Surveying Modern Surveillance Burglar alarms and security systems are key

Burglar alarms and security systems are key components of commercial loss control

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omprehensive security systems, including burglar alarms and surveillance cameras, are an important part of a company's risk management program. At a fundamental level, security systems offer an effective layer of protection from unwanted intrusion, burglary and robbery: necessary for business owners as well as individuals.

Security is also an important consideration for insurance purposes. Understanding the elements that go into a burglar alarm system and how to grade them can be an important part of underwriting a property—helping the company reduce both the frequency and severity of losses. Recognizing the mitigating uses of cameras on claims can also be valuable in this process.

The need for security systems, especially burglar alarms and camera monitoring for businesses and individuals is starkly evident from statistics from the FBI and OSHA. For the last year reported, there were more than 400, 000 store/office burglaries. Additionally, there were approximately two million violent crimes in the work place.

Burglar Alarm Systems

The first line of defense for most burglar alarm systems is a device that detects unauthorized entry. Most commonly these are contact switches and motion detectors.



Contact switches detect opening of doors and windows. Building entrances and exits are the most vulnerable to burglars, so contact switches that detect the opening of a door or window, usually



composed of magnetic reed switches, are often used. Reed switches were invented in the 1930s by Bell Labs. They are used in many applications besides entry alarms. Whenever you open your laptop to turn it on, a version of the reed switch is likely responsible.

Reed switches are mounted on the wall adjacent to doors and/or windows, with a magnet next to the switch on the door or window. When the magnet and switch are in contact there is a closed circuit; no alert is sounded. When the magnet pulls away from the switch, it breaks the circuit and the alert is sounded.

Motion detectors are used to alert activity throughout the premises. There are two common types of motion detectors: active and passive. Active motion detectors are radar based, sending out ultrasonic sound waves and electromagnetic energy. Passive detectors use infrared energy.

Active detectors send out a sound wave that reacts when there is a disturbance in the environment, such as a person walking through the signal. They can be somewhat more susceptible to false alarms, since they may react to movement that is not an intrusion, like blinds moving because of an overhead blower coming on. Passive units detect the heat from people and animals and make the alert. They are popular since there is a lower false alarm problem. Motion detectors and contact switches could be connected to a



sound alarm and cameras that turn on when a sensor alerts. Motion sensors can monitor the entire building, especially areas with high value property or sensitive information. One insured that MSO has worked with had a slightly unique alternative. The system had loudspeakers and when the alarm sounded a voice activated that told the intruder they were being recorded and the police were on their way. It was designed to deter vandalism or arson of the premises by the unhappy burglar.

Once the alert is sounded by the sensing devices in the building, it is important that the authorities be quickly notified. This would be by a burglar alarm service. There are systems whose only purpose is to monitor the alarms. They do not attest to the correctness of the equipment installed, or supervision of the opening and closing signals, and might not have a runner response. A runner is someone





from the operating company who would have keys to the premises and would be sent out to check the cause for the alarm. In some cases, a runner could also be from the law enforcement agency with jurisdiction.

UL (formerly Underwriters Laboratories) sets standards to test components, materials, systems and performance to assess products. UL 827 is the standard for both fire alarm and burglar alarm systems and signaling. As with fire alarm systems, the standard describes conditions for the central station facility itself. It should have walls and roof with a one hour fire rating. Provision is also made to protect from attack or vandalism. Two sources of power supply are required. There should be redundancy for the computer systems, with a backup system required unless certain conditions apply.

The most effective burglar alarm systems will be able to provide a UL Alarm Certificate. This would designate that they are a certified central station, compliant with the applicable UL standards. The business owner and insurance company would have verification on the quality of the system.

UL has recently changed some of the coding noted on the certificates to make them more streamlined and easier to understand. An important component of the certificate includes line security, which is the monitoring of the communication channel from the protected property.

The extent of protection is indicated. For example, the highest, extent No. 1 could be a combination where there is "complete protection of all openings, ceiling, floors and walls, with sound or vibration detection, so an alarm would alert if a manhole-sized opening is made in any opening, ceiling, floor or wall."

The lowest level would be designated as extent No. 4. This would be partial protection on access doors and one or more motion detectors to alert to movement within the premises. A middle extent number could include protection of jewelry cases or files with valuable merchandise or information, but not complete monitoring of all areas of the premise.



The insurance company and insured benefit from a UL Alarm Certification of the burglar alarm system/central station. The certification verifies that the system meets nationally recognized standards of installation and protection. Additionally, UL maintains a database that the insurance company can access. The certificate will indicate the type and extent of the alarm protection. The insured will further benefit since it may eliminate questions from the insurance company.

Cameras

Security cameras have been in use for many years. However the rapid development of digital technology has allowed their use to become widespread and increasingly effective. Security cameras offer risk management and loss reduction before, during and after a loss. Before the loss they can serve as a deterrent. Criminals tend to go after the softest targets, avoiding locations with visible cameras, alarm systems or lighting. During the loss, monitored cameras can alert law enforcement, hopefully soon enough to witness the crime or event in progress. After the loss, camera footage may facilitate the capture of those involved. When installing security cameras, all areas of the building and parking lot, if any, should be included.

Insurance fraud costs billions of dollars a year in losses to insurers and in increased premiums to the public who pay for those losses. Some of the most common property and casualty frauds are slip and fall claims where individuals deliberately attempt to stage or invent an accident or injury.

In addition to detecting and identifying intruders, cameras can be very useful as a defense against fraudulent slip and fall claims. Their very presence can be helpful. The person intent on staging an injury may notice the cameras and go to another business that is not as well protected. They can also be an effective way of disproving a fraudulent claim.

Video surveillance can provide 24-hour monitoring of the insured premises, with recorded backup. As noted earlier, sensors can be used to activate a camera when motion is detected or to time chronicle an event for quick reference by an investigator. With the cost of digital storage falling,





it is increasingly possible for even modest sized businesses to be able to afford the protection of these systems. Several large strip malls have reported to MSO a marked decrease in slip and fall claims after cameras were installed.

Cameras can also help protect employees and owners from robbery and other workplace violence by aiding in identification of the perpetrator and their quick apprehension. Their ubiquitous use has been a mainstay for ATM security for many years.

Workers compensation fraud is viewed by many employers as a serious problem, but 20 percent are unsure of how to recognize workers compensation scams according to the Coalition Against Insurance Fraud (CAIF). But, CAIF reports that a majority of employers agree that there are red flags for this type of fraud, which include no witnesses to the incident.





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Workplace video surveillance can be useful to detect and prevent workers compensation fraud. Like slip and fall fraud, claims would be staged with the intent to collect money as part of a lawsuit and workers comp payout. Cameras over the cash register can also pick up irregular handling of monies by an employee. Employers feel cameras are а valuable tool in detecting

workplace fraud, with one in four small businesses installing surveillance technology according to CAIF.

An emerging resource in surveillance for insurance purposes is the use of aerial drones or UAVs. Drones have and can be used for disability and workers comp investigations. Weather related claims can also be investigated, since the drone will not be deterred by damaged roads and other conditions related to a catastrophe. Fraudulent property claims could be mitigated with this technology. For example, if a high-resolution photo obtained hours after a weather event shows no damage to a roof, a claim a month later for wind damage would be suspect and require further investigation.

Another interesting use of drones could be for underwriting surveys of properties. Real time coverage could report on roof condition, size of buildings and the condition of parking or other walking surfaces. The FAA and other entities are actively determining the guidelines for drone usage for these and many other applications. Protecting our forests from fire is another role where cameras can be used. While California has been the leader in fire surveillance, New York State has a pressing need for detection. The state has almost 19 million acres of nonfederal forested lands. During the 25 years up to 2015, there were about 6,000 wildfires that burned almost 54,000 acres of forest in New York.

Wildfires have been increasing across the country and there is an urgent need for quick response to protect the forests as well as buildings and people near the fires. Automated fire detection stations utilizing cameras and thermal imaging equipment can monitor large areas on a 24-hour basis and assign firefighting assets immediately to the fire. The video recording can be used to determine the source of the fire, such as arson or lightning strikes.

The usefulness of burglar alarms and video surveillance to both a business and/or property owner as well as insurance companies is only bound to grow as time goes on. Understanding the basics of burglar alarms, the value of listed certification of central stations as well as the use of video surveillance to mitigate claims and hazards should be a key component of a company's underwriting process.

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