Duress Systems in Corrections Facilities

The Problem

While on routine patrol, a corrections officer opens a cell door to check on the inmate slumped over inside. Suddenly, the inmate lunges at the unarmed officer, knocks him down, and stabs him with a crude handmade knife. The only witnesses to the violent attack are other inmates who, even if they want to, can do nothing to help. Fortunately, the officer has triggered the duress system transmitter on his belt that is sending a “man down” alarm and summoning aid.

In order to respond effectively to assaults on personnel and other emergencies, corrections facilities must be able to pinpoint the location and nature of the problem within seconds of its occurrence. A duress system—typically composed of a closed network of portable and mounted transmitters and receivers linked by ultrasonic, infrared, or radio frequency waves to a command center alarm console—permits the rapid and coordinated response that can save lives and reduce institutional damage.

Background

The National Institute of Justice and the U.S. Department of Defense work together on projects involving the development and demonstration of emerging technologies of mutual interest and benefit to the military and corrections and law enforcement communities. The Staff Alarm and Inmate Tracking (SAINT) program, which operates at the Navy’s Space and Naval Warfare (SPAWAR) Systems Center in Charleston, South Carolina, is one such joint venture. SAINT researches systems for use in corrections facilities and provides guidelines for acquiring and implementing such technologies. The program promotes safety for both corrections officers and inmates through the use of alarm systems.
On October 28, 2000, SPAWAR asked the vendor community to provide information on duress systems for corrections officers. Based on data received in response to this request, the center created the *Correctional Officer Duress Systems: Selection Guide*, which is intended to help with the identification, selection, and deployment of this technology.

**THIS STUDY**

*Correctional Officer Duress Systems: Selection Guide* provides detailed information on nine commercially available systems, covering the alarm, locator, and control sub-systems; hardware/software used; and additional features. The *Guide* also provides contact information for system vendors, so administrators can follow up with requests for additional information.

Three types of alarm systems are available for commercial sale:

- **Type I: Panic Button Alarm.** These basic systems use buttons located on walls, underneath desks, and near doorways. Pushing a button transmits a dedicated signal to a central alarm console. Using visible and/or audible enunciations, the alarm console identifies the location of the event where the alarm was triggered. Type I systems are simple, effective for many types of emergencies, relatively inexpensive, and easy to install.

- **Type II: Identification Alarm.** In Type II systems, portable transmitters broadcast a wireless signal to a nearby sensor, which forwards the alarm to a central console. The alarm signal includes an identification code that tells the dispatcher who sounded the alarm. Because officers carry these transmitters with them, they can sound an alarm from almost anywhere within a facility. Use of a Type II system also eliminates most nuisance alarms.

- **Type III: Identification/Location Alarm.** Type III systems operate much like Type II systems, with the added feature of tracking corrections facility staff members and pinpointing the alarm location. An extensive wireless infrastructure identifies, localizes, and tracks the transmitting device; the system may produce a positioning symbol on a console panel or a map-like display at a central alarm location.

**LIMITATIONS**

*Type I* systems (panic buttons) may be inaccessible in a duress situation because they are mounted in fixed locations. They also lend themselves to nuisance alarms triggered by inmates.

*Type II* systems (identification alarms) cannot localize alarms within a facility.

*Type III* systems (identification/location alarms) are more expensive than other systems and are the most difficult to install.
Selecting an officer duress system that is appropriate for a particular facility requires that the individuals involved in the selection process define their own specific requirements and needs. Administrators might consider the following factors when choosing a system.

**Cost.** How much does it cost to install and integrate the system? What are the expected operational and maintenance costs?

**Scalability/Flexibility.** Can the system be expanded and updated as needed?

**Installation and Integration.** Is the installation process simple? Will the duress system integrate smoothly and successfully with other systems already in operation?

**Reliability.** Does the system self-test for accuracy? Does it have a battery backup in case of power failure? Do the transmitters indicate when batteries are low? Is maintenance readily available?

**Operator Usage.** Is it easy to learn how the system works? What about ease of day-to-day use?

**Coverage.** Given the design quirks and flaws of a particular facility, how complete will coverage be?

Vendors are working on systems that will use emerging technologies, such as global positioning systems; ultra wideband (an RF-based technology that operates across a broad frequency range at low power levels, emitting short pulses that exhibit a wide spectrum); and biometrics.

Corrections facility administrators and corrections officers.
