



## **Classrooms of the future**

New lecture theatres get state-of-the-art technology thanks to ADC KRONE cabling.

### CASE STUDY

#### **CHALLENGE**

When UQ decided to build a brand new, state-of-the-art building to house lecture theatres, one of the project goals was to install the fastest, most reliable and cost effective network possible. They wanted a high-density, enhanced Category 6 copper solution that could be easily installed and provide the data rates for years to come. They also wanted to ensure the system could be easily managed.

#### **STRATEGY**

UQ chose ADC KRONE's TrueNet Category 6 solution because it was a proven product with ease of parts, ease of service, one point of contact and a 25-year warranty.

#### **RESULTS**

Following a smooth installation, the new building had a high quality structured cabling system, which has lessened the risk and complexity of changes. They updated standards have made it easier for UQ to manage voice, data and video services. UQ can achieve 10 Gigabit Ethernet over short distances now, and can attain dynamic network requirements effortlessly. The results exceeded UQ's expectations.



## New building

As one of Australia's most respected universities, The University of Queensland (UQ) devotes considerable funds and resources to ensuring its students have the most productive learning environment possible. When UQ decided to build a brand new, state-of-the-art building to house lecture theatres, one of the project goals was to install the fastest, most reliable and cost effective network possible.

UQ's cabling communications project manager Mike Rawle explains: "We wanted a high-density, enhanced Category 6 copper solution that could be easily installed and provide the data rates required for years to come," he said. "We also wanted to ensure that the cabling system could be easily managed. We did not want to revert to old, outdated standards that would cause more trouble and waste valuable resources to manage.

"We began by looking at all the issues we currently observe in our existing designs and discussed ways of making them right in the new building," he added.

The new system would need to not only provide the speed and bandwidth required for today's application and technologies – including Voice over Internet Protocol (VoIP) and 802.11n – but also to remain organised and manageable for years to come.

"The solution needed to be more dynamic and responsive to individual requirements than previous systems," said Mike. "We had to consider the current and future needs of each student and provide a flexible design that could handle new applications and be reactive to market dynamics – at the right speeds – while still ensuring a feasible cost equation. It was a complex set of requirements and we needed a cabling partner that could deliver."

## Solution an easy choice

UQ's St Lucia campus, where the new building is located, is designated an ADC KRONE site so as to meet plans and specifications for at least the next decade. The decision regarding which cabling

vendor to partner with was therefore easy for Mike and his team.

"With ADC KRONE we get a proven product with ease of parts, ease of service, one point of contact, and we know that everything will work well with everything else," said Mike. "ADC KRONE's 25-year warranty also provides real peace of mind."

UQ chose ADC KRONE's TrueNet Category 6 structured cabling solution to be installed by ADC KRONE-certified integrator SDF Electrical. The solution comprises ADC and ADC KRONE products including cable, connectivity and cable management. ADC KRONE's Category 6 solution exceeds Class E channel specifications and maximises throughput, providing headroom for future technologies operating beyond one Gigabit. ADC KRONE singlemode and multimode fibre were also incorporated for incoming services and internal connection between floors. This ensures the network is ready for any future requirements.



## Flexibility, smooth rollout and easy management

The new building houses several modern lecture theatres. Level One in particular houses the Advanced Concept Teaching Space (UQ ACTS), which is fitted out with leading edge technologies including systems that integrate with iPods and mobile phones, as well as individual touch screens for students. These enable students to move through lecture slides at their own pace, type questions to the lecturer and access the automated translation services plus other services that make the lecture experience more flexible.

Each touch screen has a one Gigabit connection back to the access layer hardware. The four 45RU data racks that house the network hardware and ADC KRONE services to produce these results are visible to any student who enters the teaching space, so tidiness was a major goal for the project. SDF Electrical accomplished this through attention to detail within the racks plus tidiness in cabling, custom labelling and records.

Twelve months after the original project specification was determined, the installation was complete. It was a smooth installation thanks to SDF Electrical and UQ engineer Robbie Ruzicka.

“Robbie configured the Cisco switches and helped install them in the data rooms on all six levels of the building,” says Mike. “His network design and input really tied the whole thing together and made it work flawlessly.”

“Our project work had to coincide with the overall building progress,” elaborates Mike. “A lot of effective communication between contractors and other various trades had to take place, but it worked well. We didn’t encounter any major challenges along the way. The overall network and cabling design went ahead as planned due to first class work practices by SDF Electrical and thanks to the professional service provided by the project’s supervisor, John Smithers. Ongoing communications between UQ Networks and the various building contractors allowed a stress free and very smooth network rollout.”

Once the building and cabling were complete, UQ workers (and students) moved from an old



### CUSTOMER PROFILE

#### The University of Queensland

- The University of Queensland (UQ) was founded in 1909 by an Act of Parliament, making it the oldest university in Queensland.
- UQ currently has approximately 38,000 students from more than 113 countries.
- Its 5661 staff members include 2408 academic and 3253 general staff. It has 14 libraries with more than 2.5 million volumes.
- The University is housed in 774 buildings covering more than 470 square metres and holding more than 18,000 computers (including supercomputers).
- UQ is renowned internationally for the quality of its teaching and research and its graduates have a strong record of success in attaining employment and income levels well above average.



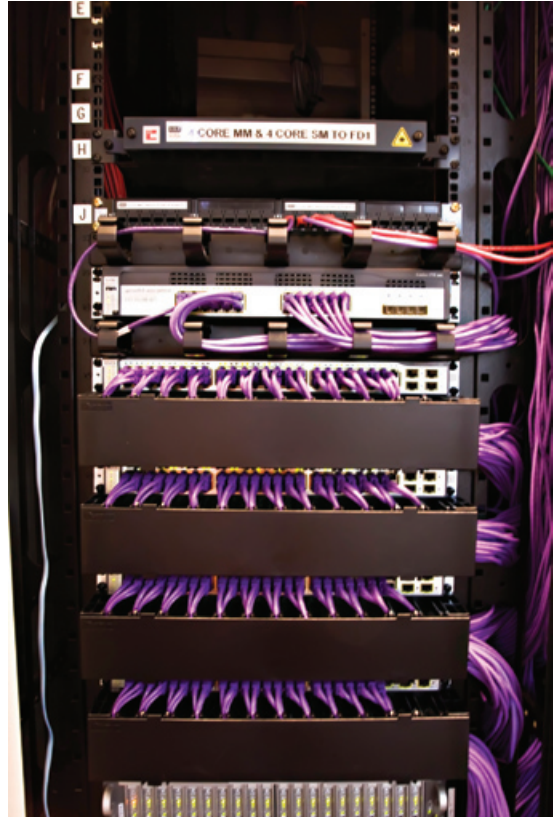
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building with an outdated cabling design into a brand new building with a high quality, structured cabling system. With regular upgrades within UQ's network, structured cabling has lessened the risk and complexity associated with changes. The updated standards have made it easier for UQ to manage voice, data and video services.

"It's much easier to manage the physical layer of the network now and we can complete client change requests more efficiently," said Mike. "The newer cabling design and final tests indicate that 10 Gigabit Ethernet is also achievable over short distances in this network, which allows future planning and network expansion. We can attain dynamic network requirements effortlessly now."

The results of the project were immediate and exceeded UQ's expectations. The University saved time and money by not having to follow up on poor cabling results and bad cabling practices and there were no disruptions during installation. Testing and results all met with UQ Networks' requirements. Because there were no service issues during this project, SDF Electrical and UQ Networks were able to work within budgetary constraints and save hours, leaving them free to work on other, smaller projects at the same time within the St Lucia campus.



"We will definitely save time and money in the future thanks to the systems that we put in place here," said Mike. "Because ADC KRONE cabling specifications comply with our current standards, we plan to utilise this system within the St Lucia campus as part of our extensive network upgrade over the next few years. The solutions provided by ADC KRONE will help improve the cabled physical layer security, management and troubleshooting as well as minimise downtime."

## CASE STUDY



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