

installation

NECA award winner

Lights, camera, action in the law school

The art and practice of justice at the University of Melbourne cost a further \$5.3 million last year – the price of a world-first communication installation.

Designed, developed and installed by Rutledge Engineering in consultation with consulting engineers, Simpson Kotzmann and CCD Australia, the University of Melbourne project won the 'Voice and Data Communications over \$500,000' category in the NECA 2002 awards.

The University Square Campus installation included eight lecture theatres and tele-teaching, three computer classrooms, two conference rooms, two board rooms, 13 seminar rooms, administration rooms and moot court facilities.

At the heart of the system is a sophisticated "e-control" interface that allows all the facilities to be fully managed via internal web pages. The project involved no less than 32 separate facilities. Rutledge Engineering estimates it occupied 22,300 man-hours

"There were several challenges with this job," said Graeme

Overall, Rutledge Engineering's operations manager. "The lecture theatre (with seating for 411 students and occupying two floors in one of the buildings) called for the most advanced audiovisual presentations, but it had to be a system that was easy to use and required minimal set-up. As well as a LAN port at each seat, this lecture theatre has also been cabled for the provision of microphones at each seat for use in tele-teaching.

"We achieved this by eliminating the need to reconfigure the existing system. Using LCD projectors, preview monitors, and video and computer interfaces, the system functions as a multimedia presentation medium. All video sources are integrated via the control system, so that all necessary equipment is on and functioning during a presentation.

Incorporated into this lecture theatre is a tele-teaching facility that allows for a lecture to be broadcast across multiple lecture theatres, managed by a central audio/visual switching system. Tele-teaching can also reach external sites via video conferencing.

"One of the unique aspects of this job is the ease with which the University can control each lecture theatre, whether from a technical support angle, or from the user's side," Overall said.

"Another is that rather than

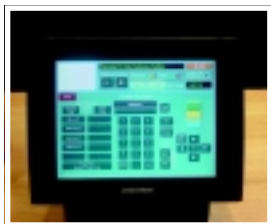
using normal analogue video and audio signals, the video is streamed via a LAN and then viewed on a screen connected to a PC. From a cabling point of view, we've gone away from coaxial audio cabling and on to twisted pair which seems to be the way everything is going.

"Audio visual and IT technologies are converging, likewise so is the type of cabling used. A substantial number of AV devices are now being released with RJ45 connectors, therefore more and more CAT 5/6 cable is used in an AV installation."

The moot court and lecture theatres are connected via video coax and shielded twisted pair audio cable to a central router, enabling sharing of presentations or court proceedings throughout the law school.

The moot court is a fully functioning courtroom and 48-seat lecture theatre where students' courtroom performance is really put to the test. 'Mooting' is a hypothetical legal hearing modelled on an appeal from a trial. As such, all the facts have been agreed upon. What is at issue is the way in which the law has been applied to the facts. This is argued out before a bench of one or more real judges.

Presenting evidence these days is a very sophisticated procedure. The moot court incorporates all the latest courtroom technologies,



The moot court is a fully functioning courtroom. Inset: Creston control panel touch screen.


including display devices with digital video recording, streaming, archiving and videoconferencing. This is all controlled through a simple graphical user interface (GUI). Students can play back and review their performance and even stream them in real time to strategically placed computers around the University or via their laptops on a wireless LAN [see story this issue for more on how universities are putting wireless technology to the test].

Four large screen plasma video monitors display current proceedings which may be recorded and played back. Cameras cover the judge, bar table and witness locations simultaneously and audio coverage is



The moot court server rack.

provided with microphones, some in the ceiling for audience participation. Remote witness rooms and breakout rooms are also connected.

The AV control room forms the heart of the multimedia system where there are four equipment racks and an operator's bench equipped with a touchscreen, LCD monitors and computer keyboard. The moot courtroom may be operated from within the courtroom itself. 

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