-2008 certified. For more information, visit http://www.proxim.com.