White Paper

Electronic Alarm Verification

Alarms require instant response. That's a fundamental fact. When there's an intrusion at a residence or business, it is critical that the alarm system summon a prompt response. The primary urgency is to ensure the safety of the occupants. Secondarily, a fast response is more likely to encourage the intruders to flee empty-handed, or enable the responders to apprehend the intruders in the act.

The unfortunate reality, though, is that for both residential and commercial occupied premises, most signals sent by intrusion protection systems to Central Stations are false alarms. This white paper will summarize the scope of the problem and describe one, highly effective technology that is currently helping address the problem.

Scope of the Problem

Simon Hakim, an economist at Temple University (Philadelphia), conducted studies showing that each year U.S. police respond to over 35 million alarm activations, and about 95 percent of them are false alarms. These alarms make up 10 to 20 percent of all calls to police. [1]

The Security Industry Alarm Coalition describes false alarm reduction as "Our number-one priority … the one issue that we have decided has to be addressed." [2]

The problem of false alarms is so significant that an industry group was formed in 1997 to support government and public safety agencies in the reduction efforts. The False Alarm Reduction Association (FARA) has compiled considerable data on the issue. It shows that a variety of factors can cause these false alarms, but by far the biggest reason is operator error.

The most common customer-related causes of false alarms include improper arming on either entry or exit, accounting for over 50% of the errors. Another 17% of the user errors were caused by moving through an armed area protected by motion detectors. Equipment errors were at the bottom of the list of most-common causes. Other alarm causes include pets moving in protected areas and severe weather triggering alarms.

What exactly are the costs of false alarms? The answer has several dimensions. In a pure financial sense, the annual cost is about $2 billion according to Temple's Hakim, primarily the wasted time of responders investigating the alarms. There is also the cost of fines paid by alarm owners.

FARA also points out the cost to public safety. It states that false alarms create complacency among responders. Not only are they less likely to respond as rapidly as possible, they are less likely to be prepared for presence of an actual intruder, creating an increased likelihood of them being taken by surprise when discovering an intruder.

And in terms of cost to the general population, when responders are dealing with a false alarm it means they aren't available for other, higher-value activities and may be unavailable to respond to a genuine emergency.

The Central Station Alarm Association (CSAA) recognizes the severity of the false alarm issue. Working with industry representatives, the CSAA led the development ANSI/CSAA-CS-V-01, a standardized set of Alarm Verification and Notification Procedures. The standard defines methods to reduce unnecessary dispatches caused by false alarms. Their research supported the common-sense assumption that verifying an alarm signal drastically reduces false dispatches. Therefore, the standard lays out various verification methods, including multiple phone calls, cross-zoning, biometrics, and audio/video verification.

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[1] http://freakonomics.com/2012/04/05/the-hidden-cost-of-false-alarms-a-new-marketplace-podcast/

[2] ibid

Technology Solution

Recognizing the need for false alarm reduction, and the value of a fast and simple solution, DMP developed the 'cancel or verify' capability, available as a programmable option on all DMP panels. When a customer security system goes into alarm, and an authorized user enters the security code to silence the system, the keypad automatically prompts the user with a question: IS THIS A FALSE ALARM?"

Selecting YES transmits a CANCELED BY USER message to the Central Station. Selecting NO transmits an ALARM VERIFIED BY USER message. In the event of an ALARM VERIFIED message, some Central Stations may opt to dispatch police immediately. Others may treat the message as one of two calls in a two-call verification procedure that is part of ANSI/CSAA-CS-V-01. This procedure, Enhanced Call Verification (ECV), requires making at least two calls to two different phone numbers to verify intrusion signals. (Manually activated hold-up, panic, and fire alarms do not require ECV.) For Central Stations that consider the ALARM VERIFIED signal as one of the two calls, responders can be immediately dispatched.

An issue with the standard, two-call ECV is that Central Station operators must first place a phone call to the premises. If the phone at the premises is not answered, the two-call verification procedure directs the Central Station operator to move on to additional customer-supplied numbers. This procedure can consume several minutes of a Central Station operator's time before police are alerted. This is especially true today when users have multiple phone numbers including home, work, personal cellular, and business cellular.

Electronic call verification in the form of the DMP 'cancel or verify' provides very fast confirmation of genuine emergencies and one-touch cancellation of false alarms. An added advantage is that, after the end user verifies the alarm, the system remains armed and continues to send information to the Central Station such as additional zones that are tripped. If an alarm is tripped but the end user does not respond to the 'IS THIS A FALSE ALARM?' prompt within a pre-programmed delay period, the original alarm is still sent to the Central Station.

Cancel/Verify also provides operator with a definitive procedure of what to do when a cancel or verify signal comes in. Instead of being forced to make subjective decisions based on partial information, operators can refer to your specific documented dispatch procedures. This protects your company from liability.

An Effective, Low-Cost Approach

False alarm reduction is a goal being pursued on many fronts, by Central Stations, government and public safety agencies, and emergency responders. Built in to every DMP intrusion panel, it provides the ability for users to instantly confirm or cancel an alarm with a button-press. Considering that the majority of false alarms occur in occupied residential or commercial premises due to operator error, 'cancel or verify' feature offers a simple and low-cost approach to false alarm reduction.

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