



PUBLIC NOTICE

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DA 10-1877

Released: September 28, 2010

**PUBLIC SAFETY AND HOMELAND SECURITY BUREAU SEEKS COMMENT ON THE
TECHNICAL AND OPERATIONAL FEASIBILITY OF ENABLING FLEXIBLE USE OF THE
700 MHZ PUBLIC SAFETY NARROWBAND ALLOCATION AND GUARD BAND FOR
BROADBAND SERVICES**

PS Docket No. 06-229

Comment Date: December 3, 2010

Reply Comment Date: January 7, 2011

By this Public Notice, the Public Safety and Homeland Security Bureau seeks comment on the feasibility of allowing for flexible use of the 700 MHz public safety narrowband spectrum. Specifically, we seek to explore whether allowing public safety the option of using 700 MHz narrowband spectrum for broadband services would be operationally feasible and technically compatible with existing and future public safety narrowband operations. We also seek comment on potential conditions or restrictions on flexible use that might be required to prevent harmful interference to narrowband operations or impairment of narrowband interoperability. As a procedural matter, we note that this Public Notice does not propose any change to the current rules governing the 700 MHz narrowband spectrum; its purpose is to gather information in order to develop a better understanding of options for future evolution of the 700 MHz narrowband spectrum that the Commission could make available for the public safety community.

Background

Pursuant to Section 337(a) of the Communications Act, the Federal Communications Commission has allocated 24 megahertz of spectrum in the Upper 700 MHz band for public safety services. The Commission has designated: twelve megahertz of this spectrum (769-775/799-805 MHz) for narrowband operations; ten megahertz (763-768/793-798 MHz) for broadband operations that is reserved for deployment of a nationwide interoperable public safety broadband network and two megahertz (768-769/798-799 MHz) as a guard band between the narrowband and broadband segments. Under current rules, the 700 MHz narrowband spectrum is allocated and channelized in a manner that does not permit broadband operations. The narrowband channel plan also provides for nationwide interoperability channels using standardized P25 technology.¹ Further, the guard band is part of the nationwide Public Safety Broadband License, licensed to the Public Safety Spectrum Trust, but may be used only as a buffer between the broadband and narrowband allocations.²

There is broad and strong interest and support for deployment of public safety broadband

¹ See 47 C.F.R. §§ 90.548, 90.531(b)(1).

² See 47 C.F.R. §§ 90.528(a), 90.531(f); Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, et al., PS Docket No. 06-229, *Second Report and Order*, 22 FCC Rcd 15289, 15415 ¶ 348 (2007) (*Second Report and Order*).

communications networks in the 700 MHz band.³ Development of a nationwide interoperable broadband wireless network for first responders in the public safety broadband spectrum promises to transform emergency response by enabling public safety users to seamlessly exchange and access high-speed data and voice communications, both day-to-day and during emergencies, over a state-of-the-art network. Some members of the public safety community have suggested that the evolution of broadband networks could eventually lead to a migration by public safety from narrowband to broadband, as broadband technology becomes increasingly capable of supporting the mission-critical public safety applications that are currently provided only by narrowband systems.⁴

At the same time, many in the public safety community have stressed that providing sufficient capacity and performance for public safety narrowband operations remains of critical importance to existing public safety communications systems, and that until broadband is capable of supporting mission-critical voice operations, narrowband will continue to play a central role in first responder communications. Recently, several public safety agencies have objected to permitting flexible use of the 700 MHz narrowband spectrum, contending that it could deprive public safety of spectrum needed for narrowband use, increase the potential for harmful interference, and negatively impact interoperability.⁵

Issues for Comment

Taking the above issues and concerns into account, in this Public Notice, we seek to explore the circumstances, if any, under which allowing public safety the option of flexible use of the 700 MHz narrowband allocation and guard band for broadband services would be operationally feasible and technically compatible with existing and future public safety narrowband operations, including any impact on interoperability. We seek comment on the potential level of interest in such flexible use within the public safety community, both in the short term and the long term. As public safety agencies confront decisions on devoting future funds and resources for communications, should they be able to consider options for expanding broadband operations as an alternative to new or expanded narrowband networks? In particular, we seek comment on these issues from the states and 700 MHz Regional Planning Committees (RPCs) that have responsibility for planning and coordination of the 700 MHz narrowband spectrum.

To guide public input on these issues, we seek specific comment on the questions presented below, but also invite more general comment:

- What is the current and anticipated use of 700 MHz narrowband networks?
 - How extensively are 700 MHz public safety narrowband channels—including channels licensed directly to states,⁶ channels licensed pursuant to approved RPC plans, and channels designated for nationwide interoperability—being utilized currently for public safety narrowband operations? To what extent does use of the narrowband spectrum vary by

³ See Requests for Waiver of Various Petitioners to Allow the Establishment of 700 MHz Interoperable Public Safety Broadband Networks, PS Docket No. 06-229, *Order*, FCC 10-79 (rel. May 12, 2010); see also *Second Report and Order*.

⁴ See, e.g., Letter from Terry L. Sult, Chief, Sandy Springs Police Department, to James A. Barnett, Chief, Public Safety and Homeland Security Bureau (June 1, 2010); City of New York, “700 MHz Public Safety Broadband Applications and Spectrum Requirements” (filed February 23, 2010), at 9-11.

⁵ See, e.g., *Ex parte* Letter from Mark Grubb, Statewide Interoperability Coordinator, Delaware Department of Safety and Homeland Security, to Marlene Dortch, Secretary, Federal Communications Commission (July 15, 2010); *ex parte* Letter from Ray Lehr, Statewide Interoperability Director, Maryland Interoperability Program Management Office, to Marlene Dortch, Secretary, Federal Communications Commission (July 23, 2010); *ex parte* Letter from Darryl Anderson, Director, Ohio Statewide Interoperability Executive Committee, to Marlene Dortch, Secretary, Federal Communications Commission (July 28, 2010).

⁶ See 47 C.F.R. § 90.529.

geographic area? In particular, we seek quantitative metrics (e.g., number of channels in use, percentage of jurisdictional landmass covered) that will allow us to understand better the scope and scale of existing 700 MHz public safety narrowband operations.

- What plans exist for future deployments of 700 MHz narrowband systems, and has funding been committed for these systems? In what timeframe are such systems expected to be placed into operation, and how much channel capacity are they expected to use? Again, we seek quantitative metrics (e.g., dollars committed and channel utilization / geographic coverage obtained with committed dollars).
- Are there public safety jurisdictions that are planning to deploy both 700 MHz broadband and narrowband systems in the same geographic area? If so, where? Will these systems be constructed independently or will they share infrastructure, network operations, or other resources? What information is available as to the costs of constructing separate or combined broadband and narrowband systems? Could flexibility benefit such jurisdictions by allowing them to shift spectrum from narrowband to broadband use over time?
- Would the flexibility to offer broadband services in all or a portion of the 700 MHz narrowband spectrum and/or the guard band promote more efficient use of 700 MHz public safety spectrum? Are there efficiency gains that could be realized by enabling this flexibility? For example, could the use of the narrowband spectrum help satisfy needs for increased broadband capacity? Or could broadband spectrum help satisfy the needs for narrowband capacity over time? What would need to happen for this to occur?
- If the Commission were to allow flexible use of 700 MHz narrowband spectrum and/or the guard band, would broadband operations in this spectrum potentially interfere with existing or future public safety narrowband operations? We specifically seek technical information on the likely extent of such interference scenarios. What steps could be taken to mitigate such potential harm?
 - Would guard bands continue to be necessary to protect adjacent channel narrowband operations, and how would they be configured?
 - What interference protection criteria or coordination requirements would be necessary to allow narrowband and broadband systems to operate in adjacent spectrum in the same geographic area, or in the same spectrum in adjacent geographic areas?
- What impact would allowing flexible use of all or a portion of narrowband spectrum have on the continued ability to support nationwide narrowband interoperability?
 - Could nationwide narrowband interoperability be maintained based on the existing distribution of designated interoperability channels in the 700 MHz narrowband channel plan, or would reconfiguration of the channel plan be necessary to add or shift interoperability channels to other portions of the band?
 - For areas that do not construct narrowband 700 MHz systems, could narrowband interoperability occur on interoperable channels on other existing public safety spectrum bands in these areas?
- How much, if any, of the narrowband allocation and guard band should be made available for broadband operations? Should some portion of this spectrum (e.g., the upper portion of the band furthest from the existing public safety broadband spectrum) continue to be reserved exclusively for narrowband operations?
- If flexibility in the narrowband spectrum were allowed, what role should the 700 MHz RPCs and the states play in its implementation?

- What would be the appropriate jurisdictional level for deciding whether to implement flexibility? Should such decisions be made at the state or regional level?
- How would decisions to implement flexibility impact the role of RPCs and existing regional plans for the 700 MHz narrowband spectrum? Should state licensees be required to make any filings?
- Should states/RPCs be required to coordinate with one another regarding proposals for flexible use of the narrowband spectrum within their respective jurisdictions?
- What would be the impact of allowing flexibility on the development of broadband, narrowband, and dual-use equipment in the 700 MHz public safety spectrum?
 - Would allowing flexible use prior to widespread deployment in the public safety broadband allocation create incentives for the development of broadband devices and equipment capable of operating in the narrowband spectrum as well? Are there other steps the Commission could take to promote the development of such equipment?
 - What is the potential for development of dual-use equipment that could support both narrowband and broadband use? Would such equipment be software-defined and programmable to allow for ease of transition between broadband and narrowband use?
 - For broadband devices built to operate in the 700 MHz public safety broadband spectrum, will there be interoperability issues if these devices operate in regions that opt to deploy broadband in narrowband spectrum as well? If so, how should these issues be addressed?
 - Conversely, if mobiles designed to transmit and receive broadband in the narrowband spectrum are used in regions that opt to deploy narrowband, will there be interference concerns between these devices and the narrowband network? If so, how should these issues be addressed?
- If the Commission were to permit flexible use of the narrowband spectrum, what if any impact should this have on the existing rules that require 700 MHz narrowband systems to narrowband to 6.25 kHz bandwidth channels by December 31, 2016?⁷ Should the Commission reconsider this requirement? Would public safety resources be better spent transitioning 700 MHz narrowband operations onto a broadband platform?

Comments are due by December 3, 2010, and reply comments are due January 7, 2011. Comments may be submitted using (1) the Commission's Electronic Comment Filing System (ECFS), (2) the Federal Government's eRulemaking Portal, or (3) by filing paper copies.⁸ Comments can be filed through the Commission's ECFS filing interface located at the following Internet address: <http://www.fcc.gov/cgb/ecfs/>. Comments can also be filed via the Federal eRulemaking Portal: <http://www.regulations.gov>.⁹ In completing the transmittal screen, commenters should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number. Parties who

⁷ See 47 C.F.R. § 90.535. We note that two public safety entities have previously filed petitions for rulemaking asking the Commission to extend the December 31, 2016 narrowbanding deadline. These petitions remain pending. See Petition for Rulemaking of the Region 24 700 MHz Regional Planning Committee, RM-11551 (filed electronically via the Commission's Electronic Comment Filing System (ECFS) in PS Docket 06-229 and WT Docket 96-86 on May 15, 2009); Petition for Rulemaking of the State of Louisiana (filed electronically via ECFS in PS Docket 06-229 and WT Docket 96-86 on Oct. 5, 2009).

⁸ See Electronic Filing of Documents in Rulemaking Proceedings, 63 Fed. Reg. 24121 (1998).

⁹ Filers should follow the instructions provided on the Federal eRulemaking Portal website for submitting comments.

choose to file by paper must file an original and four copies of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- Effective December 28, 2009, all hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building. **Please Note:** The Commission's former filing location at 236 Massachusetts Avenue, NE, Suite 110, Washington, DC 20002 permanently closed on December 24, 2009.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

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