



## QML achieves network transplant with ADC KRONE

### CASE STUDY

#### CHALLENGE

One of Brisbane's leading pathology practices, QML Pathology consolidated its geographically dispersed laboratories into one main building, providing an opportunity to install a completely new network. QML Pathology wanted to move to a Voice over Internet Protocol (VoIP) environment. They also wanted a high density patching arrangement to continue to allow patching by exception.

#### STRATEGY

ADC KRONE's HighBand® 25 system with Category 6 cabling plus an OM3 fibre backbone was perfect for the new site. ADC KRONE's HighBand 25 cross connect solution provides the Patch-by-Exception functionality required by QML Pathology. The Category 6 cabling is essential for advanced networks like QML Pathology's. The laser-optimised OM3 fibre backbone enables information to travel long distances without errors, thus maximising bandwidth.

#### RESULTS

The installation achieved QML Pathology's number one goal: reliability. The network is now VoIP-enabled, saving on communications expenses and ensuring the network is future-proofed. QML Pathology will also be able to implement Wide Area VoIP in the future, although it's not yet needed.



Paul Abel, QML and Brett Nash, KLM test the new technology.

## CASE STUDY

Queensland Medical Laboratory (QML) is one of Brisbane's leading pathology practices, employing more than 2000 staff including 43 specialist pathologists. It began operating under the name Queensland Medical Laboratory in 1974 and is renowned for its accuracy, speed and reliability.

QML's range of services includes pathology collection, testing, transportation of specimens, sample receipt and storage and finally data storage and results delivery. QML Pathology can provide tailored reports and results can be downloaded from anywhere in the world securely.

### Moving presents an opportunity

In 2004 QML Pathology decided to consolidate its geographically dispersed laboratories into one main building in the Brisbane suburb of Murarrie. Although the move itself would be a massive undertaking, it gave the IT team the opportunity to install a completely new network in a greenfield environment.

"We decided to use the move as a chance to upgrade and future-proof our network, building in a very high level of stability and reliability," explained QML Pathology's IT relocation project manager Paul Abel. "Reliability was our number one goal for the new network."

The previous premises used ADC KRONE's HighBand® 10 system and Category 5e cabling. QML Pathology had been very happy with this arrangement, but wanted take advantage of the PABX reaching end-of-life to move to a Voice over Internet Protocol (VoIP) environment, which wasn't possible using the existing cabling. QML Pathology also wanted a high density patching arrangement to continue to allow patching by exception.

### ADC KRONE Fits The Bill

Because QML Pathology had been using ADC KRONE solutions for some time, it made sense to consider an ADC KRONE solution for the new building. However, because it was a brand new installation, Paul Abel and his team wanted to make sure they chose the very best solution. So the team considered other solutions, but ADC KRONE's HighBand 25 system with Category 6 cabling plus an OM3 fibre backbone fit the bill perfectly.

"We investigated other manufacturers' products, but in the end ADC KRONE came out on top," said Paul Abel. "Our existing working relationship with ADC KRONE was strong and the products had been working very well for us. We knew the new products would be no exception. There is a level of trust and expectation in our relationship with ADC KRONE that we felt very comfortable with."

ADC KRONE's HighBand 25 cross connect solution allows for maximum network throughput beyond one Gigabit as well as the Patch-by-Exception functionality demanded by QML Pathology. The Category 6 cabling is essential for advanced networks like QML Pathology's. Finally, the laser-optimised OM3 fibre backbone enables information to travel long distances without errors, thus maximising bandwidth.



QML's laboratory

## Designing the solution

QML Pathology turned to consulting engineers Norman Disney & Young to provide a single communications infrastructure to handle all data transport requirements, including computing, telephony, building management, paging, security, and CCTV systems.

Norman, Disney & Young developed a structured cabling system that utilises complimentary Optic Fibre and UTP copper cabling systems configured in a hybrid star/ring topology to provide a reliable and flexible communications medium for these services.

A key design consideration was the QML Data Centre, which contains a Storage Area Network (SAN) with an isolated, high bandwidth Optic Fibre Cabling system. The Norman Disney & Young system provides for QML's current requirements, including a mixture of protocols (RS 422, RS 485 and TCP/IP) and connection topologies (bus and star) as well as providing the capacity to migrate the legacy protocol systems to a high bandwidth consolidated protocol system in the future.

"We worked with KLM and ADC KRONE to deliver a solution that would meet QML Pathology's immediate requirements, as well as their needs for the foreseeable future," explains Peter Billingham, Manager – Communications and Security Division, Norman Disney & Young. "The ADC KRONE patch-by-exception system matched the client's requirements well, as it provides a single point of interconnection, which is well

suited to a consolidated TCP/IP environment whilst allowing the jumpering of bus networks. The jumpered nature of the hard connections minimises the complexity of the mixed topology system presented to the user, and allows the remote management of add/moves/changes at a network level."

## Installation goes according to plan

The building managers had already chosen ADC KRONE-certified KLM Group to install the new network, so for QML Pathology it was simply a matter of setting the project parameters and getting started.

"Our goal was to deliver a network which virtually eliminated errors caused by the cabling system," said KLM Group's Brett Nash. "We also needed to effect the physical move with minimal downtime, as any downtime would have had a catastrophic effect on the business and resulted in a huge backlog of work."

The project took two years and two weeks from the day the IT relocation team was told about the move. The first step was to create a link between the original data centre and the data centre within the new building using ADC KRONE OM3 fibre. Once that link was established, the network migration could proceed without network downtime.

The physical dimensions of the building provided the next challenge.

"The width of the wall space available was definitive, and we had to design the network layout to fit," explained Paul Abel. "During the testing process we had seen some great results from the ADC KRONE products, but we weren't sure whether we could replicate those results given the space constraints we had to work with."



CASE STUDY



QML's Active Equipment Rack

"The new building contained a ducting system that included some very tight turns," added Brett Nash. "We were concerned about the performance of the cabling around these turns, but our fears ended up being unfounded. The ADC KRONE Category 6 cabling performed exceptionally well."

## Number one goal achieved

Thanks to the collective experience of QML Pathology's IT relocation team, KLM Group and ADC KRONE, the move happened on time and on budget. Importantly, the installation achieved QML Pathology's number one goal: reliability

"We planned to do the final physical move over the four-day Easter break to minimise the disruption to the business, which we achieved. We now have a network that is stable and reliable and will also grow with the business. Moves, adds and changes are much easier thanks to the ADC KRONE HighBand® 25 system," said Paul Abel. "The results were absolutely what we expected at the outset, so we're thrilled. We couldn't have done any better than we did."

Before the move, when the business was spread over a number of different buildings, there were campus areas that required fibre connectivity, resulting in added expense. Bringing the business under one roof meant QML Pathology no longer needs to support these outlying areas, reducing costs and giving the infrastructure some consistency.

In addition, QML Pathology's network is now VoIP-enabled. This was important to QML Pathology as the existing PABX was reaching end-of-life. The new VoIP network saves on communications expenses and ensures the network is future-proofed. QML Pathology will also be able to implement Wide Area VoIP in the future, although it's not needed yet.

"We have effectively future-proofed our network and ensured ongoing capability, stability and reliability thanks to the ADC KRONE installation. The most important consideration for our business is to be able to guarantee the network's performance and we feel confident that we've done that," concluded Paul Abel.



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