New IP-based digital technologies are transforming the world of video surveillance, making it more effective in its primary role of detecting and preventing undesirable behavior—theft, shoplifting, vandalism, assaults—but also increasing its role in delivering information that can be used to enhance business processes and optimize overall business performance.

All of this is making video surveillance more attractive to a wide array of companies, increasing both new investments and upgrades from older analog-based solutions.

Digital Technology Drives Demand

A survey last fall among national and regional retail executives commissioned by Axis Communications (a major provider of video surveillance solutions) found nearly 64 percent using some kind of IP-based security solution, more than double what the same survey found just two years earlier. The percent of small retailers planning to buy surveillance equipment in 2013 climbed nearly eight points and is well over 50 percent.

Consistent Market Growth

The growing demand for digital security and surveillance (DSS) solutions has created a $40 billion industry, posting healthy growth rates of 9-19 percent, according to reports by IMS Research and other firms that follow the industry.

The steady improvements based on digital technologies have spearheaded the growth surge. IMS Research noted that in 2009, during the global economic downturn, while the demand for analog video surveillance solutions contracted, the network (IP) video surveillance market grew by more than 18 percent.

IMS Research views 2013 as a tipping point when more than half of the surveillance market will be digital, led by the growing use of megapixel cameras and the increasing adoption of open standards in both video surveillance hardware and software.

New Applications Drive Demand

- Images captured by today’s megapixel IP cameras can start out at nearly two square feet (2560 x 1920 pixels), making it possible to zoom in without loss of detail. Footage with this kind of detail can be used for a wider range of applications that might previously have been impossible, such as pinpointing fraud at the point of sale.

- DSS systems can exchange information with other applications, for example, issue e-mails and texts after identifying undesirable behavior.

- Video analytics software can be used to automatically scan footage for undesirable behavior and immediately issue an alert, reducing the reliance on personnel needed to manually scan masses of video footage.

- Surveillance footage can also be analyzed to extract data for nonsecurity applications, such as getting accurate accounts of customers along with gender and age breakdowns.

Retailers in North America experience some $45 billion in retail shrinkage a year due to employee theft, shoplifting and organized criminal efforts. Retailers rely on video surveillance to identify suspicious and illegal behavior in aisles product areas, the POS and at other locations.
• A wide range of companies are developing solutions that add functionality and versatility to DSS solutions, taking advantage of open digital platforms (such as Intel's) and widely available external application programming interfaces (APIs).

Price Points for Digital Fall

While DSS solutions have typically been more expensive than traditional analog system, the price point for DSS is falling. A 2010 Axis Communications survey compared IP to analog in systems with up to 40 cameras. The IP-based bids were consistently lower; at 40 cameras, the IP-based system cost 16 percent less than the analog one. The fact that the video rides on the existing network infrastructure increases the ROI. Wireless and cloud capabilities also add to the economies of scale.

Open standards are also making it possible for the development of turnkey solutions designed for smaller, lower camera-count solutions that are easier to install and less expensive to operate.

More preconfigured surveillance solutions are becoming available. One example is the SecurePod™ developed by Intel and Ingram Micro along with Dell, Axis Communications and Milestone Systems. It comes with cameras, servers, software, content management, remote management (as well as the training and support) in a preintegrated, validated solution.

Retail, Education and Public Sector Lead Verticals

Retail: Retail is a major vertical market for DSS solutions. Retailers in North America experience some $45 billion in retail shrinkage a year due to employee theft, shoplifting and organized criminal efforts.³ Retailers rely on video surveillance to identify suspicious and illegal behavior in aisles product areas, the POS and at other locations. Digital video can be synched to transaction data to pinpoint fraudulent activities. Merchants can use analysis of video footage to help with store layout, merchandise positioning, staffing, promotions, conversion rates and customer experience.

Education: K-12 schools and universities are widely considered one of the fastest growing market segments for digital video surveillance. The dramatic and deadly incidents that have taken place in schools have heightened the need to take immediate action. Combining proactive protection for students and staff with digital security capabilities that serve other functions (e.g., remote education) makes it possible to optimize safety while remaining within budget.

Government/Transit: The public sector is another major user of video surveillance. The need to protect citizens, customers and passengers is, and always will be, a high priority for governments. Federal, state and local governmental agencies are increasingly turning to digital video surveillance solutions to proactively defend the homeland.

Mobility and the Cloud

Two important trends reshaping the video surveillance market are mobility and the cloud:

Mobility: Users on mobile devices can now review surveillance footage in real time, dramatically expanding the opportunity for monitoring situations. Also, there is a growing trend for mobile surveillance cameras to transmit footage in real time back to a control center, supporting better assessments of emergency situations.

Cloud: The cloud is making its presence felt in video surveillance. According to IMS Research, the prevalence of enterprise video surveillance systems using private cloud is starting to gain some traction as IT managers increasingly take responsibility for the management of video surveillance systems. IMS Research (www.imsresearch.com) estimates that the total world market for cloud-based video surveillance, or VSaaS, was worth over $500 million in 2011, an increase of 25 percent from 2010.⁴