PUBLIC-SAFETY LTE CLOSES IN ON COMMERCIAL REALITY

Urgent Communications Tech Talk
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With all of the talk about the potential benefits of 700 MHz broadband wireless LTE technology to U.S. first responders, the conversation often has been subdued quickly by someone asking the simple question: "Does LTE equipment even exist in the public-safety band?"

Until last week, the answer has been, "No." Commercial carrier Verizon Wireless claims it will have 700 MHz LTE networks deployed in more than 30 U.S. markets by the end of the year, and satellite provider LightSquared has announced plans to deploy a terrestrial LTE network in the 1.6 GHz band to complement its satellite offerings, but there were no systems utilizing the 10 MHz of Band 14 spectrum licensed to the Public Safety Spectrum Trust (PSST).

But that appears to be changing quickly. On Friday, Alcatel-Lucent and the Alexandria (Va.) Police Department tomorrow conducted the first field demonstration of first-responder data applications using **LTE equipment operating on the public safety's 700 MHz broadband spectrum**.

Morgan Wright, vice president of Alcatel-Lucent's global public safety segment, said the demonstration went "perfect," noting that participants realized potential data throughput speeds of 60 Mbps.

"This thing was screaming. The guys in the video were doing a two-way, high-def video conference with six streaming video streams, application sharing and desktop sharing, pulling down about 7 Mbps — and we still weren't taxing the network," Wright said. "This was like a racehorse with a 20-pound jockey on it — he doesn't even feel it."

Now, before public-safety officials get too excited by these throughput figures, it should be noted that the first-responder vehicles in the demonstration were only about 100 feet from the mobile base station used by Alcatel-Lucent. It goes without saying that data throughputs on the edge of the coverage cell would be decreased substantially.

However, the video portion of the demonstration definitely captured the attention of the attendees, Wright said.

“We had people who thought they were going to get the same experience as they do with 3G looking at Skype or something while sitting in a Starbucks,” Wright said. “By far, video was the number-one remarked about application of the whole demo.

“It was crystal clear, I thought. The experience was like watching a 1080p HD TV.”

Having demonstrated that its Band 14 LTE equipment works in the lab and in this limited field trial, Alcatel-Lucent’s next step is to have its equipment used in the NIST/PSCR field deployment being conducted in Boulder, Colo., to prove that it is ready to be deployed, Wright said.

“What you see in the lab and what we did is the exact same stuff we’ll be putting in front of public safety as this stuff goes out the door,” he said. “It’s real; it is not a bait and switch.”

Of course, what everyone in public safety is anxious to see is an LTE network operate under real-life, first-response conditions. Officials in the San Francisco Bay Area say they are hopeful a 10-site pilot with Motorola will be deployed next month.

First-mover advantages certainly can be helpful to any given vendor. However, for public-safety entities, the important news is that LTE technology in the public-safety band is going to be available soon from multiple suppliers, so we the promise of broadband can make the transition from hypothesis to reality.