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Education

"When we were planning for a one-to-one ratio of computers to pupils, we looked at a range of options to replace our old, 60-outlet network. If we were going to cable once for the next twenty years, it was clear we should choose a solution with a proven track record – and we also wanted plenty of bandwidth to support additional equipment and future systems. Our other key requirement was that the installation should be easy to manage and modify, which is why we decided to go for the VisiPatch solution with cross connects."

**Michael Honey**
Principal, Star of the Sea School

# Catholic School Gives Pupils Universal Computer Access with CommScope Network Infrastructure

## Ad Hoc connections replaced with 400-outlet SYSTIMAX® Structured Cabling Solution

**Summary:** When the Star of the Sea School in South Australia decided to give every pupil high speed network access, it wanted an infrastructure to serve its needs for up to 20 years. To meet its performance requirements, it chose a combination of GigaSPEED® XL copper and LazrSPEED® fiber cabling. For ease of management and maintenance, connections are made via VisiPatch® 360 patching hardware.

The Star of the Sea Catholic primary school was founded in a house of the same name at Henley Beach, South Australia, during 1912. At that time, it was attended by just ten children, today it has almost 530 pupils taught in 20 classrooms.

As part of its curriculum the school has long been committed to provide pupils with access to computers. Over time, it built up a network to connect computers used by pupils and staff, but the ad hoc cabling solutions used became increasingly unreliable and hard to maintain.

When the school was awarded government grants to upgrade its facilities, The Principal, Michael Honey, decided to install a new network at the same time. Building work planned on the site included a 600m$^2$, two-storey addition housing a library, two media suites and four classrooms. The Principal wanted a new, high performance network that would serve both the new space and existing school rooms for many years to come.

"It was an opportunity to ensure that all pupils could benefit from the latest technology," he said. "We wanted a fast, reliable network infrastructure that would serve current and future generations of pupils without high maintenance costs."

**Ahead of Standards**

The solutions the school chose were from CommScope's SYSTIMAX range. It specified more than 400 information outlets throughout the school's old and new buildings to be connected using the GigaSPEED XL copper cabling solution. This can support data transmission speeds of 1Gb/s over distances up to 100m, comfortably exceeding specification of the Category 6 cabling standard.

Cabling from the outlets is connected to communications rooms on each of the school's two floors. These are equipped with the innovative VisiPatch 360 solution. Connectors and cable management in this patching hardware are designed to eliminate the patch cord clutter found on traditional panels. As a result, connectors are easily accessible and labelling clearly visible, making moves, adds and changes quicker and less prone to errors.

Another feature of the new infrastructure that simplifies management and maintenance is the use of cross connects. By separating the active equipment from the horizontal cabling, all connections can be made using plug-in connectors rather than hard-wiring.

For backbone connections between the main computer room and communications rooms, the network uses LazrSPEED 550 multimode fiber cabling. This exceeds specifications of the OM4 fiber standard, supporting data transmission at 10Gb/s over distances up to 550m without need for expensive electronics. It can also support speeds of 40Gb/s using parallel transmission schemes.

**Twenty Year Life**

"When we were planning for a one-to-one ratio of computers to pupils, we looked at a range of options to replace our old, 60-outlet network," said Principal, Michael Honey. "If we were going to cable once for the next twenty years, it was clear we should choose a solution with a proven track record – and we also wanted plenty of bandwidth to support additional equipment and future systems.

"Our other key requirement was that the installation should be easy to manage and modify, which is why we decided to go for the VisiPatch solution with cross connects."

As well as providing the required performance and reliability, SYSTIMAX solutions from CommScope offer a 20-year warranty and application assurances. Backed by test programs at CommScope Labs, these assure users that SYSTIMAX infrastructure will support all future networking applications that conform to international standards.

Design and installation of the infrastructure was completed by TAF and Associate, a CommScope Prestige BusinessPartner based in Kidman Park, South Australia. New cabling had to be laid throughout the school's 2,200m$^2$ of buildings including the Convent, which is nearly a century old.

**One Network for All**

A four strong team removed the old cabling, a mix of Category 3, Category 5 and Category 5e products. They replaced this with two kilometers of GigaSPEED XL cabling and 600m of LazrSPEED fiber. Together with the VisiPatch solution this had to be installed while the school continued its curriculum, so scheduling the work needed careful planning.

Cable runs are carried in overhead cable trays with dropdowns to the information outlets. The network also supports wireless access points used by laptops across the campus to access educational resources within the school and over the Internet.

Other applications supported include Voice over IP, video and administrative systems. In addition, the existing infrastructure can support CCTV and security systems.

When completed the network infrastructure was certified to receive its 20-year guarantees by CommScope engineers.

Commenting on the Star of the Sea project, Reginald Evans, Regional Sales Director South Pacific, CommScope Enterprise Solutions said: "The School has a long history and now, with its new network infrastructure, it can look forward to a future at the forefront of educational technology. This was a carefully considered, long-term investment that will benefit pupils and make important savings in network operating costs."

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