

Cutting-Edge Tools to Help Responders & Telecommunicators

BY ALICIA IHNKEN

As you sit in your communications centers around the globe, curiosity may make you wonder if there's some sort of new technology that will improve how telecommunicators do their job or help officers gather important information, solve crimes or save lives. After all, so many advances have been made in the past few decades that it might seem like we've hit a wall. The good news is that technology continues to develop and enhance our lives.

The computer itself is the most prominent technological advancement of the past 100 years. As technology advances, computers are becoming ever smaller and their uses more diverse. Consider the tiny computers inside iPods, MP3 players and cell phones. Probably the most significant technological advancement for telecommunicators is computer-aided dispatch (CAD). In the field, police officers, firefighters and EMS providers are using sophisticated laptop and notebook computers to assist in a variety of tasks. Thanks to technology, police officers now have less-lethal weapon options; stun guns and TASERS are a far cry from nightsticks tapped on the sidewalk.

On the surface, it may seem that many of the technological advancements made in public safety affect just responders, but if you dive deeper, you'll find that these advancements also affect the comm center. The following noteworthy technology advancements may soon be making their presence felt at your agency.

UNIFYING TECHNOLOGY

For important reasons, *interoperability* has been a buzzword in public safety for the past few years. The ability to connect people, information, operating systems and programs is critical during large-scale disasters (e.g., Hurricane Katrina or the recent wildfires in Southern California) and at planned events (e.g., a NASCAR race or a Major League Baseball game). A tool specifically designed to enhance interoperability and better facilitate unified command at large-scale incidents is the Mobile Tactical Collaboration System (MTCS) from Ordia Solutions.

This browser-based tool can be used on laptops in the field and allows users to integrate different technology and software pro-

grams with GIS. It can work with existing software, including CAD, AVL and other incident management or EOC programs. It allows the user to see an aerial picture of a scene in real time. The technology supports voice communication with pictorial information that takes the guess work out of orders and direction from command staff who don't necessarily have to be on scene. Resources can be allocated from any number of points without the need for a centralized staging area.

From fighting fires to advanced surveillance, technology is increasing the possibilities and strengths of public safety agencies.

VIEW FROM ABOVE

NASA can assist in fighting forest fires by providing satellite views that depict hotspots, showing responders using planes and helicopters where to drop fire suppression chemicals and water. A practical demonstration of this type of coordination took place during the 2007 California wildfires when tactical planes were used to direct air tankers and Super Huey helicopters to areas in desperate need of fire suppression. The planes recorded ground data with infrared sensors and then transmitted it to ground crews. The ground crews used laptops and global positioning system (GPS) technology to track and predict the movement of the wildfires. This, coupled with images provided by NASA satellites, helped the California Department of Forestry and Fire Protection (CAL FIRE) combat the fires. Not only did the technology help firefighters in the immediate circumstances, but all the data were recorded so analysts can use the information to design more effective strategies for stopping future fires.

THE DETAILED VIEW

Another technological advancement for fire departments comes in a package about the size and shape of a laptop. Command Scope, from RealView, is a device that allows the user to access detailed information, structural floor plans, photos and aerial views of a structure via a touch screen. This comes in handy when responding to a structure fire or chemical spill. It can help fire officers determine the safest escape route for trapped victims or fire personnel and can

shed light on how the fire might develop over time. Currently, the device has only commercial data on it, but some fire agencies are providing secure Web sites where residents can post information about their homes for use in an emergency.

The possibilities of this technology are exciting. In the future, it may be linked to heat sensors, which would allow responders to predict hot spots before entering a building and show them where to access a safe egress route. This could be combined with the unified command technology in the event of an incident involving a large building, such as a school or mall.

LAW ENFORCEMENT TOOLS

Advances made in law enforcement technology include driver's license swipe machines that read the magnetic strip on the card and automatically run the name for warrants and driver status.

Another law enforcement example is a portable breath test instrument, the Intoxilyzer 8000. This compact version of the breath test devices found in jails and precincts across the U.S. is designed to be mounted in a police vehicle and used on scene. The technology involved to make this machine reliable and noteworthy includes a self-diagnostic system that performs a check before and after the breath test. There's also an option to have a laser printer hooked up so that the readout can be printed on demand.

The advantage this affords to you as a telecommunicator is time. With drunk driver stops, there's a mandatory observation period before the breath test can be administered. This allows for any incidental alcohol in the mouth, which can come from mouthwash or certain types of medicine, to dissipate and makes the test more reliable. The required observation time for the Intoxilyzer 8000 is 20 minutes. This time cannot be spent with the officer driving the prisoner to the jail. It can, however, be spent with the officer waiting for a tow truck for the driver's car, thus getting that officer back on the road a lot sooner than if you had to wait for a tow truck, transport, then abide by the observation period. *One option:* This portable machine could be brought to the scene by the designated

FROM THE FIELD TO THE COMM CENTER

breath test operator. This type of procedure saves time and money and gets your responders back in service sooner.

Another even more exciting advancement in law enforcement technology is the vehicle disabling weapon (VDW). This weapon is designed for use in traffic incidents in which the suspect is in a vehicle and fleeing from law enforcement. The device is mounted in the patrol vehicle and is capable of emitting a radio frequency that disables the suspect vehicle. Pursuits can be responsible for property damage, injuries and death, and disabling a suspect vehicle with the VDW provides a much safer option than spike sticks or barricades. In the early 1990s, approximately 331 people were killed in the U.S. each year as a result of police pursuits, and, on average, 68% of those killed were uninvolved parties. According to the National Law Enforcement Officers Memorial Foundation, 81 officers died in traffic-related incidents last year alone. The VDW affords the responder with a greater margin of safety. Its range is up to 2 kilometers, which is much farther than any other non-lethal weapon today. The range can be focused on one target without affecting surrounding vehicles, or it can be focused on a number of targets, disabling them all.

The VDW does have some limitations. It won't work in heavy rain or fog and has limited range in light rain and similar weather conditions.

Use of this technology can protect life and property. It may also reduce stress for the telecommunicator handling the pursuit. Although this technology is not widely used, additional developments are expected to provide a more compact, efficient and cost-effective product for law enforcement agencies and the military.

HOW TECHNOLOGY AFFECTS THE COMM CENTER

Whenever responders get new technology, it can affect telecommunicators in a variety of ways. The most obvious is procedural. If the fire agency decides to upgrade its technology to enhanced unified command software, such as the MTCS, it could affect how the telecommunicator handles the incident. There may be a link in the comm center that requires additional training so the telecommunicator can successfully navigate through an incident using the new technology in tandem with command.

A specialized piece of equipment, such as the Intoxilyzer 8000, could affect comm center policy by changing the order of who is dispatched where and when. Open lines of communication are crucial whenever new things are introduced into any part of public safety.

Training is an essential component to the introduction of anything new. The training must be properly timed to afford users the opportunity to absorb the information beforehand and scheduled close enough to implementation to reduce confusion.

Stay on top of the latest developments in the agencies you dispatch for. If possible, designate a liaison to assist with this so that when new technology is introduced into the comm center, that person can communicate its effects to the affected agencies. **|PSC|**

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CLASS SCHEDULE



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Class #	Location	Dates	
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23239	Web Class	Starts March 5	
24324	Minneapolis, Minn.	March 17-21	
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24050	Mobile, Ala.	April 7-11	
24249	Mesquite, Nev.	April 14-18	
Public Safety Telecommunicator 1, 6th ed., Instructor			\$459
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23286	Web Class	Starts March 26	
23343	Web Class	Starts April 30	
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Class #	Location	Dates	
24072	Ft. Worth, Texas	Feb. 11-13	
24074	Sebastian, Fla.	Feb. 12-14	
24172	Louisville, Ky.	Feb. 19-21	
24462	Eagleville, Pa.	March 3-5	
23252	Web Class	Starts March 5	
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Communications Training Officer, Instructor			\$459
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23283	Web Class	Starts March 12	
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23236	Web Class	Starts Feb. 27	
23288	Web Class	Starts March 26	
Active Shooter Incidents for Public Safety Communications			\$199
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24323	Hanover, N.Y.	Feb. 26	
24255	Plymouth, Mass.	March 10	
24455	Colorado Springs, Colo.	March 19	
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24358	Fort Collins, Colo.	March 31	
24360	Mt. Pleasant, Mich.	April 9	
Emergency Medical Dispatch, Instructor			\$459
Class #	Location	Dates	
23237	Web Class	Starts Feb. 27	
23290	Web Class	Starts March 26	
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23282	Web Class	Starts March 12	
23342	Web Class	Starts April 16	

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1. **Interoperability is:**
 - a. A buzzword with no real meaning.
 - b. The ability to link information from different sources.
 - c. Only practical during an international event.
 - d. The ability to use push to talk.

2. **At which of the following events would it not be considered practical to implement unified command?**
 - a. A NASCAR race
 - b. A professional football game
 - c. A routine traffic stop
 - d. A hurricane

3. **Floor plans are useful to fire responders:**
 - a. Because they help responders determine safe routes for entrance and egress.
 - b. Only commercial blueprints are useful to responders.
 - c. Because they can be uploaded by the public.
 - d. Because they help responders find arsonists.

4. **The use of such tools as the Mobile Tactical Collaboration System requires the command staff to be on site.**
 - a. True
 - b. False

5. **VDW stands for:**
 - a. Victim Deadly Weapon
 - b. Vehicle Disabling Weapon
 - c. Victim Disabling Weapon
 - d. Vehicle Disarming Weapon

6. **The main purpose for using the VDW is to:**
 - a. Lengthen pursuits so the officer can gather more evidence.
 - b. Impose punishment on the suspect.
 - c. Help save lives and property.
 - d. Save money on spike strips.

7. **What is crucial whenever new things are introduced into the public safety arena?**
 - a. Keeping costs down
 - b. Proper training
 - c. Staying out of the loop
 - d. Waiting to train

8. **When should training on new technology be introduced?**
 - a. Months before the technology is implemented
 - b. After the technology is implemented
 - c. Close enough to implementation to avoid confusion
 - d. After the responders have been trained

9. **GPS stands for:**
 - a. Global Positioning Satellite
 - b. Global Programmed System
 - c. Global Personnel System
 - d. Global Positioning System

10. **Limitations of the VDW include:**
 - a. It will not work in heavy fog or rain.
 - b. It can be installed only in certain vehicles.
 - c. It causes more injury than spike strips.
 - d. It does not shorten the length of a pursuit.

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