FirstNet™
U.S. DEPARTMENT OF COMMERCE

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

WILL THE 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, which will supplement the voice capabilities of today's LMR networks. FirstNet users will be able to send and receive data, video, images, and text. They will have a more reliable and faster network for getting access to information public safety needs and relies on to do their jobs. In time, FirstNet plans to offer cellular-quality voice which can be used for administrative calls and daily public safety voice communication. The FirstNet network won't become a viable replacement for LMR until mission-critical voice functionality that meets or exceeds the needs of public safety is available.

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 LTE (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?

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 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?

FirstNet intends to establish interfaces between its network and existing LMR networks. These interfaces will enable voice calls to take place between users on the LTE network and a connected LMR network. The FirstNet core will have a variety of interfaces to other networks, including 9-1-1 centers, the public switched telephone network, and the Internet. States and local agencies can specify during the consultation process where they want FirstNet to interface with their existing LMR networks.

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