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Before the

Federal Communications Commission

Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of	)	
	)	
Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules	)))	WT Docket No. 99-168

To: The Commission

COMMENTS OF AIRTOUCH COMMUNICATIONS, INC.

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SUMMARY

In this proceeding, the Commission has a unique opportunity to establish service rules which will facilitate the provision of 3G mobile telephony service. Indeed the technical characteristics of the spectrum and the timing of its availability (because of DTV transition issues) make it singularly well-suited for 3G and transitional mobile telephony needs. This spectrum use is consistent with the Commission's statutory obligations and, in conjunction with the proposed flexible technical and operational requirements, will promote sound market-driven spectrum management policies.

Licensing this spectrum solely to terrestrial mobile services will facilitate the deployment of viable and needed commercial services. The Communications Act limits the scope of the Commission's flexible use authority and imposes requirements on spectrum auctions. These statutory mandates are best served by such licensing which will promote service deployment and efficient spectrum usage, while minimizing the potential for harmful interference between licensees.

Growing demand for mobile voice and data services requires additional CMRS spectrum. The proximity of this spectrum to existing CMRS services, and its location below 3 GHz, make it particularly well-suited for CMRS licensing as a technical matter; this will also promote efficiencies in network deployment and handset and equipment development that will benefit consumers. Due to the propagation characteristics of spectrum above the 2-3 GHz band, alternative spectrum for mobile uses is far more limited than for other services.

Significant interference issues exist between mobile and broadcast license operations such that the Commission's proposal for *new* mixed spectrum use will result in inefficient spectrum use and undermine the reliability of terrestrial mobile service in these bands. While incumbent broadcast operations will be protected during the DTV transition period, the possibility of *new* broadcast operations will deter potential mobile service providers from participating in the auction and devalue the licenses to be auctioned. Imposing sharing requirements on mobile and new broadcast operators would require segmentation of the spectrum and further limit the spectrum available to mobile services, adversely affecting service deployment to the public. Again, the service rules should be limited to mobile terrestrial use for this spectrum.

The Commission should license the spectrum in two 18 MHz blocks per service area, with each license consisting of 2 x 9 MHz pairs for two-way operations. This band plan will enable licensees to provide new wireless services, facilitating the transition to 3G. Such block sizes will also help militate the obstacles to reliable service deployment posed by the existence of incumbent analog broadcast operations during the DTV transition period.

The Commission should authorize service over large regional or national service areas. Such licensing will promote important efficiencies and service benefits. Larger service areas simplify the process of interference coordination and minimize costs of disputes, promote implementation of wide-area services and minimize roaming costs for consumers. Such service

areas will also enable a CMRS carrier to effectively compete with the numerous carriers with either large regional or nationwide footprints. There should be no limits on the number of licenses for which a licensee may bid at auction; this would arbitrarily limit a carrier's participation at auction and prevent spectrum from being licensed to the party that values it most, to the detriment of service options to consumers.

The Commission should allow maximum flexibility in ownership and mobile operational requirements. AirTouch generally supports the Commission's flexible approach to these requirements, provided that the spectrum is licensed solely for common carrier or private terrestrial mobile use. AirTouch also supports the Commission's approach to foreign ownership requirements.

This spectrum should not be applied to the 45 MHz spectrum cap. This would adversely affect the value of the licenses and arbitrarily preclude otherwise able licensees from utilizing the spectrum as the market demands; it will also undermine carriers' ability to transition to important 3G services. Antitrust requirements provide sufficient protection in this area. Further, CMRS licensees will be unable to use the full spectrum amounts won at auction for some period of time, due to the retained analog broadcast operations during the DTV transition period.

The Commission's proposed flexible performance and license renewal requirements are generally appropriate. Similarly, AirTouch generally supports the Commission's flexible approach to operating rules. The Commission's Part 20 forbearance policy, as well as other CMRS-related forbearance decisions, should apply to CMRS service in this spectrum.

Technical rules should reflect the flexibility of the current cellular and broadband PCS rules. PCS and cellular licensees have successfully used the field strength approach for in-band interference; this should apply for CMRS operations in this spectrum. Similarly, cellular and PCS EIRP limits and power attenuation rules are appropriate for CMRS operations herein. Again, broadcast licensees operating at full power raise significant interference issues and new spectrum licensing on the bands should therefore be limited to terrestrial mobile services. Finally, interference with GNSS operations at Channels 65-67 will be avoided under AirTouch's proposed band plan.

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To: The Commission

COMMENTS OF AIRTOUCH COMMUNICATIONS, INC.

AirTouch Communications, Inc. ("AirTouch"), hereby files comments in response to the *Notice of Proposed Rulemaking* in the above-captioned proceeding.[1] For the reasons discussed herein, the Commission should promulgate service rules for the 746-764 MHz and 776-794 MHz bands to promote the deployment and viability of needed new terrestrial commercial mobile radio services.

INTRODUCTION

Pursuant to the Balanced Budget Act of 1997 ("1997 Act"),[2] the Commission has reallocated the 746-764 MHz and 776-794 MHz bands for commercial services, including fixed, mobile and broadcasting.[3] The Commission now seeks comment on technical and service rules

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[1] *In the Matter of Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, Notice of Proposed Rulemaking*, WT Docket No. 99-168, FCC 99-97 (rel. June 3, 1999) ("*NPRM*").

[2] Balanced Budget Act of 1997, Pub. L. No. 105-33, 111 Stat. 251 (1997).

[3] *Reallocation of Television Channels 60-69, the 746-806 MHz Band, Report and Order*, 12 FCC Rcd. 22953 (1998) ("*Reallocation Order*").

to govern the services under this broad allocation, noting that while this allocation permits a range of services, "the specific service rules will determine whether and to what extent specific services can or will be licensed."[4] The Commission is not obligated to license this spectrum for all services, and must first determine which services to be offered over this spectrum will best serve the public interest. As the Commission noted, "depending on the record developed in response to issues described below, [it] may or may not establish rules that enable the full range of services included in the Table."[5]

In fact, AirTouch believes that the record developed in this proceeding will support new licensing on this spectrum solely for terrestrial mobile services. As discussed herein, such licensing is consistent with both the Commission's statutory obligations and its policy of promoting market-driven spectrum management. The Commission has defined "flexible use" as "authorizing a wide variety of services bounded only by international allocations."[6] The Commission must not, however, mistake "flexible use" for "unbridled use" of this spectrum in promulgating service rules herein. After all, "[a]n authorization to use spectrum is of limited value without an expectation that one's legitimate use of the spectrum will be free from interference by others."[7]

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[4] *NPRM* ¶ 9 n.18.

[5] *Id.* ¶ 5.

[6] *Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Services, Report and Order,* 12 FCC Rcd. 10785, 10798 ¶ 29 (1997) ("*WCS Report and Order*"); *Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Services, Notice of Proposed Rulemaking*, 11 FCC Rcd. 21713, 21719 ¶ 9 (1996).

[7] Rosston and Steinberg, *Using Market-Based Spectrum Policy to Promote the Public Interest*, 50 FED. COMM. L.J. 99, 102 (1997).

The Commission has recognized that the appropriate flexible use policy will vary on a case-by-case basis.[8] In this regard, even the Commission's limited experience with flexible use underscores the need to exercise discretion in making service determinations for allocated spectrum.[9] Furthermore, there are other "dimensions" of flexible use which should be considered independent of service flexibility: *e.g.* technical flexibility, whereby users "have broad freedom to choose the technologies and equipment that they will use to provide services;" flexibility to determine the amount of spectrum they occupy and the geographic area they serve; and implementation flexibility, whereby licensees have flexibility in the rate at which spectrum is used and networks deployed.[10] As demonstrated herein, these other flexible use principles are well-served by AirTouch's proposed service approach.

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[8] Thus, the Commission has cautioned that:

> [O]ur decision in this instance to adopt a broadly defined service for this [WCS] spectrum should not be interpreted as a finding on the merits of flexibility as general allocation policy or prejudging the merits of flexibility in any other proceeding before us. Rather, our decision here is based on the totality of the circumstances and facts particular to this proceeding, not the least of which is the short time mandated by Congress to bring this spectrum to auction.

WCS Report and Order, 12 FCC Rcd. at 10798 ¶ 27. The Commission also determined that, for the Part 27 spectrum at issue at that time, there was "no clear basis in the current record to prefer some uses over others." *Id.* As discussed below, however, such a basis exists for the 746-764 MHz and 776-794 MHz bands at issue herein.

[9] In the GWCS proceeding, for example, which the Commission cited in support of its Part 27 flexible use policy, the Commission expressly excluded "many potential sources of unacceptable interference by barring use of GWCS for Broadcast services, Radiolocation services, and Satellite services." *See Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, Second Report and Order,* 11 FCC Rcd. 624, 633 ¶ 18 (1995); *WCS Report and Order,* 12 FCC Rcd. at 10799 ¶ 99 n.68. In this regard, AirTouch believes that the ambiguity in the service rules for WCS adversely affected valuation of the licenses and subsequent service deployment on these frequencies.

[10] *See* Rosston and Steinberg, 50 FED. COMM. L.J. at 99-101.

In short, it is not necessary for the Commission to authorize every conceivable use of this spectrum in order to promote a flexible, market-based approach to spectrum management. The technical characteristics of this spectrum and the timing of its availability make it uniquely suited for 3G mobile telephony and transitional voice needs. As discussed herein, given the demand for second- and third-generation mobile wireless services, certain difficulties inherent in sharing spectrum between broadcast and mobile services, and the location of this spectrum, licensing the 746-764 MHz and 776-794 MHz bands for terrestrial mobile use will best serve the public interest.

DISCUSSION

I. THE COMMISSION SHOULD LICENSE THE SPECTRUM SOLELY TO TERRESTRIAL MOBILE SERVICES TO MEET CONSUMER DEMAND AND TO FACILITATE THE DEPLOYMENT OF NEEDED COMMERCIAL SERVICES

The Commission seeks comment on whether service rules should permit a licensee to use this spectrum for any use permitted within the United States Table of Frequency Allocations in Part 2 of the rules, including fixed, mobile and broadcasting services.[11] While the Commission has tentatively concluded that such flexible commercial use will serve the public interest, it also cautions that this determination must meet important statutory criteria under the terms of the 1997 Act. As AirTouch demonstrates below, the Commission's caveat is well-founded because, in AirTouch's view, mixed mobile and *new* broadcast licensee use of this auctioned spectrum would not meet statutory requirements and this proposal should be rejected.[12]

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[11] *NPRM* ¶ 4.

[12] As discussed herein, AirTouch does *not* object to shared use of the new spectrum with broadcast incumbents, pending transition to digital operations, and consistent with the 1997 Act. However, AirTouch strongly urges the Commission to preclude *new* broadcast operations on the

(continued...)

A. The Communications Act Clearly Delineates the Limits of "Flexible Use"

The Communications Act, as amended by the 1997 Act, authorizes the Commission to allocate and license spectrum for flexible use only if it finds that flexible use (1) would be in the public interest, (2) would not deter investment in communications services and systems, or technology development, and (3) would not result in harmful interference among users.[13] In enacting these requirements, Congress expressly determined in the 1997 Act's legislative history that "unlimited flexibility can introduce a level of entrepreneurial uncertainty that could ultimately retard the development of new services and technology."[14] As discussed *infra*, none of these three conditions are satisfied by the Commission's proposal, and authorizing use of this spectrum for new mixed (mobile and broadcast) uses would contravene Congress' flexible use mandate and would be contrary to the public interest.

Furthermore, any auction of this spectrum must meet various statutory criteria relating to the development and rapid deployment of new technologies, products, and services; promoting economic opportunity and competition; recovery for the public of a portion of the value of the public spectrum resource made available for commercial use; efficient and intensive use of the electromagnetic spectrum; and the scheduling of auctions to ensure that interested parties have a sufficient time to develop business plans, assess market conditions, and evaluate the availability of equipment for the relevant services.[15] The Commission's efforts to comply

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[12] (...continued)
746-764 MHz and 776-794 MHz bands.

[13] 47 U.S.C. § 303(y)(2).

[14] *See* H. Conf. Rep. No. 105-217, at 581 (1997), *reprinted at* 1997 U.S.C.C.A.N. 201.

[15] 47 U.S.C. § 309(j)(3).

with these statutory requirements for the auction process will be adversely affected if the Commission licenses this spectrum for both new broadcast and non-broadcast use.

B. Numerous Factors Favor Terrestrial CMRS Licensing for the 746-764 MHz and 776-794 MHz Bands

Terrestrial mobile use of this spectrum will promote the public interest for a number of reasons. The demand for evolving second- and third-generation voice- and data-based mobile services, the anticipated spectrum allocations needed to accommodate such demand, and the technical characteristics of the 746-764 MHz and 776-794 MHz bands, demonstrate that the public interest is served by authorizing terrestrial mobile use of this spectrum. By contrast, the Commission has guaranteed continued broadcast use in other bands pursuant to the DTV transition and thus there is no need for new broadcast use of this particular spectrum.[16]

1. Demand Forecasts for Second- and Third-Generation Wireless Services Warrant the Licensing of Additional CMRS Spectrum

Licensing this spectrum for terrestrial mobile use will facilitate the continued evolution of CMRS applications from second-generation voice to high speed 3G services. As AirTouch discussed last summer in response to the Commission's inquiry regarding 3G services, while it is difficult to precisely estimate long-term spectrum requirements, an additional allocation on the order of at least 160 MHz is clearly needed to accommodate demand for 3G services.[17] Licensing this spectrum for terrestrial mobile use will help the Commission to begin

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[16] *See Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service, Sixth Report and Order*, 12 FCC Rcd 14588, 14624-628 ¶¶ 76-84 (1997).

[17] At its March 1999 meeting, ITU Task Group 8/1 adopted a report estimating spectrum of requirements for IMT-2000 to be 160 MHz of additional spectrum. Revision 3 to Document B-1/TEMP/164-E, *Proposed Text for Section 1.1 of draft CPM Report to WRC-2000*, March 18, 1999; *see also* PCIA, *Market Demand Forecast for Terrestrial Third Generation (IMT-2000) Services*, May 1998 ("PCIA 1998 Study"); *U.S. Department of Commerce, National*

(continued...)

to fulfill its commitment to ensure that mobile service providers "are true competitors in the consumer market for broadband" through the allocation, auction and licensing process.[18]

Market demand for wireless 3G services is expected to grow rapidly, as mobile data applications become increasingly important to CMRS consumers. For example, the market for users of high speed data applications is expected to increase from 10 million to 70 million users by 2005. Similarly, the U.S. market for Internet access is expected to increase from 45 million to over 110 million users in the same time frame.[19] Indeed, AirTouch believes that the demand for advanced mobile services will correlate with the projected demand for such services in the landline context. As the Commission reported in 1998, "[s]ome analysts believe that the market for mobile wireless data is beginning to grow in part due to the widespread appeal of the Internet, the increased use of e-mail and the standardization of equipment and software" and analysts project total mobile wireless data business subscribers to exceed 10 million by 2001-2002.[20] More recently, the Commission noted rapid growth in mobile data services and

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[17] (...continued)
Telecommunications and Information Administration, U.S. National Spectrum Requirements, March 1995 ("NTIA Study"); PCIA PCS Technical and Engineering Committee, *PCIA '2003' Spectrum Estimate Report — An Analysis of Spectrum Required to Support Selected PCS Services in the Year 2003*, TE/94-06-09/555RI, June 9, 1994.

[18] *See Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, Report*, CC Docket No. 98-146, FCC 99-5, ¶ 107 (rel. Feb. 2, 1999).

[19] eStats Survey June 1998.

[20] *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive market Conditions With Respect to Commercial Mobile Services, Third Report,* FCC 98-91, at 62 (rel. June 11, 1998) ("*CMRS Third Competition Report*").

devices.[21] Additional mobile terrestrial spectrum is required if these needed services are to be made reliably available to consumers.

2. Proximity to Existing CMRS Spectrum and Location Below 3 GHz Renders the 746-764 MHz and 776-794 MHz Bands Particularly Well-Suited for Terrestrial Mobile Licensing

The 746-764 MHz and 776-794 MHz bands are in close proximity to existing CMRS spectrum, including cellular and ESMR.[22] As the Commission determined in the *Reallocation Order*, because of such proximity this spectrum "could be used to expand the capacities of these services."[23] Meeting customer demand for high speed mobile wireless data applications will require substantial amounts of additional spectrum for terrestrial mobile wireless use. The proximity of this spectrum to other CMRS bands will facilitate the evolution of second generation wireless services to 3G.

In addition, licensing this spectrum for terrestrial mobile use will promote efficiencies in network deployment and efficiencies in handset and equipment development that will benefit consumers. Significant development work for CMRS equipment and handsets in recent years has been done at 2 GHz and below. Equipment spanning bands in close proximity provides economies in design and manufacturing, further advancing the Commission's statutory obligations to promote the rapid deployment of service and enhanced features to the benefit of

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[21] *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive market Conditions With Respect to Commercial Mobile Services, Fourth Report*, FCC 99-136, at 53-54, 60-62 (rel. June 24 1999) ("*CMRS Fourth Competition Report*").

[22] *See* 47 C.F.R. §§ 22.905 (cellular), 90.601 *et seq.* (ESMR).

[23] *Reallocation Order*, 12 FCC Rcd. at 22960 ¶ 14.

consumers.[24] For example, handset components to operate in the spectrum at 746-764 MHz and 776-794 MHz will be easier to design and can be more quickly manufactured because manufacturers can build upon their R&D in the adjacent 800 MHz band. Similarly, manufacturers can more easily and thus more rapidly design and manufacture multi-band handsets when the bands involved are in close proximity to one another. These economies of scale and scope will help keep down handset costs for consumers.[25] These objectives are also facilitated by the proximity of this band to existing CMRS spectrum.

Network deployment will also benefit from the location of this spectrum. At lower frequencies, such those at the 700 MHz band, radio signals propagate over longer distances. As a result, an operator deploying a network at a lower frequency can cover a geographic area with comparatively fewer base stations than it could if deploying its network at a substantially higher frequency. A smaller number of base stations creates two benefits. First, an operator will be able to minimize its investment in base stations and the associated savings can be passed on to consumers. Second, the fewer the number of base stations required, the lower the environmental impact in an area. In addition, the proximity of this spectrum to existing cellular spectrum may also promote the development and availability of 700 MHz/800 MHz dual band antennas which will further lessen the environmental impact of new services in this spectrum.

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[24] *See NPRM* ¶ 13; 47 U.S.C. §§ 151, 303(y)(2)(B), 309(j)(3); *see also Amendment of the Commission's Rules to Establish New Personal Communications Services, Memorandum Opinion and Order*, 9 FCC Rcd. 4957, 4974 (1994) ("*PCS Reconsideration Order*") (noting importance of early equipment availability in promoting deployment of competitive services).

[25] *See PCS Reconsideration Order*, 9 FCC Rcd. at 4973.

Moreover, while considerable bandwidth has been made available for fixed services, and broadcast services have been accommodated via the DTV transition, there are comparatively fewer remaining spectrum allocation options for terrestrial mobile services. Most of the Commission's recent licensing for commercial fixed services have been in upper bands, well above 2 GHz.[26] While mobile services are authorized in some of these bands, propagation characteristics make mobile operations above the 2-3 GHz band impractical.[27] Thus, the 746-764 MHz and 776-794 MHz spectrum is particularly desirable and well-suited for terrestrial mobile use and the Commission should not lose this opportunity to begin to satisfy 3G spectrum requirements.

This is, in fact, a particularly rare opportunity to make ideal spectrum available for 3G services. While it is certainly practical to implement commercial mobile services between 1-3 GHz, the propagation characteristics of spectrum at 700 MHz are particularly favorable for providing reliable high speed data services in a variety of environments — including situations where penetration through buildings and other high loss obstructions is necessary. As noted, such services can also be provided using a smaller number of base stations than at higher frequencies, thereby reducing the cost of providing services.

Unlike fixed services, which can be designed for an unobstructed line of sight radio link, the path between a base station and an associated mobile unit is constantly changing

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[26] *See* 47 C.F.R. § 101.1005 (1300 MHz available for LMDS), 101.1201 (1400 MHz available for 39 GHz); *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*, 12 FCC Rcd. 3471 (1997) (400 MHz available for DEMS).

[27] *See 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, 6888 ¶ 15 (1992).

and is subject to factors affecting service reliability, such as terrain blockage, multipath fading, and communications over varying distances. The problems associated with radio transmission in such an environment are exacerbated at higher frequencies. In addition, power from the mobile unit, especially in portable applications, is generally limited because of battery power sources and the use of omnidirectional antennas. This limited power makes it impossible to overcome free-space loss, attenuation from buildings and other path blockage by simply increasing the transmitter power.

Thus, while this spectrum may be *usable* for mobile and new broadcast services, alternative spectrum for mobile services is far more limited and, as discussed in the following section mixed use for additional mobile and new broadcast uses, as the Commission proposes, is problematic. The Commission should therefore reject its tentative conclusion that mixed use of this spectrum will serve the public interest.

C. Additional Mixed Use Band Sharing is Problematic and Will Hinder the Deployment of Needed Mobile Commercial Services in the 746-764 MHz and 776-794 MHz Bands

When the Commission reallocated this spectrum in late 1997, the record demonstrated that "including full power broadcasting in this spectrum is likely to cause interference problems with other commercial applications, especially low-power mobile applications."[28] While acknowledging "that technical challenges are involved," the Commission at the time was nevertheless "not persuaded that such sharing is not feasible."[29] The Commission now seeks comment on its tentative conclusion that "making the spectrum available for flexible commercial use under [the] Part 27 Rules is in the public interest" such that licensees will be

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[28] *Reallocation Order*, 12 FCC Rcd. at 22962.

[29] *Id.*

permitted to determine the services they will provide, including broadcast, fixed and mobile services.[30]

The Commission has acknowledged that issues of harmful interference between fixed and mobile services are difficult to resolve.[31] While such mixed use may reduce the efficiency with which the spectrum can be used, by necessitating restrictive protection requirements between different licensees providing different services, AirTouch notes that Sections 22.901(d) and 24.3 of the Commission's rules authorize cellular and broadband PCS licensees, respectively, to provide fixed service on a co-primary basis with mobile operations.[32] AirTouch does not object to such flexible use authorization for licensees providing CMRS service on this spectrum.

Significant interference issues exist between broadcast and mobile licensees. While it is possible to protect *incumbent* broadcast license operations through the DTV transition period, allowing continued use for *new* broadcast services could preclude reliable ubiquitous use of this spectrum for 3G mobile services. The inherent conflicts between such disparate services

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30 *NPRM* ¶ 12.

31 *See WCS Report and Order*, 12 FCC Rcd. at 10854-57; *LMDS Second Report and Order*, 12 FCC Rcd. 12545, 12636-38 (1997); *Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands, Implementation of Section 309(j) of the Communications Act — Competitive Bidding, 37.0-38.6 GHz and 38.6-40.0 GHz, Report and Order and Second Notice of Proposed Rulemaking,* 12 FCC Rcd 18600, 18615 (1997) ("mobile systems are particularly susceptible to interference from fixed stations since they can move into the main beam of the fixed station") ("*39 GHz Report and Order*"); *Amendment of Parts 2 and 15 of the Commission's Rules Regarding Spread Spectrum Transmitters, Report and Order*, 12 FCC Rcd 7488, 7495 (1997).

32 47 C.F.R. §§ 22.901(d) and 24.3.

will require burdensome interference protection requirements that will prevent efficient spectrum use and compromise service to the public.[33]

While incumbent operations can and must be protected, AirTouch urges the Commission *not* to authorize *new* broadcast operations on this auctioned spectrum. Thus, while potential bidders can determine prior to auction where broadcast incumbents operate and value the spectrum accordingly; and licensees can subsequently plan and deploy their terrestrial mobile networks consistent with their non-interference obligations, any *newly* authorized broadcast licensees in this spectrum will directly affect the scope, viability and timing of new services which can be provided.[34]

As the Commission acknowledged just last fall in the broadcast television context, "[t]he issue of what constitutes adequate interference protection to TV reception in land mobile/TV sharing arrangements has always been a contentious one."[35] Even where new

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[33] By statute, incumbent broadcast licensees are entitled to protection through (and in some cases beyond) the DTV transition period. *See* 1997 Act §§ 3003, 3004 (codified at 47 U.S.C. §§ 309(j)(14)(A), 337(e)(1)).

[34] Newly authorized mixed broadcast and mobile uses will thus deter potential mobile service providers from participating in the auction and devalue the licenses to be auctioned. In this regard, AirTouch submits that the interference issues involving DARS licensees in the WCS auction deterred many prospective bidders from participating in that auction. *See WCS Report and Order,* 12 FCC Rcd. at 10801 ¶ 34. In addition, the absence of clear protections for newly authorized uses was viewed as adversely affecting the valuation of the licenses and the development of services in the auctioned WCS spectrum.

[35] *The Development of Operational, technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communication Requirements Through the Year 2010, First Report and Order and Third Notice of Proposed Rulemaking*, 14 FCC Rcd. 152, 220 ¶ 150 (1998) ("*Public Safety First Report and Order*"); *see also WCS Report and Order*, 12 FCC Rcd at 10953 (TIA commenting that it is "widely acknowledged that mobile operations are incompatible with fixed and radiolocation systems; and, certainly, broadcast (and particularly broadcast satellite) operations are incompatible with all of the other primary services unless very carefully coordinated.").

broadcast and mobile services operate in adjacent bands, there is great likelihood of harmful interference to mobile operations because broadcast stations operate at substantially higher power levels.[36] Shared mobile and broadcast use of this spectrum is further complicated by the fact that, while mobile operators can control distances between broadcast operations and base stations, it cannot control the location of mobile units vis-à-vis broadcast operations. Although it is hard to predict the level of interference that would be caused by a low power mobile unit to substantially higher powered broadcast operations (and vice versa), the Commission should minimize the amount of interference that new users of this spectrum will have to protect against by limiting use to terrestrial mobile operations and excluding new broadcast operations. Authorizing new broadcast operations for the auctioned bands will directly and negatively limit non-broadcast commercial use of the spectrum, and this would be a mistake on the Commission's part.

Imposing sharing requirements on mobile and new broadcast operators in this spectrum will also result in inefficient spectrum use. Sharing between mobile and new broadcast uses would necessitate further segmentation of the band, thus limiting the Commission's ability to designate spectrum blocks of sufficient size to facilitate reliable mobile services.[37] The Commission itself has determined that paired spectrum is essential "to enable a viable

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[36] *See Amendment of Part 87 of the Commission's Rules, Notice of Proposed Rule Making*, 8 FCC Rcd. 4763, 4763 n.4 (1993) (discussing interference between VHF FM broadcasting and aeronautical mobile service); *Resolution of Interference Between UHF Channels 14 and 69 and Adjacent-channel Land Mobile Operations, Notice of Proposed Rule Making/Notice of Inquiry*, 2 FCC Rcd. 7328, 7329 ¶¶ 12-13 (1987) (discussing interference between UHF-TV broadcasting and private land mobile services). In this regard, it is notable that it is high-power broadcast services, not low-power operations, that hold primary status in this spectrum and retain such status through the DTV transition period. *See Reallocation Order*, 12 FCC Rcd. at 22964-65. While these incumbents can be accommodated, new high power services will further limit availability of spectrum to non-broadcast licensees.

[37] *See NPRM* ¶ 18.

commercial mobile services," and "[t]he separation of [these] bands by 30 megahertz of spectrum is optimal for paired, two-way operations."[38] Again, new broadcast use of this spectrum is inconsistent with this licensing scheme. Furthermore, given that the Commission has only 36 MHz of spectrum to work with, any "guard bands" between adjacent channel licensees would substantially reduce the spectrum available to the mobile services licensee.

Finally, while the Commission has cited to the 470-512 MHz band as an example of mobile-broadcast sharing, AirTouch respectfully submits that the Commission's experience with this spectrum should not be considered a model for sharing between *new* broadcast and mobile licensees.[39] Instead, the Commission has the opportunity, here at the outset of the licensing process, to *avoid* the serious problems which attend any broadcast/mobile sharing regime by licensing the spectrum solely for terrestrial mobile wireless services.[40]

In sum, spectrum sharing between new broadcast and mobile licensees in the 746-764 MHz and 776-794 MHz bands will degrade the quality and quantity of services provided on

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[38] *See id.* ¶ 19.

[39] *See Resolution of Interference Between UHF Channels 14 and 69 and Adjacent-Channel Land Mobile Operations, Notice of Proposed Rule Making/Notice of Inquiry*, 2 FCC Rcd. 7328, 7328-29 (1987) (discussing numerous interference disputes between UHF broadcast and land mobile licensees); *see also* 47 C.F.R. §§ 90.301-90-317.

[40] More recently, for the 24 MHz of spectrum allocated to public safety licensees, the Commission determined that in order to ensure that such licensees are not subject from harmful interference from TV and DTV stations, "public safety base and mobile operations [must] have a safe distance between the co-channel or adjacent TV and DTV systems" which, as the Commission subsequently acknowledged, "typically means that a co-channel and adjacent channel base and mobile system *cannot operate in areas where TV stations already exist*." Similarly, it would require geographic separation, rather than co-channel coordination or a field strength limit, for mobile services to avoid harmful interference from broadcasters. *See Public Safety First Report and Order,* 14 FCC Rcd. at 226 ¶ 163 (emphasis added). This has enormous service implications for mobile carriers vis-a-vis broadcast licensees.

the bands. For the reasons stated herein, the Commission should *not* authorize *new* broadcast use of this auctioned spectrum.[41]

II. THE COMMISSION SHOULD LICENSE THE SPECTRUM IN TWO 18 MHz BLOCKS PER SERVICE AREA

The Commission seeks comment on the appropriate amount of spectrum to provide for each licensee in the two 18 MHz blocks, including the viability of licensees competing with existing fixed and mobile service providers.[42] AirTouch recommends that the Commission license this spectrum in two blocks for each geographic service area, with each license consisting of 2 x 9 MHz pairs for two-way operations. This proposal is consistent with the Commission's tentative conclusion that the spectrum should be licensed on a paired basis "to enable a viable commercial mobile service."[43] The mobile units would operate on the lower frequencies (*e.g.*, Channels 60-62), while the base stations would operate on the higher frequencies (*e.g.*, Channels 65-67).

This band plan will enable new licensees in a given service area to more effectively compete and provide new wireless services.[44] AirTouch's band plan will provide sufficient spectrum for two-way CDMA service. Moreover, industry anticipates that 2 x 15 MHz blocks will be the minimum optimal spectrum required for IMT 2000 (voice and low-speed

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[41] *See id.* (The Commission does "not want to have any future TV stations coordinate with existing [mobile] public safety systems in the 700 MHz band".)

[42] *NPRM* ¶ 17.

[43] *Id.* ¶ 19.

[44] *See id.* ¶ 17; *see PCS Reconsideration Order*, 9 FCC Rcd. at 4979-80 (determining that larger 30 MHz blocks will enable new entrants to compete more effectively with existing wireless and wireline providers and to more effectively attract financing).

data).[45] AirTouch's recommended band plan is more consistent with this industry consensus than the smaller blocks the Commission proposes and, in conjunction with existing licensed spectrum, will accommodate demand for second-generation voice services while facilitating the transition to 3G services, as demand for such services accelerates in 2005 and beyond.

In addition, larger blocks of spectrum will help militate the obstacles to reliable service posed by the existence of incumbent analog broadcast license operations.[46] Under AirTouch's proposed band plan, a 6 MHz incumbent broadcast licensee operating in a given geographic market in one of the two 18 MHz bands will leave potentially 3 MHz of spectrum available for CMRS use — enough for two CDMA channels. This plan will enable CMRS providers to offer transitional second generation voice services and will accommodate the evolution to 3G high speed data services after the DTV transition period expires.

Given the presence of protected broadcast incumbent operations in these bands, designating a large number of licenses in smaller frequency blocks will likely result in auctioned spectrum being *unusable* throughout the DTV transition period — which may last a number of years. Indeed, a band plan involving multiple licenses with smaller spectrum blocks may render many blocks virtually valueless because no usable services can be promptly deployed on the auctioned bands.

Smaller blocks will therefore undermine the Commission's statutory obligation to promote rapid service deployment and efficient spectrum use.[47] By contrast, AirTouch's

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[45] UMTS Forum, Report No. 5, *Minimum spectrum demand per public terrestrial UMTS operator in the initial phase*, § 6.3 (1998).

[46] *See PCS Reconsideration Order*, 9 FCC Rcd. at 4797-80.

[47] *See* 47 U.S.C. §§ 303(y)(2)(B), 309(j)(3).

proposed band plan, in conjunction with its regional service area proposal, would promote the Commission's interest in licensing spectrum to multiple providers and will ensure the technical and economic viability of the new auctioned licenses.[48]

Importantly, as discussed above, this band plan allocation assumes that no new conventional broadcast services will be provided in the auctioned spectrum.[49] As the Commission has noted, existing broadcasters use 6 MHz spectrum blocks. Authorizing new broadcast licensees to operate in this spectrum at substantially higher power levels than mobile wireless providers may well render much of the spectrum in adjacent frequencies unusable for non-broadcast purposes. This would result in inefficient spectrum use, service degradation and delay, and devaluation of the spectrum.

III. THE COMMISSION SHOULD AUTHORIZE SERVICE OVER LARGE REGIONAL OR NATIONAL SERVICE AREAS

The Commission seeks comment on the type of service area or areas that should be used to license this spectrum.[50] As the Commission noted, Part 27 spectrum is licensed using either (1) 12 Regional Economic Area Groupings ("REAGs") or (2) Major Economic Areas ("MEAs"). In adopting the REAG service areas, the Commission determined that these larger areas serve a number of public interest objectives that remain relevant for the 746-764 MHz and 776-794 MHz bands, including: (1) encouraging the rapid development and deployment of innovative service; (2) facilitating interoperability and the setting of standards; and (3) allowing economies of scale that will encourage the development of low cost

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48 *See PCS Reconsideration Order*, 9 FCC Rcd. at 4979-82.

49 *See NPRM* ¶ 19 (seeking comment on "how spectrum block issues relate to the findings required by review of flexible use allocations pursuant to Section 303(y) of the Act . . .").

50 *Id.* ¶ 21.

equipment.[51] The Commission further determined that "there may be significant economic efficiencies that could be realized — to the ultimate benefit of consumers — if [certain] services were to be provided with nationwide scope."[52]

The Commission has also acknowledged in both the Part 27 and other proceedings that larger service areas "speed and simplify the process of interference coordination along geographic boundaries, as well as minimize transaction costs and disputes arising from interference . . . ."[53] Larger service areas also help ensure interoperability of networks and facilitate implementation of wide-area services and calling plans, thus minimizing roaming costs for consumers.[54] These same arguments support the adoption of large service areas for the 746-764 MHz and 776-794 MHz bands.

Furthermore, developments in the CMRS marketplace further support the adoption of large service areas. There are now numerous CMRS providers with either large regional or nationwide footprints.[55] A CMRS provider's footprint, moreover, has become increasingly important to consumers.[56] Larger service area designations will thus facilitate additional CMRS competition and will further ensure that the public, rather than third parties,

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51 *WCS Report and Order*, 12 FCC Rcd. at 10814-815 ¶ 55.

52 *Id.*

53 *Id. Amendment of the Commission's Rules to Establish New Personal Communications Services, Second Report and Order*, 8 FCC Rcd. 7700, 7732 ¶ 74 (1993).

54 *WCS Report and Order*, 12 FCC Rcd. at 10814-815 ¶ 55.

55 *See CMRS Fourth Competition Report* at 30-31.

56 *See id.* at 15-16 (discussing need for large regional carriers to enhance ability to compete effectively with national operators), 31 (noting that "the most important variable affecting [broadband PCS carriers'] ability to compete in the mobile telephone market is coverage").

recover "a portion of the value of the public spectrum resource made available for commercial use . . . ."[57]

Finally, the benefits of large service areas will be undermined if the Commission limits the extent to which auction participants may bid on multiple geographic areas.[58] Bidders should be free to bid on and hold multiple licenses as needed in accordance with market forces. Imposing a cap on the number of licenses on which a party may bid will undermine license value by arbitrarily limiting a carrier's auction participation and preventing spectrum from being licensed to the party that values it the most, again contrary to the Commission's statutory obligations. Given the large number of facilities-based CMRS carriers already in the market, such a cap on license bidding or accumulation is not needed to promote or protect CMRS competition.

IV. THE COMMISSION SHOULD ALLOW MAXIMUM FLEXIBILITY IN OWNERSHIP AND MOBILE OPERATIONAL REQUIREMENTS

The Commission seeks comment on a number of licensing and operational rules, including regulatory status, spectrum aggregation, foreign ownership, performance/construction requirements, disaggregation and partitioning, license term/renewal expectancy, and common carrier obligations.[59] As discussed below, AirTouch generally supports the Commission's

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[57] *See* 47 U.S.C. § 309(j)(3)(A)-(C); *PCS Reconsideration Order*, 9 FCC Rcd. at 4987 ("Rather than forcing replication of th[e] costly and time-consuming process [of geographic aggregation], we are beginning with larger service areas, which we expect to minimize the need for costly post-auction transactions. We also hope to spur market competition from new PCS providers by starting with larger initial geographic service areas to alleviate the cellular headstart advantage.").

[58] *NPRM* ¶ 19.

[59] *NPRM* ¶¶ 23-56.

flexible approach to these requirements, which largely parallels the Part 27 rules and the Parts 20, 22 and 24 broadband CMRS regulatory regime.

A. Regulatory Status

The Commission seeks comment on whether to apply the existing licensing framework of Part 27 such that an applicant for a license in this spectrum indicates its choice for regulatory status through the streamlined application process.[60] The Commission notes that the current FCC Form 601, however, contemplates either CMRS, PMRS or both, but not fixed or broadcast service designations. Licensing this spectrum solely for terrestrial mobile services, either common carrier or private, eliminates the need to address this matter. The common carrier or private service designation set forth in the current form should be sufficient for purposes of licensing this spectrum and AirTouch supports this method of regulatory status designation.

AirTouch notes that the current FCC Form 175 does not require parties to disclose the type of services they intend to provide over spectrum they may win at auction. The uncertainty of not knowing whether other bidders will be competitors, or whether licensees in adjacent spectrum and markets will provide broadcast or mobile services, will exacerbate further the uncertainty as to the value of spectrum to be auctioned and make the spectrum less attractive to potential bidders. Again, licensing this spectrum solely for terrestrial mobile services, either common carrier or private, eliminates this uncertainty and would preserve and enhance the commercial value of the licenses and the viability of service provision.

In addition, the Commission suggests that a change in regulatory status resulting in discontinuance, reduction or impairment of service may warrant implementation of Section

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[60] *Id.* ¶¶ 23, 25.

214(a) of the Communications Act.[61] As AirTouch notes below, the Commission already forbears from enforcing Section 214(a) for CMRS carriers, and this forbearance policy should apply to CMRS services offered on this spectrum.[62]

B. Eligibility

Generally. The Commission seeks comment on whether Sections 27.12 and 27.302 of the rules should govern eligibility for these licenses, and whether this approach of "opening this spectrum to as wide a range of applicants as possible will encourage entrepreneurial efforts to develop new technologies and services, while helping to ensure the most efficient use of this spectrum."[63] For reasons discussed above, AirTouch submits that the Commission's open eligibility approach will serve those objectives, provided that the spectrum is licensed solely for terrestrial mobile use.

Spectrum Cap. As the Commission noted, Part 27 spectrum is not attributed to the 45 MHz spectrum cap of Section 20.6 of the rules.[64] This should remain the case for Part 27 spectrum in the 746-764 MHz and 776-794 MHz bands. For reasons discussed in its comments in the Commission's biennial review proceeding reviewing the CMRS spectrum cap, AirTouch generally views the CMRS spectrum cap as an artificial and arbitrary stricture on CMRS competition. Developments in the CMRS marketplace and the existence of meaningful competition between CMRS providers demonstrate that the spectrum cap is not necessary in the

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61 *Id.* ¶ 25.

62 47 C.F.R. § 20.15(b)(3).

63 *NPRM* ¶ 26.

64 *Id.* ¶ 28.

public interest pursuant to Section 11 of the Communications Act.[65] Applying the cap to the 746-764 MHz and 776-794 MHz bands will adversely affect the market value of the licenses and arbitrarily preclude otherwise able licensees from utilizing the spectrum for needed services, thus adversely affecting consumers and competition.

An incumbent cellular or PCS licensee acquiring additional spectrum in the 746-764 MHz and 776-794 MHz bands in its markets does not raise anticompetitive concerns.[66] In any event, the competitive CMRS marketplace renders the spectrum cap unnecessary, particularly as to this spectrum. As the Commission recently noted in the *CMRS Fourth Competition Report*, "the average monthly wireless telephone bill has continued to decline, reflecting increasing penetration in market sectors with lower average usage" and the industry continues to be characterized by new net subscriber growth, high churn rates, and intense price competition.[67] Any concerns regarding competition are addressed by antitrust laws. There is no need for a spectrum limit here.

Indeed, the Commission's rationale for *not* applying Part 27 spectrum to the CMRS spectrum cap remains valid today:

> [A]pplying the cap and excluding many existing CMRS providers from acquiring WCS licenses would . . . carry significant potential costs for consumers. With their existing base station infrastructures, CMRS licensees may be the most efficient users of WCS spectrum because

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[65] *See* AirTouch Comments filed in WT Docket No. 98-205, Jan. 25, 1999.

[66] Indeed, under AirTouch's proposed band plan, an incumbent cellular licensee acquiring one 18 MHz license in these bands would be in compliance with the cap, while a 30 MHz broadband PCS licensee would only slightly exceed the cap.

[67] *See CMRS Fourth Competition Report* at 8-9, 18-24.

> economies of scope may be large in the provision of new services combined with the provision of conventional mobile voice CMRS.[68]

The spectrum cap will preclude a carrier from recognizing such efficiencies for the deployment of second-generation voice services over the 746-764 MHz and 776-794 MHz bands and for the provision of essential 3G applications. Thus, in turn, would hinder the continued competitive development of wireless services and prevent the public from benefiting from such offerings. Again, this would disserve the public interest and there is no need for Commission-imposed limits in this area.

Furthermore, as discussed above, given the existence of authorized incumbent broadcast operations in these bands, new CMRS licensees will likely be unable to use all of the spectrum paid for at auction for some period of time. Thus, a licensee's total *usable* spectrum (based on actual available spectrum) may be much less. Imposing the cap may thus preclude carriers from adopting innovative engineering solutions to accommodate incumbent broadcast licensees while promptly deploying mobile services to customers.

There should be no limit on the amount of spectrum that any one licensee may obtain in this spectrum in the same licensed geographic service area.[69] In addition, there should be no limit on the extent to which a licensee can partition and disaggregate spectrum.[70] The public interest is served by maximizing flexibility in this area. As AirTouch discussed in its comments last fall regarding 3G spectrum demands, "[t]he existing cap could potentially limit an

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68 *WCS Report and Order*, 12 FCC Rcd. at 10834 ¶ 91.

69 *NPRM* ¶ 28.

70 *Id.* ¶¶ 36-41.

efficient and innovative carrier's abilities to provide beneficial 3G services — to consumers' detriment."[71]

Foreign Ownership. The Commission requests comment on its approach to foreign ownership whereby all applicants report alien ownership on a consistent basis.[72] The Commission notes that it "now presumes that ownership by entities from countries that are WTO members serves the public interest" and that "[o]wnership by entities from countries that are not WTO members" is subject to the ECO test.[73] AirTouch supports the Commission's approach.

C. Performance and License Renewal Requirements

AirTouch supports the flexible "substantial service" standard set forth in Section 27.14(a) of the rules. The safe harbor set forth for mobile operations in the Part 27 rules, whereby "a demonstration of coverage to 20 percent of the population of its licensed service area at the ten-year mark would constitute substantial service" is reasonable. Conditioning the license to meet the substantial service requirement is therefore an appropriate means for the Commission to meet its Section 309(j)(4) mandate.[74]

AirTouch adds one important *caveat*, however. Where an incumbent broadcast licensee operates in a major metropolitan area, or is otherwise eligible to remain in this spectrum beyond the December 31, 2006 transition date, it may be difficult for the new licensees to meet the performance requirements in certain markets. Thus, the Commission should, on a case-by-

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[71] AirTouch Comments filed Sept. 30, 1998 at 15.

[72] *Id.* ¶ 31.

[73] *Id.* ¶ 30.

[74] *WCS Report and Order*, 12 FCC Rcd. at 10843-44 ¶ 113.

case basis, waive these requirements where incumbent broadcast operations make compliance untenable.[75]

As a related matter, the Commission seeks comment on the appropriate renewal criteria for licenses in this band.[76] AirTouch supports the renewal expectancy set forth in Section 27.14(c) of the rules for CMRS operations in this band. CMRS licensees are familiar with the procedures underlying license renewals, and principles of parity warrant that these requirements apply to CMRS licensees operating in the 746-764 MHz and 776-794 MHz bands as well. The Commission also seeks comment on whether different license terms should apply to licensees in this band, primarily because broadcast licensees are limited to an eight-year license term.[77] Licensing this spectrum for terrestrial mobile would eliminate the need to address this issue but, in any event, CMRS licensees should be allotted the full 10 year license term to ensure parity with other CMRS services.

D. Operating Rules

The Commission seeks comment on its proposal to apply the Part 27 operation rules to licensees in this spectrum.[78] AirTouch generally supports this approach, provided that the Part 27 approach to Title II forbearance for CMRS providers, as required by Section

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[75] *See PCS Reconsideration Order*, 9 FCC Rcd. at 5019 ("We recognize that . . . factors such as incumbent microwave operation or sparse population density in some instances could make compliance difficult. In instances where the circumstances are unique and the public interest would be served, the Commission will consider waiving the requirements on a case-by-case basis.").

[76] *NPRM* ¶ 42.

[77] *Id.* ¶ 42.

[78] *Id.* ¶ 48.

332(c)(1)(A) of the Communications Act, applies as well. As the Commission explains in the *NPRM*:

> [C]ommon carriers that are providing mobile services under Part 27 and which are classified as CMRS must adhere to the Title II requirements specified in Section 20.15(a) of the Commission's Rules, but, as specified in Section 20.15(b), CMRS providers are not required to file contracts of service, seek authority for interlocking directors, submit applications for new facilities or discontinuance of existing facilities, and, as specified in Section 20.15(c), CMRS providers are prohibited from filing "tariffs for interstate service to their customers, or for interstate access service."[79]

AirTouch submits that forbearance should also apply for Part 27 CMRS services provided in the 746-764 MHz and 776-794 MHz bands and, indeed, straightforward application of Section 20.15 mandates such a result. Other forbearance decisions applicable to CMRS adopted pursuant to Section 10 of the Communications Act, such as the local number portability deadline extension, also should apply.[80]

V. THE TECHNICAL RULES ADOPTED SHOULD REFLECT THE FLEXIBILITY OF THE CURRENT CELLULAR AND BROADBAND PCS RULES

The Commission and CMRS licensees have considerable experience with respect to the technical rules raised in the *NPRM*, including general provisions involving equipment authorization, *etc.*, as well as in-band interference, out-of-band and spurious emission limits. As discussed below, the Commission's rules in the cellular and broadband PCS context generally provide the appropriate regulatory model for the 746-764 MHz and 776-794 MHz bands, and AirTouch urges Commission adoption of comparable rules here.

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[79] *Id.* ¶ 48 (citations omitted).

[80] *See id.*

A. General Requirements

The Commission seeks comment on whether general requirements such as equipment authorization, frequency stability, FAA/Part 17 compliance, international coordination, and disturbance of AM broadcast station, should apply to Part 27 licensees in the 746-764 MHz and 776-794 MHz bands.[81] AirTouch views these requirements as general licensee obligations and therefore appropriately applied to CMRS providers operating in this spectrum.[82] AirTouch would also group in this category the Commission's proposed requirements for RF safety, as these requirements for comparable cellular and broadband PCS services should also apply to CMRS services provided in this spectrum.[83]

B. In-Band Interference

The Commission seeks comment on its tentative conclusion that either a coordination or field strength method can be an appropriate method of preventing interference between licensees. A field strength method is particularly appropriate given AirTouch's view that these licenses should be allocated for terrestrial mobile services in larger geographic areas. As the Commission notes, this approach provides licensees flexibility in deploying service and resolving interference issues "by giving licensees the ability unilaterally to deploy facilities in boundary areas as long as the limit is met . . . ."[84]

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[81] *Id.* ¶ 57.

[82] AirTouch notes that two rules the Commission mentions, Sections 27.59 and 27.61, were deleted and consolidated in the Part 1 ULS requirements.

[83] *NPRM* ¶¶ 70-72; *see* 47 C.F.R. §§ 1.1307(b)(1)-(2), 24.52.

[84] *See NPRM* ¶¶ 59-60.

The Commission's concern that this approach "may provide insufficient assurance against interference" is belied by PCS and cellular licensees' successful experience with this method.[85] This approach would also meet the Commission's Section 337(d)(1) requirement.[86] The Part 101 coordination approach, in contrast, is more appropriate for fixed services and unnecessary for mobile service licensees in the 746-764 MHz and 776-794 MHz bands.

Similarly, limits for equivalent isotopically radiated power ("EIRP") should remain consistent with the Commission's existing cellular or PCS rules.[87] These limits would apply to both transmitters and mobile equipment, and will promote parity among comparable CMRS services. The Commission seeks comment in particular, however, on whether the Section 27.64 provision that stations operating in accordance with the Commission's rules and the terms and conditions of their licenses are normally considered to be non-interfering is appropriate if broadcast service is authorized in this spectrum.[88] For the reasons discussed above, while incumbent broadcast license operations will be fully accommodated, the Commission should avoid exacerbating this serious problem by limiting licensing of the spectrum at auction to terrestrial mobile services.

C. Out-of-Band and Spurious Emission Limits

The Commission proposes that licensees in this spectrum attenuate the power below the transmitter power by at least 43 + 10 log10(P) watts or 80 dB, whichever is less, for any emission on all frequencies outside the licensee's authorized spectrum. As the Commission

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85 *See* 47 C.F.R. §§ 22.911, 24-236-24.237.

86 *See NPRM* ¶ 61.

87 *See* 47 C.F.R. §§ 22.913, 24.232.

88 *See id.* § 22.352.

notes, this requirement is generally employed in other services, including cellular and PCS.[89] AirTouch agrees that this requirement is generally adequate to prevent adjacent channel interference, *at least as between other CMRS licensees*. AirTouch submits that whether this method will work as between CMRS and new broadcast licensees, however, is uncertain. Again, no new broadcast operations should be authorized on these bands.

D. Channels 65-67

The Commission seeks comment on the impact of imposing NTIA's proposed out-of-band emission limits on commercial equipment for use in this band.[90] As the Commission notes, NTIA's proposal would have a particularly detrimental impact on CMRS services and, given that CMRS providers are natural potential bidders for this spectrum, the Commission's concern that NTIA's proposal "would severely curtail the availability of the 36 MHz of spectrum designated by Congress for commercial use" is well-founded.[91] AirTouch submits that its band plan, in which the base station transmit band correlates with Channels 65-67, will preclude interference with GNSS and render these burdensome requirements unnecessary. Interference concerns are greatly reduced by virtue of the fact that only limited fixed point base stations are needed for mobile services.

VI. COMPETITIVE BIDDING

As the Commission notes, Congress has mandated that these licenses be issued via competitive bidding. AirTouch believes that while not essential, the auction of this spectrum

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[89] *NPRM* ¶ 69 (citing 47 C.F.R. §§ 22.359, 22.917(e), 24.238).

[90] NTIA proposes out-of-band emissions of -70 dBW/MHz EIRP for wideband emissions (100 kHz-1 MHz) and -80 dBW/700 Hz for narrowband emissions (≤ 700 Hz). *Id.* ¶ 75.

[91] *Id.* ¶ 77.

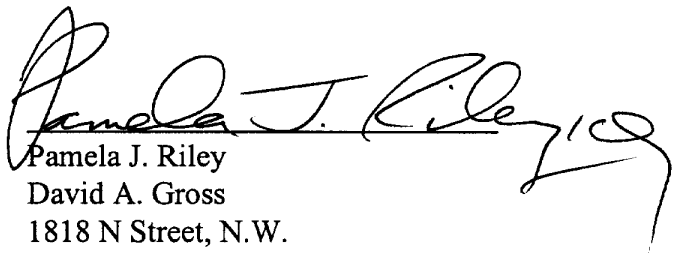
is suitable for combinatorial procedures. For reasons discussed above, moreover, the Commission has highlighted a further reason for excluding new broadcast service from service rules in this spectrum — the divergence between geographic licensing for wireless services and the focus on individual communities of interest in the broadcast services.[92] As discussed above, licenses covering large geographic areas will best serve the public interest; such large blocks do not, however, correspond to the community focus of the broadcast context.[93]

CONCLUSION

For the foregoing reasons, licensing the 746-764 MHz and 776-794 MHz bands solely for new terrestrial mobile use and allowing licensees maximum flexibility in the deployment of their commercial wireless systems will best serve the public interest and most effectively promote the Commission's obligations with respect to this spectrum.

Respectfully submitted,

AIRTOUCH COMMUNICATIONS, INC.

By: 

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92 *Id.* ¶ 82.

93 *See supra* Section III.