

## Top level security is on the cards

*There is no company logo on the site. The security gates are not ostentatious, but clearly operate to a high specification. Nothing draws attention to the building. The anonymity is quite deliberate. Inside the building a highly sophisticated process is taking place – the manufacture and personalisation of credit cards – and a high security environment is essential. The company, whom we will call ABC Ltd, protects its products and processes extremely carefully, with a balance of intruder detection, access control, and CCTV coverage.*



The business of credit card manufacture, in general terms, involves starting with sheets of plastic and through processes of printing, cutting, embossing, and adding a magnetic strip, the familiar credit card is produced. In parallel with this, the specific details of each individual customer are processed and added to the magnetic strip as required, so that the end product is a valid, personalised credit card. An extremely valuable and flexible commodity, and the reason for the high level of security.

ABC Ltd produces over 15 million cards each year for some 40 customers, including credit cards, store cards, and even hotel key cards. When the company decided to enter this business, it was obvious that the standard security system would not measure up to its new needs.

### System specification

The process of specifying the operational requirement of the new system was in one sense quite straightforward. To manufacture and personalise cards for major companies such as MasterCard and Visa requires meeting their detailed certification criteria, which include a very precise and demanding specification for security systems. A measure of the level of security involved is that the document that defines the security requirement is itself subject to very tight security and circulation control.

The specification required that the CCTV system not only provided security for building entry and exit, but also kept full surveillance over all internal processes. So most of the requirements were already given. The next step was to design a system that met the operational design, and that is where the partnership between ABC Ltd through Operational Director Mark W and installers A1 Security began.

Mark W explains: "Working together with the installer, we designed a system around 48 cameras, and 3 Hard Disk Recorders. The recorders and attached monitors are located in a 24 hour manned control room and all the internal cameras are fixed rather than operated with PTZ (pan tilt zoom) control. The rationale for the fixed cameras is that it is essential to have continuous surveillance and recording of processes. There are cameras watching all key processes on both floors of the building. With PTZ there is the risk that vital incidents may be missed if a camera operator is directing the camera in another direction at the time. A greater number of fixed cameras provide better security than a PTZ operation when the requirement is non-stop surveillance of a large number of views and processes."



The system is linked to the Local Area Network, and designated PCs can view the CCTV images using WaveReader software. A secure firewall on the LAN prevents unauthorised access. The specific cameras and recorders were chosen by A1 Security, a large and experienced installer maintaining continuous research into the latest technology. They chose their equipment for this demanding project from Norbain's range.

The 2 external cameras are the only ones to operate with PTZ control – Ultrak KD6 series colour/mono high resolution dome cameras. The remaining cameras – 5 external and 40 internal - are Vista VFD 4 V9C fixed mini-domes, with 1/3 inch lenses and 4 to 9 mm varifocal direct drive delivering a 480 television line picture. The Hard Disk Recorders are Vista Columbus Triplex (getting full part number) 1000 gigabyte devices, which enable simultaneous display, recording, and searching. The volume of images required, and the 90-day storage time required for the images, mean that a massive storage total of almost 3 terabyte (3000 gigabytes) is essential.



A striking feature of the system is that CCTV and access control work hand in hand, and it is possible to match up images with logs from the access control system. For example, the access control system may record that a person with a particular card went through a control at a particular time, and this can be matched to the image of the person entering at exactly that time. To undertake this matching requires synchronisation between the systems, and a sophisticated atomic clock manages this process.

Brendan Roberts, General Manager of A1 Security, underlined the fact that this is no run-of-the-mill installation. "The system is clearly very sophisticated, and installing it presented some stiff technical challenges, including synchronising to the atomic clock. We have good technical knowledge at A1 Security, and Norbain is well known for the depth of its technical support, so between us we were able to

implement this vital requirement quickly and successfully. Had there been less technical knowledge on either side there may well have been more problems."

The control room for the system is combined with the front entrance security position. Manned by a roster of security professionals that provide 24-hour cover, the staff are specially trained in both the technicalities of the security systems and in the site-specific issues and risks it is their task to address. Part security guard, part security system operator, each of these new-breed professionals can cover an area of responsibility that would take three people in a less automated environment.

Keeping an eye on the monitors displaying the CCTV pictures from every camera, checking the access control system status, including warnings when alarm states are detected, using PTZ camera control for external building surveillance – the nature of the job has evolved significantly from the early days of manned guarding.



Mark W reviewed the system and looked to the future: “We have been very pleased with the way our CCTV works, and how it dovetails in with our total security package. It fully meets the spec and delivers all the function we require. The bottom line is that we pass the criteria of the Vendors Inspection Program, which is absolutely essential to our business. But beyond that we gain other benefits. The system provides considerable help in a number of issues of administration too.

“For the future we may extend to the use of more alarm status to initiate CCTV recording, for example, enabling us to avoid recording an empty room, thereby saving on disk storage. We’ve not done this yet -in my view it is essential to see how a system performs first, before going too far down the automatic alarms route – security is too important to rush into. Different locations and processes carry different risks, and we need to be prudent in how we use technology to address each type of risk. We will soon have enough experience of exactly how the system works to be in a position to consider refinements.”

Brendan Roberts echoes this careful approach. “A sophisticated system such as this has many features, but it needs good judgement to decide exactly how best to use them to minimise risks. We’ve built the system around the best equipment and advanced features, but in the end it is the way those features are used that turns an average system into an excellent system. I’m confident that between the three parties - ABC Ltd, A1 Security, and Norbain - we’ve pooled all the considerable expertise available and delivered a system that can rightly be described as excellent.”

