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## Using Video Surveillance To Improve Retail Operations

A Guest Series Presented by Aimetis



# VIDEO ANALYTICS FOR RETAIL: GOING BEYOND LOSS PREVENTION

*by Marc Holtenhoff, Aimetis*

In my last column, I noted that more and better tools to combat retail theft have come to market in recent year, including video analytics software. While video analytics is most commonly deployed in loss prevention applications, it is also very useful to address a variety of other challenges. In fact, the current trend is for non-LP groups to use video analytics to improve revenues and enhance operations. Here, then, are some operations, merchandising and customer service applications for video analytics:

**Staffing:** Retailers often guess at what staffing levels should be at certain times on given days based on vague information (we were pretty busy yesterday afternoon) regarding store traffic. As a result, it's not uncommon to find too many or too few staff on the floor, which can translate into either unnecessary personnel expenses or poor customer service levels/lost sales. But with the use of overhead "people counting" applications working in concert with video cameras focused on entrances and exits, some retailers are taking the guessing out of staffing. Once they know how much busier the store is at specific days and times or even by holiday or season, they can staff appropriately.

Others have taken this even further, particularly big box retailers. They've added additional cameras and are analyzing the amount of foot traffic moving into individual department areas to determine, for example, grocery department staffing needs vs. those of the clothing and electronics departments.

Beyond staffing, people counting can be useful in merchandising. I recall one retailer that had promotional signage near the entrance it believed most customers entered. Through people counting, it quickly discovered that almost half were actually entering through another area with limited signage and so increased its promotional signage there.

**Customer Flow:** Analyzing more than the number of people entering and leaving the store can provide additional benefits. For example, one leading jewelry chain uses video analytics to measure traffic flow patterns by aisle and displays to evaluate if merchandise is being displayed properly and to analyze the impact of sales promotions.

The technology is so advanced it can now accurately note how many people stop in front of an endcap or display for a length of time (say 10 seconds) to gauge their interest in an item or items. By filtering out all other video footage shot, retailers can view all such behavior that takes place over the course of a month in a matter of minutes. This enables them to redesign an endcap, for example, to test whether customer browsing increases with the change. Over time, retailers can conduct trend analysis — month to month or year to year — to uncover hidden trends and anticipate unusual foot traffic.

That same jewelry chain also uses analytic motion tracking/thermal zone capabilities to determine locations within the store that customers frequent. For example, it is interested if customers go directly to specific counters with sales items or browse throughout the entire store first.

Another retailer wanted to know more than just how many people are lingering next to a particular item: It wondered whether they were male or female. This retailer now calls up each 10-second video of individuals who stopped near specific items, identifies their gender, then skips to the next video clip and so on. By doing so, it can determine within an hour the gender of more than 350 people who have lingered near an area of interest — something that couldn't be done in the past because of the time involved (days vs. minutes).

**Customer Service:** Knowing when customers need some assistance can improve their level of satisfaction and increase sales. Aiming video cameras integrated with analytics on high-margin items to see when customers loiter more than 10 seconds is an easy way to accomplish this. One retailer found that 75% of customers in this category weren't getting customer service help. It implemented video analytic alarms linked to store associates' mobile devices so personnel would approach customers who appeared to need assistance. Doing so dramatically increased these interactions and improved sales. That same retailer also conducts periodic audits via analytics to ensure that over time a high percentage of these customers continue to get assistance.

Another retailer links local store video to its central headquarters where it conducts periodic audits to ensure that products are being displayed properly and customers are receiving proper service. On occasion, it has even sent remote alerts to staff that customers require assistance. Given that some stores are 2,500 miles away, in addition to improving the customer experience, it has also saved considerable travel time and staff expense.

In other cases, retailers have used analytics to be alerted when a customer arrives at the register, detect how fast checkout lines are growing and even predict when they will reach a size that requires additional cashiers. By doing so, they can address long lines (and impatient customers) before they become dissatisfied.

**Market Research:** Getting accurate metrics regarding buyer behavior can be frustrating. But when various analytic capabilities are combined, retailers can determine how many people walked in the store, then determine

what percentage entered a given department, figure out how many of those paused for a period next to an item and received help from an associate, then compare POS numbers to determine what percentage of those who showed interest in a given product resulted in a sale. Doing so enables retailers to analyze multiple store elements that can be improved.

**Safety And Security:** The safety and security of both employees and customers is of critical importance to management and is a significant factor in terms of liability and insurance. With analytics, retailer can be alerted to potential safety threats without putting staff in danger and have advanced search tools for quickly reviewing recorded video for investigational purposes. In some cases, these tools have saved retailers from fraudulent lawsuits originating when shoppers fake falls or other injuries in aisles.

## MORE THAN JUST LP

Loss prevention groups will continue to use video analytics to reduce shrink; we shouldn't minimize that value. But retailers are also finding new and creative ways to improve operations, merchandising and customer service with video analytics.



### ABOUT THE AUTHOR

**Marc Holtenhoff is CEO and director of Aimetis.** Holtenhoff has close to 20 years of leadership experience at successful, growth oriented technology companies. At Aimetis, Mr. Holtenhoff is responsible for the organization's corporate strategy, financial performance and overall growth. Prior to Aimetis, Mr. Holtenhoff was the CEO of

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