**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 | ) | |
| | ) | WT Docket No. 02-55 |
| Consolidating the 900 MHz Industrial/ | ) | |
| Land Transportation and Business Pool | ) | |
| Channels | ) | |

# COMMENTS OF NEXTEL COMMUNICATIONS, INC.


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## SUMMARY

This proceeding is about the future of public safety communications systems throughout the United States. Captioned "Improving Public Safety Communications in the 800 MHz Band," this rulemaking offers the Federal Communications Commission (the "Commission") the opportunity not only to improve public safety communications, but to do much more. The Commission has a rare opportunity to create a spectrum foundation to support the 21st century interoperable public safety communications systems essential to meeting everyday emergencies and the challenges of our Nation's Homeland Security initiatives.

The Commission should be guided by two fundamental public policy imperatives. First, the Commission must realign the 800 MHz Land Mobile Radio band to correct outdated spectrum allocations and establish the contiguous channel blocks essential to mitigating commercial mobile radio service ("CMRS") – public safety interference in the near term and eliminating it within three years. This interference problem has arisen not because any licensee has violated the Commission's rules, but because the Commission's outdated 800 MHz band plan requires inherently incompatible communications systems to operate on adjacent and interleaved spectrum channels.

Second, the Commission's spectrum realignment must provide *additional* 800 MHz spectrum for public safety communications services. All recent development and implementation of new public safety communications systems have taken place at 800 MHz; therefore, establishing interoperability between current and future public safety deployments requires additional 800 MHz channels. For example, a number of states are implementing new, statewide public safety communications systems at 800 MHz;

providing additional 800 MHz channels for interoperability, enhanced services and expanded capacity leverages these recent investments.

Some commenters have recommended redesignating the 700 MHz band for public safety use and relocating all 800 MHz public safety systems to what are now the 700 MHz commercial allocations. These parties minimize the substantial legislative actions required to effectuate that proposal and ignore the exponentially higher costs of replacing all existing public safety communications systems. Not only is 700 MHz equipment unavailable, television broadcaster incumbency precludes even starting such relocation in most urban areas until, at the earliest, the beginning of 2007. In the interim, expansion and enhancement of 800 MHz public safety systems would come to a halt as no local or state government would spend limited public funds on soon-to-be outmoded systems, and public safety communications would experience increasing interference in the 800 MHz band.

Public safety first-responders deserve better. In the aftermath of the September 11 terrorist attacks, our nation's safety requires the Commission to provide expeditiously the 800 MHz spectrum necessary to interconnect fragmented public safety communications systems across administrative, geographic, and political boundaries.

In its previously submitted *White Paper* and in these comments, Nextel has proposed a realignment plan that would achieve these critical objectives. Under this plan, public safety systems would be relocated to a contiguous block of 800 MHz spectrum and receive an additional 10 MHz of spectrum. Incumbent private radio and commercial licensees (including Nextel) in the Land Mobile Radio band would need to relocate their systems, but no licensee would suffer a net loss of spectrum. To ensure this, Nextel

would contribute substantial spectrum holdings in the 700, 800 and 900 MHz bands. In return, Nextel would receive replacement spectrum – on a "kHz-for-kHz" basis – in a 16 MHz contiguous block at 800 MHz and a contiguous 10 MHz block at 2.1 GHz or other suitable band spectrum designated for digital, "cellularized" Specialized Mobile Radio ("SMR") systems. Finally, Nextel and other CMRS realignment beneficiaries would fund a substantial portion of public safety's retuning costs. Nextel has committed up to $500 million to compensate public safety in this relocation process, assuming the Commission adopts Nextel's *White Paper* realignment plan.

The Commission should reject proposals that fail to meet the twin public policy imperatives described above. These include proposals, such as one offered by the National Association of Manufacturers, which would fail to allocate additional spectrum to public safety systems. The far better option is to relocate public safety systems to a contiguous block of spectrum in the 800 MHz band with an additional public safety spectrum allocation in the band. This relocation can be done in a three-year period, thereby providing near-term interference relief – in contrast to proposals that would not even commence for four or more years.

Moreover, the Commission should adopt a plan that permits first responders and other public safety parties to take advantage of the fact that public safety communications equipment is readily available for operation at 800 MHz. Such a plan will facilitate interoperable communications and greatly minimize public safety relocation costs. Under the public safety plan proposed by Nextel, many public safety systems could continue operating on their current channels and would face no relocation costs; others

would only need to retune their equipment to operate on different channels within the 800 MHz band.

The events of September 11 have brought this nation face-to-face with the inadequacies of its fragmented, non-interoperable public safety communications network. Adopting Nextel's 700/800/900 MHz and 2.1 GHz realignment plan is the best option for establishing the spectrum foundation necessary to correct these deficiencies. Timely Commission adoption of Nextel's *White Paper* realignment plan will mitigate interference, enable first responders to better protect citizens and their property, and facilitate America's Homeland Security initiatives.

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## COMMENTS OF NEXTEL COMMUNICATIONS, INC.

Nextel Communications, Inc. ("Nextel") respectfully submits these comments in response to the Notice of Proposed Rulemaking ("*Notice*") in the above-captioned proceeding.[1] The *Notice* solicits proposals "on how best to remedy interference to 800 MHz public safety systems consistent with minimum disruption to our existing licensing structure and assurance of sufficient spectrum for critical public safety communications."[2] The Commission must act promptly to remedy this interference and to allocate additional spectrum in the 800 MHz band to meet critical public safety needs, including providing for interoperability among traditionally separate and often incompatible public safety communications networks. This action will greatly enhance the ability of public safety agencies to protect life and property through improved communications.

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[1] Improving Public Safety Communications in the 800 MHz Band, Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels, *Notice of Proposed Rulemaking*, 17 FCC Rcd 4873 (2002).

[2] *Id.* ¶ 2.

## I. INTRODUCTION

*The Land Mobile Radio Band.* The 800 MHz Land Mobile Radio band includes a total of 36 MHz (channels 1 – 720) between 806/824 – 851/869 MHz. Public safety systems, Commercial Mobile Radio Service ("CMRS") licensees, Business and Industrial/Land Transportation ("B/ILT") and high-site (non-cellular) Specialized Mobile Radio licensees ("SMR") operate in this band on interleaved, shared and adjacent channels. Nextel has the largest spectrum position in the 800 MHz Land Mobile Radio band,[3] holding licenses for a running average of 18 MHz.[4] Public safety services are the next largest spectrum holder in the band with an allocation of 9.5 MHz out of a total of 36 MHz. The largest allocation of 800 MHz public safety spectrum, the National Public Safety Planning Advisory Committee ("NPSPAC") channels, occupies 6 MHz of spectrum located directly between the 800 MHz cellular A Band channels and the upper 200 SMR channels.

A total of 5 MHz of the 36 MHz is allocated for exclusive initial licensing of B/ILT communications systems. CMRS licensees are heavy users of these channels,

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[3] Nextel is the fifth largest CMRS carrier in the U.S., providing a unique array of mobile communications services to over nine million customers throughout the country. These services include cellular voice communications, short messaging, Internet access, data transmission, and Direct Connect® – a digital two-way radio feature that enables subscribers to reach other Nextel customers with the push of a button even if they are hundreds of miles away.

[4] Appendix A describes the methodology used in calculating the "running averages" of 800 MHz spectrum held by Nextel (and Nextel Partners, Inc.), as well as B/ILT and traditional SMR services. Using a set of assumptions described in Appendix A, Nextel calculated the spectrum holdings of its services in each of the largest 100 cities in the U.S. It then calculated the "running average" of spectrum held across the top 100 cities. Nextel performed a similar analysis to identify incumbent high-site SMR and B/ILT licensees.

however, through the Commission's intercategory sharing rules and rules that authorize commercial operators to acquire existing B/ILT licenses for commercial use.[5] B/ILT systems are also eligible for licensing on the "General Category" pool channels (7.5 MHz), along with other land mobile systems. In actuality, private B/ILT systems and high-site SMR systems are licensed for a running average of approximately 4 MHz of the 36 MHz Land Mobile Radio band at 800 MHz.[6]

Assessing current 800 MHz spectrum use is also complicated by the fact that the United States shares the 800 MHz Land Mobile Radio band along its Canadian and Mexican borders with licensees of those countries. Pursuant to international agreements, the U.S. has primary use of only about half of the total 36 MHz along its common borders with Canada and Mexico.[7] These border areas include large, heavily populated metropolitan areas such as Detroit, Seattle, and San Diego in which U.S. SMR licensees have access, for example, to as little as 10 MHz. The limited 800 MHz SMR allocation in the border areas causes Nextel's running average of 18 MHz for the top 100 markets to understate somewhat its true 800 MHz spectrum position in the rest of the nation.

*Nextel's White Paper.* In recent years 800 MHz public safety communications systems on both the NPSPAC channels and the lower 70 Public Safety interleaved

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[5] Implementation of Section 309(j) and 337 of the Communications Act of 1934 as Amended, *Report and Order and Further Notice of Proposed Rule Making*, 15 FCC Rcd 22709, ¶ 110 (2000); *see also infra,* n. 72.

[6] The running averages discussed above are for the top 100 markets in the nation. Of course, individual licensees or licensee categories may have more or less spectrum in a specific market. For example, Nextel has about 21 MHz at 800 MHz in the Boston area; B/ILT systems are licensed for more than 7 MHz in two markets.

[7] 47 C.F.R. 90.619 defines the boundaries of the Canadian and Mexican border regions. Each region has a unique 800 MHz Land Mobile allocation scheme, as set forth in bilateral treaties between the U.S. and the respective border nations.

channels have received increasing amounts of interference from "cellularized" SMR systems and cellular A and B Block licensees operating in the 800 MHz band.[8] Nextel continues to commit substantial resources to mitigating CMRS – public safety interference and is working closely with the public safety community to develop an effective, long-term solution. After extensive consultation with the public safety community, Nextel submitted a *White Paper* to the Commission on November 21, 2001 that detailed such a solution.[9] Nextel's proposal recognizes that as the largest single licensee in the 800 MHz Land Mobile Radio Band, any 800 MHz realignment to correct CMRS – public safety interference will require its participation.

Specifically, Nextel proposed that the Commission realign the 800 MHz Land Mobile radio band to create two separate (adjacent) contiguous channel blocks: 20 MHz for Public Safety (channels 1 – 400), and 16 MHz (channels 401 – 720) for commercial digital wireless networks. Nextel will relocate its licenses in channels 1 - 400 (approximately 8+ MHz of the total 20 MHz) to clear this spectrum for the new public safety block.[10] Nextel will also contribute its 700 MHz guard band (approximately 4

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[8] *Notice* ¶¶ 14-16.

[9] *Promoting Public Safety Communications – Realigning the 800 MHz Land Mobile Band to Rectify Commercial Mobile Radio – Public Safety Interference and Allocate Additional Spectrum to Meet Critical Public Safety Needs*, ET Docket Nos. 00-258 and 95-18, IB Docket No. 99-81, and WT Docket No. 99-87 (Nov. 21, 2001) (the "*White Paper*").

[10] As noted in the *Notice*, international agreements may currently preclude fully implementing the proposed 800 MHz realignment plan in areas where part of the frequency blocks at issue are reserved for exclusive Canadian or Mexican use. *Notice* ¶ 33. Nextel urges the Commission to renegotiate these agreements as necessary to accommodate the realignment plan. In general, licensees on both sides of the respective borders will benefit. Until that time, 800 MHz band licensees could implement those portions of the realignment plan that are consistent with international agreements.

MHz) and 900 MHz SMR licenses (approximately 4 of the 5 MHz SMR allocation at 900 MHz) to make spectrum available for relocating 800 MHz B/ILT incumbents and high-site (non-cellular) SMR incumbents from the new public safety block. Incumbent B/ILT and non-cellular SMRs could relocate to the 700 MHz or 900 MHz bands at their own expense or remain at 800 MHz in the new public safety block on a temporary, non-interference basis.[11]

In return for the 16 MHz Nextel would contribute for these purposes, Nextel would be licensed replacement spectrum from the 6 MHz current NPSPAC channel block at 821/824 – 866/869 MHz and a 10 MHz contiguous block from a suitable spectrum band such as the reserve Mobile Satellite Service ("MSS") spectrum at 2.1 GHz.[12] Nextel would fund its own relocation costs, as would any other digital advanced SMR incumbent relocating from the new public safety block. In addition, Nextel would commit to fund

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[11] In the *White Paper,* Nextel suggested that incumbents could remain on their currently assigned channels on a "secondary" basis. The use of the term "secondary" licensee status inadequately captured the flexibility Nextel intended for frequency coordinators to respond to local spectrum requirements. In particular, public safety frequency coordinators should have discretion, in those areas where public safety may not need the entire new public safety spectrum block immediately, to permit incumbent B/ILT or analog, high-site SMR system to remain on their incumbent channel assignments temporarily until the spectrum is needed for public safety communications. This could be accomplished by agreements among the coordinators and affected licensees to lease back the spectrum assignment to the incumbent for a fixed term or other similar temporary arrangements. In other words, the B/ILT or SMR incumbent could be a temporary co-primary licensee on the public safety allocation during the term of their agreement. Nextel submits that the Commission need only establish a flexible licensing regime allocating the spectrum to public safety, but permitting public safety to accommodate B/ILT and SMR incumbents where feasible on a voluntary basis. This mechanism will also help to alleviate any localized spectrum shortages given that the amount of 800 MHz spectrum actually used by B/ILT and high-site SMR systems varies from market to market.

[12] Under Nextel's proposal, no private or commercial licensee will experience a net gain or loss of spectrum, but all would be relieved of current interference-related burdens and have greater freedom to expand their networks in the future.

up to $500 million of the costs of relocating incumbent 800 MHz public safety incumbents – primarily from the NPSPAC channels – to channels 1–400, assuming the Commission adopts its *White Paper* proposal. Cellular operators should also contribute to public safety retuning costs, as should other CMRS licensees that would benefit from the proposed realignment.

Thus, under the *White Paper* proposal, the 800 MHz Land Mobile Radio band would be realigned and complementary technical rules would be adopted to reduce substantially CMRS – public safety interference in this band.[13] Realignment would include allocating an additional 10 MHz of 800 MHz spectrum to meet critical public safety communications needs. Allocating additional 800 MHz spectrum for public safety communications systems is the only feasible, practical, near-term solution to making spectrum available for interoperability among public safety communications systems within and across administrative, political and geographic boundaries. Relocating public safety communications out of 800 MHz to an alternate band would increase the cost of spectrum realignment, as all public safety licensees would have to buy new network infrastructure and mobile units.[14] Allocating additional spectrum for public safety communications within the 800 MHz band will be far less costly than relocating public safety systems to 700 MHz, for example, where no equipment currently exists and systems would have to be built from scratch. The fact is that research and development

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[13] Nextel proposed a number of complementary measures to mitigate further the risk of CMRS – public safety interference in a realigned band. These measures include improved public safety receivers, the use of a guard band and greater public safety signal strength, as discussed further in Section III.B.3, *infra*.

[14] Public safety licensees use over 9.5 MHz of the 800 MHz band, versus the 4 MHz actually used by B/ILT and analog, high-site SMR licensees.

of public safety infrastructure is and has been focused primarily on 800 MHz systems. The public interest will be advanced by augmenting ongoing 800 MHz equipment developments and existing public safety communications infrastructure with additional spectrum for interoperability and enhanced services at 800 MHz.

Moreover, states such as Florida, Ohio, Michigan and Pennsylvania are expending hundreds of million of dollars to construct and implement new state-wide public safety communications networks in the 800 MHz band. Additional spectrum should be provided in the same band. Realigning the 800 MHz band and increasing the public safety allocation therein would enable CMRS – public safety interference relief to begin immediately upon Commission authorization herein and be completed within three years. If the Commission were to move public safety communications to the 700 MHz band, in contrast, relocation could not even begin in many major markets until 2007, and even then public safety systems would be starting from scratch in developing the necessary infrastructure.[15] A Commission decision to relocate public safety systems to 700 MHz could freeze existing and near-term 800 MHz deployments, derailing improvements to 800 MHz systems that are making some of them more resistant to CMRS – public safety interference. Relocating public safety licensees outside the 800 MHz band would put public safety communicators in the impossible position of not being able to move

[15] Relocating 800 MHz public safety communications systems to 700 MHz is infeasible before 2007, as discussed herein. There are, however, areas around the nation where stand-alone private B/ILT and high-site SMR systems could relocate in Nextel's 700 MHz guard band spectrum almost immediately, given the absence of UHF television broadcast incumbents in those areas. High-site, local B/ILT and SMR stations may be most able to make near-term use of these 700 MHz channels in markets free of co-and adjacent-channel UHF stations. Relocating, where possible, these incumbents to 700 MHz would help stimulate the development of 700 MHz equipment for both private systems and future public safety systems in the 24 MHz public safety allocation.

forward with system expansions and improvements for nearly seven years or more, a dangerous proposition given the critical importance of Homeland Security throughout the nation.

Perhaps most importantly, providing additional public safety spectrum in the 800 MHz band will facilitate full interoperability for both existing and new public safety communications systems. In contrast, relocation to another band would leave public safety operators unable to use current generation equipment and systems to achieve interoperability economically and efficiently. In short, the essential goal of providing near term additional spectrum for public safety interoperability can be achieved only by increasing the 800 MHz public safety spectrum allocation. Nextel's plan would accomplish this goal while realigning the band to mitigate CMRS – public safety interference.

As described above, Nextel has worked closely with the public safety community in developing its proposal, and public safety parties have encouraged the Commission to consider it expeditiously. On November 21, 2001, a broad cross-section of public safety organizations jointly filed a letter with the Commission stating that the basic elements of the *White Paper* proposal "have the potential to substantially improve the quality and quantity of public safety communications" and that the proposal "should be given serious and expedited consideration by the Commission through a Notice of Proposed Rulemaking."[16]

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[16] Letter to Michael Powell, Chairman, Federal Communications Commission, from Association of Public-Safety Communications Officials-International, Inc.; International Association of Fire Chiefs; International Association of Chiefs of Police; Major Cities Chiefs Association; National Sheriff's Association; Major County Sheriffs' Association; and National Public Safety Telecommunications Council (Nov. 21, 2001) ("*APCO Letter*"), *available at:* <http://apco911.org/newsreleases/PDF/Powell.pdf>.

## II. THE COMMISSION SHOULD ADOPT EXPEDITIOUSLY A SOLUTION TO CMRS – PUBLIC SAFETY INTERFERENCE THAT IMPROVES PUBLIC SAFETY COMMUNICATIONS IN THE 800 MHz BAND

### A. The Commission is Correct in Tentatively Concluding that CMRS – Public Safety Interference Is a Serious Problem that Must Be Resolved

The Commission tentatively concludes "that CMRS interference to public safety systems presents a sufficiently serious problem that a solution must be found."[17] As the *Notice* states, "[t]he Commission has long recognized 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."[18] In the 800 MHz band, however, which is home to many of the nation's public safety communications systems, the Commission's goals are not being met.

The first reports of 800 MHz CMRS – public safety interference arose over three years ago. Since that time, there have been an increasing number of interference incidents as CMRS carriers expand their systems to meet increasing consumer demand. Public safety systems are also expanding their operations. The Commission is consequently correct in observing that these "factors – the continued growth of 800 MHz public safety systems and the proliferation of CMRS cell sites – when taken together, indicate that the interference problems described above will become more severe in the near future unless we take significant corrective action."[19]

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17 *Notice* ¶ 16.

18 *Id*. ¶ 1.

19 *Id*. ¶ 18.

CMRS – public safety interference has been well documented in a report that Project 39 of the Association of Public-Safety Communications Officials-International ("APCO") filed with the Commission in December 2001.[20] In a further report, dated March 19, 2002,[21] Project 39 documented additional cases of interference and reaffirmed its initial conclusions that receiver intermodulation, sideband noise, and receiver overload are the root causes of CMRS – public safety interference.[22] Project 39 has reported interference by one or more CMRS operators in 27 states, noting that, while a small number of them have been "corrected on a site-by-site basis, *there is an emerging pattern that these corrections are often short-lived and problems soon crop up in other locations*."[23]

Public safety and CMRS licensees have attempted to minimize the level of interference in the 800 MHz band by adopting a *Best Practices Guide* that summarizes various practices to identify and alleviate CMRS – public safety interference.[24] These case-by-case measures, however, do not address the fundamental fact that 800 MHz

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[20] *Interference to Public Safety 800 MHz Radio Systems – Interim Report to the FCC*, APCO Project 39 (Dec. 24, 2001), *available at:* <http://www.apco911.org/afc/project_39/interim_report.pdf>.

[21] *Six-Month Status Report of the Project 39 Technical Committee,* presented at the APCO Western Regional Conference in Phoenix, Arizona (Mar. 19, 2002 ("*APCO Six-Month Report")*, *available at:* <http://www.apco911.org/afc/project_39/6month.htm>.

[22] *APCO Six-Month Report* at 5.

[23] *APCO Six-Month Report* at 3 (emphasis added).

[24] *See FCC News Release*, Wireless Telecommunications Bureau Announces *Best Practices Guide* for Avoiding Interference Between Public Safety and Commercial Wireless 800 MHz Communications Systems (Feb. 9, 2001) and *Avoiding Interference Between Public Safety Wireless Communications Systems and Commercial Wireless Communications at 800 MHz: A Best Practices Guide* ("*Best Practices Guide*") *available at:* <http://www.apcointl.org/afc/documents/BPG.pdf>.

public safety and CMRS systems are operating what we now know to be incompatible wireless system designs on adjacent, interleaved and mixed 800 MHz channels.[25] Moreover, as the *Best Practices Guide* states, "[w]hile all of the [case-by-case] mitigation measures . . . can be effective in reducing interference to public safety operations, they will typically result in sub-optimal use of the licensed spectrum of either the public safety licensee, the CMRS operator, or both."[26] The Commission is consequently correct to express concern that "[a]bsent some action to remedy the problem of CMRS interference to public safety systems in terms of the root causes . . . the interference will not only continue but may increase in scope and frequency."[27]

### B. CMRS – Public Safety Interference Occurs Even Though All Licensees are Operating in Full Compliance with the FCC's Rules

CMRS – public safety interference in the 800 MHz band occurs *even though all licensees are operating in compliance with the FCC's rules and the terms and conditions of their FCC licenses*.[28] The Commission's SMR rules have long permitted SMR licensees to introduce innovative technologies and improved services in the 800 MHz band. For example, in unanimously approving the application of Nextel's predecessor, Fleet Call, Inc., to convert its high site, analog SMR systems into digital, low-power, multiple base station (cellular-like) communications networks, the Commission found

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[25] Public safety systems typically use high-site, high-power base stations where each serves a wide area, while CMRS licensees are deploying digital networks that use cellular architectures. *See Notice* ¶¶ 11-13.

[26] *Best Practices Guide* at 13.

[27] *Notice* ¶ 18.

[28] *Id.* ¶ 15 ("Significantly, the interference . . . can occur even though all parties involved may be operating in compliance with the Commission's rules.").

nothing in its rules restricting such conversions.[29] The Commission found it necessary to waive only its then-applicable one-year SMR construction requirement to enable Fleet Call to operate wide-area "cellularized" SMR systems in direct competition with cellular licensees.[30]

Since that time, the Commission has implemented the regulatory parity requirements of the Omnibus Budget Reconciliation Act of 1993 ("OBRA '93").[31] That Act created the CMRS regulatory classification and directed the Commission to ensure that all CMRS licensees, including cellular-like SMR licensees, cellular licensees, and PCS licensees, are subject to the same rules and regulations, including geographic area licensing and a level regulatory playing field.[32] Pursuant to OBRA '93, the Commission auctioned geographic area overlay licenses in the 800 MHz Land Mobile Radio band. In doing so, it expressly stated that such licenses could be used to operate multiple base station, wide-area "cellular-type" commercial mobile radio networks in competition with cellular and PCS operators.[33] SMR licensees have relied on these Congressional and

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29 Fleet Call, Inc., *Memorandum Opinion and Order*, 6 FCC Rcd 1533 (1991) *recon. dismissed*, 6 FCC Rcd 6989 (1991) ("*Fleet Call Order*"). Three years before, the Commission made clear that SMR licensees had the flexibility to respond to customer needs with a variety of technologically innovative services. *See* Amendment of Part 90, Subparts M and S, of the Commission's Rules, *Report and Order*, 3 FCC Rcd 1838, 1848-49 (1988), *aff'd.* 4 FCC Rcd 356 (1989).

30 *Fleet Call Order* ¶ 26.

31 Pub. L. No. 103-66, Title VI, § 6002(c), 107 Stat. 312 (1993), codified at 47 U.S.C. § 332(c).

32 *See* Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, *Second Report and Order*, 9 FCC Rcd 1411 (1994).

33 *See*, *e.g.*, Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, *Third Report and Order*, 9 FCC Rcd 7988,

Commission policies and invested billions of dollars to build competitive 800 MHz CMRS networks.

The Commission should reject any assertions that advanced, cellular-type SMR licensees are to blame for CMRS – public safety interference or that they should absorb a disproportionate share of the burden in remedying the problem.[34] Instead, the Commission should adopt a forward-looking solution to what is, as the *Notice* recognizes, an unanticipated outcome of the 800 MHz spectrum plan and the unprecedented growth of both commercial and public safety communications networks.[35]

### C. Band Realignment Is a Prerequisite to Remedying CMRS – Public Safety Interference in the 800 MHz Band

Band realignment is a prerequisite to remedying CMRS – public safety interference and is not, as the *Notice* suggests, simply "[o]ne option for resolution of this problem."[36] It is the only approach that addresses the underlying cause of this interference and provides an effective, long-term solution. The *Best Practices Guide*

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¶¶ 94, 177-78 (1994); Amendment of Part 90 of the Commission's Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band, *First Report and Order, Eighth Report and Order, and Second Further Notice of Proposed Rule Making*, 11 FCC Rcd 1463, ¶ 14 (1995) (*800 MHz Report and Order*).

[34] Nextel's iDEN® network is the most spectrum-efficient technology deployed in the 800 MHz Land Mobile Radio Band. Adjacent cellular operators also employ efficient frequency-reuse technologies. The Commission's regulatory structure for wireless services is designed to promote and encourage the provision of new technologies and services to the public. *See* 47 U.S.C. § 157. Nextel and other CMRS carriers have done exactly that, introducing a wide range of new services and enhancing spectrum efficiency to provide rapid, efficient, nationwide radio communications services. *See* 47 U.S.C. § 151. Preserving inefficient, high-site analog *non-public safety* land mobile systems at the expense of spectrally efficient technologies and services would contravene the Commission's statutory obligations.

[35] *Notice* ¶ 10.

[36] *Notice* ¶ 20.

recognized this in stating that "[f]requency swaps that enable each party to fully utilize its licensed channels serve the public interest by promoting spectrum efficiency and the widespread availability of both public safety communications and commercial wireless services."[37]

A report sponsored by the wireless industry confirms that band realignment, such as that proposed by Nextel, is the best approach for addressing interference to public safety operations. After the Commission released its *Notice*, the Cellular Telecommunications and Internet Association ("CTIA") contracted with Wireless Facilities, Inc. ("WFI") to investigate and identify the causes of 800 MHz interference between public safety and CMRS radio systems.[38] Specifically, CTIA retained WFI to recommend "the means to mitigate the 800 MHz interference experienced between Public Safety Radio Systems and the [CMRS] systems operated by CTIA's carrier members, namely Nextel, Cingular, AT&T Wireless, Verizon."[39] WFI worked closely with each of these carriers in developing its recommendations.

WFI found that the "fundamental root cause" of CMRS – public safety interference in the 800 MHz band is the difficulty in "managing a coexistence for two very diverse network architectures (noise limited in case of [public safety systems] and interference limited for CMRS) operating in closely spaced radio band allocations."[40] It

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37 *Best Practices Guide* at 13.

38 *See An Investigation of the 800MHz Band Interference between the Public Safety and CMRS Radio Systems*, Wireless Facilities, Inc. (Feb. 2002) ("*WFI Report*"), attached as Appendix B.

39 *WFI Report* at 4.

40 *Id.* at 5. *See also White Paper* at 10-11.

concluded that "frequency realignment/swaps in the affected band [are] the best answer to the issue as a whole. It would not only pave the way to better network engineering for carriers, but also simplify functional requirements for the systems designs of affected infrastructure components (both handsets and base station radios)."[41] The report goes on to state that "*WFI feel[s] strongly that frequency rebanding with new contiguous allocations and adequate (2 MHz appears to be reasonable) guard band is a required system solution to the issue*."[42]

Although CTIA and several of its members have chosen to oppose Nextel's *White Paper* proposal,[43] CTIA's own independent consultant concurred with the *White Paper*'s interference analysis and its conclusion that 800 MHz realignment – creating separate contiguous blocks for high-site public safety communications systems and cellular-like CMRS systems, separated by a guard band – is essential to resolving CMRS – public safety interference.[44]

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41 *WFI Report* at 8.

42 *Id.* at 9 (emphasis added). WFI also recommends a number of complementary measures such as improved public safety receiver performance and system coverage characteristics.

43 *See* Letter from Coalition for Constructive Public Safety Interference Solutions to Michael K. Powell, Chairman, Federal Communications Commission, WT Docket No. 99-168 (Apr. 26, 2002) (opposing Nextel's proposed 800 MHz realignment and proposing instead to relocate public safety systems to the 700 MHz band) ("*Coalition Letter*"). This coalition includes Alltel, AT&T Wireless, and Cingular.

44 Curiously, WFI withdrew its report after it became apparent that its findings were contrary to the assertions of a number of cellular carriers regarding the issues in this proceeding.

## III. NEXTEL'S 800 MHz REALIGNMENT PROPOSAL PROVIDES THE BEST APPROACH FOR REMEDYING CMRS – PUBLIC SAFETY INTERFERENCE AND ALLOCATING ADDITIONAL SPECTRUM TO PUBLIC SAFETY IN THE 800 MHz BAND

### A. Realignment Proposals Should Be Judged Against a Specific Set of Public Interest Goals

The Commission's "primary objective in this proceeding is to explore all available options and alternatives for improving the spectrum environment for public safety operations in the 800 MHz Band."[45] To achieve this general objective, the Commission should assess band realignment proposals based on the following four criteria:

*1. The Proposal Must Provide an Effective, Long-term Solution to the Problem of CMRS – Public Safety Interference in the 800 MHz Band*. The *Notice* seeks "a solution to an interference problem potentially threatening to life and property."[46] There can be no more important public interest goal. Indeed, one of Congress's overriding objectives in establishing the Commission was to "promot[e] safety of life and property through the use of wire and radio communications."[47]

*2. The Proposal Must Allocate Additional Spectrum to Public Safety Systems in the 800 MHz Band*. In addition to addressing the fundamental causes of interference, the Commission must also allocate additional spectrum for public safety communications in the 800 MHz band. As discussed in section IV below, providing additional public safety spectrum at 800 MHz is the only economic, realistic and practical way to achieve near-

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45 *Notice* ¶ 3.

46 *Id.* ¶ 5.

47 47 U.S.C. § 151.

term interoperability among different public safety agencies and to meet the well-established need of public safety communicators for additional spectrum.

*3. The Proposal Must Ensure that Licensees Relocated From the 800 MHz Band Should Receive Suitable Replacement Spectrum on a "kHz-for-kHz" Basis*. Realigning the 800 MHz band and allocating additional 800 MHz spectrum to public safety requires relocating B/ILT licensees as well as digital and traditional SMR licensees to replacement spectrum. No private and commercial licensees should experience a net gain or net loss in the aggregate amount of spectrum they are currently licensed to hold.

*4. The Proposal Must Permit Timely Implementation.* The *Notice* states that, "[g]iven the urgency of remedying interference to 800 MHz public safety systems, it is important that any band restructuring proposals be timely effected, taking into consideration, however, the fact that too precipitous an implementation schedule could unreasonably burden stations that are required to relocate."[48] The Commission should issue a Report and Order in this proceeding and establish a schedule to implement realignment of the 800 MHz band and the allocation of additional spectrum to public safety systems as expeditiously as practicable. Realignment of the 800 MHz band is a complex process involving complementary reallocations at 700 MHz, 900 MHz and 2.1 GHz. Accordingly, a realignment plan that mitigates interference and at the same time provides additional public safety spectrum will be the most expeditious and least burdensome approach for achieving the Commission's public interest goals.

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[48] *Notice* ¶ 63. *See also id.* ¶ 3 (stating that the Commission "intend[s] to move swiftly to achieve [the] objective" of "improving the spectrum environment for public safety operations in the 800 MHz Band").

*5. The Proposal Should Minimize Burdens on Existing Licensees Consistent with the Commission's Other Public Interest Goals.* The *Notice* recognizes there is an inevitable tradeoff between minimizing burdens on incumbent licensees and developing an effective band realignment plan.[49] Although the Commission should minimize burdens on incumbent licensees where possible, its foremost priority must be to resolve promptly CMRS – public safety interference and to allocate additional spectrum in the 800 MHz band to public safety.

**B. Nextel's Realignment Proposal Will Best Serve the Public Interest**

Nextel's proposal will achieve all of the public interest goals described above. It increases the amount of spectrum allocated to public safety in the 800 MHz band from 9.5 MHz to 20 MHz, thereby enabling public safety operators to meet their growing communications needs, for example, by providing channels that can be devoted to interoperability. The proposal minimizes the relocation costs of public safety parties, provides other relocating licensees with suitable replacement spectrum on a 1 kHz to 1 kHz basis, and can be expeditiously implemented over three years. Nextel's proposal provides an effective solution to CMRS – public safety interference in the 800 MHz band by realigning the band and establishing a number of complementary measures to safeguard against interference.

As described below, Nextel's proposed realignment plan would greatly reduce intermodulation interference, the most common source of CMRS-based interference to public safety receivers. It includes a public safety-controlled guard band at 859-861 MHz

[49] *Id.* ¶ 20 ("[I]t may be necessary to strike a compromise between the two components of our goal, recognizing that a balancing of interests may be required in whatever rules we adopt to effect band restructuring.").

to provide additional interference protection for public safety communications. The realignment plan and the various complementary measures described in the *White Paper* would result in the substantial elimination of CMRS – Public Safety interference.

### 1. Nextel's Proposed Realignment Plan Will Greatly Reduce Intermodulation Interference to Public Safety Communications Systems

"Intermodulation" ("IM") products created in the first stage or stages of a public safety mobile or portable receiver are the most frequent cause of CMRS – Public Safety interference, as explained in the Technical Statement of Leonard Cascioli, Nextel's Vice President, RF Engineering and Operations, attached as Appendix C (the "*Cascioli Statement*"). In order for a CMRS intermodulation ("IM") product to interfere with a public safety transmission, the strength of the product must at least approach the strength of the desired public safety signal, a condition that becomes more likely as a public safety receiver moves closer to a CMRS base station.[50]

In the *Notice*, the Commission asks how the proposed 800 MHz spectrum restructuring would affect CMRS-based IM interference.[51] While the complete elimination of IM interference will require the development of more selective public safety receivers (as described further below),[52] spectrum realignment of the kind

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[50] Specifically, energy from the IM product(s) must fall within the receiver passband (*i.e.*, the IM product must either fall on the desired frequency or very close to it). In addition, the strength of the IM product(s) must be sufficient to lower the ratio of the desired signal strength to the composite interference and noise (the C/I+N ratio) below an acceptable level (*e.g.*, 17 dB for a typical voice commercial mobile radio system), *Cascioli Statement* at 2.

[51] *Notice* ¶ 27.

[52] As described in the *White Paper* and again below, Nextel proposes a number of complementary measures to leverage the proposed realignment to more completely eliminate CMRS – public safety interference at 800 MHz, including improved public

proposed by Nextel – creating separate contiguous blocks for high-site and low-site (cellularized) systems – is in fact an essential precondition to mitigating these IM problems. Given the width of the bandpass characteristics in public safety receivers – necessitated by the Commission's interleaved, non-contiguous allocations of public safety and commercial channels – IM interference cannot be mitigated, much less eliminated, without restructuring the 800 MHz band.

Nextel's proposed relocation of public safety licensees out of the 821/824 – 866/869 MHz NPSPAC band and its proposed shift of digital SMR operators out of the interleaved spectrum at 806/816 – 851/861 MHz would by themselves significantly reduce the likelihood of IM interference to public safety transmissions. As explained in the *Cascioli Statement*, this improvement would occur with respect to interference from (i) Nextel operations below 866 MHz, (ii) cellular A-band and B-band carriers above 824/869 MHz, and (iii) the collocated operations of Nextel and cellular A-band/B-band carriers. First, with respect to Nextel's own operations, more than half of Nextel's transmitters currently operate in the 861-866 MHz range,[53] and standard IM calculations indicate that IM products created in public safety receivers from these facilities fall predominantly into spectrum at 856-871 MHz. By relocating the NPSPAC public safety operations outside these bands, Nextel's plan would significantly lower the probability of Nextel-based interference to public safety radio systems.[54] Moreover, moving Nextel's

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safety receiver performance and stronger public safety base-to-mobile signals that are more resistant to locally stronger CMRS base station emissions. *See White Paper* at 32-33.

[53] As noted previously, Nextel is licensed for a running average of 18 MHz in the 800 MHz band, 10 of which is in the range 861-866 MHz. *See* Appendix A.

[54] *Cascioli Statement* at 2.

operations into the 821/824 – 866/869 former NPSPAC spectrum would enable Nextel to more effectively consolidate its frequency planning to minimize IM products falling on the critical public safety channels used at a given location. Most remaining IM products would fall instead on channels within a guard band at the top end of the new public safety block.[55] The guard band would also help protect public safety users from interference caused by CMRS out-of-band emissions ("OOBE").

Nextel's proposal would have a similar effect on IM interference from cellular A-band operators transmitting at 824/836.5 – 869/881.5 MHz and B-band carriers operating above 836.5/881.5 MHz.[56] Because the IM products generated solely by cellular A-band and B-band operators would in most cases be sufficiently attenuated, public safety systems relocated from 821/824 – 866/869 MHz to 806/816 – 851/861 MHz would not receive interference. The IM products generated by each of the cellular carriers would fall almost exclusively in the digital, cellularized SMR band and the guard band. Adopting the *White Paper* proposal would also decrease the probability of IM interference from *combined* Nextel and collocated cellular A-band/B-band transmissions, thereby substantially reducing the number of public safety channels that could be affected by such full-strength IM products.[57] Thus, the answer to the Commission's question is

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55 *Id.* at 2, 8-9. Although not suitable for life-safety communications, the guard band would be controlled by public safety licensees and available for less critical public safety communications.

56 *Id.* at 3.

57 *Id.* As suggested above, 800 MHz restructuring will not by itself eliminate the possibility of IM-related interference from *collocated* facilities; as explained in the *White Paper* and *infra* at Section III.B.3: public safety receiver performance must be enhanced (*e.g.*, with narrower bandpass filters) and public safety networks must be made more robust.

that Nextel's proposed realignment, even without enhancements, will minimize the incidence of CMRS – public safety interference.

### 2. Nextel's Proposed Guard Bands Will Further Reduce CMRS – Public Safety Interference

In the *Notice*, the Commission asks whether a guard band is necessary in the 800 MHz band to safeguard public safety operations from interference, and, if so, requests comment on the minimum effective bandwidth.[58] As described in the *White Paper*, Nextel proposes the creation of contiguous blocks of public safety and digital SMR spectrum in the 800 MHz band, and urges the adoption of a guard band containing at least the 2 MHz of the proposed new public safety band (859-861 MHz) adjacent to the new digital SMR channel block.[59] This 2 MHz guard band will provide public safety systems with significant additional protection from CMRS-based interference. With at least 2 MHz of additional separation between cellularized SMR systems and public safety operations, the incidence of IM interference to public safety transmissions should, at the very least, be reduced to a level that is manageable through site-by-site coordination. With the development of more selective public safety receivers, the presence of a 2 MHz guard band could even lead to the virtual elimination of IM products below 859 MHz within the new public safety spectrum block.[60]

A 2 MHz guard band would allow noise-related interference from CMRS out-of-band-emissions ("OOBE") to be reduced. In fact, with such a guard band, CMRS

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58 *Notice* ¶ 78.

59 The guard band would actually be 2 MHz in each of the uplink and downlink bands for a total of 4 MHz.

60 *Cascioli Statement* at 8-9.

carriers could utilize transmit filters that would attenuate their signals to the point that noise-related interference to public safety systems would be practically eliminated.[61]

In the *Notice*, the Commission asserts that guard bands are "antithetical to spectrum efficiency" and indicates its reluctance to require them unless "all other interference-reduction mechanisms prove inadequate."[62] Contrary to the Commission's suggestion, however, the proposed guard band need not lie fallow. While it should not be relied on for critical, life-dependent public safety communications, the guard band could be home to ancillary communications services utilizing robust, high-site compatible architecture, or localized power-constrained network architecture to avoid interference to adjacent public safety systems. Toward that goal, the guard band would be part of the new 20 MHz public safety channel block and public safety coordinators would be responsible for assigning the channels to uses consistent with its guard band function.

### 3. Complementary Measures Will be Necessary to Reduce CMRS – Public Safety Interference to the Minimum Possible Level

The Commission seeks comment on whether it should adopt various measures "complementary" to the proposed realignment of 800 MHz spectrum.[63] Nextel's proposed 800 MHz realignment is an essential part of any effort to address CMRS – Public Safety interference. Nextel believes that the Commission should move forward simultaneously with several of these complementary policies. A coordinated, multi-pronged approach will enable the Commission to reduce CMRS – Public Safety interference to the minimum possible level.

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61 *Id.* at 8.

62 *Notice* ¶ 78.

63 *Id.* ¶¶ 73-79.

First, as explained in detail in the *Cascioli Statement*, Nextel urges the Commission to establish mandatory receiver performance standards for public safety radio systems.[64] An industry-driven standards-setting process might create delays and uncertainty and fail to adopt sufficient standards. A mandatory standard adopted by the Commission would eliminate these risks and also ensure that all interested parties have an opportunity to review and comment on that standard.

Second, the Commission should establish requirements for more robust public safety signal levels. Specifically, the Commission should require a signal strength of –70 to –75 dBm, assuming a 17 dB carrier/(noise and interference) ratio and the absence of intermodulation.[65] This requirement will improve in-building coverage and thereby better meet the communications needs of public safety first responders.

The Commission should also adopt tighter OOBE limits for CMRS providers. Nextel's rationale for more stringent limits is explained fully in the *Cascioli Statement*. As explained by Mr. Cascioli, under the current 800 MHz band plan, existing combiner technology cannot produce sufficient OOBE rolloff to mitigate fully noise-related CMRS – public safety interference.[66] After realignment to de-intermix public safety and CMRS spectrum, however, an OOBE limit of –80dBc/25 kHz at 500 kHz from the edge of the authorized channel block could virtually eliminate CMRS OOBE as a secondary CMRS –

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64 *Cascioli Statement* at 6-7. The Commission should adopt public safety receiver performance standards for both voice and data mobile and handheld equipment.

65 *Id.* at 8.

66 *Id.* at 7-8.

public safety interference source.[67] The best way to accomplish this is by deploying transmit filters on the transmit path (861-869 MHz) of digital, cellularized SMR systems.

The Commission also seeks comment on the appropriate timing of any complementary measures. It asks "whether 800 MHz band reconfiguration and the complementary measures … should be applied in two phases, *i.e.* a restructuring of the bands, followed by an evaluation of the results thereof, and then by an assessment of the need for complementary measures necessary to achieve an interference-free environment for 800 MHz public safety communications."[68] Nextel believes that, as a general matter, the Commission should address band reconfiguration and the complementary measures simultaneously, because they are both essential elements to resolving CMRS – public safety interference in the 800 MHz band. Given the risk to safety of life that CMRS – public safety interference can pose, the burden should be on supporters of a two phased approach to demonstrate how the public interest is served by further delaying corrective measures.

If, however, additional time is necessary to develop specific complementary technical measures, such as improved public safety receiver standards, the Commission should first expeditiously adopt a Report and Order that establishes an 800 MHz realignment plan, allocates additional spectrum to public safety, provides suitable replacement spectrum to relocating incumbent licensees and recognizes the need to adopt complementary technical standards. Then specific standards could be developed after

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67 *Id.* Such an OOBE limit should only be phased in, rather than be immediately applicable. Operators will need time to install the necessary filtering equipment.

68 *Notice* ¶ 79.

further study and adopted in time to permit the timely implementation of the realignment plan.

### C. The NAM Proposal Would Not Serve the Public Interest

In response to the Nextel *White Paper*, the National Association of Manufacturers ("NAM") and MRFAC, Inc. submitted a four page letter to the Commission proposing an alternative realignment plan (the "NAM proposal").[69] As described in the *Notice*, "[u]nder the NAM proposal, the NPSPAC channels and the interleaved public safety channels would be deleted and incorporated into a contiguous 10 MHz block of public safety spectrum at 806/811 – 851/856 MHz. SMR and [B/ILT] channels would be consolidated into a 10 MHz block of spectrum at 811/816 – 856/861 MHz. Digital SMR stations with cellular architecture would occupy the spectrum currently occupied by the NPSPAC channels (821/824 – 866/869 MHz) and the upper 200 SMR channels (816/821 – 861/866 MHz)."[70]

The NAM proposal recognizes the need to separate spectrum used for traditional high-site systems and that used by cellularized systems into separate contiguous blocks to mitigate interference. It falls far short, however, of achieving the Commission's goal of "improving the spectrum environment for public safety operations in the 800 MHz Band."[71] Although public safety systems would be relocated in a contiguous block of spectrum in the lower part of the 800 MHz band, they would be required to fund these

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[69] Letter from Jerry J. Jasinowski, President, NAM, and Clyde F. Morrow, Sr., President, MRFAC to Michael K. Powell, Chairman, Federal Communications Commission (Dec. 21, 2001) (filed Mar. 19, 2002 in WT Docket No. 02-55).

[70] *Notice* ¶ 22.

[71] *Id*. ¶ 3.

relocation costs even though governmental agencies typically operate under limited budgets. At the same time, public safety systems would receive only 0.5 MHz additional spectrum under the proposal. CMRS licensees such as Nextel would pay their own relocation costs but also suffer a net reduction of two MHz of spectrum under the proposal.

Although nowhere mentioned in the NAM proposal or the *Notice*, the primary beneficiaries of the NAM proposal would be private radio parties. By proposing an allocation of 10 MHz to B/ILT and analog SMR users under its realignment plan, the NAM proposal would double the amount of 800 MHz band channels currently allocated exclusively to private radio entities. It would more than double actual B/ILT and analog SMR use in many markets. B/ILT and analog SMR licensees are authorized to operate in the General Category block and on 100 channels in the interleaved block (channels 151-400), but many of these channels are now licensed to CMRS providers pursuant to intercategory sharing, rule waivers, or the Commission's decision to permit B/ILT licensees to assign or transfer their 800 MHz spectrum to CMRS licensees for use in CMRS operations.[72] As a result, according to the data available to Nextel, there is no market in which B/ILT and analog SMR licensees actually operate on more than nine MHz of 800 MHz spectrum; in most markets they operate on five MHz or less; and in many markets, they operate on even less spectrum. Yet the NAM proposal would allocate 10 MHz nationwide for exclusive, non-cellularized B/ILT licensing.

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[72] Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended, *Report and Order and Further Notice of Proposed Rule Making*, 15 FCC Rcd 22709, ¶ 110 (2000) ("*BBA R&O and FNPRM*"); Nextel Communications, Inc. Requests for Waiver of 47 C.F.R. §§ 90.617(c) and 90.619(b)*, Order*, 14 FCC Rcd 11678 (1999); Southern Company Request for Waiver of Section 90.629 of the Commission's Rules, *Memorandum Opinion and Order*, 14 FCC Rcd 1851 (1998).

The NAM proposal does not even attempt to justify this *de facto* allocation of additional spectrum to private radio. This *sub silencio* reach for additional spectrum is contrary to the Commission's public interest goals in this proceeding. Rather than establishing a more rational band plan and allocating additional spectrum for critical public safety needs, the NAM proposal relocates public safety licensees to a different set of frequencies at public safety's expense and reduces the amount of spectrum assigned to CMRS licensees. Under the NAM proposal, the public safety community, as well as CMRS licensees, get "all of the pain and none of the gain." The Commission consequently should reject the NAM proposal.

### D. The Alternative Proposal Raised in the *Notice* Fails to Satisfy Public Safety Spectrum Needs

The *Notice* raises the possibility of employing an alternative realignment proposal. Under this alternative, the Commission would "relocate[e] the currently interleaved seventy Public Safety channels to a contiguous block of spectrum from 809.750 to 811.500 MHz. The fifty Business and fifty Industrial/Land Transportation channels would then occupy consecutive 1.25 MHz blocks, from 811.500 to 814 MHz, and the eighty SMR channels would be located in the 814-816 MHz block. Thereby, the Business and Industrial Land/Transportation channels would provide a buffer between public safety and SMR systems."[73]

This alternative, however, fails to allocate additional spectrum to public safety systems, a critical element in advancing the overall objective of improving public safety communications in the 800 MHz band. Significantly, it also fails to address the issue of compensation for public safety operators. In addition, this option will not mitigate

[73] *Notice* ¶ 26.

CMRS – public safety interference in the 800 MHz band. As described above, CMRS carriers, including Nextel, operate on B/ILT channels, yet the alternative plan described in the *Notice* would place these channels in a band directly adjacent to public safety systems and thereby create the same potential for interference that exists today. This alternative plan would also permit public safety systems to continue to operate on the NPSPAC channels, which are directly adjacent to CMRS systems using digital, cellular architecture. Thus, this plan would not remedy the fundamental cause of interference to public safety communications systems at 800 MHz – the interleaving and adjacent spectrum allocation and assignments of incompatible noise-limited (public safety) and interference-limited (CMRS) systems.

### E. The Commission Should Reject Proposals to Relocate 800 MHz Public Safety Systems to the 700 MHz Band and Other Proposals Requiring Legislative Action

The Commission should reject proposals that would require legislation prior to implementation. Such proposals would create uncertainty and substantially delay – or prevent – resolution of the critical public safety issues raised in this proceeding. As set forth in section VII, the Commission has all necessary legal authority to address the basic causes of CMRS – public safety interference and to meet public safety's urgent spectrum needs by realigning the 800 MHz band, allocating additional spectrum to public safety operators, and assigning replacement spectrum to affected licensees.

For these reasons, the Commission should reject any suggestion that it resolve the issue of CMRS – public safety interference in the 800 MHz band by (i) relocating public safety systems from the 800 MHz band to commercial spectrum in the 700 MHz band, and (ii) funding public safety relocation costs with revenues from auctioning vacated 800

MHz channels.[74] Such a proposal would require Congress to reverse at least four significant legislative actions it has taken in recent years. For example, it would require Congress to amend statutory provisions that designate this spectrum for "commercial use" *and* require the Commission to assign this spectrum through competitive bidding.[75] Congress would also need to amend the statutory provision that requires auction revenues to be deposited in the U.S. Treasury.[76] Presumably, Congress would also be required to amend the digital television ("DTV") transition schedule it adopted in 1997;[77] otherwise, it would be *no earlier than 2007* before public safety systems could even begin deploying their relocated systems in the 700 MHz band in many major markets.

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74 *See Coalition Letter*; *see also* Letter from Brian Fontes, Vice President, Federal Relations, Cingular Wireless LLC, to Michael K. Powell, Chairman, Federal Communications Commission, WT Docket No. 99-168 (Apr. 18, 2002).

75 *See* 47 U.S.C. § 337(a)(2) (designating 36 MHz of spectrum in the upper 700 MHz band for "commercial use to be assigned by competitive bidding"), as added by Section 3004 of the Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251 (1997). The Commission has already auctioned 6 MHz of this commercial spectrum (the 700 MHz guard band licenses) to bidders who bid thereon in reliance on the Commission implementing the statutory 700 MHz spectrum allocation.

76 *See* 47 U.S.C. § 309(j)(8).

77 Analog broadcast television stations, including those operating in the 700 MHz band (Channels 60-69) are permitted by statute to continue operations until their markets are converted to DTV, which is not scheduled to occur until December 31, 2006 at the earliest. *See* 47 U.S.C. § 309(j)(14). The Commission must extend this date in certain circumstances, including the lack of significant penetration of DTV within a market. *Id.* The Congressional Budget Office anticipates that the Commission will have to extend significantly the December 31, 2006 deadline. *See Completing the Transition to Digital Television*, Congressional Budget Office, at Summary (Sept. 1999) (stating that "[i]t now appears likely that the transition will extend beyond 2006 in most markets, with its ultimate end uncertain."). Indeed, the majority of broadcast stations have already missed the Commission's deadline for initiating DTV operations. *See Many Broadcasters Will Not Meet May 2002 Digital Television Deadline*, Report to the Ranking Minority Member, Subcommittee on Telecommunications and the Internet, Committee on Energy and Commerce, House of Representatives, United States General Accounting Office, at 4 (Apr. 2002).

It is simply unrealistic to expect Congress to take all of these highly controversial steps, especially when there are far superior alternatives well within the Commission's current statutory authority. Proposals regarding the reallocation of commercial spectrum in the 700 MHz band ignore the fact that this band will likely be heavily encumbered by incumbent broadcast television stations for many years to come, making it unusable for public safety systems.[78] This reality makes it impractical to allocate additional public safety spectrum in the 700 MHz band, let alone relocate existing 800 MHz band public safety systems to this band.

In addition, relocating 800 MHz public safety systems to the 700 MHz band would impose enormous costs on public safety systems. These systems would need to acquire completely new equipment to operate in a new band. The resources and planning that have been invested in the developing 800 MHz public safety systems would be wasted. Indeed, public safety operators would have little reason to continue developing systems or buying public safety equipment for the 800 MHz band. The deployment of public safety communications systems would essentially be frozen when the need for improved communications is most critical for Homeland Security. Relocating public safety systems to the 700 MHz band would take years to implement, even assuming broadcast stations vacated this spectrum by 2007. In the meantime, public safety systems would receive increasing amounts of interference in the 800 MHz band.

[78] *Notice* ¶ 48 (stating that the 700 MHz band "is heavily encumbered by incumbent television stations").

## IV. THE COMMISSION SHOULD ALLOCATE ADDITIONAL 800 MHZ SPECTRUM TO PUBLIC SAFETY SERVICES TO SATISFY PUBLIC SAFETY'S DEMONSTRATED SPECTRUM NEEDS

*Previous Public Safety Spectrum Studies.* Pursuant to Congressional mandate, the Commission over the past two decades has extensively studied and documented the pressing need for additional public safety spectrum.[79] In 1985, the Commission's Private Radio Bureau completed a *Future Public Safety Telecommunications Requirements* report that projected the amount of additional public safety spectrum that would be required in twenty-one metropolitan areas by the year 2000.[80] The Commission sought public comment on the report in PR Docket No. 84-232, but never took any further action in that docket.[81]

In 1993, Congress directed the Commission to complete a study of state and local public safety spectrum requirements through the year 2010, and to develop a specific plan to ensure that adequate frequencies were made available to public safety licensees. The Commission's resulting 1995 report did not contain specific conclusions or recommendations, but merely indicated that further study was necessary.[82] To address Congressional concern that this report was "superficial and inadequate,"[83] the FCC and

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79 *See* Section 9, *Federal Communications Commission Authorization Act of 1983*, Pub. L. No. 98-214, 97 Stat. 1467.

80 *See* Future Public Safety Telecommunications Requirements, *Order*, PR Docket No. 84-232, FCC 85-329, 50 Fed. Reg. 32239 (1985).

81 *Id*.; *see also* Termination of Stale or Moot Docketed Proceedings, *Order*, 17 FCC Rcd 1199 (2002).

82 *Report and Plan for Meeting State and Local Government Public Safety Agency Spectrum Needs Through the Year 2010* 10 FCC Rcd 5207 (1995).

83 Statement of Chairman Harold Rogers, Hearings Before the House Committee on Appropriations, Subcommittee on the Departments of Commerce, Justice, and State, the Judiciary, and Related Agencies, 104th Cong., 1st Sess., Part 6, Telecommunications Issues, at 410 (Mar. 22, 1995).

NTIA established the Public Safety Wireless Advisory Committee ("PSWAC") to investigate the wireless communications needs of public safety agencies through the year 2010 and recommend possible solutions. In discharging this obligation, numerous public safety and private sector professionals, comprising five distinct subcommittees, labored over the next fifteen months to produce the comprehensive *PSWAC Final Report*.[84] This report quantified at 97.5 MHz the current and future spectrum needs of public safety agencies through 2010[85] and concluded that, "unless *immediate* measures are taken to alleviate spectrum shortfalls and promote interoperability, Public Safety agencies will not be able to adequately discharge their obligation to protect life and property in a safe, efficient, and cost effective manner."[86] Of course, the terrorist attacks of September 11, 2001 and the ensuing implementation of Homeland Security measures have placed "increased demands on public safety agencies' communications capability."[87]

*The Demonstrated Need for Additional Public Safety Spectrum*. The Commission has a "renewed [its] commitment to homeland security,"[88] and recently designated 50 MHz of spectrum in the 4.9 GHz band for short-range public safety use.[89] Much more

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84 Final Report of the Public Safety Wireless Advisory Committee to the Federal Communications Commission, Reed E. Hundt, Chairman, and the National Telecommunications and Information Administration, Larry Irving, Assistant Secretary of Commerce for Communications and Information, WT Docket No. 96-86 (Sept. 11, 1996) ("*PSWAC Final Report*").

85 *Id.* at ¶ 2.2.1.

86 *Id.*, Executive Summary at 2 (emphasis added).

87 *Notice* ¶ 18.

88 *Id*. ¶ 30.

89 The 4.9 GHz Band Transferred from Federal Government Use, *Second Report and Order and Further Notice of Proposed Rule Making*, 17 FCC Rcd 3955 (2002) ("*4.9 GHz Order*") (reversing earlier tentative conclusion not to set aside any of the 4.9 GHz band for public safety use).

needs to be done, however. The instant proceeding represents an excellent opportunity for the Commission to address the demonstrated, critical spectrum needs of first responders and other public safety entities by designating additional 800 MHz spectrum to exclusive public safety use. In seeking comment on whether to implement such a measure,[90] the *Notice* states that the Commission "require[s] quantitative information on public safety agencies' needs for additional spectrum."[91] Nextel respectfully submits that the Commission has already received ample evidence, including quantitative information, demonstrating the ongoing urgent need for additional public safety spectrum. Indeed, as described above, the *PSWAC Final Report*, at over 700 pages, provided this very evidence more than five years ago. Moreover, the Public Safety Wireless Network ("PSWN") has repeatedly endorsed the findings set forth in the *PSWAC Final Report*, including the pressing need to allocate the remaining portions of the 97.5 MHz of spectrum recommended by the PSWAC.[92] The continuing, pressing need for additional public safety spectrum prompted PSWN to file a petition for rulemaking on September 14, 2001 that "emphasize[d] the need for the additional 71 megahertz (MHz) of spectrum for public safety services as recommended by the PSWAC to address the remaining shortage of spectrum for high-speed data, video, and other emerging applications."[93]

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90 *See Notice* ¶¶ 29-30.

91 *Id*. ¶ 5.

92 *See* PSWN Report, *Public Safety Radio Frequency Spectrum: Highlighting Current and Future Needs* (Jan. 2000) ("*PSWN 2000 Report*"), *available at:* <http://www.pswn.gov/library/pdf/pubsaf_currfutneeds.pdf.> (FCC needs to allocate 73.5 MHz of additional public safety spectrum); *Petition for Rule Making by the Public Safety Wireless Network to Promote Allocation of Spectrum for Public Safety Agencies and Other Matters to Address Communications Needs Through 2010*, WT Docket No. 96-86, at iv (Sept. 14, 2001) ("*PSWN Petition for Rulemaking*").

93 *PSWN Petition for Rulemaking* at iv.

Based on the *PSWAC Final Report* and the *PSWN Petition for Rulemaking*, and taking into account the recent allocation of 4.9 GHz spectrum for short-range public safety communications needs, there remains a considerable shortfall of public safety spectrum. In practical terms, this shortfall is much greater than described in those analyses. Although the FCC has allocated 24 MHz of 700 MHz spectrum to public safety use,[94] public safety communications providers in most parts of the nation will be unable to use this spectrum for years given that, as described above, this spectrum is heavily encumbered by incumbent broadcast television stations. As the President of APCO recently testified,

> [I]n most of the nation's largest metropolitan areas, the new [700 MHz] spectrum allocated for public safety was not available on September 11, and will not be available until TV broadcasters on channels 63, 64, 68, and 69 (and in many cases the adjacent channels), release those channels as part of the digital television (DTV) transition. The problem facing public safety is not only that the spectrum is not currently available nationwide, but also that there is no firm date for when the spectrum will become available.[95]

The need for additional public safety spectrum has grown only more acute in the wake of the September 11 attacks: "Unfortunately, for far too many years, public safety agencies

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[94] The Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communication Requirements Through the Year 2010, Establishment of Rules and Requirements for Priority Access Service, *First Report and Order and Third Notice of Proposed Rulemaking*, 14 FCC Rcd 152 (1998) (as directed by the Balanced Budget Act of 1997, FCC designates 24 MHz of spectrum in 700 MHz band – composed of TV channels 63, 64, 68, and 69 – for exclusive public safety operations, including 2.6 MHz designated for interoperability purposes).

[95] Statement of Glen Nash, President, Association of Public-Safety Communications Officials–International, Inc. (APCO), Before the United States Senate Commerce, Science and Transportation Committee, Communications Subcommittee (Mar. 6, 2002) ("*Nash Statement*"), *available at:* <http://www.apco911.org/gov/docs/nash_3-6-2002.htm>.

across the nation have faced a severe shortage of radio spectrum available for their communications systems. . . . Now, with new Homeland Security responsibilities being placed on public safety personnel, there will be even greater demand for public safety spectrum."[96]

*Alleviating Congestion on Public Safety Systems.* The urgent nature of many public safety communications requires a "high degree of system reliability," without which life or property would be endangered during times of emergency.[97] In order to maximize such reliability, many public safety systems "are kept lightly loaded under normal circumstances, so that they are available to handle a sudden increase in communications traffic that can frequently occur due to an emergency situation."[98]

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96 *Nash Statement. See also* Statement by Chief John M. Buckman, III, President, International Association of Fire Chiefs, to Subcommittee on Science, Technology, and Space of the Committee on Commerce, Science and Transportation, United States Senate, at 9 (Oct. 11, 2001) ("There is a critical need . . . to expand the amount of radio spectrum that is allocated to emergency services, to enable better on-scene communications and to facilitate seamlessly interoperable radio communications among and between emergency response agencies."); Statement by Chief Edward P. Plaugher, Arlington County (VA) Fire Department, to Committee on Commerce, Science, and Technology, United States Senate, at 3 (Oct. 11, 2001) ("*Plaugher Statement*") ("The national solution to this problem [of poor interoperability among public safety agencies] lies in the allocation of radio spectrum."); *APCO Letter* (noting that "public safety agencies in many areas lack sufficient radio spectrum and are often without effective interoperable radio communications," and supporting proposal outlined in the Nextel *White Paper*).

97 *Notice* ¶ 11.

98 *Id*. (*citing* the *Best Practices Guide*). The PSWAC Operational Requirement Subcommittee described the typical usage pattern for public safety systems, and their resulting spectrum needs, in the PSWAC Final Report.

> Public Safety systems need quick expandability to accommodate peak use. Although normal day-to-day operations may not require high capacity, in times of disaster, for example, many new users may come on a system simultaneously. Expansion capacity must be engineered into systems. This is especially true of emergency management and disaster services, which are characterized by very low usage patterns on a day-to-day basis,

Despite this need for lightly loaded spectrum, public safety frequencies – including those in the 800 MHz band – have become increasingly congested and subject to interference in recent years, particularly in highly populated areas.[99] "In some instances, public safety agencies operate with hundreds of users per channel, far more than is safe under 'normal' day-to-day circumstances, let alone major emergencies."[100] Although digital technologies can permit more efficient use of public safety spectrum in the short term, only the judicious allocation of additional spectrum to public safety use will alleviate congestion in the long run.[101]

*Interoperability Spectrum.* There is also an urgent need to allocate additional public safety spectrum to support interoperability among different public safety systems. Because public safety agencies operate on a wide range of frequency bands, often with incompatible radio interfaces,[102] they often cannot communicate with each other. This lack of interoperability "hinders cooperation and coordination among public safety agencies on a day-to-day basis,"[103] and endangers life, property, and Homeland Security in times of disaster. For instance,

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> but extremely high use during a major event such as an earthquake, hurricane or flood.

*PSWAC Final Report*, ¶ 4.1.19.

99 *See*, *e.g.*, *PSWN Petition for Rulemaking* ¶ 8; *Nash Statement* at 3 (describing "dangerous congestion" in many areas).

100 *Nash Statement* at 3.

101 *See*, *e.g.*, *PSWN Petition for Rulemaking* ¶ 37 (pointing out that many public safety entities lack the resources necessary to upgrade to digital technologies).

102 *See PSWAC Final Report* at ¶ 4.3.8 (federal, state and local public safety agencies use a total of ten radio bands that range from 30 MHz to over 800 MHz).

103 The Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communication Requirements

> [r]escuing victims of the [first] World Trade Center bombing, who were caught between floors, was hindered when police officers could not communicate with fire fighters on the very next floor. Similarly, the inability to communicate among the agencies that had rushed to the Oklahoma City bombing site required resorting to runners to relay messages.[104]

Similarly, the numerous firefighters responding to the attack on the Pentagon "were forced to use communications equipment that they had never operated before or even seen," or to use "runners carrying messages."[105]

The most effective way to address such problems would be to migrate agencies in the same geographic area to common or compatible frequency bands. Unfortunately, this solution is not feasible in many areas because "there is not enough spectrum in any one band to accommodate all, or even most, of the public safety users in the region."[106] As a result, there exists an "urgent need for additional interoperability spectrum to be allocated for use by public safety agencies in all bands."[107] The *Notice* recognizes this need in

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for Meeting Federal, State and Local Public Safety Agency Communication Requirements Through the Year 2010, Establishment of Rules and Requirements for Priority Access Service, *Third Memorandum Opinion and Order and Third Report and Order,* 15 FCC Rcd 19844, ¶ 82 (2000).

104 *PSWAC Final Report* ¶ 1.1. The problem of lack of interoperability among public safety agencies has been longstanding and is well documented. *See*, *e.g.*, "Interoperability: Critical for Public Safety Communication," *Sheriff Magazine* (July 2001) (describing how the 1982 Air Florida crash in Washington, DC, demonstrated the need for interoperable public safety communications as well as the shortage of spectrum allocated for such communications), *available at:* <http://www.iacptechnology.org/Library/InteroperabilitySheriff0701.htm>.

105 *Plaugher Statement* at 2. *See also* News Release of U.S. Senator Ron Wyden (Oct. 11, 2001) ("At the Pentagon [on September 11, 2001], I understand that responders faced daunting communication problems between responders across varying radio frequencies.").

106 *Nash Statement* at 4. For instance, although the FCC has designated 2.6 MHz of 700 MHz spectrum to public safety interoperability, as explained above this spectrum will remain occupied by incumbent TV broadcaster for years to come in many areas.

107 *PSWN Petition for Rulemaking* ¶ 25.

stating that "[i]t is clear that public safety operations would benefit from additional channels devoted to interoperability."[108] Since there are numerous public safety systems operating in the 800 MHz band today, this is the logical place to expand. Otherwise, every public safety operation would be forced to move to achieve interoperability.

*Allocating Additional Public Safety Spectrum in the 800 MHz Band.* The 800 MHz band is uniquely suited to meet the need for allocating additional spectrum to public safety entities. The propagation characteristics of the 800 MHz band are well suited for the wide-area coverage requirements of public safety systems. Moreover, a large number of public safety systems already operate in this band throughout the country.[109] Allocating additional public safety spectrum in the 800 MHz band will permit existing and new public safety systems to operate in a contiguous block of spectrum. As described above, there are a number of substantial benefits to this approach. It will facilitate interoperability among existing and new public safety systems. It will also lower public safety equipment costs, because the increased number of public safety operations in the same band will create economies of scale in the design and production of such equipment. Indeed, public safety communications equipment meeting the specialized public safety needs of the APCO 25 standard is already available, and public safety entities could begin exploiting any newly allocated spectrum without undue costs or delays.

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[108] *Notice* ¶ 30.

[109] As noted above, a number of state governments, including Florida, Michigan, Ohio and Pennsylvania, are investing hundreds of millions of dollars to deploy new systems in the 800 MHz band.

Expanding the amount of exclusive, contiguous public safety spectrum at 800 MHz is a far more effective and efficient long-term plan than establishing additional public safety spectrum in another band, particularly in bands that would involve higher public safety equipment costs or in the higher bands with propagation characteristics requiring more infrastructure to meet ubiquitous public safety coverage requirements. No other spectrum bands are as well suited as the 800 MHz band to satisfy public safety's immediate critical interoperability communications needs.

## V. THE COMMISSION SHOULD SEEK TO MINIMIZE PUBLIC SAFETY'S RELOCATION COSTS AND ENSURE SUITABLE REPLACEMENT SPECTRUM FOR OTHER RELOCATING LICENSEES

Realigning the 800 MHz band and allocating additional spectrum in this band to public safety services will require incumbent licensees to relocate to different channels, including channels located in other bands. As stated in the *Notice*, the Commission has ample authority to require such relocations:

> Relocation is one of the tools that the Commission has available to it in exercising its spectrum management responsibilities. It often is used to solve problems of current and future congested bands and to ameliorate technical difficulties that impair other communications services. On numerous occasions, the Commission has required incumbents to relocate to other spectrum if the public interest was so served. This is true regarding public safety licensees as well as non-public safety entities.[110]

Relocation of incumbent licensees in the 800 MHz Land Mobile Radio band will significantly advance the public interest by allowing the Commission to remedy CMRS – public safety interference and allocate additional spectrum to public safety. The *Notice* seeks comment on these incumbent relocation issues. In these comments, Nextel will focus on those issues raised in the *Notice* that are not already covered in the *White Paper*.

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[110] *Notice* ¶ 31 (footnotes omitted).

### A. CMRS Licensees Should Fund the Bulk of Public Safety's Relocation Costs, and Other Licensees Should Be Responsible for Their Own Costs

The *Notice* seeks "comment on which, if any, of [the Commission's] precedent is useful as a model for determining which 800 MHz licensees would be entitled to reimbursement in the event they were required to relocate from their existing frequencies."[111] The relocation issues raised in this proceeding address particular public safety communications needs that do not fit neatly within recent precedent involving the relocation of incumbent licensees. Commission decisions involving Emerging Technologies, for example, are inapposite because in these cases incumbent licensees were relocated "to foster the growth and development" of emerging technologies and new communications services.[112] These new services benefited substantially from such relocations and had the resources and financial incentive to fund the relocation of incumbent licensees. In contrast, the primary beneficiaries of a realignment of the 800 MHz band and the allocation of additional spectrum would be public safety licensees. These public sector licensees do not have the resources to fund the relocation of other incumbents. Indeed, they will need financial assistance to cover their own relocation costs.

The *Notice* also seeks "comment on whether a band relocation proponent should be required to bear the cost of relocating public safety systems – and Business, SMR and Industrial/Land Transportation systems as well – and, if so, on the rationale underlying

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111 *Id.* ¶ 42.

112 Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, *First Report and Order and Third Notice of Proposed Rule Making*, 7 FCC Rcd 6886 ¶¶ 1-2 (1992).

such a requirement."[113] There is no precedent or rationale for saddling a relocation proponent with such a burden merely for offering a solution in the public interest. The Commission should instead adopt cost reimbursement arrangements that will advance its public interest goals and recognize the potential beneficiaries of its decision and their ability to fund relocation costs.

The Commission's primary objectives in this proceeding should be to remedy interference to public safety systems caused by an out-of-date band plan and to ensure that public safety operators have sufficient spectrum to meet their short-term and long-term needs. These important goals cannot be achieved unless public safety systems, which operate under limited budgets, receive substantial financial assistance to cover their relocation costs. As set forth in the *White Paper*, Nextel has proposed that commercial SMR providers and cellular licensees in the 800 MHz band fund a substantial part of public safety's relocation costs.[114] These CMRS licensees will benefit significantly from a realignment of the 800 MHz band by being relieved of the burdens of addressing CMRS – public interest interference on an ongoing, *ad hoc* basis and having greater flexibility in operating their commercial networks. Nextel, for one, has consequently committed not only to fund its own relocation costs, but also to contribute up to $500 million for relocating incumbent public safety systems if the Commission adopts its proposed realignment plan.[115] The Commission should require other commercial SMR providers and cellular licensees to make a similar commitment to

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113 *Notice* ¶ 43.

114 *White Paper* at 39-41.

115 *Id.* at 40 n. 52. As noted in the *White Paper*, Nextel will incur more relocation costs than any other licensee under the 800 MHz realignment plan.

funding the relocation costs of incumbent public safety licensees.[116] In particular, if these licensees collectively contributed $1 billion toward public safety relocation costs, their contribution would be comparable to Nextel's commitment and would substantially further the Commission's efforts to realign the 800 MHz band.

Other incumbent licensees required to relocate should cover their own costs. These licensees include B/ILT and traditional SMR licensees that may be required to relocate their systems to the 700 MHz and 900 MHz bands. The *Notice* seeks comment on the relocation costs of these licensees as part of realigning the 800 MHz band, and private radio parties should quantify such costs. In evaluating any such cost estimates, however, the Commission should keep in mind that many B/ILT and traditional SMR systems will be able to continue operating in the 800 MHz band for a considerable length of time. Moreover, as stated in the *Notice*, the Commission has "on occasion required

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[116] The *Notice*, ¶ 47, seeks comment on the possibility that auction revenues could be used to fund public safety relocation costs to the extent that realignment of the 800 MHz band "yields 'recovered spectrum,' whether through refarming or otherwise." The *Notice* further states that, "[i]n the alternative, to effect the same end, winning bidders could be required to relocate public safety systems as a prerequisite to receiving a license." *Id.* These options are not feasible for a number of reasons. As an initial matter, any "recovered spectrum" that results from "refarming" should be allocated to public safety systems, which are exempt from the competitive bidding requirements set forth in the Act. *See* 47 U.S.C. § 309(j)(2)(a). Moreover, with the exception of allocating additional spectrum to public safety licensees, realignment of the 800 MHz band will involve a series of spectrum swaps designed to ensure that incumbent licensees receive neither a net loss nor net gain in the amount of spectrum they presently hold. As set forth in Section VII B. below, these licensees would not be required to participate in spectrum auctions as part of this realignment process. Finally, even assuming the Commission conducted a spectrum auction, it is required by statute to deposit the auction proceeds in the U.S. Treasury, and therefore could not use these revenues to fund public safety relocation costs. *See* 47 U.S.C. § 309(j)(8).

licensees to bear their own costs of relocation" when it determines that the public interest would thereby be served.[117]

### B. B/ILT and Traditional SMR Licensees Should Be Required to Relocate to the 700 MHz or 900 MHz Bands

If a B/ILT or traditional SMR licensee cannot co-exist on a non-interfering basis with public safety systems in the realigned 800 MHz band, the licensee should be required to relocate to the 700 MHz or 900 MHz frequencies Nextel would contribute as part of the realignment plan.[118] In the *Notice,* the Commission requested comment on the feasibility of relocating 800 MHz incumbents to alternative spectrum bands, including 700 MHz and 900 MHz.[119] The *Notice* also raised the concern that Nextel may not have sufficient 700 MHz and 900 MHz channels to relocate all incumbents in some markets.

Current 800 MHz traditional SMR and B/ILT incumbents that would need to be relocated constitute a running average of approximately 5 MHz in the top 25 cities; this running average falls to approximately 4 MHz in the top 100 cities.[120] Based on Nextel's spectrum holdings, this incumbent relocation can be accomplished.

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117 *Notice* ¶ 42; s*ee*, *e.g.*, Regulatory Policy Regarding the Direct Broadcast Satellite Service, *Memorandum Opinion Order*, 94 F.C.C. 2d 741, ¶¶ 8, 24-26 (1983) ("*DBS Recon. Order*") (affirming earlier decision that it would serve the public interest to require displaced fixed service users to bear their own costs of relocation from band to be allocated to DBS); *accord National Association of Broadcasters v. FCC*, 740 F.2d 1190, 1211-1212 (D.C. Cir. 1984) (FCC has discretion to require displaced fixed service users to bear their own relocations costs if doing so would serve the public interest).

118 As set forth in the *White Paper*, at 42-44, the Commission could also provide B/ILT and traditional SMR licensees incentives to relocate voluntarily to the 700 MHz or 900 MHz bands.

119 *Notice* ¶ 48.

120 Appendix A sets forth the methodology used in calculating the running average for the 800 MHz spectrum holdings of traditional SMR and B/ILT licensees.

Nextel is licensed for more spectrum in the 900 MHz band than the Notice indicates.[121] First, since the Commission adopted the *Notice*, the Bureau approved the assignment of 83 900 MHz MTA licenses from Neoworld License Holdings to a subsidiary of Nextel.[122] As a result of that and other pending transactions, Nextel has a running average of nearly 4 MHz of 900 MHz spectrum across the country.[123]

In 92 of the top 100 cities, Nextel is the 700 MHz guard band licensee for the 4 MHz B Block. Although Nextel is not the 700 MHz guard band licensee for all of the 700 MHz guard band, its 700 MHz guard band licenses cover 94% of the U.S. population. In nearly all cases, therefore, Nextel will be contributing 700 MHz guard band spectrum in the populated areas needed to relocate 800 MHz incumbents.

Nextel recognizes that in some areas UHF television stations make its guard band spectrum unavailable for the near future. In other areas, such as Salt Lake City, no UHF television station holds a license on Nextel's 700 MHz guard band frequencies; thus, these frequencies could be used immediately for 800 MHz relocation. As discussed above, UHF television incumbency until 2007 renders the 700 MHz band unsuitable as a replacement home for 800 MHz public safety systems. Public safety systems are typically designed to cover large areas and therefore are most likely to be precluded by existing broadcast UHF television facilities. In contrast, site-licensed B/ILT and high-

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121 *Notice*, Appendix One, Exhibit A.

122 Wireless Telecommunications Bureau Grants Consent for the Transfer of Control of 900 MHz SMR Licenses From Neoworld License Holdings, Inc. to FCI 900, Inc., *Public Notice*, WT Docket No. 02-41, DA 02-881 (Apr. 19, 2002). That transaction has not yet been consummated.

123 The methodology used in calculating the running average of Nextel's 900 MHz spectrum holdings is set forth in Appendix A.

site SMRs may be the only existing licensees that can use 700 MHz today in areas without UHF stations. Many B/ILT and traditional SMR systems operate discrete, stand-alone systems that are not part of wide-area or regional networks.[124] Where available now, B/ILT systems relocating from 800 MHz would have clear spectrum with no incompatible adjacent or co-channel licensees. The availability of this 700 MHz spectrum and licensee interest therein would help to expedite the development and availability of 700 MHz communications systems. For all of these reasons, Nextel's 700 MHz guard band spectrum would provide a desirable location for relocating non-cellular private and SMR systems in areas that have no channels 60-69 UHF television incumbents.

Under its realignment plan, Nextel is committed to making sufficient spectrum available to the Commission to accommodate all 800 MHz incumbents required to relocate to the 700 or 900 MHz bands. Thus, in the event that Nextel's spectrum holdings in a specific market are inadequate, Nextel would be responsible for obtaining the additional spectrum needed to implement these incumbent licensee relocations. Nextel believes, however, that this contingency is unlikely, for a number of reasons.

First, as discussed in the *White Paper* and previously herein, some 800 MHz B/ILT and high-site SMR incumbents could remain in the new public safety channel block temporarily, so long as public safety users did not need that spectrum in that area immediately. While reallocating and assigning this spectrum to public safety, the Commission should incorporate a flexible licensing scheme enabling public safety and

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[124] Obviously, this is not the case for all B/ILT systems, such as those used by the railroads, some utilities and nationwide companies.

incumbent licensees to reach agreements to continue incumbent use as long as such use does not preclude the implementation of public safety communications services.

Second, public safety systems are publicly-funded and therefore typically have very long planning and funding cycles. For this reason alone, some channels in the new public safety spectrum block will not be needed for a predictable period, during which public safety licensees and incumbents can reach agreements permitting incumbents to remain primary on their channels for a mutually agreeable period.

Nextel has substantial experience in incumbent relocation in the upper 200 SMR channels and is confident that once rules are established, frequency coordinators for the incumbent and public safety sectors will have market-driven incentives to meet the spectrum needs of all compatible architecture systems. When the Commission considered the rules and procedures for the upper 200 channel SMR wide-area licensing, numerous incumbent licensees predicted disastrous results if the geographic area licensee had the right to relocate incumbents from the upper 200 channels through retuning.[125] As the largest geographic area licensee on the upper 200 channels, Nextel managed the retuning of approximately 1,000 such systems. Nextel forecasts the same success in its proposed 800 MHz realignment, provided the Commission creates a sufficiently definitive regulatory framework and permits parties to take advantage of the same marketplace dynamics that facilitated the upper 200 channel relocation process.

The *Notice* seeks comment on what technical rules should apply to licensees relocating to the 700 MHz guard bands "to insure that operations in that spectrum do not

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[125] *See*, *e.g.*, *800 MHz Report and Order*, ¶ 68.

interfere with public safety communications in the 764-776 and 794-806 MHz band."[126] Nextel suggests that the same frequency coordination and technical rules that currently govern 700 MHz guard band operations should apply to B/ILT and traditional SMR licensees relocating to this spectrum.[127] The Commission designed these rules specifically to prevent interference to public safety systems in the adjacent bands. Indeed, in prohibiting cellular systems from operating in the guard bands, the Commission expressly contemplated that private radio operations – such as B/ILT and traditional SMR facilities – would be compatible with public safety systems.[128] The Commission should, however, amend its rules so that B/ILT and SMR licensees relocating to the 700 MHz guard bands do not have to act as guard band managers, but can utilize all of their licensed replacement spectrum for their own communications needs.[129] This rule modification will help ensure a sufficient amount of replacement spectrum for these licensees.

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126 *Notice* ¶ 49.

127 *See* 47 C.F.R. §§ 27.2 (prohibiting cellular architectures in guard bands), 27.53 (setting forth emission limits governing guard band operations).

128 Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, *Second Report and Order*, 15 FCC Rcd 5299, ¶ 32 & n. 68 (2000) (referring to band managers making guard band spectrum available for various private radio uses), ¶¶ 38-41 (stating that the Communications Act does not preclude band managers from leasing spectrum to private radio services).

129 The Commission's current guard band rules require a licensee to "lease the predominant amount of its spectrum to non-affiliates." 47 C.F.R. § 27.603(c). Of course, this proposal only applies to the 700 MHz guard band spectrum that Nextel would swap to the Commission for relocating 800 MHz incumbents.

### C. Nextel Should Receive Suitable Replacement Spectrum

Under its proposed realignment plan, Nextel would contribute over 16 MHz of spectrum: 8 MHz of spectrum in channels 1-400 of the current Land Mobile Radio band that would become part of the new 800 MHz public safety spectrum block, and 4 MHz of spectrum in the 900 MHz SMR band and 4 MHz of 700 MHz guard band spectrum to provide replacement spectrum for B/ILT and traditional SMR licensees that relocate from the 800 MHz band. In exchange, Nextel would be licensed for 6 MHz of replacement spectrum at 821/824 – 866/869 MHz (the current NPSPAC channels) and an additional 10 MHz of other suitable replacement spectrum. Nextel's *White Paper* proposed that this 10 MHz of replacement spectrum be reallocated from the reserve Mobile Satellite Service ("MSS") spectrum at the 2.1 GHz band. A segment of the 1910-1930 MHz unlicensed PCS band, along with an appropriate paired MSS band, could also provide a source for suitable replacement spectrum.

*The 2.1 GHz MSS Band.* Nextel proposed in the *White Paper* that the Commission reallocate the 2020/2025 MHz and 2170/2175 MHz bands to terrestrial mobile services and assign that spectrum to Nextel in exchange for spectrum Nextel would relinquish in the 700 MHz, 800 MHz, and 900 MHz bands.[130] This relocation will substantially advance the public interest by helping to resolve CMRS – public safety interference in the 800 MHz band, addressing the critical spectrum needs of public safety systems, and affording Nextel replacement spectrum for its use in providing terrestrial mobile services.

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130 *White Paper* at 55.

The 2020/2025 MHz portion of the MSS band is currently used by the Broadcast Auxiliary Service ("BAS") and the 2170/2175 MHz portion is used by the Fixed Service ("FS"). The *Notice* seeks comment "on the means of equitably relocating BAS and FS incumbents in this band."[131] The Commission determined in its MSS proceeding that FS incumbents would be relocated to the extent they received harmful interference from MSS, but would not be required to relocate if they could successfully share spectrum with MSS. [132] The Commission should take a similar approach regarding terrestrial wireless – FS sharing of this band: if this sharing results in interference, the FS incumbent should be required to relocate and Nextel would compensate the incumbent for its relocation costs.

The BAS relocation plan adopted in the MSS proceeding consists of a complex, two-phase, market-staggered approach that would relocate incumbent BAS licensees gradually over many years as MSS systems become operational. Broadcasters have objected to this staggered relocation, arguing that it will impose undue burdens and uncertainty on their BAS operations. They have urged the Commission "to rationalize and simplify the relocation of BAS incumbents" by creating a "one-step relocation to the final BAS band plan."[133]

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131 *Notice* ¶ 57.

132 *See* Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service, *Second Report and Order and Second Memorandum Opinion and Order*, 15 FCC Rcd 12315, ¶¶ 76-78 (2000) ("*2 GHz MSS 2R&O*"), *recon. pending*. Because relocating incumbent FS operations will, in some cases, involve channel pairs that operate in spectrum not reallocated to MSS, the Commission adopted cost-sharing reimbursement procedures between MSS and other entities. *Id*. ¶¶ 95-102.

133 Joint Comments of the Association for Maximum Service Television, Inc. ("MSTV") and the National Association of Broadcasters ("NAB"), ET Docket No. 00-

Nextel is willing to work with broadcasters to develop a revised BAS relocation plan that could provide BAS licensees with a faster, less burdensome transition to the final BAS band. Nextel would have a strong incentive to accelerate the current BAS relocation timetable in order to clear the replacement spectrum it will need as part of the 800 MHz realignment plan. At the same time, the Commission should ensure that the different users of the MSS band share BAS relocation costs on an equitable basis.

*The 1910-1930 MHz Unlicensed PCS Band.* The *Notice* seeks "comment on the suitability of the 1910-1930 MHz band for replacement spectrum; and on what other band segments could be paired with the 1910-1930 MHz band."[134] Nextel believes a 5 MHz segment of this band may provide suitable replacement spectrum, provided that the spectrum is or can be cleared of other uses. Nextel further recommends that the 5 MHz of spectrum from 1910-1915 MHz be paired with 5 MHz at 1990-1995 MHz currently allocated to MSS. The latter band could be made available as the result of the ongoing efforts by the Commission and the National Telecommunications and Information Administration ("NTIA") to augment the spectrum needed for third generation ("3G") wireless services. Specifically, the Commission and NTIA are now examining the potential use of the 1710/1770 and 2110/2170 MHz bands for 3G services.[135] A decision

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258, at 5 (filed Oct. 22, 2001); Letter of Jack N. Goodman, NAB, to William J. Caton, Acting Secretary, Federal Communications Commission, ET Docket No. 95-18, Attachment at 17, 25 (filed Mar. 26, 2002).

134 *Notice* ¶ 52.

135 *See NTIA Statement Regarding New Plan to Identify Spectrum for Advanced Wireless Mobile Services (3G)*, National Telecommunications and Information Administration (Oct. 5, 2001) *available at:* <http://www.ntia.doc.gov/ntiahome/threeg/3gplan_100501.htm>; *Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems*,

to reallocate those frequencies would require the redesignation of 5 MHz of downlink spectrum in the 2 GHz MSS band (2165-2170 MHz), a step that would in turn leave an unpaired 5 MHz segment in the 2 GHz MSS uplink band (1990-2025 MHz). Whether the uplink allocation occurs or not, the reassignment of the 1990-1995 MHz MSS band segment to Nextel for pairing with the 1910-1915 MHz band would constitute a reasonable solution to Nextel's need for CMRS replacement spectrum.

*Replacement Spectrum.* The *Notice* also asks whether the Commission should grant Nextel a nationwide license for 10 MHz given the fact that the spectrum Nextel is contributing to the proposed realignment may be less than 10 MHz in some areas, or may not provide nationwide coverage.[136] Nextel respectfully submits that in considering this question, the Commission must take account of the difficulty of making market-by-market comparisons in the instant situation. Unlike cellular and PCS licensees, Nextel has aggregated its spectrum position through acquisitions and assignments of site-by-site licenses at both 800 MHz and 900 MHz, supplemented recently by the auctions of wide-area, geographic overlay licenses and Commission auctions of the 700 MHz guard band licenses. As a result, Nextel holds a mix of site-specific and geographic area licenses.

The Commission should view Nextel's various spectrum holdings on a nationwide basis. Nextel is the fifth largest CMRS operator and provides service to more than 90% of the U.S. population. Its largest spectrum holdings are in spectrum-congested urban areas, while it holds lesser amounts in some rural and smaller markets. As a result, viewed on a market-by-market basis, Nextel proposes to contribute significantly more

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Memorandum Opinion and Order and Further Notice of Proposed Rulemaking, 16 FCC Rcd 16043, ¶ 42 (2001) ("*Third Generation Order*").

136 *Notice* ¶ 60.

than 16 MHz in some markets and somewhat less in others. In terms of running average, however, Nextel will be contributing a running average of 16 MHz. Moreover, as explained above, Nextel is committed to making sufficient replacement spectrum available to relocating B/ILT and traditional SMR incumbents in those markets where Nextel's current spectrum holdings fall below its nationwide running average, if necessary to accommodate all incumbent relocations. Accordingly, Nextel's proposal to receive 16 MHz of nationwide replacement spectrum (6 MHz from the current NPSPAC channels and 10 MHz in the 2.1 GHz or other suitable band) constitutes a fair and reasonable kHz-for-kHz channel swap.

This approach is consistent with Commission efforts over the past several years to promote regulatory parity, as contemplated by OBRA '93, by licensing digital SMR licensees on a geographic area basis rather than on a site-specific basis. Geographic area licensing is far more efficient for the Commission to administer and is the mechanism for licensing cellular and PCS CMRS licensees. Nextel's *White Paper* proposal would essentially complete the implementation of licensing regulatory parity mandated by OBRA '93, as it would replace the regulatorily disparate and disadvantageous licensing burden Nextel has endured vis a vis its geographically-licensed CMRS competitors.

To be sure, the theoretical value of spectrum may vary depending on its location and configuration. But these differences in spectrum value can easily be offset by the very real costs of relocating a wireless communications network to a different set of frequencies. Nextel, for example, will need to reconfigure its own licensed facilities as part of a realignment of the 800 MHz band, which would entail substantial equipment, engineering, and administrative costs. Nextel will also need to cover the costs incurred

by incumbent BAS and/or FS licensees relocating from the proposed 10 MHz of replacement spectrum at 2.1 GHz. In addition, as noted above, Nextel has committed to fund up to $500 million of public safety's relocation costs should its *White Paper* proposal be adopted.

Moreover, attempting to determine the market value of particular blocks of spectrum in a rulemaking proceeding would be an inherently arbitrary and contentious undertaking. Outside of the auction context, which as discussed below does not apply to the spectrum swaps at issue here, the Commission simply does not have the tools to assess accurately the wide range of market conditions and other variables that underlie the market value of particular spectrum licenses at any given time.[137]

The Commission should keep in mind that on numerous occasions it has amended rules governing a particular service in ways that may have increased the value of the particular licenses at issue. Indeed, promoting the more efficient, and therefore more valuable, use of the spectrum is a central objective of the Commission.[138] The FCC's authority to carry out this mandate is in no way lessened if a rule change enhances the value of a particular licensee's spectrum holdings. For example, in 1998 the FCC overhauled its Multipoint Distribution Service ("MDS") and Instructional Television Fixed Service ("ITFS") rules to permit these licensees to construct digital two-way systems that could provide high-speed, high-capacity broadband service, including two-

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[137] *See* FCC Report to Congress on Spectrum Auctions, WT Docket No. 97-150, FCC 97-353, at 32-33 (Oct. 9, 1997) (describing the difficulty in determining the value of spectrum outside of the auction context and stating that the Commission has traditionally not made its own estimate of the value of the spectrum).

[138] 47 U.S.C. § 151 (stating that one of the FCC's fundamental goals is "to make available, so far as possible … a rapid, efficient … radio communication service").

way service via cellularized communications systems.[139] These rule changes allowed ITFS licensees "nearly maximum flexibility" to engage in "channel swapping" by essentially trading their licensed spectrum for spectrum licensed to MDS operators.[140] The Commission recognized that these rule changes would provide "competitive benefits to the MDS industry," "maximize the value of their spectrum resources,"[141] and also increase the value of the spectrum held by ITFS licensees "both for their own use and as a leasable asset."[142] These actions were perfectly consistent with the FCC's public interest goals because the amended rules "will also provide significant benefits to consumers" who "will be able to use the high-speed and high-capacity data transmission and Internet service that will be available through the new [MDS/ITFS] systems."[143] Remedying CMRS – public safety interference and allocating additional spectrum to public safety will provide greater public interest benefits. Providing suitable replacement spectrum on an overall kHz-for-kHz basis for licensees relocating under an 800 MHz realignment plan is an essential element in achieving these benefits. This public interest calculus is not changed if such replacement spectrum gives a licensee greater flexibility to maximize the value of its spectrum holdings. Indeed, this result would be wholly consistent with the Commission's statutory mandate.

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139 *Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, Report and Order, 13 FCC Rcd 19112 (1998) ("*MDS/ITFS R&O*"), *recon.*, 14 FCC Rcd 12764 (1999), *further recon.*, 15 FCC Rcd 14566 (2000).

140 *MDS/ITFS R&O*, ¶ 106.

141 *Id.* ¶¶ 10, 13.

142 *Id.* ¶ 10.

143 *Id.* ¶ 9.

## VII. NEITHER THE *ASHBACKER* DOCTRINE NOR SECTION 309(j) APPLIES TO NEXTEL'S PROPOSED 800 MHz RESTRUCTURING

The *Notice* tentatively concludes that neither the doctrine enunciated in *Ashbacker Radio Corp. v. FCC* ("*Ashbacker*")[144] nor the competitive bidding provisions of Section 309(j) of the Act[145] would be implicated by "the 800 MHz land mobile band restructuring plans advanced to date."[146] While the Commission raises questions about certain aspects of the *White Paper* proposal, any further analysis of Nextel's proposed 800 MHz restructuring should yield the same result. As described below, court precedent and Section 316 of the Act[147] provide the Commission with the spectrum management authority to implement Nextel's *White Paper* plan by (i) requiring incumbent licensees to "exchange" or "swap" their current licensed spectrum for alternative frequencies, and (ii) by relocating incumbent licensees to unassigned spectrum without first offering other entities eligibility for those channels. The Commission can move forward with these steps without triggering either *Ashbacker* or the auction requirements of Section 309(j).

### A. Nextel's Realignment Plan Is Consistent with the *Ashbacker* Doctrine

Title III of the Communications Act confers broad authority on the Commission to manage spectrum in accord with the public interest. Section 301 states that the government shall maintain control over the spectrum and precludes private ownership rights in the spectrum,[148] and Section 303 grants the Commission general authority to

144 *Ashbacker Radio Corp. v. FCC*, 326 U.S. 327 (1945).

145 47 U.S.C. § 309(j).

146 *See Notice* ¶¶ 80-82.

147 47 U.S.C. § 316.

148 47 U.S.C. § 301.

allocate and assign spectrum.[149] Section 316 allows the Commission to modify any existing license when necessary to "promote the public interest, convenience, and necessity."[150] These and other Title III provisions establish "broad parameters within which the FCC may further its view of the public interest without interference from the courts."[151]

It is against this backdrop that the courts have developed the *Ashbacker* doctrine. In *Ashbacker*, the U.S. Supreme Court held that a comparative hearing is required when two "bona fide" applicants file "mutually exclusive" applications for the same license.[152] As various subsequent decisions have made clear, *Ashbacker* sets forth a procedural safeguard that in no way diminishes the substantive authority of the Commission to manage spectrum. In particular, *Ashbacker* does not require the FCC to entertain competing applications when it seeks to modify the frequency assignment of an existing licensee under Section 316. Rather, as the U.S. Court of Appeals for the D.C. Circuit has recognized, *Ashbacker* is triggered only when the proposed assignment involves "free channel space" or "an open frequency" for which more than one applicant would be eligible under the Commission's rules.[153]

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149 Establishing Rules and Policies for the Use of Spectrum for Mobile Satellite Services in the Upper and Lower L-Band, *Report and Order*, 17 FCC Rcd 2704, ¶ 25 (2002) ("*MSS Report and Order*") ("Section 303 of the Act provides the Commission with broad authority to implement its spectrum management policies.").

150 47 U.S.C. § 316(a)(1).

151 *Rainbow Broadcasting Co. v. FCC*, 949 F.2d 405, 410 (D.C. Cir. 1991).

152 *Ashbacker*, 326 U.S. at 333.

153 *See Rainbow*, 949 F.2d at 409-410. The Commission's authority to limit eligibility criteria for open channels is discussed below.

*Channel Swaps*. The *Ashbacker* doctrine clearly does not apply to licensee proposals to exchange or "swap" existing channels – which are already occupied and hence not "open" – for equivalent channels at a different frequency.[154] In fact, the FCC has numerous times exercised its Section 316 authority by granting these exchanges and modifying parties' licenses to reflect their new frequency assignments.[155]

This authority exists regardless of whether a swap is voluntary.[156] As the Commission recently emphasized, "the language of Section 316 is clear and unequivocal: '[A]ny station license . . . may be modified by the Commission . . . if in the judgment of the Commission such action will promote the public interest, convenience, and necessity.'"[157] Section 316 thus "provides the FCC with the authority to modify licenses without the approval of their holders. This authority for the first time allowed the FCC to take the initiative in modifying licenses."[158] Under Section 316, then, the Commission

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154 *See Rainbow*, 949 F.2d at 410 ("*Ashbacker* does not compel the FCC to hold comparative hearings in order to approve channel exchanges"); Amendment of Section 73.606(b), Table of Allotments, Television Broadcast Stations and Section 73.622(b), Table of Allotments, Digital Television Broadcast Stations, *Report and Order*, 14 FCC Rcd 11856, ¶ 12 (1999) ("*Channel Swap Order*") ("in the case of channel exchanges, the rule of *Ashbacker* does not apply because the channels are occupied."), *review denied*, 16 FCC Rcd 4013 (2000).

155 *See, e.g.*, *Channel Swap Order* ¶ 19; *Rainbow*, 949 F.2d at 410.

156 *See Notice* ¶ 80 ("We invite comment on whether or not a swap is voluntary has implications for the Ashbacker analysis.").

157 *MSS Report and Order* ¶ 22 (quoting in relevant part Section 316(a)(1) of the Act, 47 U.S.C. § 316(a)(1)).

158 *Rainbow*, 949 F.2d at 410. Section 316 also allows the Commission to modify a license with the approval of its holder. *See, e.g.*, *MSS Report and Order* (modifying Motient license without objection by Motient).

may modify existing licenses when it determines that the public interest so requires, even without the consent of an affected licensee.

In light of the Commission's "clear and unequivocal" authority under Section 316,[159] neither Nextel's proposed channel exchanges nor any similar proposal would implicate the *Ashbacker* doctrine. Pursuant to the *White Paper* proposal, incumbent licensees in the 700, 800, and 900 MHz bands would swap their current licensed spectrum for alternative channel assignments, with the goal of reducing the underlying causes of CMRS – public safety interference and providing additional spectrum for public safety communications.[160] With these incumbents swapping already-occupied channels for appropriate replacement channels, the Commission could modify the relevant licenses under Section 316 without considering the subject frequencies "open" under *Ashbacker*.

*Proposed Use of the 2.1 GHz Band*. In the *Notice*, the Commission claims that the portion of Nextel's proposal involving the swap of certain 700, 800, and 900 MHz channels for 10 MHz of 2.1 GHz MSS spectrum "is somewhat different from other situations involving swaps or exchanges" because "MSS licensees who would lose the use of that 10 MHz of 2 GHz MSS spectrum would not be given comparable spectrum in any other band."[161] The *Notice* seeks comment on whether such a situation represents a channel "exchange" or "swap," and whether it implicates the *Ashbacker* doctrine.[162] The

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159 *MSS Report and Order* ¶ 22.

160 *See White Paper* at 51-52, n.78.

161 *Notice* ¶ 81.

162 *Id*.

*Notice* also asks whether the public interest benefits associated with Nextel's proposal would justify giving Nextel "exclusive rights to use the 2 GHz frequencies" Nextel would receive under its proposal.[163]

The Commission's concern regarding the proposed use of 2.1 GHz spectrum is without basis; the Commission's legal authority to execute this part of the *White Paper* proposal is just as sound as it is with respect to its other components. As an initial matter, contrary to the Commission's suggestion, Nextel's 2.1 GHz proposal would not harm any existing licensee by taking away its assigned spectrum. In particular, incumbent MSS licensees would retain all spectrum currently assigned to them in the 2 GHz band.[164] The 10 MHz assigned to Nextel would come from the 14 MHz of 2 GHz MSS spectrum that is being held in reserve for future expansion of MSS systems. In addition, consistent with the Commission's existing 2 GHz policy, incumbent BAS and FS licensees would be compensated for their relocation to other spectrum bands.[165]

Moreover, the Commission's authority to modify licensees' frequency assignments without considering such frequencies "open" under *Ashbacker* is not limited to the context of channel exchanges. The Commission confirmed this principle just five weeks before releasing the *Notice*:

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163 *Id*.

164 There are currently eight MSS licensees, each of which have been assigned a non-specific seven MHz of spectrum; specific license assignments are made once a licensee's satellite systems become operational. Although these licensees have thus been collectively assigned 56 MHz of spectrum in the 2 GHz band, no licensee has been granted a specific 7 MHz range because none of them has yet launched an operational satellite. *See Third Generation Order*.

165 As explained in the *White Paper* at 56-57, the Commission has already adopted a plan to relocate incumbent 2.1 GHz BAS and FS licensees. *See 2 GHz MSS 2R&O*, 15 FCC Rcd at 12326-27.

> We are not persuaded . . . . that the holding in *Rainbow Broadcasting* is applicable only to situations involving channel swaps. The opinion contains no language indicating that the court intended that its holding . . . be narrowly construed. Rather, in *Rainbow Broadcasting* the court found that the Commission is afforded significant latitude when it exercises its Section 316 authority. Specifically, the court referred to the Commission's authority to utilize Section 316 to expand a licensee's authority, pointing to the legislative history of the 1983 amendment of Section 316. Further, the Commission is not required [under *Ashbacker*] to open all frequencies for competing applications, so long as it provides a reasoned explanation for not doing so.[166]

In particular, once spectrum in a given band has been reallocated (as Nextel has proposed in the 2.1 GHz MSS band),[167] the Commission has authority under Section 316 to substitute that reallocated spectrum for channels currently assigned to existing licensees in another frequency band. The Commission can take this step without

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[166] *MSS Report and Order* ¶ 25 (*citing Rainbow*, 949 F.2d at 409-410). *See also* Applications of Achernar Broadcasting Company, Lindsay Television, *Memorandum Opinion and Order*, 15 FCC Rcd 7808, ¶ 18 (2000) (holding that FCC may modify a construction permit to specify an alternate channel where the substituted channel had not been allotted to the community in question, and stating that "nothing in Section 316 suggests that our authority to modify a construction permit, where the public interest is thereby served, is limited to previously allotted channels.").

[167] It is well established that the Commission has the authority to move forward with the type of reallocation proposed by Nextel.

> There is ample precedent for our reallocation of spectrum in the public interest, even where such reallocation results in the displacement of current users of the spectrum, and it is clear that we have broad discretion to do so. Indeed, the Court of Appeals has recognized our broad discretion to make spectrum allocation and reallocation decisions. . . . We have, in a number of contexts, moved users of spectrum to different bands.

Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service, *Fourth Further Notice of Proposed Rule Making and Third Notice of Inquiry*, 10 FCC Rcd 10540, ¶ 28, n.30 (1995) ("*Digital TV Fourth Further Notice*") (citations omitted).

triggering any *Ashbacker* rights,[168] since *Ashbacker* does not preclude the Commission from promulgating rules that limit eligibility to apply for a license.[169] The Commission has full discretion to implement such policy, as long as such action would, in the judgment of the Commission, promote the public interest, convenience, and necessity.[170] The 2.1 GHz portion of Nextel's proposal clearly satisfies this test, as it is one key part of a larger realignment proposal designed to achieve vital public interest goals, including rectifying CMRS – public safety interference and allocating additional spectrum for critical and interoperable public safety communications services. In fact, Nextel's 2.1 GHz proposal does not even ask the Commission to act to the fullest extent of its Section 316 authority under *Rainbow* (permitting the expansion of a licensee's spectrum), since

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168 *See*, *e.g.*, Amendment of the Commission's Rules to Relocate the Digital Electronic Message Service From the 18 GHz Band to the 24 GHz Band and to Allocate the 24 GHz Band for Fixed Service, *Order*, 12 FCC Rcd 3471 (1997) (relocating DEMS under Section 316 from the 18 GHz band to another band previously allocated to government radionavigation service), *recon. denied*, 13 FCC Rcd 15147 (1998) ("*DEMS Relocation Order*").

169 *See United States v. Storer Broadcasting Co.*, 351 U.S. 192 (1956) (establishing that the Commission's promulgation of rules limiting eligibility to apply for a broadcast license does not violate the applicant's right to a hearing); *Aeronautical Radio, Inc. v. FCC*, 928 F.2d 428, 439 (D.C. Cir. 1991) (establishing that the Commission may reject, without a hearing, applications that do not meet valid eligibility requirements); *Digital TV Fourth Further Notice* ¶ 29 ("We believe that we are not precluded by *Ashbacker* . . . from limiting initial eligibility to incumbent broadcasters"); *MSS Report and Order* ¶¶ 21-29 (modifying Motient's license to allow it to use up to 20 MHz of spectrum in L-band, and rejecting arguments that the subject frequencies must be opened to competing applications under *Ashbacker*).

170 *See*, *e.g.*, *Storer*; *Digital TV Fourth Further Notice* ¶ 29, n. 33 ("Indeed, in a number of other contexts we have concluded that we are not precluded by *Ashbacker* from establishing initial eligibility criteria in the public interest."); Amendment of the Commission's Rules Regarding Modification of FM Broadcast Licenses to Higher Class Co-channel or Adjacent Channels, *Report and Order*, 60 Rad. Reg. 2d (P & F) 114, ¶17 (1986).

those replacement frequencies would leave Nextel with no more spectrum than it holds today.

### B. Nextel's Realignment Proposal is Consistent with Section 309(j)

As the *Notice* tentatively concludes, none of the channel swaps proposed in Nextel's 800 MHz realignment plan or any similar plan would implicate the competitive bidding procedures of Section 309(j).[171] The allocation of additional spectrum and spectrum swaps involving public safety licensees would not trigger Section 309(j)'s requirements, because public safety entities are exempt from the Act's competitive bidding requirements.[172] Moreover, the spectrum swaps involving private radio and commercial licensees would not implicate Section 309(j), because the statute's competitive bidding requirements only apply to the award of "initial" spectrum licenses.[173] The private radio and commercial licensees that occupy the channels swapped under Nextel's proposal have long since been awarded their initial spectrum licenses for such channels. Instead of applying for "initial license[s]" under Section 309(j)(1), these licensees would simply receive licenses for replacement spectrum in exchange for the licenses surrendered as part of this realignment. Likewise, Section 309(j) would not be implicated by Nextel's proposal to reallocate and assign 10 MHz of spectrum in the 2.1 GHz band for terrestrial land mobile purposes. As explained above, Nextel would not receive any initial license to use this spectrum, but rather would have its existing licenses modified under Section 316 through a variety of channel swaps.

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171 *Notice* ¶ 82.

172 47 U.S.C. § 309(j)(2)(A).

173 47 U.S.C. § 309(j)(1) (generally requiring competitive bidding when "mutually exclusive applications are accepted for any initial license or construction permit").

This analysis is consistent with other cases in which the Commission has relocated wireless licensees from one frequency block to another comparable block without triggering Section 309(j)'s competitive bidding requirements. For instance, the Commission in 1998 held that Section 309(j) requirements were not applicable to the relocation of digital electronic message service ("DEMS") licensees:

> Because its actions [to relocate DEMS licensees to new spectrum] were license modifications under authority of Section 316, and did not involve the grant of initial licenses, the Commission was not authorized under Section 309(j) of the Act to use auction procedures. Those auction procedures may only be used to select from among mutually exclusive applications for initial licenses. Accordingly, petitioners' reliance on Section 309(j) of the Act is misplaced.[174]

Like the relocated DEMS licensees, the incumbents affected by the Nextel's proposal would be relocated pursuant to the Commission's Section 316 modification authority, and not pursuant to Section 309(j).

## VIII. THE 900 MHz BAND LAND MOBILE FREQUENCIES SHOULD BE MADE AVAILABLE FOR COMMERCIAL USE IF THEY ARE NOT USED AS REPLACMENT SPECTRUM IN AN 800 MHz REALIGNMENT

The Commission has sought comment in its *Balanced Budget Act* proceeding on whether it should permit CMRS use of Private Land Mobile Radio Service ("PLMRS") frequencies in the 900 MHz band.[175] The *Notice* in this proceeding also seeks comment on this issue "in light of Nextel's proposal to accommodate displaced 800 MHz Business and Industrial/Land Transportation licensees in the 900 MHz land mobile band."[176]

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174 *DEMS Relocation Order*, ¶ 59 (footnotes omitted).

175 *BBA R&O and FNPRM,* ¶¶ 143-144.

176 *Notice* ¶ 86.

Nextel's *White Paper* proposal contemplates reallocating four of the five MHz at 900 MHz allocated for CMRS service for co-primary CMRS and private PLMRS systems. The 900 MHz band is currently composed of five MHz of B/ILT spectrum and five MHz of SMR spectrum interleaved among each other.[177] Relocating 800 MHz B/ILT licensees to this spectrum would give them a new home adjacent to like systems.

If, on the other hand, the Commission does not use the 900 MHz band Land Mobile frequencies as replacement spectrum, it should permit CMRS use of the PLMRS frequencies in this band as proposed in the *Balanced Budget Act* proceeding. The majority of parties commenting on this issue supported this proposal.[178] Moreover, as the Commission has noted, permitting CMRS use would be consistent with the Commission's decision to permit such use of PLMRS frequencies in the 800 MHz band.[179]

## VIII. CONCLUSION

With the submission of the *White Paper* in November 2001, Nextel sought an effective, long-term answer to the two critical problems facing public safety communications today in the United States: (i) the continuing interference to public safety transmissions from CMRS operators in the 800 MHz band, and (ii) a well-documented, severe shortage of public safety spectrum. The *Notice* is an important step

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[177] B/ILT and SMR spectrum at 900 MHz are interleaved on a channel block rather than a channel-by-channel basis as are they are at 800 MHz.

[178] *See* Comments of Nextel, WT Docket No. 99-87 (filed Mar. 5, 2001); Reply Comments of Nextel, WT Docket No. 99-87 (filed Apr. 2, 2001) (summarizing positions of the parties).

[179] *BBA R&O and FNPRM*, 15 FCC Rcd at 22760-22761, ¶¶ 110-111.

toward a solution, but, once interested parties have filed their comments and developed the record, it is essential that the Commission move decisively to adopt the rules and policies necessary to further the nation's Homeland Security mission. In particular, the Commission must recognize that the only viable solution in this proceeding is the fundamental realignment of the 800 MHz band, the heart of the U.S. public safety radio system. Only by allocating additional 800 MHz spectrum to public safety use, creating contiguous spectrum blocks for 800 MHz operators, and relocating incumbent licensees

such as Nextel to appropriate replacement spectrum, can the Commission protect and advance the nation's vital public safety communications system.

Respectfully submitted,

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