

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)
)
Service Rules for the 746-764 and) WT Docket 99-168
776 - 794 MHz Bands, and Revisions)
to Part 27 of the Commission's Rules)

To: The Commission

COMMENTS OF NEXTEL COMMUNICATIONS, INC.

Nextel Communications, Inc. ("Nextel") respectfully submits these Comments in support of the National Public Safety Telecommunications Council's ("NPSTC") and the Public Safety Wireless Network's ("PSWN") Petitions for Reconsideration ("Petition") in the above-captioned proceeding. As the largest licensee of 700 MHz Guard Band spectrum, Nextel agrees with NPSTC and PSWN that the Federal Communications Commission ("Commission") should reconsider its decision to allow commercial base station operations in the 777-792 MHz band¹ and should revert to the original 700 MHz band plan adopted in this proceeding.²

¹ See In the Matter of Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, WT Docket 99-168, *Second Memorandum Opinion and Order, FCC 01-02*, ____ FCC Rcd ____ (February 6, 2001) ("*700 MHz Second Reconsideration Order*").

² See In the Matter of Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, WT Docket 99-168, *First Report and Order*, 15 FCC Rcd 476 (2000) ("*First 700 MHz Order*").

I. BACKGROUND

Pursuant to Congressional direction,³ in January 2000 the Commission allocated 36 MHz of 700 MHz spectrum for commercial uses and 24 MHz of spectrum for public safety operations. In the same Order, it adopted a 700 MHz band plan. From the 36 MHz of commercial spectrum, the Commission carved out two smaller Guard Bands of two and four MHz each adjacent to the established public safety bands.⁴

The Commission stated that a primary goal of the 700 MHz band structure is “to ensure that activation of services in these 36 MHz of spectrum will not impair public safety operations . . . through harmful interference”⁵ noting the Congressional directive that public safety service licensees in the 746-806 MHz band “continue to operate free of interference from any new commercial licensees.”⁶ The importance attached to interference protection for the public safety bands was stressed not only by the public safety community but by an equipment manufacturer, Motorola, who proposed Guard Bands to further

³ See Section 337(a) of the Communications Act, 47 U.S.C. § 337(a), as added by § 3004 of the Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251 (1997).

⁴ *First 700 MHz Order.*

⁵ *First 700 MHz Order* at para. 33.

⁶ *Id.*

insulate the adjacent public safety bands from commercial service emissions in the central segments of these bands.⁷

The Commission adopted “paired-band architecture” and distinct power limits – the power limits for the lower frequency band segment reflect primary use of higher-power base station transmissions and the upper-band segment was set at levels that optimize its efficient-use for the lower-power transmissions from the control, mobile and portable stations that will be received by base stations.⁸ Adoption of the orientation of base station transmissions on the “downlink” frequency segment was consistent with rules adopted two years earlier in the 700 MHz public safety band proceeding.⁹ The Commission also noted that this approach would enable more efficient spectrum use and would minimize the “near-far” interference problem.¹⁰ Based on “convincing” engineering showings in the record, the Commission set out-of-band emission (“OOBE”) power limits that purportedly “strike a reasonable balance” between protecting public safety and “maintaining commercial viability” of the 700 MHz band.¹¹

⁷ *Id.*

⁸ *700 MHz First Order* at para. 40.

⁹ See NPSTC Petition at page 4. See also In the Matter of the Development of Operational, Technical and Spectral Requirements for Meeting Federal, State and Local Public Safety Agency Communication Requirements Through the Year 2010, WT Docket 96-86, *First Report and Order and Third Notice of Proposed Rule Making*, FCC 98-101, 14 FCC Rcd 152 (1998).

¹⁰ *700 MHz First Order* at para. 40.

¹¹ *Id.* at para. 104.

Less than two months later, the Commission adopted licensing, technical and operational rules governing the Guard Band spectrum immediately adjacent to the public safety bands.¹² The Commission adopted even more stringent rules to protect adjacent public safety operations. The Commission adopted higher OOB power limits, required frequency coordination and prohibited use of cellular-like systems in the 700 MHz Guard Band.¹³

In June 2000, based on requests from Adaptive, ArrayCom and US West, the Commission reconsidered its *First 700 MHz Order* and removed its restriction on the operation of base stations in the lower band commercial allocation, and mobile, portable and control stations in the upper band commercial allocation.¹⁴ The Commission determined that they had “inadvertently and unnecessarily” limited the potential for new and innovative service offerings on these bands and allowed commercial base station operations in both the upper and lower commercial bands.¹⁵ While the Commission noted that permitting base station operations in the upper band “raises the possibility” of “base-to-mobile”

¹² See In the Matter of Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission’s Rules, WT Docket 99-168, *Second Report and Order*, FCC 00-90, 15 FCC Rcd 5299 (March 9, 2000) (“700 MHz Guard Band Order”).

¹³ *Id.* at para. 13.

¹⁴ See In the Matter of Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission’s Rules, WT Docket 99-168, *Memorandum Opinion and Order and Further Notice of proposed Rulemaking*, FCC 00-224, 2000 FCC LEXIS 3468 (June 30, 2000).

¹⁵ *Id.* at para. 7. The Commission also revised its power limits to enable Time Division Duplex (“TDD”) technologies to operate on these bands.

interference into the public safety band, it believed that the interference OOB levels it set would adequately protect public safety operations.¹⁶

Motorola challenged this Commission rule reversal in August 2000. In January 2001, the Commission affirmed its decision to allow base station operations in the upper commercial band.¹⁷ The Commission disagreed with Motorola's technical assumptions and believed that instances of interference could be addressed on a "case-by-case" basis.¹⁸

II. DISCUSSION

While the 700 MHz commercial band technical rules have been under review and FCC Auction No. 31 for the 10 and 20 MHz blocks (totaling 30 MHz) of 700 MHz commercial band spectrum has been delayed four times, the Commission has already held two 700 MHz Guard Band auctions and has awarded 700 MHz Guard Band licenses. Nextel was the largest winner of Guard Band auction spectrum in FCC Auctions No. 33 and 38.¹⁹ Based on recent interference issues involving public safety communications systems and commercial wireless systems in the 800 MHz band, and as the largest holder of Guard Band spectrum, Nextel has a distinct interest in and brings the necessary

¹⁶ *Id.* at para. 9.

¹⁷ *700 MHz Second Reconsideration Order.*

¹⁸ *Id.* at para. 13.

¹⁹ In FCC Auction No. 33, Nextel was the high bidder and was awarded 37 EAG B Block (4 MHz) licenses, spending \$340 million. In the recently concluded re-auction, FCC Auction No. 38, Nextel was the high bidder for three more B Block EAG licenses and is committed to paying approximately \$8 million for these licenses.

experience to comment on the NPSTC/PSWN Petitions and thereby help prevent interference to public safety communications systems from adjacent commercial operations in the 700 MHz band.

NPSTC's Petition and the attached report from the Telecommunications Industry Association ("TIA") demonstrates considerable likelihood of interference to public safety system deployments if commercial base station transmitters are permitted to operate in the 777-792 MHz band.²⁰ There is increased likelihood for interference in Nextel's licensed Guard Band channels as well. Therefore, Nextel agrees with NPSTC that TIA's warnings should be given due accord and that the Commission's technical rules should revert to those originally adopted in this proceeding.

The Commission's original service rules at 700 MHz required commercial base stations to transmit in the lower block frequencies and mobile stations in transmit in the upper block frequencies. This approach was consistent and compatible with the adjacent public safety bands, in which similar base/mobile pairing rules apply. Six months later, in an effort to increase flexibility for potential users of the 700 MHz commercial spectrum, the Commission revised its rules to allow flexible use of base station transmitters in either the upper or the

²⁰ PSWN's Petition argued that because there are ample technical findings on both sides of this issue, the Commission should at least forestall modification of its rules until technical evaluations can be completed and considered by the Commission. PSWN also argued that it is advisable to err on the side of caution when establishing protection standards for commercial spectrum adjacent to 700 MHz public safety systems. See PSWN Petition at page 4. Based on TIA's Report, discussed below, the Commission appears to have the technical evaluations requested by PSWN to make its final determination.

lower 700 MHz commercial bands. Nextel typically supports flexibility in spectrum allocations and service rules. In this instance, however, TIA's Report details the increased potential for interference to public safety systems that would result from permitting commercial base stations in the lower band.²¹ Accordingly, at this time, prior to licensing of either public safety or further commercial entities at 700 MHz, the public interest would be best served by the more prudent approach of restoring the original band plan for the 700 MHz commercial allocation.

As the largest Guard Band licensee, Nextel is also concerned that operation of base station transmitters in the upper-frequency band may increase the potential for interference to Nextel's Guard Band operations.²² The relief discussed above would have the added benefit of reducing this interference potential as well, thereby increasing the opportunities of Nextel, as a Guard Band

²¹ See TIA's Report "Protection of Public Safety Systems from 700 MHz CMRS Band Interference," dated February 20, 2001, attached to NPSTC's Petition for Reconsideration.

²² This risk of interference is particularly important in light of continued delays for the auctioning of the remaining 30 MHz of 700 MHz commercial spectrum, currently scheduled for September 12, 2001. Because Nextel is already licensed in the Guard Band, it has already begun to work with vendors to develop equipment for deployment of systems in the 700 MHz Guard Band - - allowing it to potentially deploy systems and make this spectrum available to interested parties where no broadcast incumbent is present, even if the Commission auction is delayed. The Commission Guard Band Manager concept requires certainty that Guard Band operations will not be harmed by other commercial providers in the yet-to-be-auctioned 700 MHz band.

Manager to effectively make this spectrum available to potential users consistent with the Commission's objectives for creating the spectrum manager concept.²³

III. CONCLUSION

The Commission must continue to strike a reasonable balance between protection to public safety operations and commercial viability and flexibility. To restore the appropriate balance the Commission should reverse

²³ 700 MHz Guard Band Order.

its recent decisions and re-adopt its original technical rules by restricting base station operations to the lower-frequency band at 700 MHz.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, James B. Goldstein, hereby certify that on April 24, 2001, caused a copy of the attached Comments of Nextel Communications, Inc. to be served by first class mail to the following:

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