Clear Image's University Challenge

Throughout its recent period of frenzied development, the University of Bradford has evolved to become a progressive, forward thinking educational establishment, with a firm belief in offering leadership on sustainable development and community issues. Through its research, teaching, learning and community engagement, the university aims to help society to anticipate, adapt, and offer alternatives to the world's current and future environmental, social and economic problems.

The university has around 10,000 students enrolled, of which almost a third are mature students. Almost 25% are international students, and they come from over 100 countries.

Hand-in-hand with its responsibility to promote understanding and values for sustainable development, the University of Bradford has devised an 'Ecoversity Programme', initiated with the aim of developing a practical model for a modern, sustainable university. To assist the development of the programme, an ongoing construction and modernisation program began in 2004, one of the results of which is the recently opened 850 square metre Atrium. Constructed using ethyl tetra fluoro ethylene, the same highly transparent foil used by the Eden Project, it provides students, staff and visitors with an indoor meeting space for university and community activities.

Alongside the University of Bradford's infrastructure investment, its management were keen to protect it with an integrated security plan, developed in conjunction with the building programme.

Effective control

Peter Haines, Estates Manager (Security) at the University of Bradford, takes up the story; "At the time the new development project was initiated, our existing control room was cramped and oppressive. The staggered evolution of the system had resulted in a legacy system with a myriad of equipment, supplied from a variety of different manufacturers. The result of this was a disjointed control process, leaving our operators with a multitude of differing ways of achieving control tasks, none of which were very simple or intuitive. This convoluted process was adversely affecting time management of everyone in the control room, and urgently needed to be addressed if the efforts of my security team were going to keep apace with the university's expansion plans."

With previous experience of overseeing university control room designs in the past, Peter was uniquely placed to foresee the issues that would arise from such an expansive project, and to know exactly what technology would best fit the bill to establish a successful control solution.

With this in mind, Peter turned to Panasonic Premier Integrator, Clear Image. "From the outset we appointed Clear Image as the main contractor for the construction of our control facility," explains Peter: "From previous experience I know that it's important to have a single point of contact for any security project. So once the university's building contractors had physically built the control room alongside the other new university buildings, their job was finished, and it was Clear Image who we entrusted to furnish the control room and complete the surveillance system."

Detailing the university's security objectives to Clear Image, Peter liaised heavily with the integration specialist to achieve his ultimate specification for the new system. Peter continues: "Clear Image's status as a Panasonic Premier Integrator afforded us with the reassurance that we were investing in an endorsed quality of installation expertise. When Clear Image demonstrated their proposed product solutions to my security team, it was clear that our

surveillance needs would be met with the deployment of a Panasonic based CCTV solution."

Peter and his team now operate from a bespoke new control room that offers the high level of system functionality that is so important to the university, as he explains: "Our experiences with the previous control room led us to target the procurement of a surveillance system that would provide us with single and concise roots to all system functionality, indeed it was a number one priority for us. A priority that has been amply addressed with the new Panasonic based CCTV solution." A fact that has also been recognised within the security industry, with the Clear Image installed project securing the 'Best Project' award at the IFSEC 2007 Panasonic Premier Integrator Awards.

Comprehensive coverage
From the control room, University of Bradford operators can view images from over 90 cameras, covering strategic areas of the university's three sites, including; car parks, the main entrances and exits of buildings, car park entrances and exit barriers, corridors within the university buildings, lifts, main footfall routes through the campus, atrium area and the cafeteria. Jim Duncan, Business Development Manager at Clear Image explains: "Panasonic WV-CW960 cameras were used to significantly expand the system's overall coverage around the exterior areas of the campus. Complementing existing cameras, their SuperDynamic III technology and high-resolution imaging allows maximum scene coverage and picture quality in the constantly changing lighting conditions of the tree lined environment."

Panasonic WV-CW970 (Advanced Auto Track) cameras have also been employed at strategic locations where operators can take full advantage of the unit's auto tracking feature. These cameras can provide highly accurate automatic tracking of individuals and objects based on colour, shape and contrast. With pan, tilt and zoom capability enabling the camera to automatically keep the target object centred in its field of view. In addition, specific objects can be locked for automatic tracking by the University of Bradford operators, freeing them to perform other essential tasks while a

potential incident is developing, such as alerting other members of the security team to the situation. Peter continues: "As with any control room with an extensive number of cameras to monitor, our operators cannot oversee all of the system's cameras all of the time. This is where these cameras come into there own, providing a virtual operator who is ever alert to suspicious activity. In my experience, they also yield much more usable results than a standard camera using a pre-programmed PTZ tour. This is because automatic tours aren't intuitive and can move away from an incident in progress, often missing critical footage. With our new WV-CW970 cameras we can be confident this will not happen.

"Internally, Panasonic WV-CS950 cameras were chosen for their ability to provide flawless images, even when covering both the university's naturally brightly lit Atrium area and the darker corridors extending from it - in one visually seamless operational sweep."

Remote sites

In addition, cameras at the School of Health Studies and the School of Management, located at different sites across the city, are readily available to monitor in the control room. "On the main city-centre campus, images are transmitted back to the control room via a mixture of coax and fibre," Peter explains: "Whilst images from the School of Health Studies and the School of Management are encoded onto the University's own Wide Area Network (WAN) at each site, via local Panasonic WJ-HD 316A Digital Recorders and relayed into the control room via IP. This IP approach and utilisation of an existing network for selected cameras meant we avoided costly cable infrastructure costs to connect the two remote sites. It also allows the Panasonic digital recorders we have archiving images locally at each site to be interrogated remotely, by authorised users from areas other than the control room, such as my office. This affords me instant incident investigation, making the most efficient use of my time and avoiding the need to have a technically trained operative physically dispatched to each site simply to retrieve archived data. My operators deal with a wide variety of security, and health and safety issues on a daily basis, and all the technology we use at

Bradford has been devised to ensure that operators' tasks are streamlined and their time used in the most effective way."

Securing the site

Operational security issues tackled at the university include the monitoring of on-site traffic and their access to the site via remotely sited barriers that protect the university campus. "We have quite a flow of daily traffic into the university's authorised car parks and a large amount of general deliveries to manage across the site," explains Peter. "In this respect, it is vital that our operators have a clear view of exactly who is requesting access to the site. Facilitating this, coupled with camera placement at each barrier is an audio intercom, allowing precise audio and visual confirmation of access requests. We have also found the cameras covering the barriers invaluable if a driver is denied access to the site, to ensure that they leave the barrier controlled area without impeding the flow of other legitimate incoming traffic."

Operators staff the university control room 24/7, along with a 24-hour emergency phone line, available to students should they feel the need to alert security staff to a situation or incident on campus. If they find themselves in circumstances where they are unable to make a call, a dedicated text number is also available. Supporting students and staff, the emergency phone line provides peace of mind with professional security assistance being on-hand via the university's manned guarding team. Working in five shifts of eight, the team cover all three campus areas 24 hours a day, with each member being in communication with the control room via a dedicated radio system.

"Student liaison is very important to us at the university," explains Peter; "We promote a constant program of dialog with the students, who advise us on rising areas of concern we may not yet be aware of within the campus. This constant communication, in conjunction with the security team and myself, has resulted in identifying the strategic placement of many of the recently installed Panasonic cameras around the site. This valuable 'grass routes' information, coupled with the high-quality images we enjoy from the

surveillance system, has allowed the university to benefit from economical and effective camera placement, ensuring that we are able to maximise the coverage of campus areas, allied to minimal camera outlay."

With over 3,000 new students arriving each year, Peter and his team are at their busiest in the September-October period, when new students are unfamiliar with the layout and operation of the university. As well as assisting newcomers to navigate the site, they need to be extra vigilant at this time, as Peter explains: "Four thousand new faces on-site can help to disguise the criminal element at this time of year. Using the advanced surveillance technology at their fingertips and years of professional experience, our team can constantly monitor the footfall traffic around the site to identify anyone acting suspiciously, swiftly despatching a member of the security staff on the ground to investigate if necessary. Without a valid reason for being in the university's grounds, they will be escorted off-site. However, recognising our greater responsibility to the wider community, we can alert city centre businesses via the 'Shopwatch' scheme, ensuring any suspicious individuals are not simply moved on to commit crime elsewhere.

"In an incident where an apprehension leads to prosecution, evidential quality video footage can be burnt from one of our Panasonic WJ-HD316A digital recorders, direct to DVD, to provide effective, audited prosecution video evidence for use in court."

Security partnership

On-site security staff are not only used to deter the criminal element but play an integral part in student liaison and assistance. Call points for disabled students are being installed around the main campus buildings and linked directly to the control room, allowing operators to quickly dispatch ground staff to provide assistance where and when requested.

"Student liaison is an integral part of the success of any university control room, and an issue which is at the top of our agenda," enthused Peter: "CCTV no longer has a singular area of responsibility anymore but addresses wider

issues such as public well-being and health and safety. Here at Bradford we aim to create an enhanced feeling of safety and security for all our students and staff. This process can be greatly assisted if they have an understanding of what we do, and how we go about it. This is why we invest time to promote our service, ensuring new students and staff know about the powerful technology we use to help protect them. Usually, the most the general public ever see of surveillance technology is a camera on a wall but we deliver presentations to all newcomers, and invite them to a guided tour of our facility, to see behind the scenes and find out more about what we do. This promotion also has the added bonus of information filtering through the campus community and in some cases, reaching the criminal element, ensuring that they know choosing to commit an undetected crime on our campus will be a difficult proposition."

Peter concludes: "Using the new Panasonic based surveillance system is invaluable in assisting us to fulfil our role at the University of Bradford. My 'single root to system functions' remit has been fulfilled, resulting in a far more efficient control room environment. In our old facility, operators were working reactively, performing mainly retrospective investigations, as the system was unable to react quick enough to catch incidents as they happened. This all changed when the new Panasonic based control room went live. My staff now enjoy the technical capability to catch and track incidents in progress, allowing ground staff to react instantly, securing the site more effectively but more importantly, ensuring a high level of safety and security for our students, staff and visitors"

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