Advancing technology makes for safer seaports

Alex Carmichael, British Security Industry Association (BSIA), Worcester, UK

Security technology is developing at a rapid rate, both in terms of affordability and potential. Progress is such that it is now more essential than ever for users to make sure they choose the right suppliers of equipment and services, reports Alex Carmichael of the British Security Industry Association (BSIA).

Introduction

Security at a modern seaport is at the centre of a complex and multi-faceted challenge. Issues such as the protection of valuable cargos, controlling the movement of people and contraband across international borders and more recently the risk of terrorist attack has brought maritime security to the forefront.

Seaports demonstrate the principle that different sites possess unique features that influence the design and operation of security measures. Their sheer size, the need for widely dispersed multiple points of access and the constant need to accommodate high volumes of people and traffic provide a classic example of the importance of integration and flexibility. The International Maritime Organisation (IMO), since the 9-11 attacks has set new port security standards – the International Ship and Port Security Code (ISPS). The code, which came into force in July 2004, recognises these complexities and rightly takes the approach that security is a risk management activity that demands a detailed assessment in each particular case.

Physical protection

Security planning begins with an appreciation of the role of physical protection. If access is to be controlled, it must clearly be channelled, which in turn means that perimeters as a whole need to provide a meaningful barrier. The technology now exists whereby most types of fence and gate can be fitted with effective detection technology, which typically comprise a sensor cable attached to an analyser capable of interpreting the different kind of vibrations caused by intruders. Another type of fence-based security system works by delivering a short painful but otherwise harmless, electric shock to anyone attempting to cut, climb or tamper with the fence. A code of practice, PAS 47 that is expected to lead to the publication of a British or European Standard, now governs the use of this technology.

Monitoring

Monitoring is obviously a key component of any such perimeter protection, and fence detector outputs are designed to interface with on-site alarms or CCTV systems, ensuring an ability to investigate and respond to any interference. Modern security technology is making the key element of surveillance increasingly effective and affordable by enabling the centralised control of security over the largest of installations. The advent of digital video has now eliminated all the former constraints on transmission distance. Digital quality, real-time images can be transmitted via Local and Wide Area Networks and Internet links and viewed literally anywhere, allowing centralised monitoring across even the largest ports. Detector-activated and remotely monitored CCTV is now subject to a clear set of standards, BS 8418, which governs the use of cameras and detectors linked to a monitored CCTV is now subject to a clear set of standards, BS 8418, which governs the use of cameras and detectors linked to a Local and Wide Area Networks and Internet links and viewed literally anywhere, allowing centralised monitoring across even the largest ports. Detector-activated and remotely monitored CCTV is now subject to a clear set of standards, BS 8418, which governs the use of cameras and detectors linked to a

Access control

Another BSIA company recently showed how the same flexibility could be applied to access control technology with an installation for the Port of Cork. Spread over a 15-kilometre site, the port’s access control clearly required remote monitoring and a system was designed to combine intelligent card readers with an Ethernet connection to extend the system to remote buildings and enable central, remote monitoring of movements throughout the port, regardless of distance. The installation combines a facility for the port to design and print its own security passes incorporating personnel images, company logo, individual signatures and other information. Access to monitored buildings and checkpoints across the port is limited to authorised cardholders.

As well as regulated movement into the site itself, access systems offer the additional capability to control internal movement in a monitored, ‘keyless’ environment. They are thus useful not only in preventing trespass but also in impeding the circulation of unauthorised people. Modern systems incorporate advanced features that allow individual programming, giving different people different levels of access. ‘Time windows’ can be built in to allow people like cleaning staff to enter only at certain times, for example. Transaction recording facilities that log who went where and when enable systems to be used for dual applications, such as investigation and payroll purposes. Used in this way, access control
addresses both the ‘big picture’ and enables detailed attention to specific areas where the protection of high value property and confidential data is important.

As with perimeter sensors, access control integrates well with CCTV. This has major implications for another key development with direct relevance to port security, the increasing sophistication and reliability of automatic number plate recognition (ANPR) software. ANPR makes it possible not only to employ security cameras to support access control but also to equip the overall security system with an intrinsically wider crime prevention and detection capability. Such systems are already being used successfully to monitor incoming traffic by linking CCTV images to databases of known stolen vehicles in order to signal alerts to security staff. The falling cost and increasing sophistication and reliability of ANPR technology is creating huge potential both in terms of crime prevention and site operations alike. Whilst ANPR can be linked to barriers and rising bollards to physically restrict movement, it can also be employed to grant admittance to authorised vehicles.

Ports, with the need for widely dispersed multiple points of access and the constant requirement to accommodate high volumes of people and traffic, provide a classic example of the importance of integration and flexibility. Thankfully, the security industry is increasingly equipped to meet the challenge.

Alex Carmichael is Director of Technical and Membership Support Services at the BSIA and is responsible for co-ordinating all technical, quality and membership support matters within the Association.

Alex joined the BSIA after a career in HM Forces. He has an electronic engineering background and has had a varied career dealing with a diverse range of electronic equipment. In his current role at the BSIA he acts as UK representative on various European committees such as Cenelec, Euralarm and Coess monitoring EU Directives, UK legislation and Standards that impact BSIA members. He liaises closely with other industry organisations such as ABI, ACPO, ACPOS, CFOA, BBA, Home Office and Inspectorates.

The British Security Industry Association is the trade association covering all aspects of the professional security industry in the UK. Its 570+ members provide over 70 per cent of UK security products and services and adhere to strict quality standards.

Tel: +44 845 389 3889
Email: info@bsia.co.uk
Website: www.bsia.co.uk