

Public Safety Broadband Requirements and Standards

Ensuring Public Safety has a voice in the creation of a Nationwide Public Safety Broadband Network

The Issue Faced by Public Safety Agencies

Today, public safety uses narrowband land mobile radio (LMR) networks primarily for mission critical voice communication. Unfortunately these narrow channels reduce the speed of transmission of video and imagery (like using dial-up to download video). Currently, public safety overcomes this limitation by augmenting their communications with commercial cellular broadband networks. They are using smart devices for information exchange, but these commercial networks do not provide public safety with the same reliability as their LMR networks. Unlike the general public, public safety has critical requirements such as quality of service, reliability, and talk around (direct unit-to-unit communication without the use of infrastructure). It is likely that public safety will continue to use LMR networks for the foreseeable future; however, there is a need for agencies to begin to look at ways for their LMR networks to coexist and interoperate with broadband networks.

Creation of a Nationwide Public Safety Broadband Network

In February 2012, Congress enacted “The Middle Class Tax Relief and Job Creation Act of 2012,” which contained landmark provisions to create an interoperable Nationwide Public Safety Broadband Network (NPSBN). The legislation established the First Responder Network Authority (FirstNet), a 15 member board, which is responsible for the creation of a NPSBN. In anticipation of the passing of the legislation, the U.S. Department of Homeland Security Science and Technology Directorate (S&T) and the National Public Safety Telecommunications Council (NPSTC) mobilized and began organizing efforts to update the 700 MHz Broadband Statement of Requirements (SoR) to ensure public safety’s voice was heard through the development process of this network. NPSTC was a natural leader for this effort, as they had an established Broadband Working Group (BBWG) which previously delivered key public safety requirements documents. Historically dating back to its support of the SAFECOM SoR, S&T has long recognized

the importance of the role that first responders play in the standards arena. Truly successful standards must be informed by the requirements of end users. The result of this latest joint effort is the development of Launch Requirements which describes public safety’s high-level requirements which must be addressed before the launch of a NPSBN. This collaborative effort, which includes input from public safety, national associations, industry, and federal partners, will undoubtedly be a critical resource for the FirstNet as it makes decisions related to the construction and operation of the network.

FirstNet and DHS S&T

FirstNet will hold the spectrum license for the network, and will be responsible for representing public safety before all relevant Standards Development Organizations for broadband. The 700 MHz Broadband SoR helps public safety convey a shared vision that ultimately will help private industry better align current products and future research and development efforts with critical interoperable communication needs. The Launch Requirements will also help inform other aspects of FirstNet’s responsibilities; for example, they can be a critical reference point as FirstNet enters the solicitation process for the build out of a NPSBN with industry.

Project Snapshot:

1. Engages public safety to identify their most pressing requirements for a broadband network, which will in turn be used to help inform the creation of the NPSBN.
2. Ensures first responders have a voice in the broadband standards development process to make certain their requirements are met as the NPSBN is built.

