Public Safety Input Needed on Broadband Technical Requirements

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By Michelle Zilis, Managing Editor

Public-safety officials have the opportunity to conduct red line edits of the entire technical requirements document for the nationwide broadband public-safety network. The National Public Safety Telecommunications Council (NPSTC) Broadband Working Group is leading the project, with input from the federal Public Safety Communications Research (PSCR) program, vendors, standards agencies and public-safety officials. About 30 percent of those involved are public-safety officials.

The document is designed to be "public-safety driven" to ensure the network meets public safety's expectations, said Andrew Thiessen, PSCR lead project engineer. "We're going to make sure public safety edits it," he said. "We want them to walk through the whole thing."

In its third draft, the more than 260-page document should be published and presented to the First Responder Network Authority (FirstNet) within another month or two, Thiessen said. Before it is finalized, the document will go through the public-safety round of edits.

The editing effort will invite all public-safety officials who have been involved with the broadband technical requirements process. The NPSTC board will invite other public-

safety practitioners to review the document. They hope to have as large an editing group as possible while still being manageable, Thiessen said.

In March, work began to define public-safety broadband under the set parameters defined in the Middle Class Tax Relief and Job Creation Act of 2012 law, the potential $7 billion in funding and use of Long Term Evolution (LTE) technology.

In addition to the technical broadband requirements for public safety, the PSCR is investing in several other LTE-focused initiatives.

"Today about 90 percent of our work is on broadband, with just about 10 percent on LMR," Thiessen said. "All the work we're doing is looking at a global perspective, despite that we're working in band 14."

Broadband Demo Network

The program's 700 MHz public-safety broadband demonstration network is focusing on phase three testing. The first phase tested for basic functionality. After the Middle Class Tax bill was passed, phase two was deemed less important and indefinitely delayed. Instead the group began phase three testing, which focuses on interoperability."Now we're asking competitors to see if their equipment is actually interoperable and meets the standard," said Emil Olbrich, lead project engineer, PSCR.

With public safety receiving the D block, vendor and lab equipment all had to be upgraded to fit the 10 x 10 megahertz design. The upgrade started in April and is still ongoing. "It required all vendors to update to larger systems," Olbrich said. "It was not as easy as we expected."

PSCR hopes to finish phase three testing by the end of the calendar year.

Other LTE Projects

Following is a quick overview of other PSCR projects discussed at the Association of Public Safety Communications Officials (APCO) International conference and exhibition Aug. 21.

• Audio quality for LTE — Following studies conducted on Project 25 (P25) vocoders, PSCR plans to repeat the same testing on LTE devices to see if the LTE vocoders have the same or similar problems.

• Video quality — The program is working on subjective testing to determine the data rates required to meet public-safety video expectations.

• LMR-to-LTE interface — Working with a global perspective, PSCR is trying to help define the push-to-talk over LTE (PTToLTE) standards in partnership with the Third Generation Partnership Project (3GPP).

• Nationwide modeling — A sample survey is being used to conduct the nationwide model in an effort to evaluate LTE and its ability to support public-safety requirements, including an estimated buildout requirement.

• Base station testing — Drive tests are being conducted to test uplink and downlink requirements for LTE base stations or eNodeBs.