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IS P25 FINALLY REACHING MATURITY?

May 13, 2009 4:50 PM, By Lynnette Luna

Compliance testing will give public-safety agencies confidence to take leap

They're finally here. Last week the U.S. Department of Homeland Security's Office for Interoperability and Compatibility announced that eight laboratories were **approved to test equipment as part of the Project 25 Compliance Assessment Program**. That means first-responder agencies soon will be able to obtain third-party testing information that ensures that P25 equipment operates and interoperates as specified by the standard.

It's a big deal. The burden always has been on the buyer to determine that the equipment they are purchasing does what it's supposed to do in the field. Manufacturers may have built according to the standard, but they conducted little to no interoperability testing with other P25 products.

When I spoke with Dereck Orr, program manager for public-safety communications standards with the **National Institute of Standards and Technology's Office of Law Enforcement Standards** (which has jointly established this testing program with the OIC), last summer, he lamented that many of the P25 radios the agency tested **did not meet the full suite of the standard**. He said that many problems stemmed from the fact that vendors were differentiating their products, which in turn made them somewhat proprietary.

"The key is to make sure they don't interfere with standardized product, but it has led to some non-conformance to the standard," he said at the time. "Testing was something that for a long time public safety assumed occurred, but then they realized that their toasters were tested to a higher degree than their radio systems."

Now information from the testing labs will provide first-responder agencies with information that ensures P25 equipment operates and interoperates as specified by the standard.

What will be the impact? With an estimated 200-plus P25 systems and 1 million portable radios now deployed across America, and with interoperability testing coming into full swing, one would think that P25 technology is now reaching the critical mass that will enable pricing to drop. With testing, smaller agencies that don't have the luxury of commanding cost savings that result from volume-buying should be able to purchase digital radios from any P25 vendor at lower prices and to operate those devices on their networks without any complications.

According to ABI Research, the market for handheld devices used by emergency first responders will grow significantly over the next five years, from slightly more than \$1 billion in 2007 to more than \$3.6 billion in 2013. That figure includes public-safety equipment used in Europe, which is based on the TETRA standard, but the firm said the North American market looks to be the single largest global opportunity in the long term because federal funding is filtering down through local emergency agencies.

To what level prices will be pushed down remains to be seen, however. While these two factors — volume and interoperability — typically cause handset pricing to fall dramatically in the commercial cellular world, manufacturers continually point out that the public-safety radio is fundamentally different than the typical commercial handset. These radios feature extra hardening materials and specialized technology that is optimized to work in an emergency situation. But once agencies have the confidence to pick and choose their devices rather than be afraid to buy a radio that might not work with their system, pricing competition should ensue.

Moreover, the real impact of these labs will be seen when they include certification of the P25 Inter RF Sub-system Interface standard, which enables two or more trunked P25 networks to be connected at the network layer. The P25 ISSI will enable roaming across multiple networks while allowing dispatchers to communicate with users outside of their home network coverage areas.

Products based on ISSI will offer even more benefits to the public-safety community because they will allow networks and radios from various manufacturers to interconnect via a common

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standardized interface.


Coming out of the gate, these interoperability testing labs are only ready to conduct common air interface tests, but the OIC is keenly aware of the importance of ISSI testing as it moving to include these tests as fast as possible.

All I can say is that after the more than 15 years of the P25 standard's existence, it's about time.

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