Retail Security Enhancement

Retail Glance Access

Abstract

Blue Line Technology's First Line™ has an "unknown" designation that locks out potential assailants that have their faces concealed. Businesses with late-night shifts can now achieve a significant added layer of security.

By Paul Brauss, Blueline Technology LLC

In concert with the Intel IoT Solutions Alliance

Table of Contents

Introduction

The concept of a convenience store comes from an early history where a community would have small mom-pop type stores that supported the needs of the community with staple products. Over time these stores account for nearly 39% of retail spending developed into mega-chains. While many are still independently owned, they follow a franchise business model but remain rooted as important to the local community. An important element to their success is easy to access for traffic. It is this value proposition to the customers that also provides a detriment to the "predominant cash" business model because it is easy to access for robbery and theft practitioners.

There are over 32,000 robberies a year in convenience stores and nearly 11,000 of those will be robbed multiple times. The rate of robberies has been described as an epidemic and unless cost-effective preventive actions are taken, customers and employees will continue to be at serious risk. Most of the reported violent crimes occur at night in these locations.

The resulting damage from convenience store robberies can be physical, economic, and psychological. Large store chains must pay for legal reviews and have reported cost impacts from $10,000 to $250,000 in legal and settlement fees. Independent store owners are more directly affected due to their size and inability to absorb the loss and may not be able to recover from a robbery. Employee turnover rates for the CS are typically high as well with the major cause being the implied safety/security concerns.

Frustrating for the store owners and police as well as the point that current security surveillance has waned in effectiveness because of the forensic approach (after the fact) to investigations. The criminal element seems to grow immune to the current security approach. With new technology, the security approach can be enhanced to a prevention posture with a simple glance at the camera.

The Solution:

Blue Line Technology introduced a patented software solution to the convenience store industry in 2017 that has had substantial positive results for the employees, customers, store owners, and managers. The software solution starts by combining a dedicated edge appliance with camera and mag door locks in controlling the door access. These components are not new to the stores but when enhanced with the patented software the solution moves from a
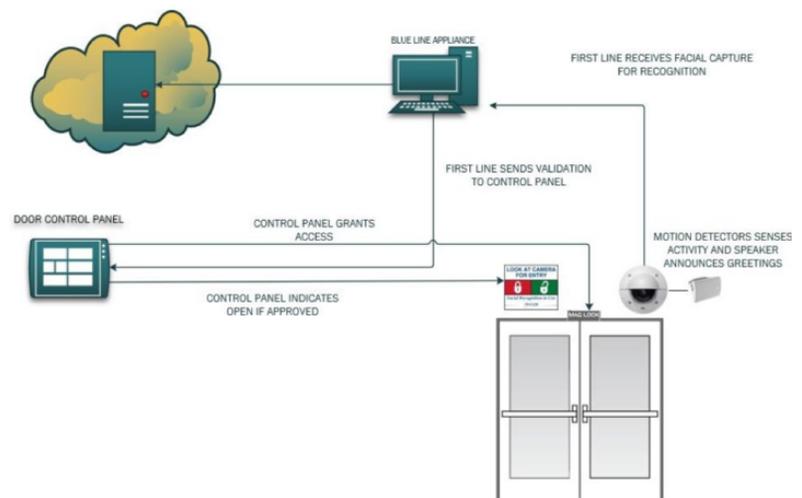
forensic approach to security to a deterrence and prevention approach.

The application change is that with the Blue Line solution a glance at a strategically positioned camera is required. Not unlike other surveillance cameras in place (most convenience stores have 10-15 cameras in use today), this camera is positioned at the door entrance and includes two stream capabilities. In this position, the camera can read a patron's face as they approach the store. The camera technology includes a motion sensor that activates a speaker with a gentle reminder to look at the camera to gain entrance. An indicator sign signals to the customer that the face has been read and

the door released for entry. The patron walks into the store without breaking stride. This process happens "on the walk." In the event a masked person approaches, he/she must either remove the covering to have the system record their face, or they will not be granted access. After careful review, clerks can choose to let this person in if they wish. Like other surveillance video cameras, a recording is made of entries and an ID number assigned and the video managed as a typical surveillance system. If there is a need to review the footage (theft occurred, etc.), the store manager can then place the subject's face into the system for future immediate notification of criminal activity. The known threat can be kept from entering the store if desired.

Privacy Concerns

Sensitive to privacy concerns, Blue Line Technology's solution requires no personal data, no names and has been tested for over three years demonstrating no bias and no profiling. The face becomes an entry key. The camera-based system increases safety by allowing the store staff to prevent masked individuals from entering the store. The camera does not automatically share, receive or transmit any information or facial images to any organization outside of the store management.

Installation and use of the systems

Working with key integrators and distributors, Blue Line has designed a simple installation kit for the retail application. The kit includes the necessary hardware, wire bundles, signage in an easy to install a wall-mounted enclosure that fits in equipment rooms today. The software is loaded in the small appliance device that is part of the kit. A monitor is strategically mounted for ease of visibility by clerks. Predetermined messaging instantly appears on the monitor instructing clerks how to respond if a threat is encountered. The clerks simply see the person's entry as either a red (threat), green (known safe employee), or unknown (safe customer). The enhanced video capability is set to run constantly

throughout the day, even when doors are unlocked. The operators have a simple on/off switch that they can manipulate, turning the locks to active at any time. Individual stores can format the system to their protocols.

Typical Operating Procedures

With the system installed and the store clerks fully trained on the operation of the unit, we will determine a start and stop time each business day for the system to operate. Below is a representative sample of the operation of the system.

A. At dusk – the manager/lead cashier will turn the Blue Line Facial Recognition system into the "on" position and position a sign on the glass door (8 ½ X11) alerting any patron that FR is in use.

B. As a patron approaches the door the motion sensor will register movement and announce, "welcome to the store – please look at the camera to gain entrance".

C. The patron will look at the camera and the face will register as an "unknown" unlocking the door.

D. The store manager/lead cashier will answer any questions about the system and why the system has been installed "The BL facial recognition system has been installed to provide a safer work environment and safer customer experience at this store".

E. Should an event happen in the parking or pump area during the times that our FR solution is not securing the doors, the clerk can flip the switch at any time, locking the doors and requiring a face to open the door.

F. If a person enters the store by looking at the camera and commits a crime while on the property the clerk can do one of two things. First, the clerk, if approved to do so, can go back to the video, snap a few photos, and enter the individual into the FR system as an alert. Second, the clerk can note the time of the event and as much of a description of the individual, so the approved personnel can go back to the video and create the registration.

G. The end-user will create a policy on which personnel will receive a notification if an "alert" identification takes place.

KPI's: Key Process Indicator (Metrics)

Success is measured in these key elements:
A. The Equipment works as specified
B. Reduced/Eliminated Robberies

C. Reduction in Police Service Calls
D. Improved profitability (reduced loss due to theft)
E. Revenue impact
    a. Basket Size
    b. Transaction Counts
F. Franchise Feedback
    a. Customer Interviews
    b. Store Employee interviews
G. Reduced Employee Turnover

Summary

The criminal activity data gathered as part of the Blue Light case study as well as the interview data, store manager's comments and customer comments support the following conclusions.
The implementation of the Blue Line Technology access control solution as described in the study has had dramatic positive results on the safety and security of patrons as well as retail stores employees.

The financial benefits include:
- Increased employee productivity and employee retention
- Eradication of "armed robberies"
- Reduction in petty theft
- Reduction of workman's comp cases
- Satisfied employees, customers, and business owners
- Complete customer acceptance of the solution
- +95% reduction in police service calls

The metrics being evaluated were discussed with corporate individuals as critical to the success of the solution. These were the metrics that were to determine the effectiveness of the solution. Also, the Blue Line staff wanted to know more concerning the behavior modification and lasting effects of the deterrence approach. For about the cost of a daily lunch, the results were dramatic and cost-benefit substantiated.

A. Dr. Daniel Isom is the Executive Director of REJIS and noted Criminologist. *"The solution presented by Blue Line Technology in a retail setting can produce a very subtle behavior modification, which can lead to positive results. The Blue Line deterrence solution, in a retail environment, can also provide a feeling of safety to customers and employees. The overall design of the solution at the entrance, before the shopping experience, can deter undesirable behavior. This feature is not intrusive but a behavioral clue warning individual they are under surveillance. The benefit of using the face as a "key" to unlock a door is that it reminds those with ill intentions that being caught is highly likely and not worth the risk."*

B. Kushdip Hanns (Kush) is the owner of an AMPM Convenience store at 16th and Washington in Yakima, WA. The following is a quote from Kush after an event at his store, *"we suffered a tragic robbery event when a masked gunman entered our store, robbed and then killed a cashier, who was a family member. I was looking for a solution that would be a more proactive approach to security for my patrons as well as my employees."* He heard about Blue Line Technology's work with other convenience stores regarding an access control process that requires the patron to show his/her face to unlock the door. This slight behavior modification provides a reminder to the patron that there is a high definition picture of the individual and the location has advanced security. He immediately saw the merit in the solution and was anxious to implement a prevention strategy to his protocol. He installed the system nearly one year ago and saw the benefits immediately. The solution was significantly tested on July 20, 2018, at 1:20 am when masked gunmen approached the store and tried to gain entrance. The entrance was denied, and the masked gunmen were forced to move on leaving the store employees and patrons safe from harm. The prevention strategy allowed time for the employees to contact the police who are now actively looking for the would-be robbers. In a follow-up discussion with Kush he explained: *"The Blue Line Technology access control solution prevented me from being robbed. I am grateful to the team at Blue Line and for the product. I am so glad I invested in this solution and it proved a huge value last night".*

C. *"The deterrence capability alone has significant benefits and our loss control consultant has praised this as one of the most significant safety enhancements he has seen in years. The most important outcome is that our employees and our store manager feel much safer with this solution."* Robert Forsyth, President – MotoMart

D. Baltimore Maryland Store Owner : Imtiaz Minhas reports that he *"see's shoplifting down 80%. The number of times they encountered a shoplifter is down significantly. More important no robberies when in prior four months they had four robberies!"*

E. St. Louis Missouri store owner: Mustafa Sarway tells television news channel 4 KMOV, *"It has been over a year, and, nothing. We don't even call the cops for even the little things we used to call them for."*

F. *"We just wanted to make sure that we were doing everything we could to ensure that we provided a safe, secure workplace for our many hard-working employees,"* said Dana Newhaus, Director of Human Resources of Concordia Publishing. *"The durability of Blue Line's system has been tested against the daily entrance and exit process for our employees, and it has worked great,"* noted Newhaus. *"The database management is user-friendly, something that we strongly needed. This non–intrusive system provided high accuracy, minimum interference and a much more comfortable solution than others on the market."*

G. *"The St. Louis Police Department formally recognizes **MotoMart** for achieving positive results reducing crime with innovative deterrence technology. We offer sincere appreciation for these efforts reducing crime. The willingness to invest in innovative technology demonstrates their commitment to improving safety for their employees, customers and local community. It is my pleasure to express sincere gratitude and acknowledge the manner in which you have distinguished your business as a leader in making our community a safer place."* Major Daniel Howard STLMPD

About Blue Line Technology

Blue Line Technology developed the foremost intelligent, video tethered, facial recognition security system software.

The company's primary objective is to create effective video camera security systems that provide the highest level of protection for building occupants, and property, across sectors and industries.

Streamlined collaboration between Blue Line's software development team your security specialists assures that research and development focuses on the most critical, *must-have*, safety and security features. Our ground up applications were created, and collaborated on, by first hand security experts that are veterans of law enforcement and armed forces.

*For more information about Axis, please visit our website **www.bluelinetechnology.com.***

BLUE LINE
TECHNOLOGY

FL

Call Today for a free consultation and learn about Blue Line Technology and our First Line products. | 636.496.7100 or info@bluelinetechnology.com