Empowered by Innovation

NEC

NEC technology links communities
City of Albany

Customer
- City of Albany Council

Industry
- Local government

Challenges
- Disparate radio link technologies
- Unreliable and ineffective IT back-up system
- Lack of local support

Solution
- NEC's Pasolink System which is designed to provide short-haul access links, including cellular backhauls with small and medium capacity, and operates over multiple radio frequency bands ranging from seven to 38GHz.

Benefits
- Centralisation of servers and databases
- Greater IT efficiency and server utilisation
- Improved staff productivity
- Reliable back-up system

Applications
- Pasolink Access Radio System

Overview

The City of Albany is a port city located over 390 kilometres south-east of Perth. Its Council delivers a range of vital business and community services, including building, planning, health care, and emergency services to the City's 33,600 residents.

The City of Albany Council has nine premises located across the region, including a head office, leisure centre, day care facility, library, town hall, depot, visitors centre, the Vancouver Arts Centre (VAC) and the Princess Royal Fortress – one of Australia's best outdoor military museums. The City of Albany relies on fast and reliable communication between all of its sites to deliver important services to residents.

Between 2002 and 2009, the Council's IT department conducted an extensive IT and communications network upgrade. To complete the overhaul, it needed to upgrade its radio link network.

NEC communication technology delivers efficiency and productivity gains.

The Challenges

The City of Albany Council was using an array of disparate radio link technologies to support its WAN (Wide Area Network) and link its various remote sites to the main office. The links enabled the remote sites to access business applications and data stored at the Council's data centre housed in its head office. The radio link units had different frequencies and all of the links were unlicensed.

The Council initially deployed 2MBps radio links on Mount Clarence and then later upgraded to 30MBps links. "The 30MBps radio links had worked sufficiently until a number of other companies started putting up unlicensed radio links on Mount Clarence, which caused interference. Lightning was also taking out the links regularly and we were experiencing severe latency issues," said Ian McLoughlin, IT Administrator, City of Albany Council.

The links were going down four times a year and out for three to four days at a time. The Council had no local support and relied on support agents in Perth to restore. As Albany is located nearly 400 kilometres from Perth, this meant a lot of network downtime as they waited for support to arrive.

"We have 25 PCs located at our Mercer Road depot. If the radio link went down, no one was able to work. No one was able to access the applications and data they needed to do their jobs which meant there were significant productivity losses," said Ian.

Further, residents could not access certain Council services at the library, visitors centre and leisure centre when the links went down."Even when the radio links were working, the network was inefficient and slow," said Ian.

In addition, the City of Albany Council did not have a reliable and effective back-up solution. For a town population of 33 600, this was essential.

"Traditionally we had been using a tape back-up solution and the tape was manually taken offsite for security. This was never 100 per cent safe and we never knew if it would work in a disaster recovery situation as on occasions the tape media would degrade after a number of years." said Ian.

To maintain staff productivity and service availability, and to support a robust disaster recovery solution, the City of Albany Council required a new point-to-point wireless solution that was highly reliable, cost effective and enabled high-speed data transmission.

The Solution

The City of Albany Council considered Telstra's MPLS (Multi-Protocol Label Switched) service. According to Ian, each individual Telstra link cost $20,000 a year. This was not a feasible option for the Council as over time it would require nine links to connect nine sites.

The Council also reviewed NEC's Pasolink System which is designed to provide short-haul access links, including cellular backhauls with small and medium capacity, and operates over multiple radio frequency bands ranging from seven to 38GHz.

"NEC's Pasolink solution certainly met our criteria. It was easy to install, economical and scalable," said Ian.

The Council deployed five 150MBps NEC Pasolinks on Mount Clarence, linking its leisure centre, library, depot and visitor centre to the Council's head office.

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>
> **Ian McLoughlin,
> IT Administrator, City of Albany Council**

The Benefits

The City of Albany Council has experienced significant productivity gains since deploying NEC's Pasolink radio link network. "Staff can now access data and applications in a tenth of the time," said Ian.

"Our databases are now stored and managed centrally at the main office. Previously we had to create and manage three different versions of the one database across different locations because the links between the sites were too unreliable.

"Centralisation of our servers and databases has allowed us to achieve greater IT efficiency and server utilisation, as well as reduce the amount of time staff spend managing multiple databases," said Ian.

"Upon implementation, NEC's technician took us through everything we needed to know about the technology and showed us how it worked. We then handed it over to them to manage. NEC jumps on the system every day and ensures everything is operating smoothly.

"There is no interference or latency with NEC's Pasolinks. The branches don't even know now they are on a WAN. It's almost like they are on a Local Area Network (LAN) as the speed and reliability is so excellent," said Ian.

The City of Albany Council now has a reliable back-up system they can trust. This means less downtime should an issue occur and a must faster response time.

"The NEC Pasolink has enabled us to set up a fully functional data recovery site at the leisure centre. Thanks to the speed and bandwidth of the NEC Pasolink we are now able to replicate and backup data every few minutes, from the main office to the DR site at the leisure centre site.

Moving forward, the Council intends to upgrade to 300MBps links, which will create greater bandwidth and transmission speeds that will support Council's increasing data transmission requirements. It also plans to replace another outdated radio link currently connecting the VAC site to the network, as well as deploy additional radio link to the airport and to the new Albany Entertainment Centre.

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> **Ian McLoughlin,**
> **IT Administrator, City of Albany Council**

For more information, visit www.nec.com.au, email contactus@nec.com.au or call 131 632

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