

BEFORE THE
Federal Communications Commission
WASHINGTON, D.C.

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)

Amendment of Part 2 of the Commission's Rules)
to Allocate Spectrum Below 3 GHz for Mobile and)
Fixed Services to Support Introduction of New)
Advanced Wireless Services, including Third)
Generation Wireless Systems)

ET Docket No. 00-258

Petition for Rulemaking of the Cellular)
Telecommunications Industry Association)
Concerning Implementation of WRC-2000:)
Review of Spectrum and Regulatory Requirements)
for IMT-2000)

RM-9920

Amendment of the U.S. Table of Frequency)
Allocations to Designate the 2500-2520/2670-)
2690 MHz Frequency Bands for the Mobile-)
Satellite Service)

RM-9911

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

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

The Cellular Telecommunications & Internet Association ("CTIA")¹ hereby submits its
Comments in response to the above captioned proceeding.²

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

² See Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems Petition for Rulemaking of the Cellular Telecommunications Industry Association Concerning Implementation of WRC-2000: Review of Spectrum and Regulatory Requirements for IMT-2000 Amendment of the U.S. Table of Frequency Allocations to Designate the 2500-2520/2670-2690 MHz Frequency Bands for the Mobile-Satellite Service, ET Docket No. 00-258, RM-9920,

I. INTRODUCTION AND SUMMARY

Over the last several years, the mobile wireless industry has experienced rapid growth, with the number of wireless users more than doubling since 1996, and currently reaching over 100 million subscribers. Advanced wireless services and third generation (“3G”) services present the next step in the continuing growth and development of the mobile wireless industry. Consumer demand for advanced wireless services is expected to experience a similar pattern of rapid growth, and it is estimated that by 2010, there will be over 600 million 3G subscribers worldwide.³ The development of advanced wireless services will spur new advances in voice, data and interactive services as well as improved technologies to provide these services. These new services can only be offered to U.S. consumers, however, if domestic carriers have access to additional spectrum resources.

There is no single definition for advanced wireless services or 3G, nor should the Commission endeavor to create one. What is clear, however, is that carriers will require additional spectrum and continued regulatory flexibility to offer consumer-oriented wireless applications in the future. The terms “advanced wireless and 3G services” encompass still developing concepts for services and technologies that reflect the convergence of the Internet and mobile networks, and the need of many consumers to access information efficiently from anywhere in the world.⁴ Currently, such services and applications are expected to be as diverse as location-based, business-to-consumer, office extension and monitoring services, and mobile

RM-9911, *Notice of Proposed Rulemaking and Order*, FCC 00-455 (rel. Jan. 5, 2001) (“Notice”).

³ UMTS Forum, Enabling UMTS/Third Generation Services and Applications, Report No. 11, Figure 1 (Oct. 2000).

⁴ Id. at 6.

commerce, multimedia, unified messaging, voice over IP and interactive broadcasting applications.⁵

It is estimated that a substantial amount of additional spectrum will need to be allocated to ensure that carriers have access to sufficient capacity to offer advanced wireless services competitively. The rapid growth in existing Internet and mobile data services alone necessitates an additional allocation of spectrum, given that such demand is unlikely to be met simply through more efficient use of already allocated spectrum.⁶ As the Commission acknowledged in the Notice, “[a]lthough the anticipated increased demand for new data services, as well as expected continued increases in mobile telephone service, may be met in part by the introduction of new technologies and continued spectrum management policies, we recognize that additional spectrum may be needed to meet these new and increased demands.”⁷

In this inquiry into advanced wireless services, the Commission should evaluate the options for making additional spectrum available for advanced wireless services in conjunction with other ongoing wireless proceedings, such as the Spectrum Cap proceeding and the Secondary Markets review. The answer to the problem of allocating sufficient spectrum to support advanced wireless services lies not just in the proposals present in the Notice. The Commission should recognize that the solution to the advanced wireless and 3G services spectrum problem has two parts: (1) ensuring that currently available spectrum is put to its highest and best use; and (2) allocating additional spectrum for advanced wireless services.

⁵ Id. at 13.

⁶ Notice, ¶ 12.

⁷ Id.

II. THE COMMISSION MUST ALLOW CURRENTLY ALLOCATED SPECTRUM TO BE PUT TO ITS HIGHEST AND BEST USE.

As the Commission continues to examine spectrum that may be suitable for advanced wireless services, it must ensure that currently allocated CMRS spectrum is put to its highest and best use. By lifting unnecessary regulatory restrictions on CMRS spectrum, the Commission will remove obstacles to the use of existing spectrum allocations for advanced wireless services. At present, the Commission should focus on two pending proceedings that would permit carriers to make the most efficient and socially beneficial uses of existing CMRS spectrum allocations - the Spectrum Cap proceeding and the Secondary Markets proceeding.

It is widely accepted that CMRS carriers will require significant additional spectrum to deploy advanced wireless services. Under the Commission's rules, however, no CMRS licensee may have an attributable interest in more than 45 MHz (55 MHz in rural areas) of the 180 MHz of CMRS regulated spectrum.⁸ Thus, the 45 MHz spectrum cap serves as a clear and present barrier to the deployment of advanced wireless services. Accordingly, the Commission must eliminate the spectrum cap as an initial step towards promoting development of advanced wireless services, and more efficient use of CMRS spectrum generally.

In the Spectrum Cap Review NPRM, the Commission notes that "relative to demand, there is a limited amount of spectrum available that, as a practical matter, is suitable for the provision of broadband CMRS within the foreseeable future."⁹ In a competitive market, such as CMRS, the spectrum cap prevents carriers from responding to market demand for bandwidth

⁸ 47 C.F.R. § 20.6(a).

⁹ 2000 Biennial Regulatory Review Spectrum Aggregation Limits for Commercial Mobile Radio Services, WT Docket No. 01-14, *Notice of Proposed Rulemaking*, FCC 01-28 (rel. Jan. 23, 2001) ("Spectrum Cap NPRM").

intensive services because they do not have sufficient access to necessary inputs, namely spectrum.¹⁰ Moreover, there is no incentive to develop such services and technologies because carriers are not permitted to obtain sufficient spectrum to deploy these services. To ensure that CMRS carriers make the most efficient use of existing spectrum allocations and meet the anticipated demands of consumers for advanced wireless services, the Commission must eliminate the artificial regulatory barrier created by the 45 MHz spectrum cap.

Furthermore, eliminating the spectrum cap is a significant interim measure that will encourage and allow efficient use of currently allocated spectrum while the Commission continues to work towards allocating and licensing additional spectrum for advanced wireless services. As the Commission noted in the context of its spectrum cap waiver process, merely managing existing allocations of spectrum more efficiently will not present a comprehensive solution to the advanced wireless services spectrum shortage, but such changes in spectrum management policy may allow carriers to begin to provide advanced wireless services until additional spectrum can be allocated.¹¹ By removing the spectrum cap, the Commission will

¹⁰ See Gregory L. Rosston & Jeffrey S. Steinberg, Using Market-Based Spectrum Policy to Promote the Public Interest, 50 FED. COMM. L.J. 7, 98 (1997) (“Market-Based Spectrum Policy”). A spectrum cap is a useful regulatory tool in markets that are not yet fully competitive. In the context of the competitive CMRS market, therefore, the spectrum cap serves only to prevent the normal operation of market forces. Thus, rather than promoting the development of competitive advanced wireless services, the spectrum cap presents a barrier to CMRS carriers that require additional spectrum to provide such services. Id.

¹¹ Spectrum Cap NPRM, ¶ 7 (noting that the waiver process “could be used to meet the spectrum requirements for third-generation (3G) and other advanced wireless services until we could allocate additional spectrum for the next generation applications.”).

allow carriers to acquire additional spectrum and thereby ensure that consumer-driven advanced wireless services are deployed in a timely manner.¹²

The Commission has begun to recognize the impediment that the spectrum cap presents to advanced wireless services deployment, since it has already excluded certain spectrum from the spectrum cap in an effort to make more spectrum available for advanced wireless services. For example, in order to “encourage entrepreneurial efforts to develop new technologies and services, while helping to ensure the most efficient use of the spectrum,” the Commission determined that any spectrum that carriers acquire in the 700 MHz band auction will not be applied to current spectrum aggregation levels.¹³ This decision was based upon the goal of both encouraging “entry by new competitors as well as increas[ing] the availability of significant spectrum for the introduction of 3G services over the medium to long term.”¹⁴ These goals and policy considerations are similarly relevant to the Commission’s deliberations to entirely eliminate the spectrum cap, for all CMRS spectrum, not just newly allocated spectrum. Removal of the spectrum cap can significantly increase the availability of spectrum for advanced wireless services pending new allocations, particularly if more than 45 MHz is needed for efficient operation.

Removing regulatory barriers to the leasing of spectrum rights is also a significant step in allowing more flexible use of spectrum and thereby ensuring that existing allocations of CMRS

¹² The Commission, of course, will retain its jurisdiction over license transfers and can address competitive based concerns under the Section 310 public interest standard.

¹³ Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission’s Rules, WT Docket No. 99-168, *First Report and Order*, 15 FCC Rcd 476, ¶ 49 (2000) (“700 MHz Service Rules”).

¹⁴ Spectrum Cap NPRM, ¶ 28.

spectrum are put to their highest and best use. Under the Commission's rules, certain spectrum leasing arrangements are precluded, and others require costly and time consuming Commission approvals.¹⁵ These rules typically prevent carriers from easily transferring spectrum to carriers with higher valued use, including carriers that intend to use spectrum for advanced wireless services. Thus, both the spectrum cap and the Commission's rules on spectrum leasing prevent market forces from deriving the most efficient use from existing CMRS spectrum allocations. The Commission should recognize, as it did in the Secondary Markets NPRM, that "permitting wider use of spectrum leasing would promote the public interest by increasing efficiency of spectrum use," and also would allow carriers to use additional spectrum to deploy advanced wireless services.¹⁶

Permitting wireless licensees to participate in voluntary secondary market arrangements for their spectrum will encourage those carriers who are currently not fully utilizing their spectrum to lease unused resources to third parties in need of additional spectrum to deploy new services. Consistent with the Commission's Policy Statement on promoting more efficient use of spectrum, spectrum leasing arrangements would thus make "more effective use of spectrum that is currently assigned to existing licensees. This would provide opportunities for the development and operation of new services and competition."¹⁷ By removing regulatory barriers to spectrum leasing, therefore, the Commission effectively makes additional spectrum available to CMRS

¹⁵ See generally, Intermountain Microwave, *Public Notice*, 12 FCC 2d 559 (1963).

¹⁶ Promoting Efficient Use of Spectrum Through Elimination of Business to the Development of Secondary Markets, WT Docket No. 00-230, *Notice of Proposed Rulemaking*, FCC 00-402, ¶ 18 (rel. Nov. 2000) ("Secondary Markets NPRM").

¹⁷ Principles for Promoting the Efficient Use of Spectrum by Encouraging the Development of Secondary Markets, *Policy Statement*, FCC 00-401, ¶ 12 (Dec. 1, 2000).

carriers that previously could not utilize such spectrum. Adopting a liberal spectrum leasing policy, in combination with elimination of the 45 MHz spectrum cap, will prevent valuable spectrum from lying fallow while the Commission continues its efforts to allocate additional spectrum to support advanced wireless services.

III. THE COMMISSION MUST ALSO ALLOCATE ADDITIONAL SPECTRUM FOR ADVANCED WIRELESS SERVICES.

Lifting the spectrum cap and allowing carriers to participate in voluntary secondary market arrangements for their spectrum will promote the most efficient use of already allocated CMRS spectrum. The Commission must also recognize, however, that existing spectrum allocations are insufficient to meet the anticipated consumer demand for advanced wireless services and additional spectrum must be allocated to CMRS to meet those demands. The Commission should use this proceeding as a starting point for identifying spectrum that can be reallocated for advanced wireless services, and continue its inquiry as the advanced wireless services market and the amount of spectrum needed to support the market becomes more defined.

A. Additional Spectrum Must Be Reallocated For Advanced Wireless Services.

In the Notice, the Commission identifies several bands of spectrum that may be successfully reallocated for “a flexible allocation for the provision of advanced wireless services.”¹⁸ As detailed in the Notice and the NTIA Report, these bands are currently occupied by Commission licensees providing other services, or by the government.¹⁹ The Commission

¹⁸ Notice, ¶¶ 27, 39-55.

¹⁹ Id. ¶¶ 40, 45, 51, 58; NTIA, Plan to Select Spectrum for Third Generation (3G) Wireless Systems in the United States, available at <http://www.ntia.doz.utiahome/threeg/3g-plan14.htm> (rel. Oct. 20, 2000).

should continue to examine whether these bands, and those identified in the NTIA Report, can provide a source of additional spectrum. However, the inquiry should not be limited to those bands already identified. The Commission also must continue its efforts in conjunction with the Executive Branch to determine whether any other sources of spectrum, consistent with those identified at WRC-2000, may be suitable for reallocation for advanced wireless services.

The Commission should strive to allocate appropriate spectrum to allow the market to operate both efficiently and competitively.²⁰ The difficulty, of course, is that while it is clear that CMRS carriers will need more spectrum to provide advanced wireless services, the amount of spectrum necessary, to date, is unclear. The Commission, therefore, should allocate sufficient spectrum to maintain the balance between efficiency and competition currently present in the CMRS market. Thus, spectrum must be allocated so that there is enough spectrum available for carriers to provide advanced wireless services on a minimum efficient scale. If CMRS carriers have access to sufficient additional spectrum, the Commission will be able to promote the development of new technologies and services while ensuring that competition continues to flourish in the CMRS industry.

B. The Commission Must Continue Its Efforts To Relocate Incumbent Licensees And Clear The 700 MHz Band.

In 1997, Congress reallocated the 746-764 MHz and 776-794 MHz bands for the provision of fixed and mobile wireless services.²¹ Since then, the Commission has adopted

²⁰ See Market-Based Spectrum Policy, at 93 (noting that the Commission should “create the conditions under which market forces can most effectively work... Thus, in allocating spectrum, the Commission should strive to ensure that ample spectrum is available for services that the public demands.”).

²¹ Section 337(a) of the Communications Act, 47 U.S.C. § 337(a), as amended by § 3004 of the Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251 (1997).

service rules for this spectrum that are intended to allow the bands to “be used to provide a wide range of advanced wireless services.”²² The Commission specifically structured the 700 MHz band service rules to provide additional spectrum for the provision of advanced wireless services, noting that “[r]apidly expanding demand for wireless voice and data services, as well as projections of international demand and the increased spectrum necessary to support...next generation technologies, confirm that these bands should be structured to enable their efficient and intensive use for wireless services and technologies.”²³ Accordingly, the Commission must continue its efforts to relocate incumbent 700 MHz broadcast licensees and ensure that this band is available to CMRS carriers, as mandated by Congress.

The current status of the 700 MHz band is a classic example of what economists commonly term the “holdout problem.” Simply stated, when incumbents are given an extended or unlimited period of time to relocate, they are able to exercise stronger bargaining power in negotiating the relocation. This imposes undue costs on society, high transaction costs and delays in the provision of new services. In the 700 MHz band, broadcast licensees may continue to operate until the end of 2006, when the transition to digital television (“DTV”) is scheduled to be completed.²⁴ Otherwise, wireless carriers and incumbents may negotiate voluntary

²² 700 MHz Service Rules, ¶ 1.

²³ Id. ¶ 2.

²⁴ 47 U.S.C. § 309(j)(14). Because the 2006 deadline is only triggered if 85 percent of all television sets are DTV-capable, there is substantial doubt that the deadline will be met. See Powell: FCC Must Be More Restrictive, Restrained as Convergence Issues Call, Comm. Alert (BNA Interview) DER No. 20, at 12 (Jan. 30, 2001) (observing that the 2006 deadline “is extraordinarily aggressive and probably unlikely.”).

agreements to complete the transition to DTV sooner, or compensate incumbents for relocation.²⁵ This extended right to stay in the 700 MHz band (even perhaps beyond 2006) will likely create a classic holdout problem. Thus, “[a]n indefinite right to stay gives incumbents too much power in negotiating large premiums for relocating or terminating. Holdout problems can lead to large bargaining costs.”²⁶ Moreover, the public interest will not be served by allowing broadcast licensees to use their status as incumbent licensees to delay indefinitely the efficient use of the 700 MHz band for advanced services or to inflict disproportionate costs on 700 MHz band licensees and their subscribers.

C. The Commission Must Continue To Apply Use Restrictions To Prevent Interference Between Services As An Unintended Consequence Of Relocation and Sharing.

It is a primary function of the Commission to ensure that licensees and their subscribers are not subject to interference. Although the Commission should eliminate regulatory barriers and relocate certain licensees to allow carriers to use spectrum more efficiently, the Commission must also retain necessary restrictions to guard against interference problems and interservice sharing problems. While flexible spectrum policies allow carriers to put spectrum to its best and highest use, continued application of the Commission’s rules governing harmful interference is

²⁵ See Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission’s Rules, WT Docket No. 99-168, *Third Report and Order*, FCC 01-25 ¶¶ 13, 56 (rel. Jan. 23, 2001). The Commission also declined to adopt cost-sharing or cost-recovery rules or guidelines. *Id.* ¶¶ 9, 50. The decision to allow voluntary relocation agreements and to allow the market to determine which carriers will bear relocation costs increases incumbents’ bargaining power and, therefore, the likelihood that new 700 MHz band licensees will be forced to delay use of the band due to a holdout problem.

²⁶ The Law and Economics of Property Rights to Radio Spectrum: A Conference Sponsored by the Program on Telecommunications Policy, Institute of Governmental Affairs, University of California, Davis: Efficient Relocation of Spectrum Incumbents, 41 J.L. & ECON. 647, 673 (1998).

necessary to ensure the viability of that spectrum. Such restrictions serve important public interests, and will minimize post-licensing interference problems that can be costly and complicated to resolve.

Parties seeking to introduce new uses and technologies should be required to follow the customary procedures, typically petitions for rulemaking, waiver requests or requests for declaratory rulings. Application of these procedures will ensure that existing operators are given the opportunity to comment on or, if necessary, oppose innovations that produce harmful externalities in the form of interference. Licensees must have appropriate assurance from the Commission that licensees' spectrum will not be subject to interference by new, non-complying uses. This is critically important if the major investments required to produce advanced wireless services are to be undertaken.

IV. CONCLUSION

For the foregoing reasons, CTIA respectfully requests that the Commission eliminate unnecessary regulatory barriers to efficient spectrum utilization while it allocates additional spectrum to advanced wireless services.

Respectfully submitted,

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