



**FirstNet™**

## How will the FirstNet Network Work with Today's Land Mobile Radio Networks?

### **WILL THE FIRST RESPONDER NETWORK AUTHORITY (FIRSTNET) NETWORK REPLACE THE LAND MOBILE RADIO (LMR) NETWORKS PUBLIC SAFETY USES TODAY?**

When the FirstNet network launches, it will provide mission-critical, high-speed data services to supplement the voice capabilities of today's Land Mobile Radio (LMR) networks. Initially, the FirstNet network will be used for sending data, video, images and text. The FirstNet network will also carry location information and eventually support streaming video. FirstNet plans to offer cellular voice communications such as Voice over Long Term Evolution (VoLTE) or other alternatives.

### **WHEN WILL MISSION-CRITICAL VOICE BE AVAILABLE FOR FIRSTNET USERS?**

FirstNet can't predict the arrival of mission-critical voice in part because the standards are still under development. The standards work will determine the functionality and performance requirements for mission-critical Voice over Long Term Evolution (VoLTE). FirstNet is actively involved in the standards-setting process and the industry at large is working to accelerate the development of this new worldwide standard.

### **WHAT MAKES MISSION-CRITICAL VOICE DIFFERENT FROM CELLULAR-QUALITY OR COMMERCIAL-GRADE VOICE?**

Today's LMR networks support push-to-talk, direct mode, and emergency call functionality. Public safety users typically communicate one-to-many instead of one-to-one. If the network fails, they also must be able to communicate with other responders in close proximity, so direct mode is critical. There are also performance requirements for mission-critical voice that address call set-up speed, quality, and reliability. These attributes need to be defined through the standards-setting process.

## **WILL THE FIRSTNET NETWORK SHARE SITES WITH LMR NETWORKS?**

The FirstNet network will leverage existing infrastructure where it makes engineering and economic sense. Our goal is to keep costs down and reduce the time it takes to build out the new Band Class 14 FirstNet network. Band Class 14 is the portion of spectrum allocated to public safety for operation of the FirstNet nationwide public safety wireless broadband network. Whether FirstNet shares sites with LMR networks will depend on the availability of space to house FirstNet equipment and whether the location proves to be the best option for meeting our network design, coverage, and cost requirements.

## **WILL THE FIRSTNET NETWORK CONNECT TO LMR NETWORKS?**

In order to access one or more LMR networks, a dedicated handset must be within range of the specific towers within the frequency band on which it operates. Public safety personnel utilize a propriety subscriber unit and must sometimes carry multiple units to execute their daily mission. Headquarters personnel, ad hoc users or neighboring jurisdictions are routinely provided with units when needed for mutual aid. There are many solutions that will allow FirstNet users to improve efficiency by extending LMR access to smartphones, tablets and PCs. Through a simple Internet Protocol (IP) gateway, users will be able to transmit and receive voice traffic on any device that is authenticated to an LMR network via a Push to Talk (PTT) voice application.

