

Shop tactics

Security experts recently took part in a retail security dinner debate at a top London hotel. Here, CCTV Image outlines many of the views put forward by many interested parties who consider that information technology has a huge part to play in the retail sector

AS INFORMATION technology finds more and more applications in video surveillance, we are beginning to see benefits emerge in the relatively new field of video analytics.

That was the view of retail security experts who attended the Retail Security Dinner Debate held at Claridge's in London, hosted by IBM and its partner companies: Axis Communications, CNL, Guide Security Services, Retail Fraud magazine and CCTV Media (whose publications include CCTV Image, SecureView, CCTViNFO.com and VideoAnalytics.info).

Video analytics, for the uninitiated, is the use of computer software to interpret images in motion video and make decisions based on the information which is contained within the scene – in short, it's about teaching computers to see and respond to incidents captured on CCTV.

Video analytics potentially has many exciting security applications in areas of society ranging from airports and public transport to city centres and retail outlets.

During the discussion at Claridge's, issues which emerged included the use of technology to reduce costs associated with manned guarding, how to work with your IT department to identify the best solutions for your organisation, reducing shrinkage through the application of technology and the value of metadata to the retail business.

Each delegate had his own point of view based on his experiences over the years and the challenges being faced today.

Getting onboard

Simon Futcher, national loss prevention manager at Sainsbury's Supermarkets Ltd, said the most interesting point to emerge in recent years was the degree to which IT departments everywhere are "getting onboard and understanding security... Two to three years ago, if you talked to an IT person about CCTV – [putting it] on their networks – they would say don't bother. It's too risky for our systems and networks to even think about."

However, technology has moved on considerably and IT networks are more robust than they used to be and, to be fair, the IT departments have made an effort to understand security and have accepted that security is very much about profit protection – which can only be good for the business.



Opulent surroundings: Gordon Ramsay at Claridge's

Mr Futcher says that one of the exciting areas of development for him is data mining – the extraction of meaningful information about security incidents from gigabytes of sales data.

CCTV can be used for data mining by linking electronic point of sale (EPOS) data to digital CCTV images, giving a retailer the ability to view till transactions overlaid on CCTV footage.

Video analytics can take this one step further through the use of metadata. Metadata is descriptive information that is generated by video analysis software and added (or tagged) to the video footage. Armed with information about the number of people in a scene, the colour of their clothes and even a description of the type of behaviour they were engaged in, a person can

more quickly find a relevant piece of security footage.

At the end of the day, despite the application of more intelligent technology, it always comes back to people. "It's about allowing them to work harder and smarter," he says.

Computer analysis

Richard Lawrance, head of audit and loss prevention at the fashion chain Monsoon, suggests a way in which technology can be useful in reducing manpower requirements. "In my experience, risk profiling – or using incident capture systems to assess where stores are being targeted by shoplifters – may be one way of challenging pre-existing views of where guarding cover is required."

Mr Lawrance believes data mining can be useful in certain circumstances. "Crucial to their success, however, is an effective framework to use the information they generate," he says. "They are not a panacea."

When it comes to video analytics, he says, intelligent systems which can identify faces, vehicles and suspicious patterns of movement are all showing some value, but he adds, "The challenge for early adopters is always justifying the cost, especially in an increasingly challenging business environment."

For Paul Newbury, development manager business protection at John Lewis, the challenge in adopting new technology is achieving a decent return on investment "as some technology isn't always cheap".

He says, "Establishing the right time to invest in certain technologies is the key. Too early and it's too expensive, too late and you may have missed the boat."

What stage does he think video analytics is at right now? He admits it's an area which he finds interesting. "This software has intrigued a number of people I have shown it to who have been in the industry for a long time. I do believe once it is up and running well, within a retail environment, it can offer some cost savings, but it's too early to tell at this stage."

Game on

Bill MacKenzie of computer games retailer GAME has a well-developed view on the subject. In an email to CCTV Image, he writes:

"In today's retail market, there is a huge emphasis on delivering high standards of service and stock availability which in turn distracts field operations personnel from detecting internal fraud. We also recognise that staff are getting smarter at how to defraud their employers. These two factors alone make the investment in technology even more important if we are to find effective and productive ways of using valuable resource to detect internal fraud.

"Many retailers are too narrow minded when it comes to targeting shrinkage reductions and they tend to look at the variances in their stock databases versus their physical counts as the key place to focus on when in reality they are likely to be losing much more through the many millions involved with margin erosion via discounts, refunds, gift card and gift voucher fraud. It is much simpler to defraud the till rather than physically take the stock out of the store in their coats or bag.

"The way a company communicates the emphasis they are putting on the use of technology to detect their staff defrauding them is one of the most powerful methods of preventing fraud.

"I also feel that the connection between engaging people and technology cannot be underestimated because there is no doubt that any technical solution will still need the people in the business to be engaged in using it.

"Finally, I firmly believe that CCTV technology is vital for prevention and proving the case when it comes to taking action against the individual especially when it is linked to the data mining tool."

Massive market

In talking to retail security managers, you get the impression that there is a massive market in the retail sector for video analytics, but when asking the board of directors to buy it, the requirement is to demonstrate how it will benefit all departments, not just security.

As a security application, video analytics can help retailers identify patterns of behaviour that lead up to shoplifting and help them find video evidence to use as evidence against suspected shoplifters.

However, video analytics has potential beyond security, for instance in getting more accurate footfall counts or helping the buying department identify traffic patterns and loitering times within stores to ascertain which products attract the most interest from customers.

Nonetheless, we must be wary of an over-reliance on technology to solve our problems – manpower will always play a role. Having said that, video analytics – machine intelligence – can achieve reductions in manpower requirements in certain areas, by monitoring inactive CCTV channels for signs of activity and warning CCTV operators when something happens – for instance, an out of hours delivery at a shop.

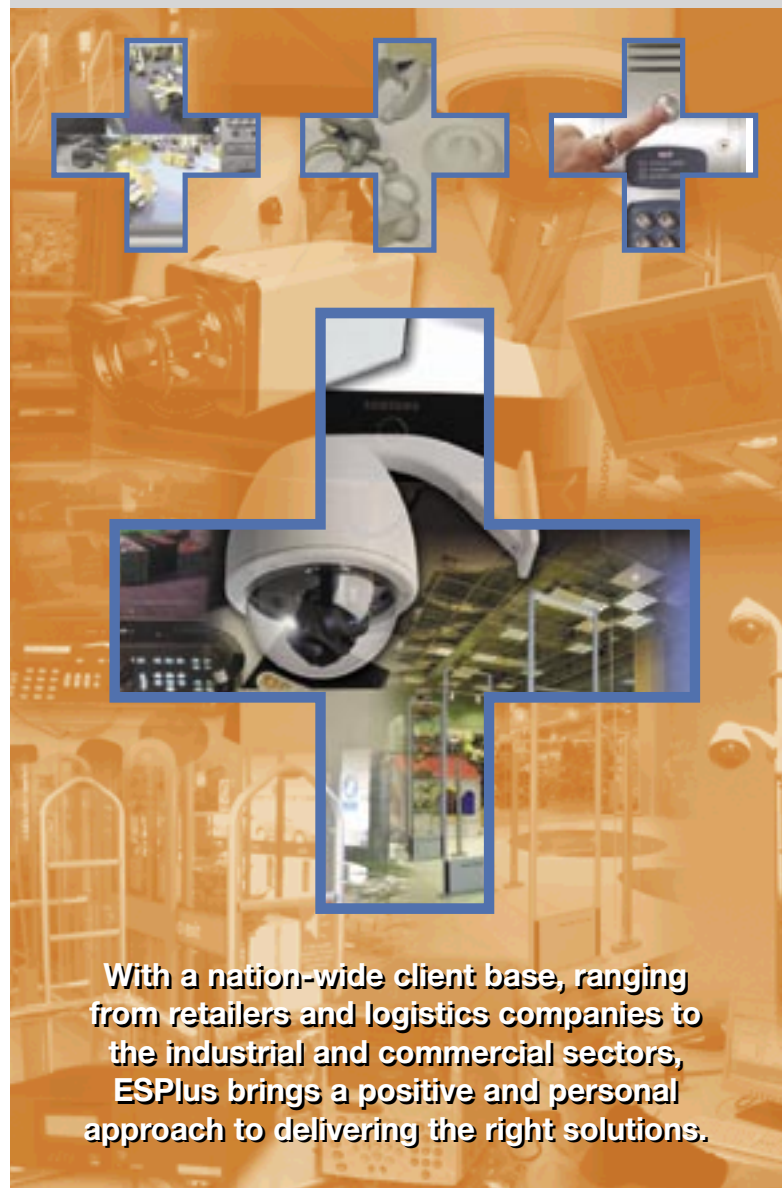
On the shop floor, internally, it would be ideal to link the EPOS system to video analytics and ask it to warn you when a refund has been generated when no one was in a certain area around the till point.

As one security manager commented, it's a system that's just waiting to be developed more fully. If it lives up to its promise, retailers will flock to it like they've flocked to EPOS and other innovations that have streamlined operations and saved money.

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