

Case Study

Alcan Engineering: savings and efficiencies with NEC and IP

The sharp increase of more than 500 employees for its work on the Alcan Gove alumina refinery expansion had an unexpected impact on Alcan Engineering and its telephony system. The solution came in the form of NEC Internet Protocol (IP) telephony which brought convenience, flexibility and substantial savings to Alcan.

The Customer

Alcan Engineering is a wholly-owned subsidiary of Alcan and provides engineering and design services to Alcan and other third party clients around the world.

Headquartered in Brisbane, Alcan's Australian interests include the Gove Alumina Refinery in North East Arnhem Land which is undergoing a \$2 billion expansion; a 41.4 percent shareholding in Queensland Alumina Limited (QAL) in Gladstone and 51.5 percent ownership in the Tomago Aluminium Smelter, in New South Wales. It has offices in Sydney and Gladstone, and a new packaging facility is to be established in Adelaide.

Overall Alcan is a multinational, market-driven company and a global leader in aluminium and packaging, as well as aluminium recycling.



David Frazer

Information Technology and
Communication Manager

Alcan Engineering

The Problem

Alcan Engineering, which plays a key role in the Alcan Gove's alumina refinery expansion, was faced with the reality of accommodating almost 500 additional employees in Alcan's Brisbane headquarters.

The existing telephony system had to be expanded quickly, and for Alcan Engineering's Information Technology and Communications Manager, David Frazer, the logical answer was Voice over IP.

Frazer said the existing telephony system was ageing and could not meet the demands of so many new staff.

"We needed a flexible telephony solution which was fully scalable and delivered real cost saving," Frazer said.

"In addition, we wanted to build on our existing telephone infrastructure."

Alcan Engineering was working from a basic analogue telephony system – a Fujitsu 9600 with analogue tie lines linking the Brisbane office to a Cisco Call Manager System at Gove – which was originally designed to support around 250 staff.

"Our team faced the problem of being unable to easily expand the existing PABX. We had not anticipated a growth of 500 staff, so scalability to this level was never built into the original system."

"The staff were also spread over two buildings in Brisbane's CBD which made it difficult to sustain phone numbers and ensure continuity."

"Alcan Engineering needed a flexible telephony solution which was fully scalable and delivered real cost savings."

The Solution

Alcan Engineering needed a solution where the existing analogue extensions could still be maintained and used, while undertaking a process of migrating over the solution to VoIP.

Critically, the solution had to seamlessly integrate with an existing Cisco system at Gove.

Frazer said the team had to determine if it would simply install a Cisco solution, or look for a wider solution to all of Alcan's needs.

He said it was NEC's proven reputation and ability to work with other manufacturers' equipment which was a deciding factor in choosing to work with them.

Frazer worked closely with local NEC channel partner, Xerox Business Centre (XBC) and visited NEC Business Solutions' head office in Melbourne for a full demonstration of the IP solution in action.

XBC's Voice Network Specialist, Paula Sully, explained why NEC's VoIP system was the best solution for Alcan.

"NEC's centralised VoIP system easily integrates any combination of traditional and IP equipment, which suited Alcan's requirements," she said.

"It's also scalable, highly flexible and has the ability to grow with Alcan, as they move additional remote sites onto the network."

Alcan's new system comprises an NEC IPS (Internet Protocol Server) 2000 voice server installed at the Queen Street Third Stage Expansion



David Frazer and XBC's Voice Network Specialist, Paula Sully discuss the implementation.

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project office, with 600 IP D-term handsets and 32 analogue extensions.

At Alcan Engineering in Charlotte Street, another NEC IPS 2000 voice server was also installed, maintaining the existing 250 analogue extensions, while adding five IP D-term handsets and the NEC softphone solution.

Alcan also needed to ensure IP connectivity at Gladstone, a key business site for Alcan in central Queensland. So a remote distributed module, the NEC IPS-DMR was installed in Gladstone, to run off the Charlotte Street IPS voice server. Another IPS-DMR will be installed at Alcan's Adelaide packaging facility.

The new VoIP solution uses the current WAN infrastructure at Gove and is fully integrated with the existing Cisco Call Manager system. A centralised operator using Performance Solutions vision software provides a graphical interface to the voice servers and Lotus Notes. This also ensures ease of administration and maintenance.



“Employees moving between different sites can easily work by plugging into the nearest data point.”

The Benefits

In an implementation process that saw 500 extensions installed in just three days, the company is now around 75 percent VoIP. As the project grows, the existing analogue lines will be dropped in favour of IP.

Frazer expects the benefits and savings to be immediate and substantial.

“Operating, administration and maintenance costs will be reduced by simplifying moves, additions and changes,” Frazer said. “Employees moving between different Alcan sites can easily work by plugging in their PC and telephone to the nearest data point. This adds real value to the organisation.”

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“Integration with Lotus Notes provides superior voicemail functionality, and enables staff to view the status of every other person on the network.

“From a cost perspective, the company no longer pays fixed line call rates between Gove, Gladstone and Brisbane. The solution enables least cost call routing, a feature which automatically selects the best and cheapest carrier route available for a call, at any time of day.”

Frazer said Alcan was expecting to save around 75 percent on the cost of its phone calls between Brisbane and Gove alone. “We’re looking at telecommunication savings of around \$100,000 per year which equates to a 35 percent reduction in overall costs.”

The conversion to VoIP has also produced some unexpected benefits. “With VoIP, we’ve laid a great foundation. The voice quality is fantastic, our phone numbers are uniform and we feel connected as a team across the sites.”

Frazer said the success of the VoIP implementation could be attributed to a close working relationship with XBC and NEC. “We’ve partnered with the right people at the right time, and innovation has been delivered.”

Alcan Engineering expects to save around \$100,000 per year, equating to a 35 percent reduction in overall telecommunications costs.

About NEC Business Solutions

NEC Business Solutions Ltd provides voice, data and video solutions for business and government. The company uses its expertise in internet-based telephony, contact centres and managed services, and strong partnerships with other leading companies to creatively and affordably solve business problems.

NEC Business Solutions employs 750 staff nationally, and is a wholly owned subsidiary of NEC Australia.

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