SOUND THE ALARM

Today's Security Components, From High-Tech To Age-Old

By Tammy LeRoy

The *2006 Self-Storage Almanac* reports that one in five facilities nationwide had incidents of theft or break-in, and 9.5 percent fell victim to vandalism. Security systems have become a hot topic from a marketing aspect and as an element of the approval process. But owners should be mindful that self-storage facilities are still favorite targets for criminals. The latest *Almanac* figures, however, report that theft was down seven percentage points from the previous period. This demonstrates that the increasing attention to security measures—for whatever reason it is being given—is working to prevent self-storage crimes.

"Theft definitely occurs in self-storage," says David Rothschild of St. David's, Pa.-based WHAM Security Systems, "and added security measures act as a deterrent to crime. But what owners are really selling is peace of mind." Good lighting, a secure perimeter, coded access gates, video surveillance, and individual unit alarms are the common security components of today's self-storage site. Most of these features are highly visible to customers, and self-storage advertising messages often focus on site security.

Flaunt Your Investment

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Most of these features are highly visible to customers, and self-storage advertising messages often focus on site security. "We tell people that when you're budgeting for security, you really have to mentally put part of that into your marketing," says Peter Goodman, president of Concord, Calif.-based Digital Security Systems, Inc.

Besides giving customers a feeling of added safety, digital video recorders (DVRs) are incorporated into most of today's security systems as a deterrent and an evidentiary tool. Typical recorders are the day-night type that record in color during the day and automatically change to black and white when the available light reaches a low level. Remote viewing is possible with most of today's systems through a DVR linked to the site's computer system. With a Web-based system, viewers can monitor each camera or several at once. In addition, archived recordings can be retrieved.

Goodman believes in flaunting security measures to let people know there is coverage. For example, he suggests mounting cameras in industrial housings because it looks formative. It costs about $150 per camera for the housing and mount. Most facilities display video monitors in the office, but to give tenants an added sense of security, some are placing monitors throughout the facility, such as at elevator entrances. The cost is $400 to $500 per unit.

THEFTS and BREAK-INS
(JULY 2004 to JUNE 2005)

REGION Division	Percentage of Facilities Reporting Incidents	Average Number of Incidents
NORTH CENTRAL	18.4%	1.9
East North Central	14.3%	1.8
West North Central	30.8%	2.0
NORTHEAST	10.3%	1.3
Middle Atlantic	10.5%	1.0
New England	10.0%	2.0
SOUTH CENTRAL	20.9%	1.7
East South Central	18.6%	1.6
West South Central	22.5%	1.8
SOUTHEAST	18.3%	1.4
South Atlantic	18.3%	1.4
WEST	29.1%	1.9
Mountain	27.8%	2.1
Pacific	30.2%	1.7
NATIONAL	20.5%	1.7
Number of Units		
1 to 99	13.7%	1.9
100 to 299	23.4%	1.8
300 to 499	22.6%	1.6
500 to 999	21.6%	1.6
1,000 or more	18.2%	2.0
Market Area		
Heavy Industrial	21.3%	2.0
Commercial/Retail	17.3%	1.3
Urban/Downtown	20.8%	1.4
Residential	21.1%	1.7
Rural	22.6%	2.0

Source: *2006 Self-Storage Almanac*

OTHER PHYSICAL CRIME
(VANDALISM, TRESPASSING, DISORDERLY CONDUCT, ETC.)

REGION Division	Percentage of Facilities Reporting Incidents	Average Number of Incidents
NORTH CENTRAL	5.8%	1.3
East North Central	3.9%	1.7
West North Central	11.5%	1.0
NORTHEAST	5.2%	1.0
Middle Atlantic	2.6%	1.0
New England	10.0%	1.0
SOUTH CENTRAL	11.5%	1.2
East South Central	11.9%	1.1
West South Central	11.3%	1.2
SOUTHEAST	11.0%	1.3
South Atlantic	11.0%	1.3
WEST	12.0%	1.9
Mountain	7.4%	3.8
Pacific	15.9%	1.2
NATIONAL	9.5%	1.4
Number of Units		
1 to 99	6.9%	1.0
100 to 299	11.4%	1.4
300 to 499	7.3%	1.3
500 to 999	10.8%	2.3
1,000 or more	27.3%	1.0
Market Area		
Heavy Industrial	6.4%	1.3
Commercial/Retail	9.4%	1.3
Urban/Downtown	16.7%	1.5
Residential	10.5%	1.7
Rural	6.5%	1.0

Source: *2006 Self-Storage Almanac*

Gate Access

Security begins at the gate when customers enter the facility. Gate access with keypad entry, both for entering and exiting, is most common for self-storage applications. Generally, a camera is added to record people's coming and going. An access code disarms their unit alarm and records the time. When customers enter their code to exit the facility, the unit alarm is reset.

With access control at the gate, a common way for thieves to enter a facility is to follow closely behind a customer who has entered a valid code. With a typical setup, an 18-foot gate takes 20 seconds to open, delays for 20 seconds, and takes 18 seconds to close, allowing ample time for two vehicles to pass through. To prevent unauthorized entry in this manner, anti-tailgating devices are becoming increasingly popular.

With these devices, the gates open approximately 13 feet and then an electronic sensor determines when a vehicle has passed through. Once the vehicle has cleared the gate, the motor reverses its direction and closes without any delay and without needing to open all the way. Although wider gates are becoming more popular with the upsurge in recreational vehicle storage, owners should keep in mind that the wider the gate, the longer it will remain open for tailgaters.

Securing Individual Units

Without a unit alarm system, self-storage theft is relatively easy to commit with a bolt cutter and a replacement lock. Thus, as individual unit alarms became affordable, they soon became standard features for new self-storage development. The type of individual door alarms used on a project—whether hardwired or wireless—is

frequently determined by the age and construction of the facility.

In older facilities, especially where most of the units are occupied, wiring an entire facility for unit alarms is usually cost prohibitive as well as greatly inconvenient since customer units would need to be opened. In these situations, owners usually must purchase wireless technology, which can be retrofitted without opening units.

With new construction, hardwired systems are still more popular. Not only is the cost lower per unit, false alarms rarely occur with wired technology if properly installed. Most of the cost of these systems is in the wiring and labor.

The earlier wireless technology came into disfavor for self-storage, mainly because of false alarms, especially at facilities near communications towers or radio stations. These require a transmitter on every door that shoots a beam to a central receiver. The difficulty is in older places with alcoves and aisles and various construction materials interfering with the beam. Steve Cooper of Ashville, N.C.-based Digitech International says the early systems were ill-conceived, and that newer products built specifically for self-storage have a much lower incidence of false alarms. He says an increasing number of new developments are using wireless unit door alarms because of ease of installation and maintenance. The cost difference between the two types of systems today is narrow.

Glen Gilmore of Houston-based Envirocom, Inc., a company that provides electronic consulting, service, and installation to the self-storage industry, says wireless alarm systems are also more difficult for criminals to tamper with; however, he says hard-wired systems are still more reliable overall if properly installed.

The premise behind door alarms is that the alarm is set off when there is no longer a metal contact between a magnet in the latch or door and the switch. "The early systems were fairly easy to bypass with a thin piece of metal with a magnet attached," he says. About eight years ago, Gilmore says U-Haul patented a tamperproof switch they chose to keep proprietary. The problem, he says, is that three or four years ago, companies began to copy the unpatented features of the

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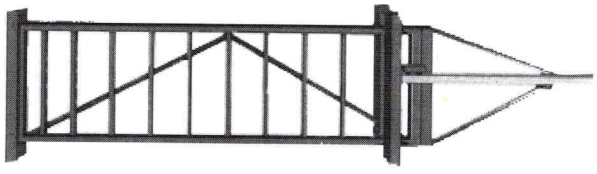

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switch and market them as tamperproof, which Gilmore says they are not.

"Many people don't realize that and they buy these products," he says. "A thin piece of metal that slides into that latch will keep the alarm from going off." He says the part that makes U-Haul's product tamperproof—a cone-shaped opening that becomes smaller toward the switch—cannot be copied.

Still, Gilmore says no switch is actually tamperproof. "All systems can be defeated," he says. "It's just at what level. Do you have to haul in an electronic saw and make a lot of noise, or can you just pull a small piece of metal out of your pocket." He says his company prefers to install a switch that is located on the top of the door and is unarmed depending on whether or not the door itself is open and not the latch. "People close the doors and forget to latch them all the time," he says.

Unit locks are another important security feature. The technology of unit door locks has improved significantly. The cylinder-type lock, which was in its infancy 10 years ago, provides an added measure of security. Because only the key head is exposed, cylinder locks are much more difficult for thieves to remove than traditional padlocks that can be cut with bolt cutters. Historically, a majority of self-storage thefts are perpetuated by tenants, so access control to individual units is key.

Other Security Factors

Intercom systems installed in facility hallways have gained popularity. These provide added security for customers, are a help to managers, and provide a soothing effect when music is piped in. They have proven to be an effective marketing tool as well.

Lighting is a huge deterrent to criminal activity, and ample lighting also makes a facility appear more secure. A facility lighting design should leave no dark corners. The newest lighting trend is motion sensors. Lights should turn on as soon as someone enters a hallway. It is also important that when customers are in their units, they don't suddenly find themselves in the dark because there is no movement in the hallway. Some facilities install low level lights that are always on as a backup.

Software integration with security products is another key issue. Integration between security components and management software became available in the 1980s, but it has been continually enhanced. The half-dozen or so leading manufacturers' products can be integrated with most of the popular management software packages, but it is important to ask both vendors questions about integration. The most desired aspects of software integration are the abilities to lock out delinquent tenants and to facilitate the move-in process through kiosks. Linking gate access with software is also important because it leaves a record for evidence.

On The Horizon

Rothschild says that the fundamentals of modern security were established in the 1980s and haven't changed much, although there have been many technological improvements in the individual components. He cites the quality of video and the convenience of DVR systems as an example.

In video surveillance, Cooper says the dream has been to use the existing computer network to capture and store images. DVR systems, (which are limited to 32 cameras,) can now be viewed remotely by giving them their own IP addresses. "But the alternative people have hoped for," Cooper says, "is to use an existing LAN to carry video signals to the Internet. In that system, DVRs wouldn't be necessary. An owner with 24 stores could have the video from all of the sites recorded at a central office."

Such a system is dependent upon having enough bandwidth capacity and equipment that is properly coded for the Internet. It is possible for network video recorders to use an existing LAN instead of a close-wired system to convey signals today, but this setup is still very expensive. That may

10 TIPS FOR GETTING THE MOST OUT OF YOUR SECURITY SYSTEM

Sophisticated security systems are expensive but generally worth the cost. Still, no system is worth the expense unless managers take action to make committing a crime more difficult at their facilities. These tips will add to the effectiveness of your total security system.

1. Invest in a customer screening system, including background checks and fingerprinting, to avoid giving criminals access to your facility.
2. Review gate access records periodically to see if there is any unusual behavior on the part of a particular tenant.
3. Install gates with electronic sensors that begin to close as soon as a vehicle has cleared. This prevents "piggyback" entry.
4. Require cylinder locks, which cannot be cut with a bolt cutter.
5. Your facility should have no dark corners. Install new or brighter lighting fixtures if necessary.
6. Lighting fixtures should be adjusted in a way that allows cameras to capture the best images.
7. Limit the number of keys to your facility. Many self-storage crimes are committed by untrustworthy employees. Limit access to customer information, including access codes.
8. Follow manufacturers' instructions for the proper care of security equipment.
9. Keep window advertising below waist height or above head height so you can spot anyone acting suspiciously, and so that people outside can see if anything is wrong inside. Don't obscure your line of vision with displays.
10. Rehearse emergency procedures with all employees. Each manager should have a clearly-defined plan for robberies, break-ins, fires, etc. TL

soon change. "We are just now crossing the threshold into that technology," Cooper says, "and the prices are beginning to come down."

Another innovation, and one that was developed specifically for self-storage applications, is an electronic lock system that allows either individual units or an entire facility to be locked or unlocked from a remote location. Mesa, Ariz.-based Storage Solutions President William Bohannan, Jr., and Vice President Ray McRae dreamed of such a system, but found it was not available—at least not at a cost-effective price. They partnered with a technology company for two years to develop the system. In early 2006, the prototype was successfully installed at a new Storage Solutions location.

Like many innovations in technology, the idea for this product came when Bohannan and McRae looked for a tactical solution to a problem they could see on the horizon. To balance growing demand with scarcity of land, they realized that building satellite facilities on small, leftover parcels within a few miles of a central location may become necessary in the future. Combining kiosk rental with the ability to lock and unlock individual units from a central office would eliminate the need for a manager at small sites. McRae says this system also provides customers with double security. Cutting locks will not open units, and customers cannot move into the wrong space.

Gilmore says Envirocom has a patent on a product that is a multifunctional switch. This switch not only arms and disarms the alarm; it also turns the unit light on and off, which, he says, is more efficient than timers and costs about $50 less per unit. In one application, the switch performs a third function by turning off air conditioning when the unit doors are open.

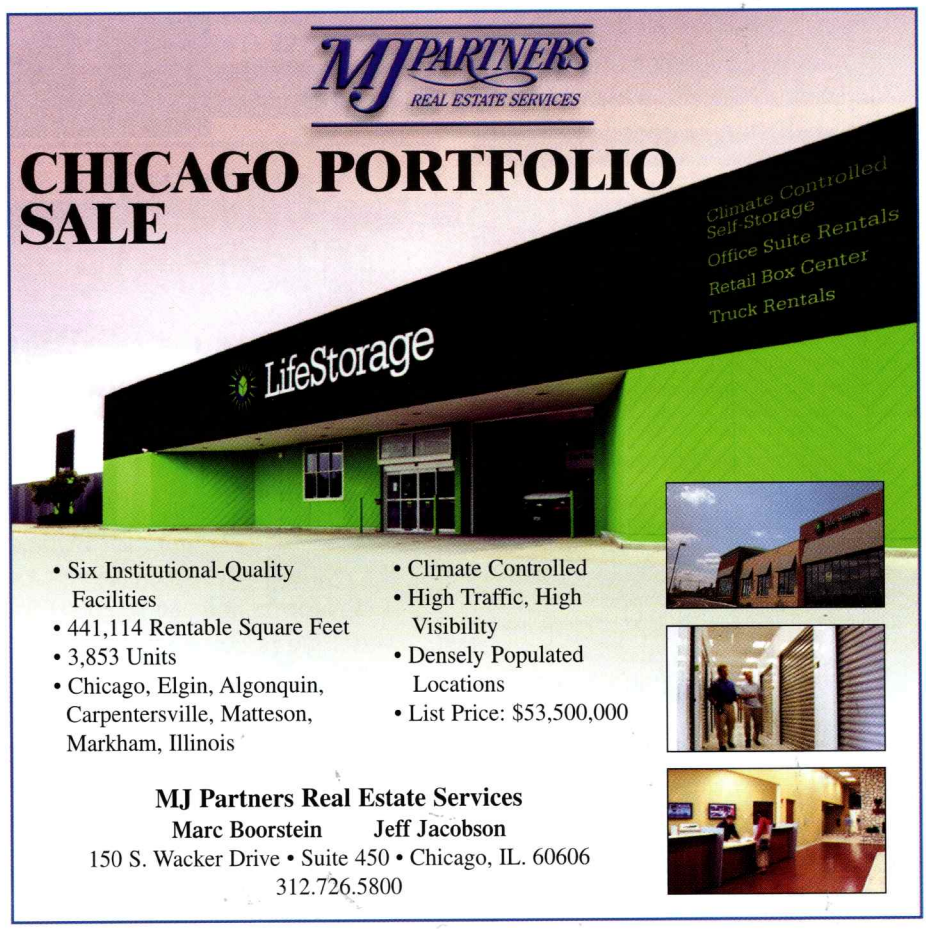
As far as access goes, biometrics is the latest buzz. Biometric access is a flashy term for a system in which a portion of the body, such as the fingerprint or iris, acts as a key. Although there is no doubt that biometric viewing virtually eliminates the possibility of unauthorized access, the question is whether it's appropriate for the way customers use self-storage. The potentially viable applications are for second-tier security for areas such as vaults, wine storage, or safe deposit boxes.

Meeting Your Security Needs

Measured in inflation-adjusted dollars, the cost of security components have come down, but security budgets for today's self-storage sites are significantly higher than they once were when viewed as a percentage of development costs. A typical facility security system in today's larger new developments averages around $100,000, but personal preference is still a factor.

Digital Security Systems, for example, recently installed 24 cameras in a five-story facility with 1,100 units, Goodman says. But they also recently installed 48 cameras in a 620-unit facility outside of Burbank. "It was like Star Wars," Goodman recalls. "But it was owned by a judge, and he was afraid of litigious actions. He was completely obsessed that somebody might sue him. All he missed was a potty-cam." Overkill aside, Goodman says no matter what location you are in, every area has crime, and you are still selling.

He recommends that developers look for a security company with self-storage experience. "A contractor who says, 'I've installed these types of alarms before' is fine," he says, "but when was the last time they installed 1,000 at one time? It all has to work in sync."

As for the future of security products, Cooper says the fundamentals of security will probably never change. "But we continually make improvement to close the loop or 'harden the target," he says. The best deterrent to crime, Cooper adds, is good customer service. "The better the managers know their customers, the more likely they will know if someone questionable comes on site. And the better the customers know the manager, the less likely they will commit a crime."

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