DATASAT COMMUNICATIONS

Moving beyond surveillance for African mine site

Video surveillance has a pivotal role to play within asset protection as well as health and safety for remote mine operations. Surveillance networks need to be rapidly deployed along many kilometres around the site perimeter.

The mine owner must protect against the illegal removal of assets and raw materials from the site as well as unauthorised personnel entering the mine area. Even with security fencing around the perimeter, effective video surveillance is the only way to ensure security personnel are immediately aware of unusual activity around the mine perimeter.

The Challenge

Datasat Communications was commissioned by G4S, the international security company, to install wireless CCTV nodes at three sites around a mine in West Africa. The surveillance network was to be managed remotely from a central control centre at another site several kilometres from the mine operations.

As well as delivering high quality surveillance to the central control centre, the same footage had to be accessible to security personnel on-site. To achieve this, secure access had to be granted to the surveillance system anywhere on the network - via laptops and tablet devices. The mine owner required that staff be able to access the network in transit to make on-site security as responsive as possible.

› Key Benefits

- Design, build and installation of network within tight timescales

- Highly robust and secure wireless network infrastructure

- Network flexibly extended to include new Access Control system

- Card Reader and Fingerprint Recognition require always-on high bandwidth connectivity

- Segregated access for mine personnel, contractors and visitors

- Video surveillance management and storage delivered via Datasat video servers

- Internet access delivered throughout the mine site

- Satellite backhaul to UK headquarters

- Wireless infrastructure pre-built and tested to ensure quick and effective network roll-out

> "Wireless infrastructure is an excellent and cost-effective solution to add connectivity quickly to remote mining locations. The Datasat network has given us another benefit. It is very, very flexible. We found its ability to allow us to add a completely new and unspecified service to the network, at almost no cost, very impressive. Datasat Communications brings a high level of quality to everything they do. The wireless infrastructure had been pre-built and tested so on-site roll-out was very straightforward."
>
> JC Grobbelaar, Director of Security Solutions, G4S

The Solution

Datasat designed a wireless network infrastructure based on the Datasat QuadraFlex range of wireless equipment. QuadraFlex wireless devices deliver high throughput up to 1.2Gbps. Their multi-radio configurations allow for multiple communications services to operate seamlessly and securely over a single infrastructure.

In addition, all Datasat wireless equipment is based on an innovative IP Layer 3 architecture. This enables advanced traffic management and bandwidth allocation that allows intelligence to be placed at the network's edge. This infrastructure overcomes the latency and interference issues that affect many wireless networks. Layer 3 management allows fewer wireless devices to be used within the network and uses QoS-based policies to priorise network services down to individual user level.

The functionality and capacity of the surveillance network showed the mine owner that it could run its new Access Control system over the same infrastructure. With card reader facilities and advanced fingertip biometrics, the Access Control system needed to be constantly-on to allow for real-time authentication. In addition, the network had to be able to handle the 'bursty' nature of video surveillance traffic - prioritising the video data when it needed transmitting.

The Datasat network was able to be quickly redesigned and implemented to accommodate the Access Control functionality.

The Outcome

The network was rolled out within a tight timeframe to provide video surveillance across the three key sites. In addition, the Access Control system was integrated into the network at virtually no extra expense to the project. To emphasise the multi-service nature of the wireless network, the infrastructure was also able to deliver Internet access across the mine operations.

While wireless was used for on-site connectivity, the network was implemented Satellite Backhaul to connect on-site infrastructure securely and reliably with the central control room as well as the mine owner's headquarters based in the UK.

As well as global connectivity from anywhere in the world, the infrastructure allowed security personnel to access video surveillance anywhere on the network - via their mobile device of choice.

Contact us today with your communications requirements on **+44 (0)1707 665 320** or email us at **sales@datasat.com**

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