

Security at Limerick Institute of Technology

Limerick Institute of Technology (LIT) is a thriving educational community. With 4,000 full time students, the additional part time students, craft apprentices and hospitality students in a wide-range of disciplines together make up a total student population in excess of 6,500. Qualifications taught range from Apprentice and Technician level courses to undergraduate and postgraduate degrees up to PhD. The Institute is increasingly involved in Research and in special programmes promoted by the European Union that ensure interaction between the Institute and Industry, and between the Institute and Higher Education Institutions abroad.

To support its success, the Institute is now completing a multi-million pound building programme comprising of new buildings and the refurbishment of existing buildings on the main campus at Moylish Park.

As in any educational establishment, the security of students and staff and their property is a responsibility taken very seriously at LIT, and in late 2001 the CCTV system was reviewed. The system at that time had 16 cameras cabled into a multiplexer and VCR in a control room at the centre. The cameras covered car parks, walkways, and the computer rooms, and the monitors were watched for most of the working hours by the caretaking staff, who could operate Pan-Tilt-Zoom (PTZ) controls on some of the cameras when required. Any out of hours incidents that were known to have occurred could be searched for on the VCR tape recordings.

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Unfortunately, the system had not been performing at the level the Institute required. Pat Gill, Estates Manager at LIT describes the problem. "The quality of image and recording on the old system was not good enough, and we knew we could do better."

“Add to that the operational overhead of changing VCR tapes, the maintenance issue with tapes running down quickly and giving poor playback, and the laborious searching of tapes to try to examine an incident, and the system was losing credibility. This is not a particularly troublesome site, but there had been incidents over the years of outsiders committing theft in the car park, and the system was not really picking this up to any useful extent. It was time to improve it.”

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The system was upgraded in two ways – the control room equipment, and then the cameras and cabling infrastructure.

To upgrade the control room equipment, three Vista Columbus Hard Disk Recorders were installed to replace the existing VCRs and Multiplexer, backed up by three VAIDe units (Vista Array of Independent Disks with ethernet – additional archive storage of between 2 and 8 hard disks, providing up to 2,000 gigabytes of storage space).

This move to digital recording brought two significant improvements to the system. First, any searching is very much quicker and easier on a digital system, saving staff time and exasperation.

The staff appreciate having a complete month of recording online, plus the software to search it swiftly and effectively. Second, the hard disk storage is simpler to manage compared with a VCR tape system, so the operational issues of swapping tapes in the VCR and keeping track of the usage of each tape are things of the past.



However, the changes at the centre could not overcome one of the fundamental problems of the system – the quality of the camera images. For that, better cameras were needed. The decision was taken to replace most of the existing cameras with Vista VPCMX colour/mono cameras, and the total number of cameras was increased to 26, to give better coverage and very much better quality of picture. The old PTZ cameras were left in place, as these were performing adequately.

Having planned the changes to the camera configuration, the spotlight fell on the infrastructure. Looking to the future, was a co-ax star network the best and most flexible design for whatever changes might take place? Given all the equipment changes that were being made, and the possibility of future changes linked to LIT's building programme, the optimum design of two fibre rings emerged. These rings of 24 core fibre, better suited to the long distances of the site than a co-ax cable ring, give far more flexibility than a star network, enabling new cameras to be added to the system with the addition of a very small cable run from the camera to the ring.

Limerick-based installer Edmund Finn of Finsecure views the new system with pride and satisfaction: "We are happy that the Vista equipment will perform well, because we have very good experience of these units in our other installations. We were pleased with our project implementation, and this was helped by the totally reliable delivery and support from suppliers Norbain. The Institute now has a system that performs to a far higher level than previously. This system is also carefully designed to cope with developments in the future."