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Frequently Asked Questions About Public Safety Broadband

What is the National Broadband Plan?

The National Broadband Plan was created by the Federal Communications Commission (FCC) at the direction of the President, and is the roadmap document towards providing high-speed data services to all Americans. Universal broadband deployment is the largest utility effort since Rural Electrification almost a century ago. Broadband is the water supply for your town. You can use the water for drinking, cooking, bathing, irrigation, industry, or to support technologies not yet invented. Broadband uses Internet protocols and technology to create an environment that evolves as new requirements emerge. Chapter 16 of the Plan is devoted to Public Safety uses and direction for the Nationwide Public Safety Broadband Network.

What is Public Safety Broadband?

Public safety broadband (sometimes called “Long Term Evolution” or “LTE”) provides public safety, alert and warning, dispatch, critical infrastructure, and mutual aid users a coherent, nationwide, standards-based wireless communications platform. Public safety broadband uses radio frequencies recently made available by the digital television conversion, and through the reapportionment of existing allocations. By participating in an integrated nationwide network, everyone benefits from greater efficiency and new capabilities.

What does it do?

By using modern data technology, public safety broadband enables the rapid transmission of any kind of information. Voice, video, remote data access, control systems and alerting are all applications for the system. Roaming technology permits responders from distant locations to join incidents without requiring new radios, reprogramming, or retraining. Exchanging information is conceptually as simple as navigating the World Wide Web. Network design and the administrative policies of each agency determine what information can be shared, and with whom.

Why do we need this?

As our society has developed more technologies, the adoption of disparate systems has accelerated. At the same time, our need to work together has increased dramatically. By establishing a universal framework, our ability to serve improves. Just as standardized railroad gauges enabled the transportation boom and unified the nation in the 19th Century, broadband promises to do the same in the 21st.

While commercial carriers already provide advanced data services via LTE, the addition of the D-Block spectrum for public safety affords a protected environment for critical communications. Further, public safety communications facilities and user equipment must be more robust than consumer equipment, especially where life safety and mission critical traffic is involved. Finally, administrative agreements for roaming, data security, and overall interoperability require the creation of a public safety broadband governance structure.

What is the role of the state governing body?

The development of public safety broadband, while driven by the Federal level, is largely the role of the states and territories. Each state has been asked to create a structure including governance and a point of contact. Federal guidance suggests that a unified effort including dispatch, conventional communications, and broadband stakeholders, is best. Developing operating procedures, agreements, and system governance are key roles for the state governing body. The Statewide Interoperability Coordinator has been established as a resource to bring these groups together and promote cooperation.

What is the role of private-sector carriers?

Since it not feasible or desirable for the states to build a brand-new voice and data communications system, it is important to the infrastructure already in place. Commercial carriers (e.g. AT&T, Sprint, Verizon) have spent billions of dollars over the last 30 years to build commercial voice and data systems. By partnering with these carriers, deployment of public safety broadband is accelerated at the same time the public networks are made more resilient. While existing carrier-based solutions are generally adequate for consumer use, extra capability and resiliency is necessary for public safety.

Will this make existing voice systems obsolete?

No. There is a lot of work to be done before a public safety grade voice and data network is ready to operate in any location, let alone nationwide. Existing voice communication systems will be necessary for many years to come. Eventually, though, the migration to broadband will reduce usage on legacy systems. Conventional radio will continue to have a role for specific applications for decades to come. Existing system assets, particularly resilient towers, sites, and interconnectivity, may also be used in the new network.

When and how will the network "turn on"?

The launch and evolution of the Nationwide Public Safety Broadband Network will be gradual. There will not be any one date when the system will activate and legacy systems terminate. Gradually we will see the introduction of rugged data devices operating in the public safety spectrum. Initially, they will be limited in data-carrying capacity, geographic coverage, and overall utility. Those currently using commercially provided mobile and portable broadband (smartphones, mobile PCs) may not notice any day-to-day improvement.

As the network grows, as more equipment becomes available, and as software applications are developed for public safety users, capabilities will increase and the use of data services will become a bigger part of public safety workflow. Even then, legacy voice systems will still be the primary means of operation for most agencies.

Ultimately, the network will become robust enough to permit mission-critical voice and other services. At this point, the voice "application" will be added to the suite of services available. As older voice equipment and systems reach their end-of-life, they will be replaced with broadband equipment. For a while, connections similar to "console patches" or "bridges" will marry the old and new channels, until the legacy systems are discontinued.

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