

NETWORK VIDEO:

Axis Communications and Genetec, technology leaders in internet protocol (IP) based surveillance, examine why retailers are beginning to realise the additional benefits network video can offer



According to the *Retail use and experience of CCTV in the UK report* conducted by the Centre for Retail Research (CRR), 71% of UK retailers are considering migrating to network video.

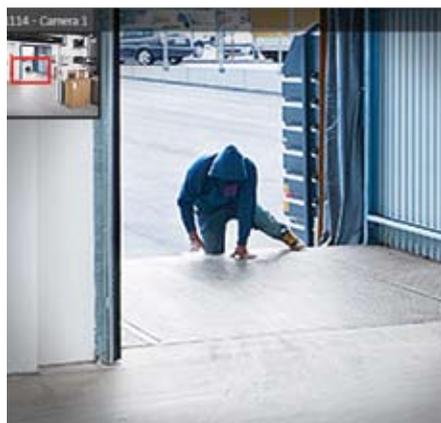
At a time when shrinkage is on the rise, margins are low, competition is fierce and the economic climate is uncertain, retailers need to maximise any investment in technology spend and consider how it can positively impact the bottom line.

While legacy investments in analogue video surveillance have primarily been based around loss prevention and security, network video in addition to enhancing a loss prevention strategy, also offers a platform to extend the role of video to optimising business processes, achieving operational efficiencies and gathering business intelligence on store activity.

HDTV provides superior image quality

The technology companies said that the video surveillance market is following the trend in the consumer video industry, with users demanding better image quality. HDTV network cameras offer a minimum of three times the resolution of the analogue CCTV cameras that exist in many retailers today.

They added that applying network cameras with HDTV performance to a retail



surveillance system will significantly boost operators in identifying and tracking suspect shoppers real time, enhance interrogation of video footage post event resulting in reduced operational investigation time and achieve a higher probability of gaining positive identification.

Benefits can also extend to include liabilities and service level improvement. For example, powerful digital zoom capabilities can be used during live monitoring and playback, which can be useful when dealing with a contentious customer transaction by identifying the denomination on a bank note.

HDTV delivering added value

While the benefits of an increase in image quality are abundantly clear with HDTV cameras, cost-effective deployment is still a key consideration for retailers, particularly given the current economic climate.

Implementing "multi-view streaming" where a single HDTV network camera can deliver simultaneous video streams from different areas of a scene potentially offers retailers improved security coverage whilst deploying fewer cameras. For example, a network video surveillance system can treat a single HDTV camera as multiple "virtual" cameras offering three different views, with each view monitoring a different cash register at the checkout. This also enables video searches to be performed individually on each "virtual" camera.

Not discounting the savings on camera hardware alone, the total cost of ownership (TCO) is significantly reduced through less cabling, a much quicker installation, lower power consumption, less software licensing and lower ongoing maintenance.

Optimised aisle monitoring

An innovative use of HDTV cameras, addresses a challenge retailers face with monitoring shopping aisles. The landscape format (4:3) traditionally offered by cameras

is inappropriate as large parts of the field of view – specifically the sides of the image – are redundant.

The optimum field of view for many shopping aisles is a narrow horizontal view, with higher vertical coverage (see picture on page 21). A network video system that supports rotation of a 16:9 widescreen HDTV image, into a 9:16 format, offers a vertically orientated video stream that captures more usable video along an aisle, which is of particular relevance to high shelving environments.

Benefits of remote access

An inherent benefit of network video is the ability to gain authorised access to live or recorded video from any network location, including via mobile devices. With the CRR survey revealing that 68% of UK retailers require wider organisational access to video, retailers making the step to IP based surveillance, can benefit from a system, which enables a proactive approach to identifying potential threats.

Axis and Genetec highlighted how remote video access can also aid the business to be more responsive to the need for change. For example, enabling merchandising departments to remotely audit store compliance with a promotion or end-cap display and instantly correct display guidelines that have not been adhered to. Also, with enterprise video management systems, cameras and information from multiple stores can be accessed at the same time improving response time and simplifying processes.

Flexibility and scalability

Network video systems based on H264, a compression format used widely in the consumer video market, can also reduce video bandwidth and storage utilisation by up to 80%, relative to legacy formats used in many installations today.

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This benefit extends the application use for video. By configuring multiple streams at different quality levels from a single camera, it is possible to preserve high quality video within the store and provide a reduced quality stream for remote access. This way, it is possible to transmit video over the WAN without affecting point of sale (PoS) transaction data usually transmitted over the same link.

For small footprint stores, edge-recording capable cameras could be a smart alternative to the traditional server based

approach as it removes the need to deploy and maintain a server in each and every store location. This cost-effective solution also allows for automatically transferring the video to a central location where it can be stored for longer periods. This can be scheduled during off-peak hours when wide area network (WAN) network bandwidth utilisation is low.

Future-proof integration

Network video typically is based upon an open architecture. This means that a network video system is not limited to strictly managing video content. Data and information from external systems such as PoS, electronic article surveillance (EAS), access control, video analytics or intrusion systems can be seamlessly integrated with the video system, offering a powerful

tool for investigation. For example, an investigator could ask the system to display the video of all stores when a receiving door was opened say after 4pm, or to show all refunds from that day's transactions over £100. The associated video is then instantly accessible.

As new hardware technology emerges, an investment in network video is protected, as software can easily be upgraded to embrace new technology. This serves to future-proof investment in network video today, with the potential to exploit the technology of tomorrow.

To find out more, visit:
www.axis.com
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