

Macquarie University's prestigious law building is future-ready with state-of-the-art network connectivity solutions



Customer

Macquarie University

Country

Australia

Challenges

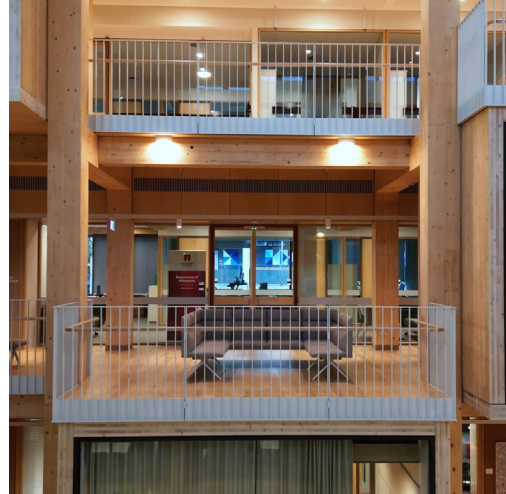
While Macquarie University is ranked as one of the top universities to study law in Australia, its lectures were held in a 25-year-old building that didn't meet the needs of today's law students, particularly from an audio-visual perspective. The outdated audio-visual capabilities were particularly problematic, as Australian courts have begun accepting meetings, court cases, and legal interviews held over virtual platforms as part of the evolution of this industry based on modern technology and accessibility. Since the COVID-19 pandemic, Australian courts have embraced electronic hearings, conducted in accordance with the Federal Court's guidelines for virtual proceedings.



For law students, learning how to effectively present a case through virtual platforms has become as important as face-to-face presentations. In response to these changing needs, Macquarie University law school alumni raised funds towards a full building refurbishment. CommScope, Electrical Data and Fibre Optic Systems Pty Ltd (EDF Systems), and Macquarie University partnered to design and deliver this project using sustainable timber construction and best-of-breed integrated network capabilities.

CommScope solution

Macquarie University is a long-term CommScope client and every building, from the administration centre to the new law building, has CommScope's SYSTMIX® network and cabling solutions installed throughout. Over time, these solutions have been upgraded based on evolving needs and new technology, and the university has gradually migrated its network from Cat5e to Cat6A on copper and from OM1 to OS2 on fibre. The law building is fitted with a



Cat6A unshielded twisted pair (UTP) solution with approximately 1,500 outlets and 90,000 metres (290 boxes) of Cat6A cable and single-mode fibre. The solution includes 700 metres of fibre cable and associated fibre connectivity.

The project

The university and alumni collaborated to identify three key requirements for the project. The first requirement was that state-of-the-art audio-visual equipment should be available throughout the building, with room to scale. It was also important to make the building visually appealing and reflective of Macquarie University's law program. Finally, the building should have a high sustainability rating in line with the university's sustainability principles.

An integrated, state-of-the-art solution

The Macquarie University law building project was designed using CommScope products and installation methods, acknowledging that the installation quality would align with CommScope's partner program and be supported by a 25-year warranty. As a result, no alternatives were considered for this project. SYSTIMAX® has been the longstanding choice of product throughout the campus; choosing SYSTIMAX® and working with a CommScope PartnerPRO® network provider ensured the building's network would be future-ready and could seamlessly integrate with the university's broader network. The law building is unique, both aesthetically and architecturally, and the structured cabling is synonymous with the quality of the materials used in the building, aligning with the university's overall vision.

Precise planning, start to finish

The structure uses treated timber, moulded to exact specifications overseas and imported, to meet sustainability requirements. Consequently, the project demanded meticulous

planning to accommodate pre-formed penetrations for cable pathways, created in the factory rather than onsite. Any onsite cutting or drilling could compromise the building's structural integrity.

CommScope offers its partners free access to sophisticated online tools that support the design of network systems. These tools significantly reduce time for partners, who can input their requirements and receive exact specifications in response. The tools are dynamic; should an electrical contractor onsite require a slight adjustment, the tool can instantly adapt to the revised inputs. This project was planned meticulously, considering both current and future needs, with designs accommodating 40 per cent future growth.

Leonard Ash, Registered Communications Distribution Designer (RCDD), BICSI member, and Manager of Technical Design and Estimating, EDF Systems, said, "CommScope's products and tools empower technical designers to design projects that meet high-quality operational requirements. Projects are simple to design because there are no constraints set by the product's limitations. If you can think it, CommScope can deliver it. The only restrictions tend to come from local and national regulations."

Leading the way in sustainable building practices

Sustainability has become increasingly important in the construction sector. The refurbished law building is Macquarie University's third timber construction and its crown jewel. Innovative and industry-leading, the Macquarie University Law School was built using 600 cubic metres of Glulam posts and beams, complemented by 4,700 square metres of cross-laminated timber (CLT) for the floors and walls.

It's more aesthetically pleasing than a brick and concrete building, and the timber is constructed from sustainable wood

that grows quickly and can be replaced, unlike steel foundations, which are made from finite mineral resources.

CommScope's focus on sustainability and supporting construction companies to reduce waste and increase recycling capabilities makes it an ideal partner in this space. CommScope's on-the-ground partner in the project, EDF Systems, a certified CommScope PartnerPRO® network provider, appreciated SYSTIMAX's simple-to-squash and recyclable cardboard box packaging, instead of the large plastic drums that most other cabling providers use. Contractors increasingly face waste management clauses in contracts, and this packaging supports waste removal portfolio targets.

Laying the foundation for future projects

The project delivered an excellent outcome, according to Macquarie University and its alumni. The new law building is 100 per cent integrated internally and with the wider campus network, ensuring that communication can be broadcast throughout the university if required. Through thorough planning and exceptional partnerships, as well as engaging with clients before the project began, CommScope anticipated and addressed potential issues. This proactive approach has set a precedent, with the project's success being replicated with electronic data processing systems at the Macquarie University Woolcock Building on 2 Innovation Road, which is currently underway.

"The product just works. Projects are simple to design because you're not trying to design around limitations in the product set. If you can think it, CommScope's tools and products can deliver it."

Leonard Ash

Registered Communications Distribution Designer (RCDD), BICSI member, and Manager of Technical Design and Estimating, EDF Systems



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