The Value of Unified Security Solutions in the Retail Environment

Integrated network platforms optimize retail operations, enhance security and reduce loss

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1. Introduction

Retail is a dynamic market, constantly changing and evolving due to the economic climate, buyer behavior, and the rise and fall of criminal activity. As shoplifting and employee theft continue to be chief sources of shrink, it is becoming increasingly clear to retailers that their existing tools such as analog CCTV systems are ineffective. Some retailers have started using IP video systems but they are not realizing the full potential of networked solutions - video surveillance remains separate from other loss prevention systems such as access control, EAS and intrusion detection. There is a critical need for unified networked solutions that correlate important data from multiple IP-based subsystems to increase situational awareness, and better protect assets and employees.

This white paper looks at the current retail environment and outlines the benefits of unified, networked solutions for loss prevention (LP), and also explores how these systems can be leveraged to gather data for store operations and merchandising.

2. The State of the Market

2.1   The Rise in Shrink and Crime

Shrink is an unfortunate reality in today's retail market. The recent Retail Industry Leaders Association Crime Trends Survey reported growth in amateur shoplifting, financial fraud and robberies in addition to increases in organized retail crime. In addition, employee theft ranks as the primary source of loss. According to the Global Retail Theft Barometer, disloyal employees cost retailers more than $40 billion annually. Organized retail crime (ORC), once a problem associated with large metropolitan areas, is expanding into suburban and rural areas. In total, the FBI estimates ORC costs retailers $30 billion annually in the United States and a recent National Retail Federation survey found that nine out of 10 retailers reported themselves victims of ORC.

2.2   Do More with Less

Retailers are often forced to tread a fine line between paying to protect their assets while reducing security expenses. The recent economic downturn contributed to an increase in retail crime activity, forcing retailers to beef up security operations. At the same time, retail was a market most affected by the recession and was forced to make reductions in personnel. Faced with the dilemma of reducing costs as well as losses, retailers relied on their LP departments to "do more with less."

3. The Reality of IP Technology

3.1   IP-Video Offers Significant Benefits over Analog Video

Loss prevention has seen major advancements over the past decade with the introduction of IP-based technologies to the market. IP technology offers much more advanced tools and capabilities than traditional analog systems. Advancements include:

► Real-time video monitoring from any location over the network
► Centralized video monitoring of multiple cameras and sites
► Higher quality images and feature sets
► Advanced data encryption
► Long-term savings in infrastructure and operational costs

Standard video

HD video

With the recent introduction of megapixel and HD cameras, IP cameras have far surpassed analog cameras in terms of image quality, which is critical for retailers. When cases are prosecuted in court, the burden of proof lies on the retailer. Therefore, the better the video evidence, the more likely the retailer is to win a case. In addition, when shoplifters or employees are presented with video evidence of their crimes, they are more likely to admit guilt. Greater image quality also extracts important details from captured video, including merchandise details, vehicle license plates and even currency.

3.2   IP Technology Expands to Other Forms of Security

It is not just camera technology that has advanced with the introduction of IP systems. Retailers can greatly benefit from a fully networked access control system. IP door locks offer enhanced security and flexibility over traditional lock and key sets. For example, when replacing staff members, it is far easier to deactivate digital cards from a database housed on the computer than it is to replace keys and locks. Networked access control can identify break-ins faster and have the ability to record a timestamp event when a door lock has been tampered with.

3.3   Where IP Falls Short

Loss prevention tools have undergone major technological advancements over the past decade with the introduction of IP-based solutions. However, while IP technology has made great strides for loss prevention solutions, the full power of these networked based products have not yet been realized. For the most part, the components that make up a sophisticated IP-based solution, such as video management, access control, video analytics, alarm detection and others, are purchased from separate vendors and therefore operate in a siloed environment. The result is both expensive and complicated for procurement as well as installation and maintenance. As a result, many retailers have decided to forgo critical components such as access control or analytics to reduce capital expenditures. Even retailers that purchased end-to-end systems found that these components could not communicate or share information without costly custom integration. Because of this, critical security incidents were often missed, resulting in security hazards and lapses.

Retailers need a cost-effective solution that integrates these critical components from the ground up and provides a higher level of intelligence and efficiency through integration.

4. Integrated From the Ground Up

Until today, retailers have not been able to take full advantage of a networked infrastructure because the different LP/security technologies were not integrated. Today's networked solutions integrate the capabilities of various subsystems, such as video management, access control, VoIP and video analytics into a single platform. Instead of piecing together separate components from various vendors, these components can now be purchased together as one package, installed all at once, and operated over a single user interface.

4.1   Seamless Communication For a Higher Level of Intelligence

Platforms that combine these traditionally separate components from the ground up enable critical information from connected devices to communicate seamlessly with each other. For example, when a door is forced open, security operators receive an alert but also have the ability to pull up video from a corresponding camera all on the same interface. The security operator can then talk, utilizing VoIP capabilities, to an intercom or audio-enabled camera next to that door.

5. Win the Battle Against Shrink

In addition to correlating information from video management and access control systems, unified networked solutions incorporate some of the most advanced technology available on the market today to help retailers win the battle against shrink.

5.1   Video Analytics

For LP departments with limited resources, adding surveillance cameras is a cost-effective way to put more "eyes" on the store. However, as the number of cameras increases, it

becomes difficult to monitor them and harder to find video for forensic evidence. Hence intelligent unified solutions need to have video analytics to help retailers get automatic alerts, rapidly search through video and collect important data.

Some of the activities video analytics can be used to identify include:

- ► Organized retail crime behaviors such as a "wipe-out" on a product
- ► Facial recognition for identifying repeat offenders
- ► Suspicious behaviors outside the store or in the parking lot
- ► Slip-and-falls
- ► Entry and exit monitoring

Trip wire will alert operators when people or objects enter into a specific field of view

Even in a busy retail environment, video analytics can help detect suspicious behavior such as objects left behind

5.2   VoIP Revolutionizes Communication

Voice over IP is key to managing multiple stores from a single location. Loss prevention personnel can communicate with a store from network devices, land line phones, or even cell phones, through the same interface that manages the video, access control and alerts database. VoIP allows them to speak through audio-enabled cameras or intercoms. They can also stream and record live audio from a microphone in a camera to their own monitor or handheld device. VoIP also allows off-site personnel to monitor unattended deliveries. Lastly, security operators can record an audio file and have it playback through a camera speaker when triggered by an event. Imagine a nighttime break-in. The cameras can be set up to playback a message informing the culprit that the police are on their way. VoIP offers endless new possibilities for the retail market.

5.3   Remote Management

Remote management provides users the ability to access, configure and monitor all features of their security system from anywhere and at any time through a web browser. Remote management applications can bring substantial value to retailers who are reducing on-site resources and are therefore, left with fewer people to monitor the same number of locations.

Another important aspect of a remote management system is the opportunity to take advantage of managed services. Retailers large and small can benefit from the features of a unified networked system without the burden of maintaining equipment or minute-to-minute

monitoring of surveillance footage. Managed services gives this role to a monitoring company, freeing up the retailer and the LP team to focus on investigation and prevention.

5.4   POS and EAS Integration: Bring Data to Life

The POS terminal is a primary spot for losses to occur. The ability to integrate POS activity with a video surveillance platform provides LP staff with correlated data to help uncover various sources of store losses. POS time-stamp functions will match employees with specific transactions on video to help root out employee scams including:

- ► Altered sales tags and other price discrepancies
- ► "Sweethearting"
- ► Coupon or return fraud
- ► Cash register theft

A video surveillance system that is integrated with Electronic Article Surveillance (EAS) systems provides similar value. Electronic sensors at the entrances/exits set off an alarm when tagged merchandise is taken out of the store, which, in turn, will alert the cameras to view and record this activity. These time-stamped alarms correlated with video footage are invaluable for recording incidents as well as employee training.

6. Integrated Systems Increase Business Intelligence

In addition to loss prevention departments, which greatly benefit from unified networked solutions, retailers can also use these solutions to monitor employee behavior and enhance customer service. By leveraging these platforms, managers can observe whether employees are following store policies. Cameras placed at a time clock can tell whether employees clock out for breaks. Surveillance images can show whether front-line employees are greeting customers in an appropriate fashion. Stores can use people counting to identify the number of customers that enter a location within a given time period and then use that data to calculate conversion rates and to determine appropriate staffing levels. Video information can also measure the effectiveness of marketing and merchandising. For example, video analytics calculate the length of time a customer spends at a given display or item. Retailers can set up automatic report generation on the user interface to record and report this important data.

Intelligent analytics can calculate the length of time customers spend on a display item to help determine the effectiveness of marketing and merchandising.

7. Conclusion

Today's retailers can benefit greatly from solutions that leverage the IP network and integrate multiple devices to work together. These solutions are cost effective, feature rich and easy-to-use. No longer is a fully integrated end-to-end solution exclusive to big retail chains that have the space to house the equipment and the money to afford it. Today's systems combine the performance, sophistication and functionality of an enterprise-class system into a compact, integrated package. LP departments can expand their capabilities with technologies that correlate video surveillance, access control, VoIP and video analytics. By accessing all these components on web-browsers and even mobile devices, LP investigators benefit from greater mobility and efficiency. LP operators can monitor, communicate with, even control door access for multiple stores from a centralized location. Advanced IP video offers enhanced picture clarity while intelligent video analytics help reduce shrink and build business opportunities. Lastly, a completely unified solution offers greater possibilities than an analog system, and is more effective and intelligent than a piecemeal IP solution where components are purchased separately and communicate on a limited basis.

For LP departments, unified IP solutions offer a huge step forward in retail loss prevention and business intelligence.