



On the lookout

How the next generation of CCTV could replace armed guards in banks

What is the difference between a bank robber and an innocent customer? It might sound like the beginning of a joke, but this is a serious question posed by scientists working to develop the next generation of software for video surveillance.

Closed-circuit television (CCTV) has become ubiquitous in many western societies. The UK has the dubious merit of being the “most watched” nation on earth, with local authorities such as the Shetlands Islands Council, according to data released last year, operating more cameras per person than the San Francisco Police Department.

By comparison, penetration rates for CCTV are modest in most Middle East countries, with surveillance largely limited to government buildings, military sites, the headquarters of the wealthiest companies and some private residences. There are numerous reasons for this. One is that developing economies are slower to adopt such technologies. But the main cause appears to be cultural: not only are levels of theft, vandalism and petty crimes lower in the Arab world; businesses and individuals are also less security-conscious.

A relaxed attitude might make for a less stressful life, but it leaves businesses vulnerable to everything from vandalism to theft, fraud and ▶

embezzlement. Companies in the region are becoming aware of the need to protect online data, for example. Yet for high-risk institutions such as banks, CCTV networks and similar monitoring systems are still among the first lines of defence.

With this in mind, the Central Bank of Bahrain and the country's Ministry of the Interior have taken steps to link all bank branches, cash machines and CCTV devices to a central monitoring facility. This will bring a number of benefits, in theory at least. Not only will the assets and staff of banks be better protected. Since police can be deployed to the scene, banks will have less need for armed guards. Using trained civilian guards will "improve the image of the banking environment in Bahrain".

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After two years of consultation, the government settled on Spectator, a Dutch company, to supply the equipment for the scheme. Spectator has already worked on a similar project in Germany, in partnership with Bosch, a supplier of security systems. More than 35,000 workstations of the police in North Rhine Westphalia are set up to receive streaming video of high-risk locations such as banks and shops.

Since helping to set up the German project in 2006, Spectator has set its sights on markets such as Eastern Europe, South America and the Gulf. Besides Bahrain, where it recently established its headquarters in the region, the company is active in neighbouring Qatar, where some 700 sites are covered by the technology, and in the United Arab Emirates.

"The whole of the Gulf is rapidly waking up to the concept of centrally monitored alarm systems," says Bhushan Kate, regional manager for Spectator. Like most companies working in security, Spectator



has evolved with the technology. When it started out a decade or so ago, its systems carried CCTV footage via ISDN lines – one of the first technologies capable of carrying both speech and data on the same connection. Though still used in many parts of the world, ISDN has since been eclipsed by digital technologies such as ADSL, which already accounts for much Internet traffic. Wireless communication is used as well.

The advantage of modern CCTV systems, says Kate, is less about the technology than how it is applied. One of the advantages is that older technologies and cameras already in use can be integrated into the system. Capital costs are also minimal: clients such as banks and shops pay a monthly fee for the service, rather than paying up-front for the equipment. That said, security technology is evolving faster than the communications systems which carry it. "CCTV has turned 180 degrees," says Kate. "In the 1990s, ▶

it was all based on analogue tube-cameras; now everything is digitised."

The software which analyses the data is also more sophisticated. Intelligent software can already alert guards to unusual behaviour, such as a group of people running in one direction or a fare-dodger jumping a turnstile. These tools are still intended just to help the watcher. A new generation of CCTV, fittingly called Samurai and developed by an international team at the University of London, aims to take automation a step further.

Samurai is already capable of spotting a person behaving suspiciously in a crowd and tracking them across several cameras. It could be installed in airports in the UK - where it was tested in

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November - within the next few years. Even so, it may be some time before software replaces human surveillance. "More than 70 per cent of alarm calls are still false alarms," says Kate. "The real aim is to try and reduce that figure." ■

