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Technology Talk: Interoperability for Day-to-Day Operations

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For decades, police, fire, EMS, and state emergency management agencies relied on awkward means to achieve onsite coordination at critical events. With funding scarce and budget shortfalls looming, interoperable technology was a luxury item that most public safety agencies could not afford; this meant officers on the scene relied on handwritten messages or swapping radios to communicate with other agencies.

But interoperable communications technology is becoming more affordable, and police agencies are beginning to see the value of interoperable communications for their daily requirements, such as hostage negotiations, inclement weather evacuations, and civil disturbances.

Hostage Scenario

A large metropolitan police department responds, on average, to two hostage situations a week. The police response can be complex and involve several specialized units, making on-scene communications a challenge. In times past, commanding officers would crowd around a speaker located at the command post to monitor the progress of the on-scene negotiations. Radios were then used to relay their interpretation of the negotiation to the responding officers, but those officers lacked the ability to listen firsthand to the perpetrator. That shortcoming prevented tactical officers from determining the stability of the hostage taker because they were unable hear voice tone and inflection. This method of communications was inefficient put officers and civilians at risk.

Today, using a tactical interoperable device, hostage negotiation teams can establish headquarters at the communications command post where an encrypted radio and a hostage phone can be connected to the device. The audio of the negotiations being transmitted and received over the hostage phone is now seamlessly interconnected to the encrypted radio. This capability allows each of the responding tactical units to monitor the negotiations via their personal radios. By providing entry teams with real-time information, interoperable communications reduces the risk of harm to all involved.

Inclement Weather Evacuations

Wildfires, tornadoes, floods, and hurricanes can all trigger the activation of emergency evacuation plans. Thousands of residents crowd open highways in search of safety. Miles of civilian vehicles, across multiple jurisdictions, create a stop-and-go traffic jam. Time is critical, and local, state, and federal teams are dispatched to effectively manage

the evacuation. Each agency (carrying its own radio, which operates on its designated frequency and band) responds and must work with the others to coordinate public safety efforts along perhaps hundreds of miles of evacuation routes.

Having a communications plan in place before such an emergency can mean the difference between mission success and mission failure. One kind of effective plan uses a wide-area interoperability system (WAIS). WAIS technology allows a number of devices to be connected on an IP (Internet Protocol) network to provide interoperable communications over a wide geographic area. Each device can be monitored and controlled from any point on the network, allowing an incident responder on a handheld radio to achieve point-to-point communications with a responder positioned miles away.

Civil Disturbance

During any large gathering, such as a parade, a sporting event, or a concert, there exists the potential for a civil disturbance. On-site security and local public safety may ask for backup from surrounding jurisdictions. Without warning, multiple agencies that would typically not have a need to communicate with one another could arrive on the scene with their department radios. They would need an easily deployable interoperable system.

One answer is an interoperable communications system in a mobile configuration. Situations that occur without any prior coordination could force responders to carry multiple radios, which instantly reduces available resources by half or more. Interoperability makes the most of available resources and response by allowing agencies to use their departmental radios and still be able to communicate with fellow responders. Typical patchwork interoperable devices provide a means to configure a user radio on the scene within minutes, and every minute is critical for first responders.

Interoperability is a problem that plagues every agency, metropolitan or rural, and one that must be addressed today. It is the responsibility of all departments to determine their interoperability requirement with the input of surrounding jurisdictions. The technology is readily available and does not require replacing current investments or infrastructure. Patchwork interoperability solutions currently being deployed in mobile, fixed, and wide-area applications can be configured to meet the needs of public safety departments without the million-dollar price tag. However, interoperability is not achieved through technology alone; procedures, policies, and memoranda of understanding also need to be in place. Ultimately, the success of any interoperable communications solution relies on the fundamental cooperation among agencies and the vision to use solutions to their fullest magnitude.

For more information regarding communications interoperability, visit www.iacptechnology.org or write to the author at (roman.kaluta@jps.com).

[Top](#)

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