

# IP Surveillance Helps Retailers Rein in Losses

By Dr. Jumbi Edulbehram

**M**ore retailers are banking on new advances in technology to strengthen loss prevention plans and boost revenues. And why shouldn't they? According to the National Retail Security Survey, retail losses accounted for over \$41 billion dollars last year with 1.61 percent of sales loss due to theft and fraud. Annual shrinkage combined with increased competition and economic pressures like high gas prices, tightening of the credit market, a cool labor market, and a downturn in the housing market are forcing retail managers to find ways to streamline their business practices and improve their bottom line. As a result, retailers are considering IP (Internet protocol) video surveillance to help reduce shrinkage and provide solutions that decrease losses and incidences of theft.

IP video surveillance gives retailers new tools and capabilities that help tighten security efforts and improve store performance. As more retailers migrate from analog video to completely digital systems, they are realizing the multitude of benefits network products offer and are planning ahead for system upgrades. The 17<sup>th</sup> Annual Retail Technology Study cites that security and ID management was in the top 10 technology initiatives for 2007. The study also explains that retailers are adopting new generation software with the idea that they will recoup their investment in a very short amount of time.

There are several advantages to using IP surveillance to manage loss prevention, ranging from capturing quality video that can be used in a court of law to providing better methods of analyzing store layout and display design. Here are three main reasons why managers should count on this new kind of technology to improve security and cut their losses.

## Analog Cameras Fall Short of Expectations

Deploying video surveillance in a retail setting...be it digital or analog...can act as a deterrent; however, analog cameras fall short of providing maximum security benefits. Analog cameras lack the ability to provide superior image quality, which may



greatly reduce the overall effectiveness of a loss prevention system. Analog surveillance cameras are only capable of video resolutions equal to 0.4 megapixel, whereas network cameras can deliver up to 16 times greater resolution, cover a larger area, and provide superior digital zoom capabilities.

A key feature that analog cameras lack is progressive scanning. In *progressive scanning*, network cameras scan an entire image line by line every 25/30 of a second. Analog cameras, on the other hand, provide interlaced scanning that causes image distortion especially for moving objects. Progressive scanning produces much better detail with moving images, such as a person walking rapidly in the store.

In addition to higher resolution and progressive scanning, network cameras can provide additional capabilities that enhance picture quality. For example, built-in backlight compensation gives clear images of people even if there is bright light from behind, or a network PTZ that compensates for jitter caused in the images by small amounts of vibration.

With analog cameras hooked up to digital video recorders (DVRs), accessing store video remotely is difficult, if not impossible. With network camera systems, store video can be easily accessed over the LAN or WAN network. Being able to access information over the network enables loss prevention personnel to remotely view video clips of exceptional POS transactions, easily log into store systems to retrieve video of incidents, or do video verification of alarms and manage store systems remotely.

Network camera systems are also much more scalable than closed, proprietary CCTV systems. A DVR typically allows for 4, 8, or 16 camera inputs and is only scalable in those steps. If a retailer wants to add a system with 17 cameras, they would need to buy an additional DVR, which is a costly proposition. Network cameras, on the other hand, can be added easily one by one or in multiple numbers without any restrictions. Open systems give users much more flexibility in what products they use, and allow for users to deploy the latest and greatest technology available on the market.

## Addressing Loss Prevention Challenges

According to the National Retail Security Survey, the majority of retail shrinkage in 2006 was due to employee theft. At \$19.5 billion, employee theft represented almost half of losses (47%). Shoplifting accounted for \$13.3 billion, or about one-third (32%) of losses, while other losses included administrative error (\$5.8 billion and 14% of shrinkage).

In order for retailers to catch improper behavior, they need sharp, colorful images that show richness in detail like numbers on a license plate or an employee badge number, and provide quality images that are admissible in a court of law. As organized crime groups and thieves get more sophisticated, retailers need to retaliate with sophisticated technology that makes it easy for them to track suspicious activity, identify perpetrators, and share information so other stores do not become victims.

Network cameras can also be integrated with existing retail systems to assist in loss prevention. For example, cameras can be integrated with electronic article surveillance (EAS) systems to ensure proper procedures are being followed, such as an employee stopping a customer who sets off an alarm at the door. Cameras can be directly connected with point-of-sale (POS) systems so that video evidence can be easily collected for fraudulent transactions and POS exceptions.

With shrinking LP budgets, many retailers are finding themselves in a position where they have to do more with less. Contrary to popular belief, the cost to acquire, install, and operate a large IP-based installation is actually cheaper than an analog system with DVR components. The cost savings come from lower installation costs (only one network cable goes to the cameras for both video and power), commercial off the shelf hardware is more cost-effective than proprietary hardware like DVRs, and lower service and maintenance costs since network systems are based on open standards and have standard IT components.

## Providing Long-Lasting Value

Network cameras provide more than just a solution to loss prevention. They also provide information that can be used to study consumer behavior, employee tasking, and store layout and design. The video that a camera collects can be used to count the number of people coming in and out of a store or

even down a particular aisle. For instance, if a retailer knows a particular area of the store gets more foot traffic, they can charge a premium for product placement. If a retailer wants to push a particular product, then they can move the displays and/or product to a more popular section of the store.

Video can be set up to monitor check-out lines so that managers can develop new ways to keep the flow of traffic moving during busy shopping hours. They can provide alerts when shelves need restocking, when spills occur, or when aisles are obstructed.

Managers can also use video for training designed to improve customer service techniques or teach employees how to spot shoplifters. With video, managers can see which employees interact the most with customers and which employees do not. Overall, the video captured can help improve productivity and training programs, all of which can positively impact the bottom line.

With so much at stake, it is important for retailers to educate themselves on surveillance options that are relatively hassle-free to implement. There are a number of powerful software management tools for monitoring, accessing, and storing video that are readily available. The right software can add capabilities, such as combining video evidence with time-lined POS transaction data, or integrating video with cash register transaction data for advanced, flexible searching and analysis.

Retailers also have a number of choices for future-proof installations that leverage commercial off-the-shelf (COTS) components that can be implemented in stages without having to completely overhaul a CCTV system all at once. Retailers can replace analog cameras one-by-one with network cameras that simply plug into the system. Because of the open architecture of network cameras, retailers can purchase and install the newest technology as it becomes available.

IP-based surveillance systems open the doors to vast value-added features that decrease shrinkage, increase revenues, and improve employee training and morale. With so many advantages that help retailers stay competitive and state-of-the-art, it's hard to see why they would go with anything other than IP surveillance. ■

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