



Case Study: Macarthur Minerals

A unique network design simultaneously supporting corporate and welfare interests and managed with Acceleration & QoS technology

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Background

Macarthur Minerals Limited is an Iron Ore Exploration company, operating in Western Australia. With a remote exploration camp, located 240km North West of Kalgoorlie and no access to terrestrial communication, satellite connectivity is the only solution available to drive daily corporate and welfare communications.



Challenge

Macarthur Minerals' previous communication infrastructure was based on a Ku-Band platform (being subject to rain fade); was heavily contended with no bandwidth management and lacked the worker welfare component.

In this environment, Macarthur Minerals' corporate communication challenge was three-fold. They had to ensure that their mission-critical application delivery was never compromised; worker welfare adequately supported and application traffic was served with sufficient bandwidth capacity (to meet current and future demand).

What was needed in this situation is a network service, providing a dedicated pool of bandwidth, which would simultaneously support corporate and welfare traffic. In addition, bandwidth management was required to make the best use of the satellite link and allow for bandwidth-demanding welfare applications without compromising corporate traffic.

Snapshot

Customer: Macarthur Minerals

Industry: Iron Ore Exploration

Requirements

Network service, providing a dedicated bandwidth pool which simultaneously support corporate and welfare traffic

Bandwidth management to support both traffic tunnels without compromising one another

Solution

Pactel's network design allows for direct connectivity to Macarthur Mineral's headquarters in Brisbane while the welfare traffic for miners goes directly to the internet. Miner devices are supported via wireless coverage using a flexible portal with user login control. QoS & WAN Acceleration technology is applied to optimise the satellite link.

Results

A completely managed, end-to-end solution that would balance the corporate needs and personal needs of workers living on site – all with managed bandwidth consumption.

Trends Affecting Today's Bandwidth Consumption

With the advent of more video and cloud-based applications coming online every day, the amount of rich media traffic crossing any corporate network is rapidly increasing. As an example, YouTube went from 100 million views per day in 2006 to 2 billion views a day in 2010 (website-monitoring.com).

According to Gartner research, the movement toward user-supplied and owned (also known as smart – author's note) devices is a key driver for excessive bandwidth consumption in remote areas for many companies.

In addition, welfare networks are becoming more common amongst remote operations during long deployment, resulting in large amounts of recreational traffic, such as Skype and Social Media platforms passing through the network.

Solution

Network Design

In April 2012, Pactel International deployed an end-to-end managed satellite service, which would meet both the business needs of Macarthur Minerals and the personal needs of its staff living on site.

Based on one of Pactel's corporate C-Band platforms, the service supports simultaneous, but separated, corporate voice and data applications and recreational traffic.

The design of the network allows for direct connectivity to Macarthur Mineral's headquarters in Brisbane while the welfare traffic for miners goes directly to the internet. Miner (smart) devices are supported via wireless coverage distributed throughout the camp and managed using a flexible portal with user login control.

Bandwidth Management

Pactel's engineers adopted the latest Quality of Service (QoS) technology to prioritise voice telephony and corporate data over personal traffic. The QoS component ensures that Macarthur's day-to-day work and communication remain uninterrupted by the worker welfare traffic that is able to use remaining satellite capacity.

In addition, Pactel International deployed WAN Acceleration technology with a separate acceleration platform supporting each tunnel to ensure that all applications are continuously optimised and sufficient bandwidth reserves are available to meet future needs.

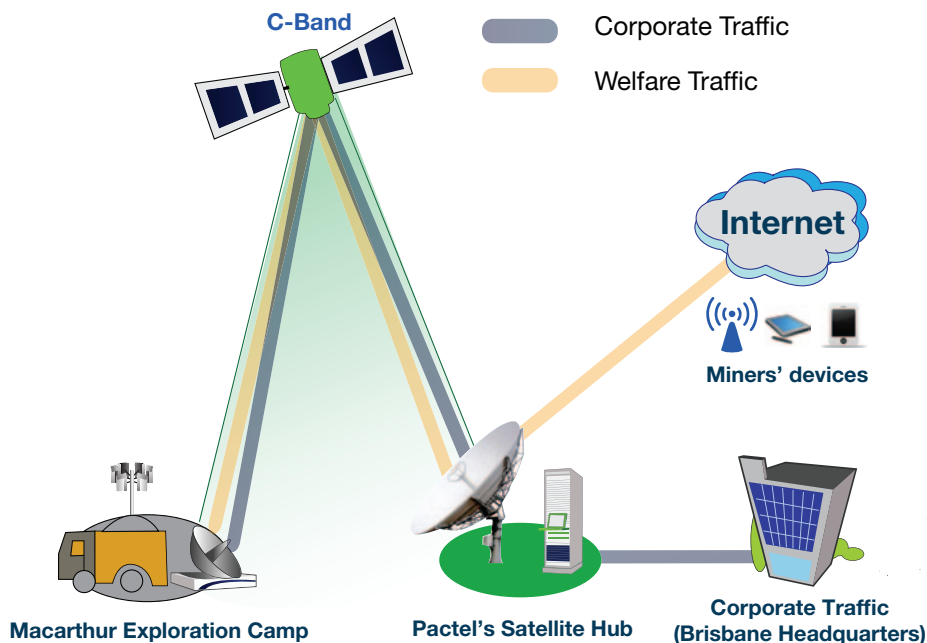
Service Features

Using the latest technology and Pactel's proven experience and expertise, the service offers:

- Guaranteed bandwidth availability to corporate data
- Support of all workers personal (smart) devices
- TIER 1 Voice platform, ensuring exceptional voice quality and low latency
- Maximised network uptime due to no rain fade effect on a C-Band platform
- 24/7 Remote Network monitoring
- World-class service and ticket handling system
- Accelerated user experience, mitigating the effect of satellite latency

"Setting up separate paths across our backbone to handle corporate data while providing direct access to the Internet for on-site workers helps keep them in touch with friends and family, and improves their quality of life during deployment"

Dr Lloyd Wood, Engineering Manager for Pactel International



Results

Pactel met all customer expectations by developing a managed solution that would balance the corporate needs and personal needs of workers living on site– all with managed bandwidth consumption. As a result, Macarthur Minerals’ management and staff can now enjoy the following benefits:

- Uncompromised corporate application delivery achieved by bandwidth allocation and QoS
- Improved worker retention ratio due to enhanced communication quality between workers and their families
- Total network flexibility to accommodate for future priorities, number of users and devices.
- Overall operational efficiency due to reliable communications infrastructure and cost-effective approach to bandwidth management .

As for Pactel International this project helped strengthen the company position as a market leader in providing completely managed and value-added satellite communications services for the resource industry.

Steffen Holzt, Director of Pactel commented: “We are extremely proud of supplying a fully customised, integrated network that worked so well for our customer. Projects like these are Pactel’s future – thanks to the customers like Macarthur Minerals who appreciate our value add.”



“We are grateful to Pactel’s engineering team for designing a well-balanced service, allowing us to consistently maintain daily site operations and keep our workers content – all without putting a strain on available bandwidth”.

Suzy Phillips, Corporate Services Manager
Macarthur Minerals

About Pactel International

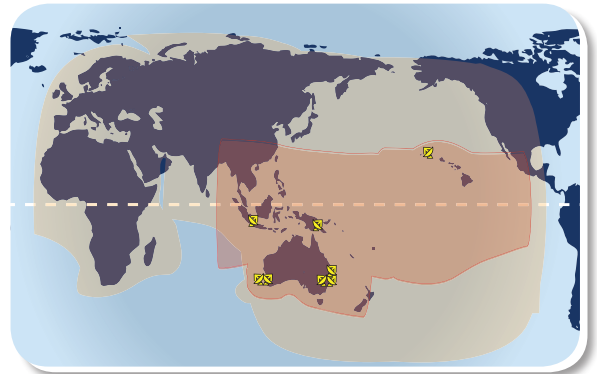
Founded in 2003, Pactel International is an Australian-owned global satellite communications provider, supplying connectivity across all areas of the Asia-Pacific region.

Our offerings range from commercial and corporate to carrier-grade networks that support services such as Internet, Private WAN, Telephony and Voice and Mobile GSM.

The company competitive advantage is highlighted through complete service customisation; 24x7 network monitoring and customer support; and superior quality and reliability of service and equipment during harsh environments and extreme weather conditions of the Asia-Pacific Region.

Pactel's primary mission is to provide remotely-based businesses and communities with peace of mind by keeping them connected: constantly, reliably and efficiently. Accordingly, we are committed to providing a communication infrastructure that reflects the diversity of our end-user requirements: from small businesses to resource sector through to resellers and wholesalers.

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About Macarthur Minerals Limited

Macarthur Minerals Limited is an Australian based resource development company currently focused on developing its Ularring Hematite Project, located in the Yilgarn iron ore district in Western Australia. The Ularring Hematite Project is located 110 km from rail infrastructure with a direct connection to the iron ore exporting Port of Esperance, Western Australia.

The Ularring Hematite Project has an indicated Mineral Resource of 54.46 Mt at 47.2% Fe and an inferred Mineral Resource of 25.99 Mt at 45.4% Fe (press release dated June 14, 2012; NI43-101 Technical Report dated June 29, 2012). In addition, Macarthur's Moonshine Magnetite Project has an inferred Mineral Resource of 1.3 Bt at 30.1% Fe (press release dated December 15, 2010; NI43-101 Technical Report dated March 25, 2011).

A Positive Preliminary Feasibility Study was released to the market on the Ularring Hematite Project in August 2012, which included a probable Mineral Reserve of 42.95 Mt at 47% Fe (press release dated August 16, 2012; Technical Report to be filed by September 30, 2012). A Positive Preliminary Economic Assessment on the Moonshine Magnetite Project was released in February 2011 (press release dated February 7, 2011, Technical Report dated March 25 2011).

For more information visit www.macarthurminerals.com

