

Case Study

Denver Technology 

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LASER Optical Wireless Network Link Coogee Resources

Client Profile

Coogee Resources Limited is an Australian oil and gas company with production, development and exploration assets in the Bonaparte Basin, located in the Australian waters of the Timor Sea.

The Company's portfolio of assets includes the producing Jabiru and Challis oil fields, the Montara, Skua and Swift/Swallow oil fields to be developed, and an extensive exploration portfolio of prospects and leads in the region.

Over the longer term, the Company also plans to explore the prospect of a potential floating gas to liquids methanol production facility to commercialise offshore stranded gas assets.

For further information about Coogee Resources, please visit www.coogeerresources.com.au.

Business Situation

With unprecedented growth in 2006, Coogee Resources recognised the inability of its headquarters in West Perth to accommodate further increases in staff levels.

Keen to remain in West Perth, but aware that larger premises would prove difficult to find and attract a significant premium, Coogee Resources resolved to lease a second office in close proximity to its existing headquarters, with a view to extending its corporate voice and data network to link the two metropolitan sites.

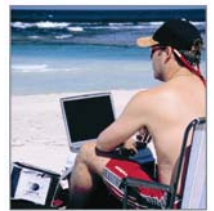
Challenge

Denver Technology was invited to propose an appropriate office connectivity solution, having delivered a range of successful IT infrastructure projects and technical support services to Coogee Resources since April 2006 (e.g. Check Point® FireWall-1, Cisco® CallManager IP Telephony, and Packeteer® iShared™ implementations).

Coogee Resources required a simple, fast, secure, reliable and cost effective connectivity solution capable of seamlessly linking its West Perth offices in a timely manner, following the signing of a rental agreement for suitable premises.

Denver recognised that successfully delivering an effective solution would necessitate:

- Accommodating the impact of any delay in acquiring a suitable West Perth premises.
- Designing the most appropriate connectivity solution from the technology options available.
- Coordinating the timely acquisition and delivery of link infrastructure components, inclusive of any custom design/manufacturing.
- Liaising with building management and regulatory authorities for approval and access to install network infrastructure and equipment.
- Managing the physical installation of network infrastructure (e.g. power and/or data cabling, masts/mounts, racks, switches/routers, etc) in accordance with customer policies, building management guidelines, HSE and other regulatory compliance requirements.
- Ensuring seamless integration with the existing corporate voice and data network.
- Implementing a network infrastructure management system to accommodate remote monitoring of the link status for capacity planning and troubleshooting.



Solution

Since building proximity and topography afforded direct line of sight for LASER operations, Denver proposed installing a point to point 1.25Gbps full duplex LightPointe® FlightStrata™ G optical wireless link to interconnect Coogee Resources' West Perth premises. This solution delivered the speed of fibre with the flexibility of wireless, and could be quickly, efficiently and seamlessly integrated with existing network infrastructure.

Denver's scope of work included project management, requirements determination, solution design/architecture, procurement and logistics, implementation, testing, commissioning and support.

In December 2006, Denver configured a pair of Cisco switches to deliver LAN backbone connectivity via a private VLAN, implemented Quality of Service (QoS) for IP telephony, and engaged specialist subcontractors to install the LASER link heads on the building rooftops (*inclusive of 240VAC single phase power and four core multimode fibre cabling terminated in the communications rack at each site*) for immediate site to site connectivity.

Subsequently, Denver undertook installation and configuration of software and hardware to accommodate remote link status monitoring in January 2007.

Benefits Achieved

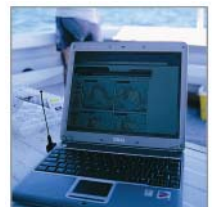
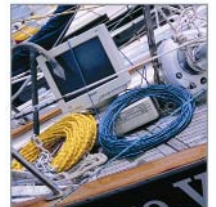
The optical wireless link implemented by Denver Technology to connect the two West Perth offices of Coogee Resources exceeded customer expectations, and delivered the following benefits:

- **Rapid Installation and Configuration**
(installation/mounting and alignment of the LASER link heads required only 2 days, including overnight shipment from Adelaide to replace a defective unit, and delivered immediate network connectivity)
- **High Operational Reliability**
(the quad beam/multi receiver link heads provide redundancy, feature auto tracking to compensate for normal building sway/vibrations, and have remained unaffected by adverse weather conditions, with no loss of connectivity in four months of operation)
- **Excellent Performance and Scalability**
(at 1.25Gbps full duplex, link capacity exceeded operational requirements, precluding the need to implement bandwidth management solutions beyond basic Cisco switch configuration to prioritise voice traffic for quality of service)
- **Seamless Network Integration**
(LAN backbone connectivity enabled staff at both West Perth offices to share a common network experience, with timely and transparent access to corporate information systems and services inclusive of Internet access and IP telephony)
- **Cost Effective**
(the use of optical wireless technology helped avoid expensive leased/dedicated lines, spectrum licensing fees and associated regulatory compliance costs)
- **Secure Voice and Data Communications**
(mounted in a restricted area atop each building for secure line of sight connectivity, the link is immune to EMI/RF interference, employs very narrow beams of invisible light pulses making detection/interception of point to point transmissions virtually impossible, and supports FIPS 140-02 cryptography standards)

Following the success of this project, Coogee Resources invited Denver to investigate adding a radio link between its West Perth offices as a backup/failover initiative for greater redundancy.

"Denver Technology's optical wireless solution has been a triumph: cost-effectively delivering the speed, security and reliability we thought we'd only achieve by laying fibre between our buildings."

Richard Oosterman
ICT Manager
Coogee Resources Limited



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