



MOTOTRBO™ CONNECTS CONGO EXPLORATION SITE

DIGITAL RADIO NETWORK PROVIDES CRUCIAL COMMUNICATION LINKS TO REMOTE AREA



Mining Projects Development (MPD) Congo SA was granted an exploration licence in May 2007 to evaluate iron ore deposits in the Republic of Congo's Lekoumou District situated in the south west of the country. Known as the Zanaga iron ore project, the mine is expected to produce 45 million tons of iron ore concentrate a year once it reaches peak capacity.

To establish a communications infrastructure that would provide reliable, high-performance voice and data connectivity between staff at the remote exploration site and its head office in Pointe Noire, MPD Congo has installed a solar-powered MOTOTRBO™ digital two-way radio network with IP Site Connect. Motorola's point-to-point fixed wireless broadband technology provides high-speed links for uninterrupted voice and data communications throughout the vast coverage area. In addition, TRBONet software from Application Partner Neocom enhances dispatch operations and facilitates the tracking of supply vehicles travelling between the sites.

The network has improved operations by allowing MPD Congo to monitor the delivery of supplies to the exploration site, enhance staff safety and provide voice, data and video conferencing services in an area with virtually no infrastructure.

CUSTOMER PROFILE

Company:
MPD Congo
(a subsidiary of Xtrata Plc)

Partner Name:
Soicex Electronique
Neocom Ltd

Industry Name:
Mining

Key Benefits:

- Robust, reliable communications
- Cost-effective voice, text and GPS services
- Widespread coverage for seamless connectivity
- Vehicle tracking for improved safety
- System powered by solar energy, minimal overheads

Product Name:

- MOTOTRBO IP Site Connect with solar power generator
- 200 DP 3601 digital portable handsets
- 100 DM 3601 digital mobile radios
- 10 PTP 58500 and 4 PTP 58300 wireless Ethernet bridges
- TRBONet Professional

“In a relatively short period of time, we were able to establish an advanced and robust communications network with hardly any existing infrastructure. MOTOTRBO IP Site Connect ensures we have constant voice and data communications with staff and vehicles on the move, which is critical when operating across such a vast and isolated area.”

P. Reed, Logistics Director MPD Congo

THE CHALLENGE

The iron ore exploration area is located 500 kilometres from MPD Congo's head office at Pointe-Noire and is accessible only by four-wheel drive vehicles. There is no electricity supply to the area and limited GSM coverage, presenting a challenge for tracking supply vehicles that travel between the two sites as well as communicating with staff.

MPD Congo thus needed to establish reliable, high-performance voice and data communications to manage its daily operations on site and ensure staff safety. Providing coverage across an area spanning some 40 000 km² with virtually no infrastructure would necessitate a wireless solution that was robust enough to withstand a harsh environment and could be operated using solar power.

Drawing on its 30 years of experience providing radio communications in Africa, Motorola's partner Soicex Electronique recommended MOTOTRBO IP Site Connect combined with TRBONet dispatch software developed by Application Partner Neocom.

THE SOLUTION

Eight MOTOTRBO DR 3000 repeaters with solar-powered generators were connected using PTP 58500 and PTP 58300 wireless point-to-point Ethernet bridges to provide reliable, high-speed voice and data connectivity throughout the coverage area, even in extreme conditions.

DP 3601 portable digital handsets and DM 3601 mobile radios with integrated GPS track the location of 200 personnel and 100 vehicles in real time, while IP Site Connect ensures seamless communication wherever they are on site and enables them to send voice and text messages to staff at MPD's head office.

Automatic roaming allows the radios to select the best signal available, without requiring users to manually tune their radios, so they can enjoy high quality communications at all times.

MPD Congo is using the TRBONet client-server software application to enhance dispatch by facilitating the monitoring of large amounts of traffic on the network. The locations of vehicles and staff across the site are mapped on large screens set up in control rooms at the exploration site and head office. Multiple work groups can be linked at the touch of a button – an important feature for emergency situations. TRBONet also enables the recording of voice conversations and the storage of GPS data such as vehicle location, speed and route. This data can then be transmitted in real time across the point-to-point wireless links.

THE BENEFIT

The robust network has reduced MPD Congo's dependency on intermittent GSM communications and provided consistent voice, SMS and GPS communications to enhance the management of its ore exploration operations and ensure staff safety.

Solar power generators offer an economical and energy-efficient solution that is environmentally friendly, harnessing natural resources to provide the required infrastructure.

Being able to track the exact location of trucks carrying iron ore and supplies along the 500 kilometres of road between the sites has greatly improved dispatch efficiency and enabled a quicker response to break downs and emergencies.

In addition, cost savings have been realised through the ability to use the PTP wireless bridges for internet access, instead of expensive satellite links and travel costs have been reduced by using video conferencing for meetings.



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