

Public-safety communications vendors prepare for Urban Shield exercise

Urgent Communications By Donny Jackson

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As first responders from throughout the United States—and some from international jurisdictions—prepare to participate in the Urban Shield exercises in the San Francisco Bay Area this weekend, officials for three vendors anticipate learning more about their solutions' market readiness through their performance in the annual event.

Each year, the Urban Shield initiative provides first responders with an opportunity to put their training in action under several different scenarios enacted throughout the Bay Area. This year, there are more than 30 scenarios that will play out from early Saturday morning to early Monday morning, according to Buck Verbrugge, West Coast business development director for Mutualink.

"I was a cop for 28 years, and I was commander of a SWAT team for five years as a captain, and I can tell you that there is nothing better than live exercises," Verbrugge said during an interview with [IWCE's Urgent Communications](#). "You can table-top [plan] something, you can see a video about something, and you can read about it. But, until you actually experience something that's as close to real as possible, there's nothing like it."

One of the scenarios that will be enacted is one in which terrorists hijack a bus and hold the passengers as hostages. For this scenario, a mobile emergency-communication vehicle equipped with [LTE](#) functionality using 700 MHz Band 14 spectrum—frequencies licensed to [FirstNet](#), which is building a nationwide broadband network for public safety—will support voice and video communications, including sharing video from cameras on the bus.

To make this happen, Oceus Networks will provide the "enhanced system on wheels" communications vehicle with Band 14 connectivity, Mutualink will provide the software collaboration platform, and Sonim Technologies will supply the LTE user devices ([see a UC video showing Sonim devices](#)). The three companies showed their ability to work together during a booth demonstration last month at [APCO](#)

2014, but doing it during the Urban Shield exercises represents “taking it up a notch,” according to Mike Wengrovitz, Mutualink’s vice president of innovation.

“We wrote about it, we’ve done some proof of principles in the lab and so forth,” Wengrovitz said during an interview with *IWCE’s Urgent Communications*. “But, with a new technology like this, the lessons learned that you get from deploying it and trying it in a controlled exercise leads to better performance in the event that it’s used in a real emergency. That’s why Mutualink likes to participate in this kind of thing.”

Wayne Eveland, senior director of public safety for Oceus, Networks, echoed this sentiment.

“We hope to show the art of possible—things that haven’t been done and have the guys that are doing the operations aspects a chance to really dig into this, give us some good feedback and test some new types of operational tools,” Eveland said during an interview with *IWCE’s Urgent Communications*.

Robert Escalle, Sonim Technologies’ senior director for public safety and defense market segment, said his company hopes to learn a great deal about its devices and how first responders use it.

“We’re looking at the user-experience level, not only of the application that will be running on the device but also the user experience of outdoor readability of the display of the [Sonim device] and the ability to survive the elements that are out there,” Escalle said during an interview with *IWCE’s Urgent Communications*. “We hope that they put it through its gamut of exercises out there, including potentially dropping the device on concrete—which we survive very nicely—and any of those different elements we’re looking for. We just want user-experience feedback.”

In the bus-takeover scenario, the enhanced system on wheels—different from a cell on wheels, because it does not require [backhaul](#) connectivity to support application functions—is expected to establish a “bubble” of [LTE](#) coverage that includes the bus, which allows first responders to view video taken from the bus cameras.

“What we’re doing is sharing a video live time with the SWAT teams as they approach the bus,” Verbrugge said. “As they get briefed on what’s going on, they can see the cameras to see if there are any hostages or any suspects—what they’re getting themselves into, before they actually storm the bus or get on the bus to deal with what they have to deal with.”

“It’s fantastic technology for police officers, firefighters or first responders to be able to get views from cameras—inside of buildings, inside of buses, from transit agencies—where you have radio [interoperability](#) and be able to get all of that live time and be able to know what type of situation the first responders are going into.”

In the scenario, the bus will be operating on Band 14, but the operation also would work if the bus used a commercial-carrier network, Wengrovitz said.

“If the buses continued to run on [commercial] public 4G, Mutualink is able to bridge all of those different networks,” he said. “For instance, the bus could be running on public 4G, the fusion center could be on the wired connection, and another agency could be on private 4G, and Mutualink’s collaboration technology would bridge over all of those types of networks.”

Using deployable system like this will be key to [FirstNet](#), especially during its early days, when fixed-infrastructure coverage is expected to be spotty, Wengrovitz said.

“What’s different about that is that the FirstNet is in motion; that is, a bubble of FirstNet coverage is being provided by a tactical vehicle,” Wengrovitz said. “There’s an emergency-command vehicle that’s driven up near the scene, and they turn on their cell-phone system, and it covers the surrounding area where connectivity is required in a bubble of 700 MHz Band 14 public-safety LTE.”

“So, instead of having to have permanent, fixed- installation [infrastructure] here in Richmond, Calif., there’s a bubble of coverage by the vehicle driven up with the emergency participation. The bus cameras are being pushed back over Band 14. The cell phones that the first responders are using to talk to each other and to talk to remote agencies is over Band 14, and Band 14 is deployed by the vehicle that drove up.”

In addition to seeing his company's products at work in the bus-takeover scenario, Sonim's Escalle said he is interested to learn about other technologies that will be deployed during the Urban Shield exercise in various scenarios.

"I think it's a great exercise to put out the technology that could be deployed that could be deployed in parts of the country for FirstNet, especially in deployable solutions out there," Escalle said. "We, as a device provider that supports Band 14, are very much in support of what Mutualink and Oceus are doing, and we're excited about participating.

"It's kind of neat to see all of the other different technologies—everything from wearable cameras to handheld devices to biometric and fingerprint readers. I think everybody kind of comes out of the woodwork to test their goods in a real-world environment, so it's a neat exercise."

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