

Voice and Data Communications



Underground Voice and Data Communication to improve productivity

Newmont Gold's Leeville underground gold mine in Nevada, USA, identified that it could boost output and productivity by improving underground voice and data communication and tracking the movement and location of vehicles and personnel.

Business Challenge

Enabling these applications required a new underground communication network, which would integrate with the existing Cisco-based surface network to provide connection to administration, production, maintenance and IT.

Solution

The mine chose MST's Impact Wireless Network, which integrated with the Cisco system and provided underground with high speed fibre connections, PoE, Ethernet and Wi-Fi. It was specifically designed for underground deployment, taking into account the power constraints, and node interconnection and location. A key element of the network was MST's NS50 wireless network switch, which distributed power and was the multi-port fibre switch, tag-reader, and Wi-Fi hot-spot.

48 NS50's linked with composite fibre and power cable, provided multiple connections at key locations with a high degree of redundancy. The NS50 is a managed switch, supporting technologies like VLAN and QoS, to segregate and prioritise applications using the same infrastructure.

The NS50's linked and powered 40 MST Wireless Access Points to extend the wireless coverage. By connecting to the WAP's via Power over Ethernet (PoE) it eliminated the need for fibre connections and so significantly reduced installation and maintenance costs.

BUSINESS BENEFITS

- Voice & data communications boosted productivity
- Improved vehicle efficiency and traffic management by tracking their movements
- Continually improve productivity and safety by tracking the movements of personnel
- Laptop and tablet access to operational and planning systems, and documentation libraries improved morale and productivity

Results

- VoIP (Voice over Internet Protocol) for person-to-person calls; underground-to-underground, and underground-to-surface.
- Wi-Fi tag tracking of location and movement of 400 personnel and 65 vehicles,
- Underground use of laptops by geology and engineering personnel,
- Shift bosses and foreman used Dell Windows 8 tablets to monitor production,
- Maintenance personnel used the tablets to access SAP work-orders and documents like MSDS's, service manuals and maintenance schedules.

For more information, contact us by email on enquiries@mstglobal.com
or visit our website at www.mstglobal.com

