

Integrated security systems and...

Alex Carmichael, Technical Services Director at the British Security Industry Association (BSIA) reviews the benefits of integrated security systems and how 'intelligent buildings' can be utilised to enhance a property's security



system validates a staff member's proximity ID card and admits them to areas they are permitted to enter (depending on their job function/security clearance). This offers convenience of use, while also ensuring that energy is not wasted in keeping these building systems running out-

of-hours in otherwise empty rooms. At larger sites, where security staff and building managers operate from a control room, this level of integration also offers a greater level of supervisory capability to improve the overall efficiency and effectiveness of daily operations. Additionally, security officers can be better deployed, monitored and supported as they perform both routine site checks and specific incident response duties during out-of-hours periods such as overnight, weekends and bank holidays.

The concept of total facilities management is being embraced by alarm receiving centres that can remotely monitor unmanned sites out-of-hours. For nearly a decade the building management sector has been trying to promote common protocols that would greatly help in creating integration-rich functionality. More recently, the conventional supply of BMS has been changing, as packaged plant with Internet Protocol (IP) technology becomes increasingly viable and effective (when procured correctly). The opportunity to maximise systems interaction and operation, while minimising capital outlay, is starting to be seen through connection of a web server to the site intranet. Connection to the internet then provides the ability to perform remote diagnostics, monitoring, control and alarm reporting.

The development of intelligent fire protection systems, lighting controls, elevators, smoke and access control systems has continued, with provision of communications interfaces through which information is made available for monitoring and control using these microprocessor-based systems. In a nutshell, this concept of total facilities management allows building management systems to control HVAC installations, while at the same time bringing the benefits of all building management systems (including HVAC controls and security systems) together on one operating platform.

Meanwhile, use of IP local area networks to 'hang' a variety of operating systems from is



intelligent buildings

also offering site operators tangible operational cost savings. A hospital in Stafford, for example, is using it to share digitised patient records and scanner images, along with IP-enabled surveillance cameras monitoring areas ranging from the A&E department through to surrounding car parks. Using the hospital's access control system, security officers can track the use of an identity card through specific doors and by pinpointing the time of entry, staff can then refer to surveillance pictures and compare them with a database of access card images to ensure the card user is indeed the authorised person.

Careful liaison with IT departments is essential before such IP-based networks are specified, to ensure any potential problems including bandwidth use are correctly addressed, but workable solutions to such issues are available. It seems that, after a long wait, the future for integrated systems is bright.

The British Security Industry Association is the trade association covering all aspects of the professional security industry in the UK. Its 500+ members provide more than 70% of UK security products and services and adhere to strict quality standards. For more information see www.bsia.co.uk, email info@bsia.co.uk or telephone 01905 21464.

The benefits of well-planned, properly specified and cost-efficient protection for any building or site are clear. Besides minimising risk to stock and equipment, effective security also safeguards against costly, and potentially disastrous business interruption. Appropriate measures will also have beneficial and tangible effects for staff, in terms of improved safety that translates into higher morale, with correspondingly maintained work rates, reduced absences and raised staff retention.

Having established the available rewards, how can these best be achieved? Security systems work best when functioning as a holistic solution to site-specific risks, where their full potential can be realised. That means integrating equipment such as CCTV cameras and recorders, access control, electronically monitored perimeter fencing, and intruder alarms.

In the past, problems encountered in matching different system control protocols led to difficulties in enabling these systems to 'talk' to each other. Various solutions attempted to resolve this 'language barrier' as system suppliers sought the key to unlocking the benefits of interoperability in that sector. Although the situation continues today, with multiple protocols still prevalent, technical advances in recent years – notably in the IT field – now mean that integration can be achieved between not just security devices but also building management systems (BMS). The age of the 'intelligent building' is upon us, offering building managers opportunities to exchange data between equipment using their advanced microelectronic circuitry.

Shared cabling, infrastructure savings and easier and cheaper changing of building layouts are some of the resulting yields. In practice, this means security systems functioning alongside environmental control units, fire detection and suppression, lighting management, lift operation and utility metering. Instead of working in near isolation from each other, these systems can now be networked and centrally, or remotely, monitored and controlled.

Practical examples of this include CCTV cameras that can be programmed to position themselves and record automatically if triggered by detector activation, such as a fire door being opened. Similar detector activations can lead to heating and lighting in certain areas of a building being switched on when the access control

