

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

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| In the Matter of |) | |
| |) | |
| Improving Public Safety Communications in the 800 MHz Band |) | |
| |) | |
| Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels |) | WT Docket No. 02-55 |
| |) | |

**COMMENTS OF THE CELLULAR TELECOMMUNICATIONS & INTERNET
ASSOCIATION**

The Cellular Telecommunications & Internet Association (“CTIA”)¹ hereby submits its Comments in response to the Commission’s *Notice of Proposed Rulemaking* (“NPRM”) to remedy interference to the 800 MHz band Public Safety systems from commercial operations in the band.² The Commission’s *NPRM* seeks comment on a band restructuring proposal submitted by Nextel and other alternatives that might alleviate the 800 MHz interference problems.³

INTRODUCTION

CTIA believes that providing our nation’s first responders with 21st Century state-of-the-art wireless capabilities is of paramount importance. CTIA accordingly supports

¹ CTIA is the international organization of the wireless communications industry for both wireless carriers and manufacturers. Membership in the association covers all Commercial Mobile Radio Service (“CMRS”) providers and manufacturers, including cellular, broadband PCS, ESMR, as well as providers and manufacturers of wireless data services and products.

² *In re Improving Public Safety Communications in the 800 MHz Band*, WT Docket No. 02-55, *Notice of Proposed Rulemaking*, (rel. March 15, 2002) (“NPRM”).

³ *See Promoting Public Safety Communications – Realigning the 800 MHz Land Mobile Radio Band to Rectify Commercial Mobile Radio – Public Safety*

the Commission's efforts to promote efficient public safety use and agrees with the Commission that "the nation's public safety community requires effective radio communications systems free of harmful interference if public safety agencies are to adequately protect the safety of lives and property."⁴ At the same time, it is important to recognize that the responsibility to be spectrum-efficient extends to Public Safety users, as it does to all licensees, and the Commission is under a statutory obligation to rationally justify the amount of spectrum made available for Public Safety use. This proceeding offers the Commission an opportunity to harmonize these goals and further both Public Safety's needs and the overarching goal of efficient spectrum management.

CTIA submits that the Commission should focus on a practical approach to addressing the interference problems in the 800 MHz band that relies on immediate, short-term, and longer-term measures. In the immediate term, CTIA urges the Commission to build on its coordination efforts to encourage carriers to work with Public Safety to resolve specific interference problems as they arise. This approach has been successful in addressing interference incidents in many circumstances, and has a proven track record in its ability to resolve interference problems. Longer-term solutions, however, will require Public Safety users to upgrade their equipment, and will require restructuring not only of the 800 MHz, but also of the 700 MHz band. Finally, CTIA submits that the funding of any Public Safety relocations or equipment upgrades should be accomplished through public funds, or through some other approach that does not impose involuntary costs on CMRS carriers and their customers.

Interference and Allocate Additional Spectrum to Meet Critical Public Safety Needs ("Nextel Proposal") (Nov. 21, 2001).

⁴ *NPRM* at ¶1.

I. BACKGROUND

The interleaved spectrum and placement of spectrum assignments in the 800 MHz band, combined with the introduction of new technologies and changes in the nature of services provided in this band, have created the potential for interference between Public Safety and commercial operations. For more than a year, in conjunction with the Association of Public Safety Communications Officers International (“APCO”), CTIA and its members have been investigating – and resolving -- reports of CMRS interference to Public Safety operations in the 800 MHz band. The *NPRM* observes there have been an increasing number of reports of interference to Public Safety communications even though all licensees are operating in compliance with the FCC’s rules.⁵ In the aftermath of the September 11th terrorist attacks, CTIA recognizes that effective Public Safety communications must be a high priority of our nation. In these comments, CTIA emphasizes that the wireless industry remains fervently committed to working with Public Safety to resolve interference problems.

In November 2001, Nextel filed a White Paper with the Commission proposing a solution to the interference problem that involved relocating incumbents in the 800 MHz band. In its White Paper, Nextel proposes realigning the 800 MHz band to eliminate the interleaving of Public Safety and commercial channels, and move Public Safety away from the cellular band.⁶ To achieve the realignment, Nextel proposes moving the commercial private radio users to spectrum currently licensed to Nextel in the 700 and

⁵ See *NPRM* at ¶13.

⁶ Nextel Proposal at 28.

900 MHz bands, giving Public Safety 10 additional MHz of spectrum (bringing their total in this band to 20 MHz), and having Nextel receive replacement spectrum (for the 16 MHz it currently holds) of 6 MHz in the 800 MHz band, and 10 MHz in the 2.1 GHz band.⁷

The Commission's *NPRM* seeks comment on Nextel's proposal and other means by which it can reconfigure the 800 MHz land mobile band to reduce CMRS interference to Public Safety systems.⁸ CTIA agrees with the Commission that "no one restructuring candidate appears fully able to meet our goal of reducing or eliminating interference without burdening existing licensees."⁹ As explained below, CTIA proposes immediate, short-term, and longer-term initiatives as the preferable alternative to the Nextel proposal.

II. NEXTEL'S PROPOSAL IS NOT THE BEST SOLUTION TO INTERFERENCE PROBLEMS IN THE 800 MHz BAND

CTIA credits Nextel for highlighting the Public Safety interference problem in the 800 MHz band in its November 2001 White Paper. CTIA does not, however, believe that the specific proposal Nextel developed is the best approach to solving the interference problems being experienced in that band. Accordingly, CTIA opposes Nextel's proposal because it fails to fully remedy interference problems and it will not provide adequate long-term solutions to resolve the problems being experienced in the 800 MHz band. As

⁷ Nextel Proposal at 18-25.

⁸ The National Association of Manufacturers also filed a proposal with the Commission. *See* Letter to Michael Powell, Chairman, Federal Communications Commission, from Jerry Jasinowski, President, National Association of Manufacturers and Clyde Morrow, Sr., President, MRFAC, Inc. (Dec. 21, 2001) ("NAM Proposal").

⁹ *NPRM* at ¶19.

an alternative, CTIA urges the Commission to adopt CTIA's proposals, which are better geared to enable the Commission to meet its overall objectives in this proceeding.

CTIA is particularly concerned by Nextel's proposal that it should be assigned 10 MHz in the 2.1 GHz mobile satellite service ("MSS") band in exchange for making additional spectrum available for Public Safety in the 800 MHz band. CTIA believes this proposal would undermine the wireless industry's efforts to gain acceptance of the NTIA Plan (1710-1770 MHz paired with 2110-2170 MHz) for advanced services spectrum.¹⁰ Because there are only 14 MHz of unassigned spectrum available in the 2165-2200 MHz band, Nextel's proposal to use 10 of that 14 MHz would not leave enough spectrum for the proposed NTIA Plan pairing. Furthermore, in the event Nextel were "given" any MSS spectrum, this spectrum grant would be inconsistent with Section 309 (j) of the Communications Act, which requires that spectrum used for commercial terrestrial services be auctioned.¹¹ Hence, any outright grant of spectrum to Nextel without Nextel having to go through an auction would be susceptible to a legal challenge since any spectrum reallocated for a terrestrial service in the MSS bands must be auctioned, as CTIA has argued in other proceedings.¹²

¹⁰ See NTIA Statement Regarding New Plan to Identify Spectrum for Advanced Wireless Mobile Services, October 5, 2001, available at www.ntia.doc.gov.

¹¹ Section 309(j) of the Omnibus Budget and Reconciliation Act of 1993 requires the Commission to grant a license or permit to a qualified applicant only through a system of competitive bidding, unless there are no mutually exclusive applications or the licenses fall into certain specified exceptions that do not apply to Nextel. See Omnibus Budget and Reconciliation Act, Title VI, § 6002(a), (b)(1)), Pub. L. No. 103-66, 107 Stat. 387, 392, (Aug. 10, 1993) (codified at 47 U.S.C. § 309(j) *et seq.*). See also, In the Matter of Implementation of Section 309(j) of the Communications Act – Competitive Bidding, Second Report and Order, 7 FCC Rcd 2348 (1994).

Another aspect of Nextel's White Paper which is especially troubling is the proposal that the cellular licensees in the adjacent 800 MHz band contribute to cover the costs of moving or modifying Public Safety operations. CTIA opposes this funding proposal because it has not been demonstrated that there is any significant interference from these cellular licensees, or that any interference from these licensees would require a widespread remedy of relocation or even modifications of Public Safety operations. By contrast, experience to date has been that any interference caused by cellular licensees can be effectively addressed by technical mitigation techniques, and does not require the major step of relocating the Public Safety licensees as a remedy. CTIA accordingly does not believe that a case has been made for cellular licensees' participation in any broad-based funding of Public Safety solutions to the 800 MHz interference problem.

III. CTIA'S IMMEDIATE, SHORT-TERM, AND LONGER-TERM INITIATIVES TO ADDRESS PUBLIC SAFETY INTERFERENCE

In response to the Commission's inquiry into "all available interference reduction options that could be applied to the problem,"¹³ CTIA sets forth the following proposals for immediate, short, and longer-term steps to address Public Safety's needs. CTIA has determined, based upon significant input from its members' technical representatives, that moving Public Safety to the 700 MHz band, coupled with improved Public Safety equipment, would be the best means of eliminating interference. But reallocating the 700 MHz spectrum, and replacing legacy Public Safety radios, is a multi-year process, and

¹² See CTIA's Comments, *Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Band*, IB Docket No. 01-185, ET Docket No. 95-18 (Oct. 22, 2001) at 7; CTIA's Reply Comments, *Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Band*, IB Docket No. 01-185, ET Docket No. 95-18 (Nov. 12, 2001) at 4.

CTIA recognizes that immediate steps and shorter-term measures will be necessary to mitigate interference before any longer-term solutions can be implemented.

A. Focused Technical Mitigation Efforts will Provide Immediate Relief from Interference to Public Safety Operations

As an immediate first step to ameliorate the interference problems, CTIA urges the Commission to build on existing efforts to address interference incidents by organizing a special task force of wireless carrier and Public Safety representatives to ensure even better coordination of efforts to eliminate interference to Public Safety users on a case-by-case basis. The efforts of Nextel and the cellular carriers to solve the interference problems identified by APCO demonstrate that individual mitigation efforts can have a significant positive impact to address interference incidents as a near-term measure. Given the successful track record of good faith case-by-case mitigation, the Commission can limit its role to those cases, if any, where industry-led mitigation efforts are not successful in resolving the interference.

Second, the Commission should formally notify Public Safety users that their current systems have potential limitations in system performance, and that they should adopt best practice measures to respond to these deficiencies.¹⁴ The FCC should also formally notify Public Safety users that they will be expected to deploy upgraded networking and receiver equipment designed to improve intermodulation rejection

¹³ *NPRM* at ¶15.

¹⁴ See *Avoiding Interference Between Public Safety Wireless Communications Systems and Commercial Wireless Communications Systems at 800 MHz – A Best Practices Guide* (“Best Practices Guide”), Dec. 2000, compiled by a working group from the Association of Public Safety Officials International (“APCO”), the CTIA, Motorola, Inc., Nextel Communications, Inc., and the Public Safety Wireless Network (“PSWN”). It is available at <http://wireless.fcc.gov/publicsafety>. Motorola has also developed a set of best engineering practices for public safety licensees using its radios.

characteristics and achieve enhanced in-building coverage by a date certain in the future, and should begin immediately taking this into consideration when making purchasing decisions.

Finally, the FCC should formally notify CMRS carriers that they should perform intermodulation analyses as an integral part of their general engineering practices for all in-band/out-of-band studies, collocation installation, and similar operations. This measure will help identify potential interference situations and improve the ability of affected entities to take steps to address interference concerns as part of the design and engineering of their networks.

B. Rebanding of the 800 MHz Band Will help Alleviate Interference in the Near Term

To the extent that the immediate steps outlined above do not adequately address interference concerns, as a next step, the Commission should encourage Nextel, Business/Industrial Land Transportation (“B/ILT”), Public Safety and other affected entities to mutually agree to a plan to restructure the 800 MHz band in a way that minimizes interference. In the event the 800 MHz licensees are unable to reach agreement, the Commission should adopt a plan that restructures the 800 MHz band spectrum assignments. CTIA does not, however, support any rebanding alternatives that affect spectrum in the 2110-2200 MHz bands, although consideration of options involving the 700 and 900 MHz bands might be appropriate.

Implementation of the 800 MHz rebanding can begin immediately, where needed to mitigate observed interference, with Public Safety migrating out of interleaved channels on a negotiated, city-by-city basis. The migration should be paid for as an essential part of the nation’s Homeland Security activities, or through other sources of

public funds. Where all licensees are operating within the Commission's rules, there is no basis to require CMRS or B/ILT licensees to involuntarily fund Public Safety relocations, or to bear their own relocation expenses.

C. The Best Long Term Solution for Public Safety Is To Use Spectrum in the 700 MHz Band to Deploy a State-of-the-Art Wireless Network

In the longer term, the optimal solution to Public Safety's requirements for interference-free and interoperable networks is to redeploy their systems in the 700 MHz band. The Commission should work with the wireless industry, Public Safety, and other affected parties -- including Congress to the extent legislation is necessary -- to cooperate in allocating and transferring the requisite amount of spectrum in the 700 MHz band to Public Safety. While CTIA submits that Public Safety could benefit from additional spectrum in the 700 MHz band, the amount of the spectrum must be rationally justified based upon the use of spectrally efficient technology. The responsibility to use spectrum efficiently extends to all licensees, including Public Safety, and Public Safety must deploy upgraded receiver and networking equipment to effectively address interference concerns and operational requirements in the long term.

With respect to the funding of new Public Safety operations in the 700 MHz band, CTIA proposes that the spectrum utilized by incumbent public safety licensees in the 800 MHz band plan be auctioned and the proceeds used, in part, to fund the creation of a 21st Century wireless emergency network. This network would use digital cellular topology to maximize spectral efficiency, and offer both punch-to-dial (into the PSTN) as well as push-to-talk capabilities that are fully interconnected with each other and national emergency response activities.

The Commission should adopt CTIA's proposed industry and policy initiatives as the most effective means of resolving the 800 MHz band commercial-Public Safety interference problems. First, the proposal supports immediate steps to ensure that interference is mitigated to the extent possible, as soon as possible. Second, it proposes intermediate steps to reband the 800 MHz spectrum, provided those rebanding measures are not funded through mandatory industry contributions. Finally, CTIA proposes that the long run solution to the interference problems currently being experienced in the 800 MHz band entail the deployment of upgraded, state-of-the-art Public Safety radio equipment in the 700 MHz band.

CONCLUSION

For these reasons, CTIA respectfully requests that the Commission adopt its immediate, short, and longer-term initiatives as set forth in these Comments.

Respectfully submitted,

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