



## Gold Coast Convention Centre shows the way with next-generation Cisco wireless LAN technology

“Cisco showed us their equipment and how it worked, which was just amazing. The technology they deliver, the fact that you can see on a map on a screen where someone is standing in the venue and pinpoint their location, that kind of flexibility for us is awesome. There's no other product out there like it.”

– Nathan Wright, Technology Services Manager, Gold Coast Convention and Exhibition Centre

The \$167 million Gold Coast Convention and Exhibition Centre opened on 29 June 2004. Located in the heart of the Gold Coast, the award-winning convention and exhibition centre features a main arena, exhibition halls and meeting rooms.

Australia's largest regional convention centre can cater for up to 8,000 people at one time, with the main arena holding about 5,500. With more than 3,000 square metres of exhibition space, the convention centre is doubling in size to 6,000 square metres by the end of 2008.

### Business challenge

The Gold Coast Convention Centre used a Telstra Hotspot for wireless connectivity, as well as a cable service to provide conference delegates and visitors with high-speed internet access.

With plans to double the floor space of the convention centre, however, there was a growing imperative to provide people attending the venue with a cheaper, high-quality wireless alternative.

“Originally we did a deal with Telstra that let the telco set up its first Hotspot on the Gold Coast,” says Nathan Wright, Technology Services Manager, Gold Coast Convention Centre.

“Back then public WiFi was relatively new. Demand for WiFi has since grown dramatically. Given our scale and the type of venue we are, it was crucial we had infrastructure in place that could offer a first-rate high-speed wireless network, but was able to accommodate 1,000 concurrent users simultaneously.”

The problem was the Telstra Hotspot struggled to cope with large numbers of users at once. It became too slow and wasn't sufficiently cheap. Use of the Telstra service had also fallen because an increasing number of executives owned corporate Next G wireless network cards.

“The sort of core market we were targeting was not so much your high-end business traveller, but rather your mid-range delegate who came with a laptop but not a company-paid wireless networking card,” says Wright.

### Solution

Cisco introduced wireless solutions expert CBO to the Gold Coast Convention Centre. After reviewing the centre's requirements, CBO saw a prime opportunity to introduce Cisco's next-generation 802.11n wireless LAN technology.

“The convention centre immediately saw the advantages of adopting Cisco's new wireless LAN technology,” says Mark McGregor, Managing Director, CBO. “It significantly boosted throughput speeds and provided future-proofing. Instead of a maximum data rate of 54Mbps, the new technology was able to achieve a top rate of 300Mbps immediately and up to 600Mbps with future product revisions.

"It was a real statement about the Gold Coast Convention Centre's confidence in Cisco because at the time the product was so new it still hadn't been released onto the market. The convention centre was the first in Australia to implement this technology."

Working closely with Cisco, CBO put together a predictive plan using software modelling from software provider Airmagnet to work out, among other things, where to best position the wireless access points.

"It was important we collaborated with Cisco's business and technical teams, as well as Airmagnet, to make sure the solution was both real and viable and met Cisco's wireless design guide," says McGregor.

CBO recommended 56 Cisco Aironet 1252 Access Points, supported by new multiple-input multiple-output (MIMO) antenna for the 802.11n technology and 4402 Wireless LAN Controller equipment. It also integrated Cisco's Aironet Power Injector 4 to power the multiple radios inside each Access Point.

"It was a great team effort given the challenges of working with an entirely new technology and solution," says McGregor. "It was a testament also to the reliability of Cisco infrastructure that ensured everything went so smoothly to plan."

## Results

### Fast, reliable service to clients

The Cisco wireless network enables delegates and visitors to access their emails and the web anywhere on the convention centre site quickly and at a reasonable cost.

"It's expected that a venue of our size and calibre offers reliable wireless internet," Wright says, "without being tied to whatever bandwidth a provider chooses to give us and at whatever exorbitant fee they want to charge."

"Being able to extend our broadband offering to include wireless is hugely beneficial to large conferences where organisers prefer to set up their own V-LANs. As well, the ability to host 1000 users at once means we can handle large technology shows without the organisers worrying about dragging in their own infrastructure."

McGregor says the 802.11n network not only can handle a greater load of users at once, but more importantly the much higher data throughput means centre delegates will have easy access to content-rich sites and bandwidth-hungry applications like video.

### Greater security

According to McGregor, one of the key aspects of the Cisco solution is the high level of security that is offered.

"At the heart of this is the Cisco Wireless LAN Controller, which is responsible for security policies, intrusion prevention, radio frequency management, quality of service and mobility. You're not going to get that from vendors that sell solutions out of the box," he explains. "With the LAN controller on board, there's no need to buy additional devices. And because security is an essential part of all Cisco solutions, it makes the job of deployment and implementation a lot simpler."

### New revenue stream

The Cisco wireless solution adds an additional revenue stream to the Gold Coast Convention Centre's already profitable cable service.

"As a business model, wireless is going to be more suited to short-term users who need an hour here or there and are happy to be charged at a flat rate," explains Wright. "Whereas if you're wanting access for an extended period, say a few days or the duration of a trade show, the cable solution is likely to be more affordable."

Under the wireless network model, users are redirected to a payment gateway where they purchase a prepaid card or pay by credit card. Wright adds that for a big annual technology

show, for instance, organisers can negotiate a bulk deal that provides delegates or visitors with free wireless access.

### Greater support to vital back-of-house systems

The convention centre sets up a range of food and beverage outlets, such as bars, coffee shops and outside BBQ areas, for delegates and visitors attending events.

Importantly, the structure of the Cisco solution enables the convention centre to create networks for the back-of-house systems, such as point-of-sale machines, that are needed for these outlets.

"With wireless, all you need is power for the till or cash register. You're not restricted to finding a particular port on the V-LAN to patch a cash machine into," says Wright. "With wireless, there's simply less physical work involved and more flexibility."

Wright adds the centre is also looking at equipping waiting certain staff in the future with PDAs so they can take orders from the floor and, using the Cisco network, wirelessly relay the information to the kitchen. "With large corporate dinners, staff can put orders through from the table, access payment details ... in short, be more efficient."

Maintenance staff armed with tablet PCs will also be freed up. Wherever they are in the venue, they'll be able to remotely control infrastructure on the network, such as air conditioning and lighting.

"Any system that is computer-controlled that staff can't get to unless they're at a dedicated point will be accessed from anywhere in the venue. It improves the efficiency of maintenance staff enormously," says Wright.

### Future applications

Wright sees future uses with such applications as asset tagging. "I like the idea of fixing RFID chips to certain important assets, so you can track where they are in the building," he says.

"Float bags for the cash registers, for instance, keys, sensitive items like that, where it's important we can locate them immediately. It's just one of those great uses that extend the benefits of the Cisco network, which goes beyond what we originally wanted from it."

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