

The FCC's Evolving Public Safety Spectrum Policy

Michele C. Farquhar
Mark W. Brennan
Hogan & Hartson LLP
September 2007

The Federal Communications Commission's recent decision to enable a nationwide, interoperable broadband network for public safety use represents a significant departure from prior public safety spectrum decisions. Whereas past public safety allocations gave direct license control to state and local or regional entities that built a patchwork of fenced-off systems across the country, the recent decision places control in the hands of a public safety representative tasked with nationwide coordination and spectrum-use planning. Moreover, the FCC's decision establishes a novel framework for a partnership between public safety users and a commercial licensee to facilitate the deployment of a shared broadband network.

1. Fragmentation and Local Control: Early Public Safety Allocations

The FCC initially allocated "public safety" spectrum to specific subsets of public safety entities. For example, the FCC established distinct Police, Fire, Highway Maintenance, Forestry-Conservation, Local Government, and Emergency Medical Radio Services, eventually grouping the services under the Public Safety Radio Services ("PSRS") moniker.¹ Each service, however, was subject to separate regulations and eligibility requirements. For example, eligibility in the Police Radio Service was limited to non-Federal governmental entities or institutions authorized by law to provide their own police protection (e.g., state police, county sheriffs, and local police departments).² Generally, each agency, precinct, or other user operated its own communications system via individual licenses.³

The FCC allocated spectrum for PSRS in several non-contiguous frequency bands, including the VHF, 220 MHz, UHF, and 800 MHz bands.⁴ It made initial PSRS allocations in the 30-50 MHz bands, but as the number of public safety users grew (and as the spectrum needs of individual users increased), the FCC provided additional allocations at higher frequencies.⁵ Unfortunately, these frequencies had less favorable propagation characteristics, which created challenges in rural areas. As technologies and equipment became available for the new, higher-frequency allocations, public safety systems became further fragmented (particularly in urban areas).⁶ As a result, public safety spectrum users sometimes had to carry more than one handset, receiver, or other device to obtain full functionality from the same PSRS system, such as a local government, precinct, or hospital network. In addition, the inflexible, fragmented nature of the early PSRS systems prevented economies of scale and inhibited the adoption of new wireless technologies; as a result, no competitive market for public safety equipment developed.

2. Regional Planning: Larger Networks, Similar Problems

Because the technologies and equipment used on one public safety system were generally incompatible with the systems employed by other agencies, users often faced a complete lack of interoperability, even

¹ See 47 C.F.R. Part 90 (1997); see also *The Development of Operational, Technical, and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communication Requirements Through the Year 2010*, WT Docket No. 96-86, Notice of Proposed Rulemaking, 11 FCC Rcd 12460, 12463-65 ¶¶ 5-12 (1996) ("1996 Public Safety NPRM").

² See 47 C.F.R. § 90.19 (1997). As an exception, all public safety entities were permitted to use the frequencies allocated to the Local Government Radio Service. See *id.* § 90.17 (1997).

³ See 1996 Public Safety NPRM at 12468 ¶ 21.

⁴ See *id.* at 12465-66 ¶¶ 13, 15.

⁵ See *id.* at 12465 ¶¶ 13-14.

⁶ See *id.* ¶ 14.

at the local level. To alleviate some of the efficiency and interoperability concerns, the FCC shifted its public safety spectrum policy in favor of regional planning.

In developing the 800 MHz Public Safety band in the 1980s, the FCC divided the nation into fifty-five regions, each of which formed a Regional Planning Committee (“RPC”) to encourage efficient spectrum use and coordination within the broad public safety community of the region (as opposed to, for example, within the police community only) while still addressing localized public safety requirements in different parts of the country.⁷ The FCC required each RPC to submit a regional spectrum use plan that, among other things, included a description of how the spectrum would be allotted and prioritized among eligible public safety users within the region and how the plan put the spectrum to its best possible use.⁸ The FCC considered the use of RPCs in the 800 MHz band a success and extended the regional planning approach to additional public safety spectrum allocations in the 700 MHz and 4.9 GHz bands.⁹

Although RPCs facilitated greater coordination and efficient spectrum use among neighboring public safety entities, they did not solve the interoperability problem. Thus, public safety systems remained highly fragmented at the local, state, and federal levels, and users often still had to carry more than one piece of equipment.¹⁰ Even in instances where regional planning resulted in some measure of interoperability at a regional level, nationwide interoperability remained an illusion.¹¹ Moreover, RPC efforts also “resulted in uneven build-out across the country in different bands,” and “balkanization of spectrum between large numbers of incompatible systems.”¹²

3. The New Paradigm at 700 MHz: A Centralized Public/Private Partnership

The FCC’s recent *700 MHz Second Report and Order*¹³ represents a significant departure from prior public safety spectrum allocations. In light of mounting concerns from public safety representatives that a lack of interoperability, sufficient capacity and robustness, and broadband functionality were hindering effective public safety communications, the FCC began exploring solutions for the 700 MHz band. Reports that public safety communications problems may have plagued rescue efforts during the September 11 attacks and the devastating hurricanes of 2005 further propelled the agency to optimize the public safety allocation in the 700 MHz band.

To address concerns about the lack of broadband functionality among public safety users, the FCC recently designated, for the first time, a portion of the 700 MHz public safety band exclusively for broadband technologies.¹⁴ This 10 MHz designation will allow public safety entities to utilize advanced wireless services to further their mission. For example, the FCC noted that broadband applications “would

⁷ See Development and Implementation of a Public Safety National Plan and Amendment of Part 90 to Establish Service Rules and Technical Standards for Use of the 821-824/866-869 MHz Bands by the Public Safety Services, GEN Docket No. 87-112, *Report and Order*, 3 FCC Rcd 905 (1987) (“*National Plan Report and Order*”). The regions were roughly designed along state boundaries.

⁸ See *id.* at 911 ¶¶ 50-52. The FCC’s role in relation to the RPCs was “limited to: (1) defining the regional boundaries; (2) requiring fair and open procedures; (3) specifying the elements that all regional plans were to include; (4) reviewing and accepting the plans, or rejecting them with an explanation; and (5) reviewing and accepting requests for modification of the plans, or rejecting them with an explanation.” See *id.* at 910-911 ¶¶ 41-57.

⁹ See *The Development of Operational, Technical, and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communication Requirements Through the Year 2010*, WT Docket No. 96-86, First Report and Order and Third Notice of Proposed Rulemaking, 14 FCC Rcd 152, 190 ¶ 77 (1998); *The 4.9 GHz Band Transferred from Federal Government Use*, WT Docket No. 00-32, Memorandum Opinion and Order and Third Report and Order, 18 FCC Rcd 9152, 9168-69 ¶¶ 40-42 (2003). The FCC also required separate coordination plans for each band.

¹⁰ See *Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band*, PS Docket No. 06-229, Ninth Notice of Proposed Rulemaking, 21 FCC Rcd 14837, 14842 ¶ 13 (2006) (“*700 MHz Public Safety Ninth Notice*”).

¹¹ See *id.* at 14841-42 ¶¶ 11, 13.

¹² See *id.* at 14841 ¶ 11.

¹³ *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, WT Docket 06-150, Second Report and Order, FCC 07-132 (rel. Aug. 10, 2007) (“*700 MHz Second Report and Order*”).

¹⁴ *Id.* ¶¶ 325-26. In a 2005 report to Congress, the FCC recognized the need for public safety broadband communications. See Report to Congress on the Study to Assess the Short-Term and Long-Term Needs for Allocations of Additional Portions of the Electromagnetic Spectrum for Federal, State, and Local Emergency Response Providers, WT Docket No. 05-157 at 13 ¶ 26 (Dec. 16, 2005) (*Intel Reform Act Report*).

enable public safety agencies to transmit (1) real-time, full motion video from any location to any other location, (2) live video from an emergency scene to a command center, and (3) building diagrams, blueprints, and mug shots to personnel in the field.”¹⁵

The FCC sought to address longstanding interoperability issues by assigning the entire 10 MHz broadband designation through one license.¹⁶ Through that license, the “Public Safety Broadband Licensee” will act as the national coordinator for public safety’s broadband spectrum. The FCC noted that whereas public safety licenses had previously been granted on a site-by-site basis, such processes are “very cumbersome for radio systems comprising hundreds of thousands of sites,”¹⁷ It also stated in an earlier Notice of Proposed Rulemaking that “[t]he availability of a nationwide, interoperable, broadband communications network for public safety substantially could enhance the ability of public safety entities to respond to emergency situations, whether due to severe weather events or criminal or terrorist activities, and likely would save lives and preserve property.”¹⁸ Thus, although some commenters expressed concern over the lack of local control under the new nationwide framework,¹⁹ the FCC found that a centralized approach best served its public safety broadband communications goals.²⁰ Moreover, the FCC noted that local public safety agencies would still be able to provide input on network design and spectrum use by communicating with the nationwide licensee.²¹

The FCC also responded to public safety’s calls for assistance in the deployment of a broadband network by establishing the framework for a public/private partnership between public safety users and a commercial licensee.²² Under this framework, the high bidder for the 10 MHz block of nationwide commercial spectrum adjacent to public safety’s 700 MHz spectrum (the commercial “D Block”) will be required to enter in a network-sharing agreement with a “Public Safety Broadband Licensee.”²³ Pursuant to the agreement, the “D Block licensee” must construct a shared network for commercial and public safety use in which the Public Safety Broadband Licensee must lease the public safety broadband spectrum for commercial use by the D Block licensee on a secondary, preemptible basis, while public safety entities will have priority access to the D Block spectrum during emergencies.²⁴ Thus, the *700 MHz Second Report and Order* establishes a mechanism whereby commercial users may access public safety spectrum, and vice-versa, in a stark contrast to the traditional taboo of commercial and public safety spectrum-sharing.

The shared, centralized broadband network has the potential to provide significant benefits for public safety users. In particular, the public safety community will have access to an additional 10 MHz of nationwide spectrum during emergencies. Public safety will also have access to an interoperable broadband network, planned from the outset at the national level. In addition, because the D Block

¹⁵ *700 MHz Second Report and Order* ¶ 325 n.727 (internal citations omitted). Other benefits include video surveillance, email and text messaging, and real-time status updates. See *id.* ¶ 31; see also *Intel Reform Act Report* at 13 ¶ 26.

¹⁶ *700 MHz Second Report and Order* ¶ 366.

¹⁷ *Id.* ¶ 369.

¹⁸ *700 MHz Public Safety Ninth Notice* at 14842 ¶ 13.

¹⁹ For example, Region 43 (Washington) commented that the spectrum should remain under the control of the RPCs, and Sharp Communications recommended a local framework for public safety systems. See *id.* ¶ 368; Region 43 (Washington) *700 MHz Public Safety Ninth Notice* Comments at 1, 3; Sharp Communications *700 MHz Public Safety Ninth Notice* Comments at 1.

²⁰ *700 MHz Second Report and Order* ¶¶ 369-70. For example, the FCC found that a nationwide licensee “could increase spectrum efficiency as compared to multiple, specialized public safety network ‘silos’ overlapping in the same area and using incompatible frequencies and technologies.” *Id.* ¶ 370.

²¹ *Id.* ¶ 326. The FCC also limited eligibility to hold the public safety broadband license under a more restrictive standard than it used for the 800 MHz, 4.9 GHz, and prior 700 MHz public safety licenses. The licensee must be a non-profit organization free of any commercial interests (as owners or managers). *Id.* ¶ 373. The licensee also must have representatives from leading public safety groups and FCC staff on its Board of Directors. *Id.* ¶¶ 373-74. In addition, the licensee must obtain written consent from at least 10 geographically diverse state and local governmental entities. *Id.* ¶ 373. The written certifications must verify that the state and local governmental entities have authorized the entity to use the 700 MHz public safety broadband spectrum to provide public safety services and that the authorizing entities’ primary mission is the provision of public safety services.

²² *Id.* ¶ 386.

²³ *Id.*

²⁴ *Id.* ¶ 399.

licensee will be responsible for constructing the shared network, the public safety community will not need to fund the infrastructure.²⁵ While some short-term issues are likely to arise from such a novel concept, it remains to be seen whether this effort will succeed as a long-term means of solving the complex challenges that have plagued public safety communications in the past.

Michele C. Farquhar is a partner in the Washington, D.C., office of Hogan & Hartson, and **Mark W. Brennan** is an associate in the firm's Washington, D.C., office. This article originally appeared as part of the 4th Annual Conference on Spectrum Management, Law Seminars International, September 17-18, 2007 (Washington, D.C.).

²⁵ Public safety users will also be able to take advantage of cost efficiencies from the shared network.