

New school embraces CCTV from the start



The Walsall Academy is one of a new breed of schools in Britain today for 11-18 year olds. A brand new school building on the site of a former secondary school, it opened its doors for the first time on 1st September last year. Specialising in technology, the school has been built at a cost of £17m under the Government's Private Finance Initiative. Sponsored by the Thomas Telford School and the Mercers' livery company, the school is both a limited company and a charitable trust.

The CCTV needs of the school community were specified into the original design and build of the school.

"Our need for CCTV is not proactive and intrusive but is merely there to provide a visible deterrent and evidential support should an incident take place. We have no security staff on the premises - monitoring

screens for instance." explains Adrian Bowater, Finance Director of Walsall Academy.

The winner of the CCTV tender was Technical Services (Shropshire) Limited. With considerable experience in town centre CCTV and also working at various Ministry of Defence sites, Technical Services has developed a strong reputation for delivering highly effective and advanced CCTV systems.

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Externally the CCTV system is designed primarily to monitor the grounds, in particular the car parks. Six fully functional Ultrak KD6 day/night domes monitor the grounds on pre-set tours, carefully utilising the units' privacy zones facility to protect the interests of nearby residents.



A further dome monitors traffic entering and leaving the school through a fixed barrier that is viewed from the school reception using a Vista flat screen monitor.

Internally, colour cameras are focused on three key areas: the cloakrooms, the school's two entrances and the school's Independent Learning Centres where pupils work regularly with the minimum of oversight.



"Cloakrooms always pose a particular challenge given the sensitivities involved in monitoring changing areas and the difficulty minimising blind spots in a room full of hanging clothes", explains John Hirons, Director of Technical Services, the installer. "Our solution is to install five Vista mini varifocal colour domes (VFD4V9C/Se) in each cloakroom, positioned to optimise the area covered. That's

an intense level of coverage but essential in such a vulnerable area."

In each of the three Independent Learning Centres three ceiling mounted Vista fixed colour cameras (NCL735CKe) with built-in varifocal lens provide ample coverage of the study and teaching areas. Similar cameras are positioned over the two entrances into the school.

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The centre of the CCTV installation is the IT suite from where the whole of the school’s extensive fibre optic network is managed. In the centre of this large control room sits a series of racks, one of which hosts the school’s CCTV recording and monitoring equipment. The centrepiece of this is the cluster of three Vista Triplex™ Columbus Digital Video Recorders (VC16Te-160Gb), one for external, one for ground floor and one for first floor cameras. As the school is contemplating remote monitoring at some point in the future, each of these is connected to one of three Adpro FastScan Series III video transmission units. Six BP2000 fibre optic transmission units from AMG facilitate image transmission across the school’s fibre optic network. An Ultrak matrix and keyboard (JPD100) provides control for the external KD6 domes and a 17” JVC monitor provides users with a viewing capability. As there is only room on the rack for a single monitor, a Vista real time Quad acts as a monitor selector fed by the three Triplex™ DVRs and the Ultrak matrix.

Images are captured at 5 pictures per second with images retained for eleven days. No more than ten cameras are connected to each DVR although each has a capacity for 16. CAT6 Ethernet cabling, which supports more than twice the speed of CAT5e, is used throughout the system.

“At first sight the recording facility looks extremely advanced for a school of this size,” explains John Hiron. “However the school was keen to build capacity into the system to ensure the initial investment is as future proof as possible. One future option already being explored is to move to overnight recording on a motion detection or event driven basis. Externally this would involve installing Optex Redwall PIR units so that at night the domes and DVRs can be activated to initiate recording whenever movement is sensed. This could then be extended easily so that the system automatically dials-up a remote monitoring station. All this illustrates that there is plenty of scope for further refinement.”



Access to the system is tightly controlled via the school's network and is currently restricted to reception staff (to control the entrance barrier), the Finance Director, and the IT Department itself who monitor the cameras using WaveReader software which is provided licence-free with the Vista Triplex™ Columbus.

"The CCTV system is working extremely well," concludes Adrian Bowater, "aided by the fact that CCTV was designed-in to the original specification for the school. There have been very few incidents – mostly of the 'lost bag' variety which are usually down to youngster's own errors. It clearly provides very effective support to our anti-bullying policy. I am very confident that the system is more than capable of meeting our needs well into the future."