

We also seek comment on whether allowing unlicensed use of any part of this band would allow even more flexibility and promote more innovation than either geographic area or site-by-site licensing.¹⁰³

68. We believe that an exclusive site-by-site-only licensing scheme could impose administrative burdens on the Commission and applicants for the spectrum. In each of these bands, the path lengths will be so short that site-by-site licensing may require an entity to obtain hundreds or thousands of authorizations in a given area to effectuate a business plan. Moreover, Section 8 of the Act¹⁰⁴ requires an application fee for each application, and Section 9 of the Act¹⁰⁵ requires a regulatory fee for each license. Under these circumstances, requiring a separate license for each path could impose substantial expenses on licensees and reduce the flexibility that licensees would need in order to respond rapidly to changing market conditions. Conversely, we believe geographic area licensing could reduce the administrative burdens by reducing the number of authorizations licensees must obtain to operate a system. Geographic area licensing would also allow licensees to establish new links without obtaining prior Commission approval (except in those areas where coordination with the Federal Government would be required).

69. Loea argues that administrative burdens could be reduced if we delegated a significant portion of the licensing process to an independent third-party coordinator.” In support of this argument, Loea provides an economic study by HAI Consulting, Inc. (HAI).¹⁰⁷ The HAI Paper provides that this third party would be part of a joint venture of the licensees and would provide spectrum management services and contract with the licensees to do so.¹⁰⁸ HAI claims that by making the coordinator the creature of the potential users of the spectrum, the Commission avoids having to regulate them.¹⁰⁹ Even if we did agree that delegating a significant portion of the licensing process to a third party could resolve the Commission’s administrative burden, it may not resolve the substantial and costly burdens that site-by-site licensing imposes on potential licensees. In addition, a coordinator would have to function in accordance with the technical licensing criteria codified in our Rules.” In order to change any criteria in our Rules, we would have to institute a rulemaking proceeding as technology evolves. We seek comment on the costs and burdens associated with site-by-site licensing.

70. Loea and the commenters also argue that geographic area licensing would unduly restrict the number of providers who could provide service in the market. Specifically, they argue because of the ability to reuse the spectrum a very large number of times in a given area, licensing the spectrum to a single licensee in a given area would create an “artificial scarcity” that would create an undue “tax” on

¹⁰³ See ¶¶ 62-63, *supra*.

¹⁰⁴ 47 U.S.C. § 158.

¹⁰⁵ 47 U.S.C. § 159.

¹⁰⁶ *Id.* at 16.

¹⁰⁷ See Loea Petition, Appendix B (HAI Paper) at 14

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ 47 C.F.R. § 101.103.

the users of the spectrum.””” This argument, however, ignores possible licensing mechanisms such as band managers that can be used to provide service to a greater possible number of users. We also note that Loea and the other commenters are seeking at least 10,000 MHz of spectrum. We believe, that it could be more efficient to license such a large amount of spectrum on a geographic area basis. In light of these considerations, we seek comment on whether using a site-by-site licensing scheme exclusively would be appropriate for the 71-76 GHz, 81-86 GHz and 92-95 GHz bands.

71. In the event we license the vast majority of this spectrum on the basis of geographic areas, we request comment on the most appropriate geographic area licensing scheme for the 71-76 GHz, 81-86 GHz and 92-95 GHz bands. When establishing geographic service areas, we must balance the competing concerns of those entities that desire large service areas with those entities that seek **small** service areas. Large service areas, such as nationwide licenses, EAs, REAs,¹¹² and EAGs,¹¹³ can achieve certain economies of scale and increased efficiencies compared to smaller service areas.¹¹⁴ However, small service areas, such as MSAs, RSAs, and CEAs,¹¹⁵ may encourage rapid service deployment to less populated and rural regions of the nation. We also believe that in some cases, smaller service areas could permit additional opportunities for small businesses to provide service in the bands and thus, more varied

¹¹¹ See Loea Petition at 17-18 and HAI Paper at 10. See also Comments of DMC Suatex Networks, Inc. at 2-3 (filed Oct. 29, 2001) (DMX Comments); Comments of The Personal Communications Industry Association, Inc. at 2-3 (filed Nov. 13, 2001) (PCIA Comments); Endwave Comments at 3-4; Boeing Comments at 6-10.

¹¹² The Commission uses Economic Areas (“EAs”) for 24 GHz and 39 GHz band, and Regional Economic Area Groupings (“REAs”) and the 52 Major Economic Areas (“MEAs”) for the 2.3 GHz band. There are 172 EAs, as defined by the U.S. Department of Commerce, and three additional Commission-defined EA-like areas. The three additional EA-like services areas are: (1) Guam and the Northern Mariana Islands (combined as one service area); (2) Puerto Rico and the United States Virgin Islands (combined as one service area); and (3) American Samoa. See Amendments to Part 1, 2, 87 and 101 of the Commission’s Rules to License Fixed Services at 24 GHz, WT Docket 99-327, *Report and Order*, 15 FCC Rcd 16934, 16942-16944 ¶¶ 13-18 (2000). See 47 C.F.R. § 101.64. See also Amendment of the Commission’s Rules regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands, *Memorandum Opinion and Order*, 14 FCC Rcd 12428, 12452 ¶ 46 (1999). At the time of the 2.3 GHz auction, REAs were defined as Regional Economic Area Groupings (“REAGs”). See 47 C.F.R. § 27.6. See also Amendment of the Commission’s Rules to Establish Part 27, the Wireless Communications Service (WCS), 12 FCC Rcd at 10785, 10814-10816 ¶¶ 54-60 (1997) (*WCSR & O*).

¹¹³ See Service Rules for the 746-764 and 776-794 MHz Bands and Revision to Part 27 of the Commission’s Rules, *First Report and Order*, 15 FCC Rcd at 476,500 (2000).

¹¹⁴ 2000 Biennial Regulatory Review Spectrum Aggregation Limits For Commercial Mobile Radio Services, WT Docket No. 01-14, *Report and Order* (2001); 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*, 14 FCC Rcd 10145, 10154 ¶¶ 18-19 (Major operational trends) (1999).

¹¹⁵ The Commission uses Metropolitan and Rural Service Areas (“MSAs” and “RSAs”) for Cellular. There are 734 MSAs and RSAs. See Public Notice Report No. CI-92-40 “Common Carrier Public Mobile Services Information, Cellular MSA/RSA Markets and Counties,” dated January 24, 1992, DA 92-109, 7 FCC Rcd 742 (1992). See also 47 C.F.R. § 22.909. The Commission has licensed MVDDS using the 348 Component Economic Areas (CEAs). See e.g. Amendment of Parts 2 and 25 of the Commission’s Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range, *Memorandum Opinion and Order, Second Report and Order and Second Further Notice of Proposed Rulemaking, ET* Docket No. 98-206, FCC No. 02-116, (May 23, 2002).

groups of service providers. Moreover, the use of small service areas may permit the meaningful participation of small businesses in the bands better than through the use of nationwide or regional service areas because the smaller service areas will likely require a lower minimum investment. Thus, smaller service areas may permit the dissemination of licenses among a wide variety of applicants.¹¹⁶ We seek comment on whether small service areas would permit the efficiencies necessary to support the cost of providing fixed wireless service.

72. Alternatively, we seek comment on whether we should adopt a licensing plan where the geographic service areas vary in size. As explained in the Band Plan section, we could adopt a segmented band plan. If such a band plan were adopted, we seek comment on whether adoption of a large service area for one licensed segment of the band and a smaller service area for the remaining licensed segment(s) of the band would be appropriate. Commenters supporting a licensing plan where the geographic service areas vary in size should indicate their reasons for such an approach as well as the amount of spectrum that would be appropriate for the service area designation.

73. We ask commenters to consider service areas that will promote efficient spectrum usage and flexibility. We wish to ensure service to rural areas''' and to promote investment in and rapid deployment of technologies and services to all underserved areas.''' Commenters that support licensing based on service areas other than those discussed above should explain why other types of service areas are more appropriate for this band.

b) Eligibility

(1) Foreign Ownership

74. Sections 310(a) and 310(b) of the Act, as modified by the Telecommunications Act of 1996, impose foreign ownership and citizenship requirements that restrict the issuance of licenses to certain applicants.''' Licensees in the 71-76 GHz, 81-86 GHz and 92-95 GHz will be subject to section 310(a) and, depending upon the rules established in this proceeding, may be subject to Section 310(b).¹²⁰ An applicant requesting authorization only for non-common carrier or non-broadcast services would be subject to Section 310(a) but not to the additional prohibitions of Section 310(b). An applicant requesting authorization for broadcast or common carrier services would be subject to both Sections 310(a) and 310(b).

75. Further, we note that in response to the commitments under the World Trade Organization (WTO) Basic Telecommunications Agreement, the Commission liberalized its policy for applying its discretion with respect to foreign ownership of common carrier radio licensees under Section

¹¹⁶ See 47 U.S.C. §§ 309(j)(3)(B), (4)(c)

¹¹⁷ See 47 U.S.C. § 309(j)(3)(B).

¹¹⁸ See 47 U.S.C. § 309(j)(4)(c)(iii).

¹¹⁹ 47 U.S.C. §§ 310(a), 310(b).

¹²⁰ *Id.*

310(b)(4).¹²¹ Under our new policy, the Commission now presumes that ownership by entities from countries that are WTO members serves the public interest.¹²² Ownership by entities from countries that are not WTO members continues to be subject to the “effective competitive opportunities” potential established earlier by the Commission.”

76. In the filing of an application under the proposed service rules, we seek to require common carriers and non-common carriers to comply with similar reporting obligations. In order to foster regulatory parity and transparency, we believe we should require all applicants to file changes in foreign ownership information to the extent required by Part 101 of our Rules. In light of the ability of Part 101 licensees to provide both common carrier and non-common carrier services, our Rules require all licensees to report alien ownership on a consistent basis, to better enable the Commission to monitor compliance.¹²⁴ By establishing parity in reporting obligations, however, we do not propose a single, substantive standard for compliance. Thus, by way of example, we do not believe we should disqualify an applicant requesting authorization exclusively to provide non-common carrier services from obtaining a license simply because its citizenship information would disqualify it from a common carrier or broadcast license. We request comment on this proposal.

(2) Eligibility Restrictions

77. We believe that opening the 71-76 GHz, 81-86 GHz and 92-95 GHz bands to as wide a range of applicants as possible will encourage entrepreneurial efforts to develop new technologies and services, while helping to ensure efficient spectrum use. Nevertheless, in addressing this eligibility issue, we seek to determine whether open eligibility imposes a significant likelihood of substantial competitive harm in specific markets, and, if so, whether eligibility restrictions are an effective way to address that harm. We believe we should rely on competitive market forces to guide license assignment absent a compelling showing that regulatory intervention to exclude potential participants is necessary. When granting the Commission authority in Section 309(j) of the Act to auction wireless spectrum, Congress acknowledged our authority to “[specify] eligibility and other characteristics of such licenses.”¹²⁵ However, Congress specifically directed the Commission to exercise that authority so as to “promot[e] . . . economic opportunity and competition.”¹²⁶ Congress also emphasized this pro-competitive policy in Section 257,

¹²¹ The commitments are incorporated into the General Agreement of Trade in Services (GATS) by the Fourth Protocol to the GATS. See Fourth Protocol to the General Agreement on Trade in Services (WTO 1997), 36 I.L.M. 366 (1997).

¹²² See Rules and Policies on Foreign Participation in the U.S. Telecommunications Market and Market Entry and Regulation of Foreign-Affiliated Entities, *Report and Order and Order on Reconsideration*, 12 FCC Rcd 23891, 23935-47, ¶¶ 97-132 (1997).

¹²³ *Id.*

¹²⁴ See Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission’s Rules. *First Report and Order*, 15 FCC Rcd 476,502-3 ¶ 64 (2000).

¹²⁵ See 47 U.S.C. § 309(j)(3).

¹²⁶ *Id.*

where it articulated a “national policy” in favor of “vigorous economic competition” and the elimination of barriers to market entry by a new generation of telecommunications providers.¹²⁷

78. Toward that end, the Commission has created a standard for determining whether an eligibility restriction is warranted for certain services.” Specifically, this standard demands that an eligibility restriction be imposed only when there is significant likelihood of substantial harm to competition in specific markets and when the restriction will be effective in eliminating that harm.¹²⁹ The effective competition standard involves much more than examining market power. In addition, the test entails examining other relevant market facts and circumstances: economic incentives, barriers to entry, and potential competition.” Because we are unsure of the exact type of services that will operate in the subject bands, we are unable to conclude whether open eligibility poses a significant likelihood of substantial competitive harm in specific markets or whether eligibility restrictions are an effective way to address substantial competitive harm. Accordingly, we seek comment on whether any eligibility restrictions are appropriate for the 71-76 GHz, 81-86 GHz and 92-95 GHz bands. Commenters advocating imposition of eligibility restrictions should specify the level of restrictions that would address any perceived harm.¹³¹

(3) Band Managers

79. We also seek comment, in the event we adopt a geographic area licensing scheme, on whether licensing to band managers” would be appropriate. In the *BBA Report and Order*, the Commission recognized band managers as a future option for spectrum licensing.¹³³ Because the technology for these bands is new and developing, we believe a flexible regulatory approach is necessary to allow development of applications for the optimal public benefit. In this connection, we seek comment on whether permitting an entity to hold a license in these bands as a band manager would be appropriate.

¹²⁷ See 47 U.S.C. § 257

¹²⁸ See Amendment of the Commission’s Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands, *Report and Order and Second Notice of Proposed Rule Making*, 12 FCC Rcd 18600, 18617-18619 ¶¶ 30-33 (39 GHz R&O).

¹²⁹ *Id.* at 18619 ¶ 32

¹³⁰ Rule Making to Amend Parts 1, 2, 21, and 25 of the Commission’s Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Services and for Fixed Satellite Services, *Third Order on Reconsideration*, 13 FCC Rcd 4856, 4861-17, 4863 ¶ 12 (1998).

¹³¹ In LMDS and the commercial mobile radio service (CMRS) Spectrum Cap, the Commission employed an attributable interest percentage.

¹³² Band managers are “a class of licensees that are specifically authorized to lease their licensed spectrum usage rights for use by third parties through private, contractual agreements, without having to secure prior approval by the Commission.” Promoting Efficient Use of Spectrum Through Eliminating Barriers to the Development of Secondary Markets, *Notice of Proposed Rule Making, WT Docket No. 00-230*, 15 FCC Rcd 24203, 24209 ¶ 17 (2000).

¹³³ See Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended, WT Docket No. 99-87, *Report and Order and Further Notice of Proposed Rule Making*, WT Docket 99-87, 15 FCC Rcd 22709, 22727-22735 (2000) (*BBA Report and Order*).

80. We note that Loea made comments opposing the band manager **concept**.¹³⁴ Specifically, Loea contends that the technological applications in the Upper Millimeter Wave band require “large vertical slices” of spectrum thereby reducing the number of viable spectrum **managers**.¹³⁵ Loea further argues that giving a band manager exclusive use of the spectrum in a geographic area gives it a monopoly in the area.” We seek comment on whether, **on** the other hand, a band manager could actually enhance accessibility by third parties interested in providing service using this spectrum. In this regard, we seek comment **on** whether a band manager could perform many of the functions that Loea proposes be delegated to a coordinator. We seek comment generally **on** the feasibility, if we decide on geographic area licensing, of providing licensees in these bands with the option **of** electing to operate either as a band manager or as a regular non-band manager licensee.”

81. If we allow band manager licensees in the 71-76 GHz, 81-86 GHz and **92-95 GHz** bands, we seek comment on the rules that should apply to band managers in these bands. Additionally, we seek comment **on** how rules for band managers should differ from the rules applicable to 700 MHz Guard Band Managers.” For example, we ask whether we should also implement safeguards, similar to those in Part 27 of our Rules, to ensure that a band manager’s core function remains focused **on** leasing.” We also seek comment on whether it is necessary to provide additional safeguards to prevent a band manager from discriminating among spectrum users.¹⁴⁰ We note that in the *27 MHz Report and Order*, we declined to apply several rules to band managers in those bands that do apply to 700 MHz Guard Band Managers.¹⁴¹ We seek comment on which Part 27 Rules relating to band managers should apply to band managers in these bands. In addition, we request comment **on** the type of information to include in agreements between band managers and spectrum users.¹⁴² Finally, we seek comment **on** whether we

¹³⁴ See *id.*

¹³⁵ See Loea Petition at 16.

¹¹⁶ *id.*

¹³⁷ We note that the Commission is exploring ways to promote leasing in its Secondary Markets proceeding. See Promoting Efficient Use of the Spectrum through Elimination of Barriers to the Development of Secondary Markets, WT Docket No. 00-230, *Notice of Proposed Rule Making*, 15 FCC Rcd 24203 (rel. Nov. 27, 2000); see also Promoting Efficient Use of the Spectrum through Elimination of Barriers to the Development of Secondary Markets, *Policy Statement*, 15 FCC Rcd 24178 (rel. Dec. 1, 2000).

¹³⁸ See generally 47 C.F.R. Part 27 – Miscellaneous Wireless Communications Services (Subpart G)

¹³⁹ See *700 MHz Guard Band Second Report and Order, supra*, note 137 (limiting band managers and affiliated spectrum use).

¹⁴⁰ See *700 MHz Guard Band Second Report and Order*, 15 FCC Rcd at 5327-5328 ¶¶ 63-67; see also *BBA Report and Order*, 15 FCC Rcd 22733 ¶ 47.

¹⁴¹ See Amendments to Parts 1, 2, 27 and 90 of the Commission’s Rules to License Services in the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz and 2385-2390 MHz Government Transfer Bands, *WT Docket 02-8, Report and Order*, ¶ 39 (rel. May 24, 2002).

¹⁴² For example, under Part 27 of our Rules, a spectrum user must specify, in detail, the operating parameters of the proposed system including power, maximum antenna heights, frequency(s) of operation, base station locations and area of operations. See 47 C.F.R. Part 27, Subpart G.

should require hand managers to file annual reports **on** their spectrum usage with the *Commission*.¹⁴³ The annual reports would enable the Commission to ensure that spectrum is not being warehoused or otherwise not being made available despite existing **demand**.¹⁴⁴

c) Canadian and Mexican Coordination

82. Section 2.301 of our Rules requires stations using wireless frequencies to identify their transmissions with a view to eliminating harmful interference and generally enforcing applicable wireless treaties, conventions, regulations, arrangements, and **agreements**.¹⁴⁵ At this time, there are no international agreements between and among the United States, Mexico and Canada concerning the reallocation of the 71-76 GHz, 81-86 GHz and 92-95 GHz spectrum. We believe we should adopt interim requirements for licensees along these borders. Additionally, we believe we should require these licensees to comply with the provisions contained within future agreements between and among the three countries. Until such time as agreements between the United States, Mexico and Canada become effective, we propose to apply the same technical restrictions at the border that we adopt for operation between the geographic service **areas**.¹⁴⁶ Generally, operations must not cause harmful interference across the border. We note that further modification might be necessary in order to comply with future agreements with Canada and Mexico regarding the use **of** this band. We seek comments on these issues. Additionally, we request comment **on** alternative interim requirements that would eliminate harmful interference to countries along our borders.

d) License Term and Renewal Expectancy

83. We seek comment on the appropriate license term for licensees in the 71-76 GHz, **81-86 GHz** and 92-95 GHz bands. We note that licenses authorized under **Part** 101 of our Rules are licensed for a period of ten **years**.¹⁴⁷ **In** addition, if we adopt a licensing scheme under which a licensee obtains the exclusive right to use spectrum, we seek comment **on** creating a renewal expectancy similar to that afforded to licensees in the Local Multipoint Distribution Service (LMDS). For LMDS licensees, we concluded that a renewal applicant shall receive a preference or renewal expectancy if the applicant has provided substantial service during its past license term and has complied with the Act and applicable Commission rules and **policies**.¹⁴⁸ We believe that a ten-year license term, combined with a renewal expectancy, could help to provide a stable regulatory environment that will be attractive to investors and, thereby, encourage development of this frequency band.

84. If **we** adopt a renewal expectancy, we propose that the renewal application of a licensee in the 71-76 GHz, 81-86 GHz and 92-95 GHz bands must include, at a minimum, the following showings in order to request a renewal expectancy:

¹⁴³ See 47 C.F.R. § 27.607.

¹⁴⁴ See *700 MHz Guard Band Second Report and Order*, 15 FCC Rcd at 5333 ¶ 79

¹⁴⁵ See 47 C.F.R. § 2.301.

¹⁴⁶ See 47 C.F.R. § 101.105.

¹⁴⁷ See 47 C.F.R. § 101.67.

¹⁴⁸ See 47 C.F.R. § 101.1011.

- A description of current service in terms of geographic coverage and population served or links installed and a description of how the service complies with the substantial service requirement.
- A description of the licensee's investments in its system(s).
- Copies of any Commission Orders finding the licensee to have violated the Communications Act or any Commission rule or policy, and a list of any pending proceedings that relate to any matter described by the requirements for the renewal expectancy.¹⁴⁹
- If applicable, a description of how the licensee has complied with the build-out requirement.

85. Under our proposal, in the event that a licensee partitions or disaggregates” its license, a partitionee or disaggregatee may only hold its license for the remainder of the partitioner's or disaggregator's original license term.” Further, applications requesting approval for partitioning or disaggregation must include a certification by each party that it will satisfy the construction requirements established in this proceeding. This approach is similar to the partitioning provisions the Commission adopted for licensees in the 39 GHz band,¹⁵² 24 GHz band,¹⁵³ and LMDS.¹⁵⁴ We provide these provisions because we do not believe that a licensee, by partitioning or disaggregating, should be able to confer greater rights than it was awarded under the terms of its license grant. We seek comment on this approach.

e) Construction and Coverage Requirements

86. We seek comment on what, if any, construction and/or minimum coverage requirements should apply to licensees in these bands. If we allow licensees to acquire exclusive use of spectrum in an area, we seek comment on whether we should require licensees to satisfy a substantial service requirement or a minimum coverage requirement in the 71-76 GHz, 81-86 GHz and 92-95 GHz bands as a condition of license renewal. We have imposed such requirements on licensees in other services to

¹⁴⁹ Cf. Section 22.940(a)(2)(i) through Section 22.940(a)(2)(iv) of the Commission's Rules, 47 C.F.R. §§ 22.940(a)(2)(i)-(iv); see also Amendment of Part 22 of the Commission's Rules Relating to License Renewals in the Domestic Public Cellular Radio Telecommunication Service, *Report and Order*, 7 FCC Rcd 719, 719-722 ¶¶ 3-18 (1992).

¹⁵⁰ “Partitioning” is the assignment of geographic portions of a license along the geopolitical or other boundaries. “Disaggregation” is the assignment of discrete portions of “blocks” of spectrum licensed to a geographic licensee or qualifying entity. Disaggregation allows for multiple transmitters in the same area operated by different companies (thus, the possibility of harmful interference increases).

¹⁵¹ See Partitioning and Disaggregation discussion at para. 91

¹⁵² See 47 C.F.R. §§ 101.56(g)-(h).

¹⁵³ See 47 C.F.R. §§ 101.535(d)-(e).

¹⁵⁴ See 47 C.F.R. §§ 101.1111(d)-(e).

ensure effective and efficient spectrum use and prompt implementation of service.¹⁵⁵ We seek comment on whether we should require licensees to provide “substantial service” to the geographic license area within the license term that we adopt for this service. We have defined substantial service as “service which is sound, favorable, and substantially above a level of mediocre service which just might minimally warrant renewal.”¹⁵⁶ Further, we seek comment on whether there should be an alternative, safe harbor standard. We ask commenters supporting a safe harbor standard to specify the type of safe harbor standard we should provide. We also seek comment on whether such a safe harbor standard should apply to band managers as well as traditional licensees or whether we need to apply a different safe harbor to band managers. In addition, we seek comment on whether a partitionee or disaggregatee should be bound by the standard, either substantial service or a construction requirement, for its partitioned or disaggregated license. Finally, we propose that licensees who fail to comply with the adopted standard will not have their licenses renewed.” These standards promote efficient spectrum usage and maximize opportunities for new services and technologies in the 71-76 GHz, 81-86 GHz and 92-95 GHz bands. Moreover, we propose that any exclusive licensee who loses its license for failure to comply with the adopted standard, will be prohibited from holding that same license for the same territory in the future.¹⁵⁸ We seek comment on these proposals.

87. If we decide to license the spectrum in these bands on a site-by-site basis, we seek comment on whether to apply the construction requirements set forth in Section 101.63 of our Rules. Section 101.63 provides, *inter alia*, that licensees authorized under Part 101 of our Rules must be in operation within 18 months from the initial date of grant.¹⁵⁹ Section 101.63 further provides that failure to timely begin operation of the station will result in the automatic cancellation of that authorization.¹⁶⁰ We seek comment on this construction requirement, as well as alternative construction requirements, for site-based licenses in these bands.

f) Individual Station Licenses

88. In the event we adopt a geographic area licensing scheme for the 71-76 GHz, 81-86 GHz and 92-95 GHz bands, we seek comment on circumstances under which such licensees would be required to obtain individual station licenses within its geographic area. Under geographic area licensing, the licensee has exclusive use of its assigned spectrum to operate within its original geographic service area. Ordinarily, licensees may operate without filing an application for each individual station within its service area. Nonetheless, we believe there are situations in which we will require licensees to obtain an individual station license for a particular station within its geographic service area. We believe those instances include: (1) applications requiring submission of an Environmental Assessment,¹⁶¹ (2)

¹⁵⁵ Cf. 47 C.F.R. §§ 22.940(a)(2)(i)-(iv).

¹⁵⁶ See e.g., 47 C.F.R. § 22.940(a)(1)(i).

¹⁵⁷ See, e.g. 47 C.F.R. §§ 101.17(b), 101.1011(a)

¹⁵⁸ See, e.g. 47 C.F.R. § 101.1011(a).

¹⁵⁹ See 47 C.F.R. § 101.63(a).

¹⁶⁰ See 47 C.F.R. § 101.63(b).

¹⁶¹ See 47 C.F.R. § 1.1307.

international coordination,¹⁶² (3) operation in quiet zones,¹⁶³ or (4) coordination through the Commission with IRAC.¹⁶⁴ We believe the applicant, in the first instance, is in the best position to determine the nature of its operations and whether those operations impact environmental rules, quiet zone rules, etc. Accordingly, we tentatively conclude that the licensee must determine whether its proposed operations and location require an individual station license for which it must file an individual application. We further propose to apply this requirement to both new stations and station modifications. We request comment on this tentative conclusion and proposal.

g) Application of Title 11 Requirements to Common Carriers

89. We also seek comment on whether we should forbear from applying certain obligations on common carrier licensees in the 71-76 GHz, 81-86 GHz and 92-95 GHz bands pursuant to Section 10 of the Act.¹⁶⁵ In the case of CMRS providers, the Commission concluded that it was appropriate to forbear from Sections 203, 204, 205, 211, 212, and most applications of Section 214.¹⁶⁶ The Commission, however, declined to forbear from enforcing other provisions, including Sections 201 and 202.¹⁶⁷ The Commission also has exercised its forbearance authority in permitting competitive access providers and competitive local exchange carriers to file permissive tariffs.¹⁶⁸ We seek comment on whether it is appropriate to forbear from enforcing any provisions of the Act or the Commission's Rules in these bands.

¹⁶² See, e.g. 47 C.F.R. § 1.928 (regarding frequency coordination arrangements between the U.S. and Canada).

¹⁶³ 47 C.F.R. § 1.924

¹⁶⁴ This coordination may be necessary depending on the final rules adopted in this proceeding, near a limited number of Federal Government installations that require protection from FCC licensed stations in these bands.

¹⁶⁵ See 47 U.S.C. § 160(a)(1-3). This section provides the Commission with authority to forbear from application of virtually any regulation or any provision of the Act to a telecommunications carrier or telecommunications service, or a class of carriers or services. But, the Commission may not forbear from applying the requirements of 47 U.S.C. §§ 251(c) and 271 until the Commission determines that those requirements have been fully implemented. See 47 U.S.C. § 160(d).

¹⁶⁶ 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, 1463-93, 1478-80 (1994) (*CMRS Second Report and Order*).

¹⁶⁷ See *CMRS Second Report and Order*, 9 FCC Rcd at 1478; Personal Communications Industry Association's Broadband Personal Communications Services Alliance's Petition for Forbearance for Broadband Personal Communications Services, Forbearance from Applying Provisions of the Communications Act to Wireless Telecommunications Carriers, WT Docket No. 98-100, *Memorandum Opinion and Order and Notice of Proposed Rulemaking*, 13 FCC Rcd 16857, 16914 (1998) (declining to forbear from applying Section 20.12(b) of the Commission's Rules (resale rule) and Sections 201 and 202 of the Communications Act). See also *RegioNet Wireless License, LLC, Order*, 15 FCC Rcd 16,119(2000).

¹⁶⁸ See *Hyperion Telecommunications, Inc. Petition Requesting Forbearance, Time Warner Communications Petition for Forbearance, Complete Detariffing for Competitive Access Providers and Competitive Exchange Carriers, Memorandum Opinion and Order and Notice of Proposed Rulemaking*, 12 FCC Rcd 8596, 8608-10 (1997).

90. Before forbearing from applying any section of Title II, Section 10(a) requires the Commission to find each of the following conditions:

- Enforcement of such regulation or provision is not necessary in order to ensure that the charges, practices, classifications, or regulations by; for or in connection with that telecommunications carrier or telecommunication service are just and reasonable and are not unjustly or unreasonably **discriminatory**;¹⁶⁹
- Enforcement of such regulation or provision is not necessary for the protection of consumers;” and
- Forbearance from applying such regulation or provision is consistent with the public interest.”

Accordingly, any proposal to forbear from enforcing any provisions of the Act or our Rules must address the conditions annunciated in Section 10(a) of the act.

h) Partitioning and Disaggregation

91. We propose to allow licensees to partition their service areas and to disaggregate their spectrum. We seek comment on whether geographic partitioning and spectrum disaggregation could result in efficient spectrum use. We note that we allow partitioning and disaggregation in other microwave services, such as the 39 GHz Service” and LMDS.¹⁷³ We also seek comment on whether our proposed approach will provide a means to overcome entry barriers through the creation of smaller licenses that require less capital, thereby facilitating greater participation by rural telephone companies and smaller entities, many of which are owned by minorities and **women**.¹⁷⁴ We are mindful of the concerns of the rural telecommunications community concerning the effectiveness of partitioning and disaggregation in facilitating service to rural areas. We intend to develop a more current and substantial record on the Commission’s mandate to ensure that rural telecommunication companies are given the opportunity to participate in the provision of spectrum-based services pursuant to Section 309(j)(4)(d) of

¹⁶⁹ See 47 U.S.C. § 160(a)(1).

¹⁷⁰ See 47 U.S.C. § 160(a)(2).

¹⁷¹ See 47 U.S.C. § 160(a)(3).

¹⁷² See 47 C.F.R. § 101.56.

¹⁷³ See 47 C.F.R. § 101.1111.

¹⁷⁴ See Geographic Partitioning and Spectrum Disaggregation by Commercial Mobile Radio Services Licensees, *Report and Order*, 11 FCC Rcd 21831, 21843-44 ¶¶ 13-17.

the Act.¹⁷⁵ Accordingly, we plan to initiate a Notice of Inquiry regarding a number of topics related to the provision of spectrum-based service to rural areas.¹⁷⁶

92. We seek comment on the advantages and disadvantages of allowing partitioning and disaggregation in these bands. In addition, we seek comment on our proposal to apply the unjust enrichment provisions of Section 1.2111 of our Rules in the event a licensee that received a bidding credit chooses to partition its license or disaggregate its spectrum to an entity that is not eligible for such a bidding credit.

3. Technical and Operational Rules

a) Regulation Under Part 101

93. Loea and the commenters propose that we regulate these bands under Part 101 of our Rules.¹⁷⁷ We tentatively conclude that regulation under Part 101 of our Rules is appropriate. As noted by the commenters, there are similarities between the services contemplated in these bands and existing fixed microwave services such as the 39 GHz service, which is regulated under Part 101 of our Rules. We seek comment on whether we should regulate primary fixed uses in this band pursuant to Part 101 of our Rules,¹⁷⁸ as we have traditionally done for fixed, point-to-point, and point-to-multipoint microwave operations. We ask commenters to discuss the advantages and disadvantages of regulating this service pursuant to Part 101. We also solicit suggestions on other methods to regulate the band, along with the advantages and disadvantages thereof. We also seek comment on whether certain technical rules would be unnecessary in the event we allow band managers to be licensees.

94. We note that none of the commenters discussed mobile operations in the 71-76 GHz, 81-86 GHz and 92-95 GHz bands. However, as stated above, this spectrum is allocated for fixed and mobile services. In accordance with our goal of providing maximum practicable flexibility, we seek comment on whether it would be appropriate to establish rules to regulate mobile operation in the spectrum. We ask commenters to discuss the advantages and disadvantages of establishing rules to regulate mobile service in the 71-76 GHz, 81-86 GHz and 92-95 GHz bands. We also ask commenters that support service rules for mobile service to propose specific technical and operational rules for mobile service.

b) Technical Rules

95. As stated above, we propose to apply our Part 101 rules to govern the use of new services in the 71-76, 81-86 and 92-95 GHz bands, except as they may be modified as a result of this proceeding. Because we do not exactly know the type of services that will use the 71-76, 81-86 and 92-95 GHz bands, we believe it is appropriate to solicit comments on possible technical requirements for

¹⁷⁵ 47 U.S.C. § 309(j)(4)(C).

¹⁷⁶ See Amendment to Parts 1, 2, 27 and 90 of the Commission's rules to License Services in the 216-200 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz 1670-1675 MHz and 2385-2390 MHz Government Transfer Bands, WT Docket No. 02-8, *Report and Order*, FCC 02-152 (rel. May 24, 2002) at ¶ 20.

¹⁷⁷ Loea Petition at 9-10, DMC Comments at 2, Boeing Comments at 6 n.8, Letter from Robert Volker, President of Pacific LightNet to Magalie Roman Salas, Secretary, Federal Communications Commission at 1-2 (filed Nov. 7, 2001) (Pacific LightNet Comments).

¹⁷⁸ Part 101 of the Commission's Rules governs the Fixed Microwave Services.

operations on these bands. While it is our tentative view that most technical issues are addressed by the current rules, there are several rules discussed below that should be considered. We solicit comments, however, on all technical parameters that should apply to operations at 71-76, 81-86 and **92-95 GHz**.

96. Loea's proposed technical rules are supported by FWCC and Pacific **LightNet**.¹⁷⁹ Generally, **DMC Stratex Networks** also supported Loea's proposed technical rules but believes further study is needed before any final values are set in the rules.¹⁸⁰ Boeing, however, contends that the parameters Loea proposed only reflect Loea's proposed system and were likely not designed in order to maximize compatibility with other systems and **services**.¹⁸¹ Boeing states that the Commission should adopt technical rules that are independent and neutral, thus permitting the licensing of competing and diverse systems and services."¹⁸²

97. **Channelization Plan.** As provided above, we propose segmentation of the **92-95 GHz** band in order to provide adequate protection to users in the adjacent spectrum and to the co-primary Federal Government and non-Federal Government users in the band."¹⁸³ However, at this time we do not propose segmentation of the 71-76 GHz and 81-86 GHz bands. The commenters argue that we should not impose a channelization plan on these bands because licensees will need access to the entire spectrum in order to obtain the very high throughput they will need to provide fiber-like services.¹⁸⁴ In particular, Boeing states that the entire available bandwidth must be made available "if true equivalence and compatibility with fiber is to be **achieved**."¹⁸⁵ We seek comment on whether a channelization plan would impede the flexibility of licensees to provide innovative services in these bands. We also seek comment on assertions that a channelization plan is unnecessary because of the ability to have high reuse of these bands in a limited area.¹⁸⁶ We seek comment on whether a channelization plan would enhance competition by allowing multiple licensees to effectively operate in the same area.

98. **Interference Protection Criteria.** In the **24 GHz** band, where we licensed spectrum in geographic **areas**,¹⁸⁷ we concluded that licensees must be assured reasonable and effective use of their

¹⁷⁹ See FWCC Comments at 2; LightNet Comments at 2

¹⁸⁰ See DMC Comments at 4

¹⁸¹ See Boeing Comments at 10

¹⁸² *Id.*

¹⁸³ See paras. 41-51

¹⁸⁴ See Loea Petition at 11; Boeing Comments at 4; Endwave Comments at 3; WCA Comments at 3. We note that only Boeing included the 92-95 GHz band in its comments regarding a channelization plan. Boeing Comments at 4.

¹⁸⁵ Boeing Comments at 5. We note that Boeing included the 92-95 GHz band in its comments regarding channelization plans. *Id.*

¹⁸⁶ *Id.*

¹⁸⁷ See e.g. Amendments to Parts 1, 2, 87 and 101 of the Commission's Rules to License Fixed Services at 24 GHz, *Report and Order*, 15 FCC Rcd 16935, 16965 ¶ 70 (2000).

own areas, while equally protecting the interests of other licensees.¹⁸⁸ Accordingly, we created an interference protection criteria to ensure cooperation among licensees to minimize and resolve potential interference problems while obtaining the most efficient and effective use of the spectrum and authorized facilities.¹⁸⁹ We prohibited all harmful interference to other users of co-channel and adjacent channel use in the same or adjacent geographical area.¹⁹⁰ In addition, we require licensees in the 24 GHz band to coordinate their facilities whenever the facilities have optical line-of-sight into other licensees' areas or are within the same geographic area.¹⁹¹ However, we provided a flexible approach in which the relevant licensees were allowed to mutually resolve their coordination problems with as little input from the Commission as possible.¹⁹² To the extent we use geographic area licensing, we propose to create a similar flexible approach for the 71-76 GHz, 81-86 GHz and 92-95 GHz bands. We seek comment on the proposed interference protection criteria. To the extent we use site-by-site licensing in these bands, we also seek comment on the applicable interference protection criteria that should be used. In particular, we seek comment on whether any of the criteria in Section 101.105 of our Rules¹⁹³ could be applied to these bands.

99. **Frequency Tolerance.** Loea proposes a frequency tolerance of 0.03 percent for all fixed and mobile stations.¹⁹⁴ Although Loea provides no basis for this proposal, we note that this is the same frequency tolerance we applied in the 31.3-40.0 GHz band. We believe that this frequency tolerance should provide the flexibility necessary for manufacturers to develop equipment in the 71-76 GHz, 81-86 GHz and 92-95 GHz bands.¹⁹⁵ We seek comment on the frequency tolerance proposed by Loea and other possible frequency tolerance criteria. For example, we could specify tight transmitter filter requirements to minimize transmissions of undesired harmonics, instead of specifying tight transmitter frequency tolerance.

100. **Restrictions on Total Radiated Power and Antenna Directionality.** Loea proposes to adopt a maximum EIRP of +55 dBW.¹⁹⁶ Loea notes that this proposal is consistent with the EIRP limitation in the 39 GHz band and several other bands.¹⁹⁷ While this proposal is consistent with the EIRP limits set for 39 GHz licensees, we ask commenters, to the extent we adopt geographic area licensing, if

¹⁸⁸ *Id.* at 16963 ¶¶ 65-67.

¹⁸⁹ *Id.*

¹⁹⁰ See 47 C.F.R. § 101.509(b).

¹⁹¹ See 47 C.F.R. § 101.509(c).

¹⁹² *Id.* at 16693 ¶ 66.

¹⁹³ 47 C.F.R. § 101.105.

¹⁹⁴ See Loea Petition, Appendix C at 4

¹⁹⁵ See 47 C.F.R. § 101.107. We note that 39 GHz licensees are exempt from the frequency tolerance requirements set forth in Section 101.107 of the Commission's Rules. *Id.*

¹⁹⁶ See Loea Petition at 14

¹⁹⁷ *Id.*

there is a need for EIRP limitations in a band occupied only by geographic area licensees.¹⁹⁸ If there is such a need, we seek comment on whether the proposed EIRP values are appropriate for the intended services in the 71-76 GHz, 81-86 GHz and 92-95 GHz bands. We also ask whether the proposed EIRP values provide adequate power for stations to transmit over typical distances for various types of applications, or whether the proposed maximum has the potential to produce harmful interference due, for instance, to scattering, when a large number of microwave paths criss-cross each other.

101. Loea also requests that the Commission specify a minimum 50 dBi gain and, consistently, a 0.6 degree half power beamwidth for the antennas used in the 71-76 and 81-86 GHz bands.¹⁹⁹ Loea claims that instituting such a requirement will result in a gain that is 12 dB higher than the other Part 101 regulated bands, thus regulating the sharing of spectrum by spatially narrowing the beams used to provide service.²⁰⁰ We seek comment on this proposal. Endwave argues that Loea has requested antenna specifications that are difficult to meet using available fabrication processes.²⁰¹ Endwave contends that a minor relaxation of certain parameters proposed by Loea will reduce the antenna cost sharply, without degrading the characteristics that support the licensing approaches.²⁰² Specifically, Endwave proposes that manufacturers should have the option of reducing antenna gain, so long as they cut maximum EIRP by twice the number of dB by which they reduce antenna gain. For example, it would be permissible to reduce antenna gain by 3 dB and EIRP by 6 dB, or antenna gain by 6 dB and EIRP by 12 dB.²⁰³ WCA supports Endwave's proposal for a minor relaxation of Loea's proposed parameters.²⁰⁴ We seek comment on the radiated power and directionality proposed by Loea and ask whether these parameters should also apply to the 92-95 GHz bands. We seek comment on whether there is a need for antenna gain regulation if we adopt geographic area licensing. To the extent commenters believe a minimum antenna gain requirement is necessary, we seek comment on Endwave's proposal to relax the technical parameters proposed by Loea.

102. **RF Safety.** We propose that licensees and manufacturers be subject to the RF radiation exposure requirements specified in Sections 1.1307(b), 2.1091 and 2.1093 of our Rules," which list the services and devices for which an environmental evaluation must be performed. We seek comment on requiring routine environmental evaluations for RF exposure²⁰⁶ in the case of fixed operations, including base stations in cases where there is a possible safety risk if the installation of the transmitter antenna is

¹⁹⁸ We note that an EIRP limitation was necessary in the 39 GHz service because of incumbents and overlays in the spectrum. See *39 GHz R&O*, 12 FCC Rcd at 18632-18634 ¶¶ 66-69.

¹⁹⁹ *id.*

²⁰⁰ *id.*

²⁰¹ See Endwave Comments at 5.

²⁰² *id.*

²⁰³ *Id.*

²⁰⁴ See WCIA Comments at 4.

²⁰⁵ 47 C.F.R. §§ 1.1307(b), 2.1091, 2.1093.

²⁰⁶ See "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields," OET Bulletin No. 65 (August 1997).

not properly designed. We propose to do this by amending Table I of Section 1.1307 of our Rules²⁰⁷ to require an evaluation if the ratio $4P/A$ is greater than 1 mW/cm^2 , where A is the area of the antenna in cm^2 and P is the power of the transmitter in mW . While other fixed transmitter evaluation requirements are based on an effective isotropic radiated power threshold, we believe that this ratio is a better indicator of health risk and will minimize the number of evaluations needed and hence decrease administrative burdens.

4. Licensing Rules and Procedures

a) Incorporation by Reference of Part 1 of the Wireless Telecommunications Services Application and Procedural Rules

103. We propose to license portions of the 71-76 GHz, 81-86 GHz and 92-95 GHz bands in conformity with the general application and procedure rules for wireless telecommunications set forth in Part 1, Subpart F, of our Rules.²⁰⁸ We seek comment on whether any of our Part 1 Rules would be inappropriate for the licensed portion of these bands.

b) Competitive Bidding

(1) Assignment of Licenses

104. As discussed above, if we adopt a licensing mechanism that could result in the filing of mutually exclusive applications, we will resolve any mutually exclusive initial applications for licenses for the 71-76 GHz, 81-86 GHz and 92-95 GHz bands through the use of competitive bidding. Loea and its supporters are opposed to the concept of assigning licenses in the 71-76 GHz, 81-86 GHz and 92-95 GHz bands via competitive bidding.²⁰⁹ Loea's provides three main reasons for its opposition. First, Loea argues that mutual exclusivity will not exist in these bands and therefore auctions are neither appropriate nor necessary.'" Loea claims there will be no mutual exclusivity because of the point-to-point nature of these paths and the nature of the propagation of the Upper Millimeter Wave bands.²¹¹ Specifically, Loea contends that in the Upper Millimeter Wave bands, harmful interference can be eliminated by reorientation of the antenna by tenths of degrees or relocation of the antenna by tenths of meters.'" Therefore, Loea concludes that even if two entities want to provide service over the same path, harmful interference can be avoided by judiciously routing the second path around the first.²¹³

²⁰⁷ 47 C.F.R. § 1.1307

²⁰⁸ See 47 C.F.R. §§ 1.901-1.981

²⁰⁹ See Loea Petition at 17; see also Boeing Comments at 6-8; Endwave Comments at 3; FWCC Comments at 2; PCIA Comments at 2; WCIA Comments at 3.

²¹⁰ Loea Petition at 17.

²¹¹ *Id.*

²¹² *Id.*

²¹³ *Id.* at 18

105. Second, Loea argues that assignment of licenses via competitive bidding is not always beneficial to the consumer.²¹⁴ In its paper, HAI concludes that an auction of the spectrum will, in effect, be an inefficient tax.²¹⁵ HAI claims that such a tax increases the prices consumers pay and discourages investment in telecommunications and may conflict with other public policy goals, such as increasing competition.²¹⁶ HAI also concludes that auctions have the potential to raise monopoly problems. Based on the HAI Paper, Loea argues that auctions reduce the ability of new service providers to enter the market, impairs the Commission's ability to reach spectrum goals and makes it less likely that consumers will be able to enjoy a variety of innovative services at reasonable cost.²¹⁷ Boeing supports this conclusion and further argues that competitive bidding would only impose additional and unnecessary costs, both in terms of real dollars and delay, in the deployment of new services.”

106. Finally, Loea argues that Section 309(j)(6) of the Act mandates that the Commission employ coordination or other services, rather than auctions, to avoid the potential for mutual exclusivity.²¹⁹ It further contends that mutual exclusivity can be avoided **by** using a site-by-site licensing scheme.” Accordingly, Loea concludes that there is **no** reason to assign the licenses by competitive bidding.

107. We nevertheless seek comment **on** competitive bidding rules for the 71-76 GHz, 81-86 GHz and 92-95 GHz bands in case we adopt a licensing mechanism that could result in the filing of mutually exclusive applications. We note that Congress has mandated that we auction spectrum in order to resolve mutual exclusivity. The Balanced Budget Act of 1997 (BBA-97) revised the Commission's auction authority.²²¹ Specifically, it amended Section 309(j) of the Act to require the Commission to grant licenses through the use of competitive bidding when mutually exclusive applications for initial licenses are filed, unless certain specific statutory exemptions **apply**.²²² The BBA-97 also incorporated in Section 309(j)(1) a reference to the Commission's obligation to avoid mutual exclusivity under Section 309(j)(6)(E) to use engineering solutions, negotiation, threshold qualifications, service regulations, or other means to avoid mutual exclusivity where it is in the public interest to do so.²²³ BBA-97 did not

²¹⁴ *Id*

²¹⁵ See Loea Petition, Appendix B, HAI Paper at 9.

²¹⁶ *Id*.

²¹⁷ See Loea Petition at 18.

²¹⁸ See Boeing Comments at 7.

²¹⁹ See Loea Petition at 18; see also Boeing Comments at 9.

²²⁰ *Id*.

²²¹ See 47 U.S.C. § 309(j)(1), (2) (as amended by Balanced Budget Act, § 3002).

²²² *Id*. 47 U.S.C. § 309(j)(2) exempts from auctions licenses and construction permits for public safety radio services, digital television service licenses and permits given to existing terrestrial broadcast licensees to replace their analog television service licenses, and licenses and construction permits for noncommercial educational broadcast stations and public broadcast stations.

²²³ See 47 U.S.C. §§ 309(j)(1), 309(j)(6)(E)

amend Section 309(j)(3)'s directive to consider certain public interest objectives in identifying classes of licenses and permits to be issued by competitive bidding.²²⁴

108. In the *BBA Report and Order*, the Commission established a framework for exercise of the Commission's auction authority, as expanded by the Balanced Budget Act.²²⁵ The *BBA Report and Order* affirmed that, in identifying which classes of licenses should be subject to competitive bidding, the Commission must pursue the public interest objectives set forth in Section 309(j)(3).²²⁶ The *BBA Report and Order* also affirmed that, as part of this public interest analysis, the Commission must continue to consider alternative procedures that avoid or reduce the likelihood of mutual exclusivity.²²⁷ The Commission has concluded, however, that its obligation to avoid mutual exclusivity does not preclude it from adopting licensing processes in the non-exempt services that result in the filing of mutually exclusive applications where it determines that such an approach would serve the public interest.²²⁸

109. In determining whether to assign licenses through competitive bidding in this proceeding, we intend to follow the approach set forth in the Balanced Budget Act proceeding regarding the exercise of our auction authority. We note, too, that subsequent to the adoption of Balanced Budget Act, the U.S. Court of Appeals for the D.C. Circuit concluded that the Section 309(j)(6)(E) obligation does not foreclose new licensing schemes that are likely to result in mutual exclusivity.²²⁹ The court stated that if the Commission finds such schemes to be in the public interest, it may implement them "without regard to Section 309(j)(6)(E) which imposes an obligation only to minimize mutual exclusivity 'in the public interest' and 'within the framework of existing policies.'"²³⁰

110. As stated earlier, we seek comment on whether to adopt a geographic area licensing scheme for the proposed licensed portion of the 71-76 GHz, 81-86 GHz and 92-95 GHz bands. We also seek comment on appropriate licensing approaches for these bands and whether such schemes would promote the objectives of Section 309(j)(3), including promoting economic opportunities and competition by disseminating licenses among a wide variety of applicants.²³¹ If we find that it would serve the public interest to implement a geographic area licensing scheme, under which mutual exclusivity is possible, then we must resolve mutually exclusive applications for initial licenses in the 71-76 GHz, 81-86 GHz and 92-95 GHz bands through competitive bidding.

²²⁴ See 47 U.S.C. §§ 309(j)(3).

²²⁵ See *BBA Report and Order*, 15 FCC Rcd 22709

²²⁶ *Id.* at 22718-22723

²²⁷ *Id.*

²²⁸ *Id.*

²²⁹ See *Eenkelman Telephone Co. et al v. FCC*, 220 F.3d 601,606 (D.C. Cir 2000), petition for rehearing on other grounds pending.

²³⁰ *Id.* (citations omitted) (citing *DIRECTV, Inc. v. FCC*, 110 F.3d 816, 828 (D.C. Cir. 1997))

²³¹ See *supra* paras. 61-69; 47 U.S.C. § 309(j)(3).

(2) Incorporation by Reference of the Part 1 Standardized Auction Rules

111. If we adopt a licensing mechanism that could result in mutually exclusive applications, we propose to conduct any auction of initial licenses in the licensed portion of the 71-76 GHz, 81-86 GHz and 92-95 GHz bands in conformity with the general competitive bidding rules set forth in Part 1, Subpart Q, of our Rules, and substantially consistent with the bidding procedures that we have employed in previous auctions.” Specifically, we propose to employ our Part 1 Rules governing competitive bidding design, designated entities, application and payment procedures, reporting requirements, collusion issues, and unjust enrichment.” Under this proposal, we propose to employ our Part 1 competitive bidding rules, as they may be modified in future Part 1 proceedings.²³⁴ In addition, consistent with current practice, the Wireless Telecommunications Bureau (“Bureau”) would determine matters such as the appropriate competitive bidding design for the auction of these licenses, as well as minimum opening bids and reserve prices, pursuant to its delegated authority.²³⁵ We seek comment on whether any of our Part 1 Rules or other auction procedures would be inappropriate in an auction of licenses in these bands.

(3) Designated Entity Provisions

112. In authorizing the Commission to use competitive bidding, Congress mandated that the Commission “ensure that small businesses, rural telephone companies, and businesses owned by members of minority groups and women are given the opportunity to participate in the provision of spectrum-based services.”²³⁶ In addition, Section 309(j)(3)(B) of the Act provides that in establishing eligibility criteria and bidding methodologies the Commission shall promote “economic opportunity and competition . . . by avoiding excessive concentration of licenses and by disseminating licenses among a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women.”²³⁷ The Commission defines small business eligibility

²³² See 47 C.F.R. Section 1.2101 *et. seq.* (Part 1, Subpart Q). In 2000, the Commission clarified and amended its general competitive bidding procedures for all auctionable services. See Amendment of Part 1 of the Commission’s Rules -- Competitive Bidding Procedures, WT Docket No. 97-82, Order on Reconsideration of the Third Report and Order, Fifth Report and Order, and Fourth Further Notice of Proposed Rule Making, 15 FCC Rcd 15293(2000) (modified by Erratum, 15 FCC Rcd 21520 (2000)) (*pet. for recons. pending*).

²³³ *Id.*

²³⁴ *Id.*

²³⁵ See Amendment of Part 1 of the Commission’s Rules - Competitive Bidding Procedures, Third Report and Order and Second Further Notice of Proposed Rule Making, 13 FCC Rcd 314, 448-49, 454-55 (¶ 125, 139) (directing the Bureau to seek comment on specific mechanisms relating to auction conduct pursuant to the Balanced Budget Act) (“Part I Third Report and Order”).

²³⁶ See 47 U.S.C. § 309(j)(4)(D).

²³⁷ See 47 U.S.C. § 309(j)(3)(B).

requirements **on** a service-specific basis taking into account the capital requirements and other characteristics of each particular service in establishing the appropriate **threshold**.²³⁸

113. In this *Notice*, we propose rules for the 71-76 GHz, 81-86 GHz and 92-95 GHz bands to allow their use for a broad range of purposes. We do not know precisely the types of services that licensees may seek in these bands or the business models that such entities may pursue which makes it difficult to forecast the capital requirements for these particular services. Nevertheless, we note that Loea promotes gigabit wireless access as a complement or supplement to optical fiber in urban, suburban, and even rural areas for a range of uses such as internet access or backhaul to cellular or PCS towers.²³⁹ To accomplish these goals, Loea envisions the deployment of highly directional, fixed point-to-point, high millimeter wave systems that would transmit narrow beams (typically less than 0.5 degrees beamwidth) with large bandwidths (of 5 GHz) along straight paths to cover relatively short distances (of 10 miles or less).²⁴⁰ Loea also contends that the technical characteristics of such systems allow for the operation of a vast number of users and paths in any given geographical area.²⁴¹ Further, Endwave contends that high millimeter wave systems would be more cost effective than fiber, which typically costs approximately \$250,000 to \$1 million per mile to install in urban areas.²⁴² The record suggests that proposed fixed services provided in the 71-76 GHz, 81-86 GHz and 92-95 GHz bands may be somewhat similar to the fixed services provided in the 39 GHz Band, and thus, we believe the capital requirements associated with these bands will be similar to the capital requirements associated with the 39 GHz band. Because of this similarity, we propose to use the same small business standards that the Commission applied in the 39 GHz proceeding.²⁴³ In the 39 GHz proceedings, we defined a “very small business” as an entity with average annual **gross** revenue not exceeding \$15 million for the preceding three years and a “small business” as an entity with average annual gross revenues not exceeding **\$40** million for the preceding three years.²⁴⁴ We seek comment **on** whether it is appropriate to use the same small business standards that were used in the 39 GHz proceeding or whether a different standard should be applied. We ask that any commenters proposing different small business standards to support their proposal with specific details.

114. If we ultimately adopt our proposed small business definitions we further propose to provide small businesses with a bidding credit of fifteen percent, and very **small** businesses with a bidding credit of twenty-five percent. Our proposed bidding credits are set forth in the standardized schedule in Part 1

²³⁸ See Implementation of Section 309(j) of the Communications Act – Competitive Bidding, *PP Docket No. 93-253, Second Memorandum Opinion and Order*, 9 FCC Rcd 7245, 7269 (¶ 145) (1994) (*Competitive Bidding Second Memorandum Opinion and Order*); see *Parr 1 Third Report and Order*, 13 FCC Rcd at 388 ¶ 18 (Commission will continue a service-by-service approach to defining small businesses.).

²³⁹ See Loea Petition at 5-7; Loea Comments at 5-7.

²⁴⁰ See *id.* at 9-14.

²⁴¹ See *id.* at 12.

²⁴² See Endwave Comments at 2.

²⁴³ See Amendment of the Commission’s Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands, *Report and Order and Second Notice of Proposed Rule Making*, 12 FCC Rcd 18600, 18662 ¶ 150 (1997). Currently, these special small business size standards are being coordinated with the U.S. Small Business Administration.

²⁴⁴ *Id.* See also 47 C.F.R. § 101.1209.

of our Rules.²⁴⁵ We believe that these bidding credits will provide adequate opportunities for small businesses to participate in the auction.²⁴⁶

115. In developing these proposals, we acknowledge the difficulty in accurately predicting the market forces that will exist at the time these frequencies are licensed. Thus, our forecasts of types of services that will be offered over the 71-76 GHz, 81-86 GHz and 92-95 GHz bands may require adjustment depending upon ongoing technological developments and changes in market conditions. For these reasons, we invite interested parties to submit detailed information on the factors that may affect the capital requirements of the possible services that could be provided in the band. Such factors include the types of system architectures, equipment availability, and market conditions.

116. We also seek comment on whether these small business proposals are sufficient to promote participation by businesses owned by minorities and women, as well as rural telephone companies. To the extent that commenters propose additional provisions to ensure participation by minority-owned or women-owned businesses, they should address how such provisions should be crafted to meet the relevant standards of judicial review.²⁴⁷

c) Application Processing

117. As noted previously, the 71-76 GHz, 81-86 GHz and 92-95 GHz bands allocation includes fixed and mobile service. Based on the record before us, we believe the technologies that will be employed primarily will be fixed broadband in nature.²⁴⁸ Accordingly, we propose to license these new services under Part 101 of our Rules. We recognize and anticipate that new technology may be developed to utilize these bands. Future technologies may blur both technical and regulatory distinctions resulting in technical and operational regulations that could inadvertently impinge on efficient spectrum use. Consequently, we seek to develop service rules that are not based on a Commission prediction of how the 71-76 GHz, 81-86 GHz and 92-95 GHz bands may ultimately be used, but instead reflect a record that enables us to establish maximum practicable flexibility. In light of these considerations, we seek comment on the following issues. Would the application of our Part 101 Rules to the 71-76 GHz, 81-86 GHz and 92-95 GHz bands be in the public interest by contributing to technological and service innovation and improving the national telecommunications infrastructure?²⁴⁹ Further, we seek comment

²⁴⁵ In the *Part I Third Report and Order*, we adopted a standard schedule of bidding credits, the levels of which were developed based on our auction experience. *Part I Third Report and Order*, 13 FCC Rcd at 403-04, ¶ 47. See also 47 C.F.R. § 1.2110(f)(2).

²⁴⁶ *Id.*

²⁴¹ See *Adarand Constructors v. Peña*, 515 U.S. 200 (1995) (requiring a strict scrutiny standard of review for Congressionally mandated race-conscious measures); *United States v. Virginia*, 518 U.S. 515 (1996) (applying an intermediate standard of review to a state program based on gender classification).

²⁴⁸ See Loea Comments at 8-11, Boeing Comments at 1-2.

²⁴⁹ The Commission has recognized that "[f]lexible allocations may result in more efficient spectrum markets." *Spectrum Policy Statement*, 14 FCC Rcd at 19870-71 ¶ 9 (1999). As the Commission observed when it adopted service rules for the 39 GHz bands: "It is in the public interest to afford [] licensees flexibility in the design of their systems to respond readily to consumer demand for their services, thus allowing the marketplace to dictate the best uses for this band." Amendment of the Commission's Rules Regarding the 37.0- 38.6 GHz and 38.6-40 GHz Bands, *Report and Order and Second Notice of Proposed Rulemaking*, 12 FCC Rcd 18600, 18616 ¶ 26 (1997).

on the benefits and costs, including potential interference, of such flexibility, and whether application of our Part 101 Rules is in the public interest. We seek comment on this proposal.

118. Additionally, we propose to use our Universal Licensing System (ULS)²⁵⁰ to process 71-76 GHz, 81-86 GHz and 92-95 GHz applications. ULS is the Commission's automated licensing system and integrated database for wireless services. ULS includes consolidated applications forms, which permit licensees and applicants to file applications electronically, thus increasing the speed and efficiency of the application process. All licensees filing applications and other filings using FCC Forms 601 through 605 or associated schedules must make these filings in accordance with ULS.²⁵¹ Use of ULS will permit Commission staff to process filings more efficiently and will enhance the availability of pertinent licensing information to the public. We seek comment on requiring the 71-76 GHz, 81-86 GHz and 92-95 GHz applicants to comply with our ULS processes.

D. PROCEDURAL MATTERS

1. Initial Regulatory Flexibility Analysis

119. As required by Section 603 of the Regulatory Flexibility Act, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the expected impact on small entities of the proposals suggested in this document.²⁵² The IRFA is set forth in Appendix A. Written public comments are requested on the IRFA. In order to fulfill the mandate of the Contract with America Advancement Act of 1996 regarding the Final Regulatory Flexibility Analysis, we ask a number of questions regarding the prevalence of small businesses in the affected industries.

120. Comments must be filed in accordance with the same filing deadlines as comments filed in this *Notice*, but they must have a separate and distinct heading designating them as responses to the IRFA. The Commission's Consumer Information Bureau, Reference Information Center, **SHALL SEND** a copy of this *Notice*, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration in accordance with Section 603(a) of the Regulatory Flexibility Act.²⁵³

2. Paperwork Reduction Analysis

121. This *Notice* contains either a proposed or modified information collection. As part of our continuing effort to reduce paperwork burdens, we invite the general public and the Office of Management and Budget ("OMB") to take the opportunity to comment on the information collections contained in this *Notice*, as required by the Paperwork Reduction Act of 1995.²⁵⁴ Public and agency

²⁵⁰ Biennial Regulatory Review -- Amendment of Parts 0, 1, 13, 22, 24, 26, 27, 80, 87, 90, 95, 97, and 101 of the Commission's Rules to Facilitate the Development and Use of the Universal Licensing System in the Wireless Telecommunications Services, WT Docket No. 98-20, Amendment of the Amateur Service Rules to Authorize Visiting Foreign Amateur Operators to Operate Stations in the United States, WT Docket No. 96-188, RM-8677, *Report and Order*, 13 FCC Rcd 21027 (1998)(*ULS Report and Order*).

²⁵¹ 47 C.F.R. § 1.913(b)

²⁵² 5 U.S.C. § 603 (1996)

²⁵³ *Id.*

²⁵⁴ *See* Pub. L. No. 104-13.

comments are due at the same time as other comments on this *Notice*; OMB comments are due sixty days from the date of publication of this *Notice* in the Federal Register. Comments should address:

- Whether the proposed collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility;
- The accuracy of the Commission's burden estimates;
- Ways to enhance the quality, utility, and clarity of the information collected; and
- Ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology.

122. Written comments by the public on the proposed and/or modified information collections are due ninety days after the date of publication in the Federal Register. Written comments must be submitted by the OMB on the proposed and/or modified information collections on or before sixty days after the date of publication in the Federal Register. In addition to filing comments with the Secretary, a copy of any comments on the information collections contained herein should be submitted to Judy Boley Herman, Federal Communications Commission, Room 1-C804, 445 12th Street, S.W., Washington, D.C. 20554, or via the Internet to jbherman@fcc.gov, and to Jeannette Thornton, OMB Desk Officer, Room 10236 New Executive Office Building, 725 Seventeenth Street, N. W., Washington, D.C. 20503, or via the Internet to jthornto@mb.eop.gov.

3. *Ex Parte* Rules – Permit-But-Disclose Proceedings

123. This is a permit-but-disclose notice and comment rule making proceeding. *Ex parte* presentations are permitted, except during the Sunshine Agenda period, provided they are disclosed as provided in the Commission's rules. **See generally** 47 C.F.R. §§ 1.1202, 1.1203, 1.2306(a).

4. Comment Dates

124. Pursuant to Sections 1.415 and 1.419 of our Rules, interested parties may file comments on or before **90** days from the date of publication in the Federal Register and reply comments on or before **135** days from the date of publication in the Federal Register.²⁵⁵ Comments may be filed using the Commission's Electronic Comment Filing System (ECFS), <http://www.fcc.gov/e-file/ecfs.html>, or by filing paper copies.²⁵⁶

125. Comments filed through the ECFS can be sent as an electronic file via the Internet to <http://www.fcc.gov/e-file/ecfs.html>. Generally, only one copy of an electronic submission must be filed. If multiple docket or rulemaking numbers appear in the caption of this proceeding, however, commenters must transmit one electronic copy of the comments to each docket or rulemaking number referenced in the caption. In completing the transmittal screen, commenters should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions for e-mail comments, commenters

²⁵⁵ 47 C.F.R. §§ 1.415.1.419.

²⁵⁶ See Electronic Filing of Documents in Rulemaking Proceedings, *Report and Order*, 13 FCC Rcd 11322 (1998)

should send an e-mail to ecfs@fcc.gov, and should including the following words in the body of the message, "get form <your e-mail address.>" A sample form and directions will be sent in reply.

126. Parties who choose to file by paper must file an original and four copies of each filing. If more than one docket or rule making number appear in the caption of this proceeding, commenters must submit two additional copies for each additional docket or rulemaking number. Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail). The Commissioner's contractor, Vistronix, Inc., will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, N.E., Suite 110, Washington, D.C. 20002. The filing hours at this location are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building. Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743. U.S. Postal Service first-class mail, Express Mail, and Priority Mail should be addressed to 445 12th Street, S.W., TW-A325, Washington, D.C. 20554. All filings must be addressed to the Commissioner's Secretary, Office of the Secretary, Federal Communications Commission.

127. Parties who choose to file by paper should also submit their comments **on** diskette. Such a submission should be on a 3.5-inch diskette formatted **in** an IBM compatible format using Microsoft Word or compatible software. The diskette should be accompanied by a cover letter and should be submitted in "read only" mode. The diskette should be clearly labeled with the commenter's name, proceeding (including the lead docket number, type of pleading (comment or reply comment), date of submission, and the name of the electronic file **on** the diskette. The label should also include the following phrase "Disk Copy – Not an Original." Each diskette should contain only one party's pleading, preferably in a single electronic file. **In** addition, commenters must send diskette copies to the Commission's copy contract, Qualex International, Portals II, 445 12" Street, SW., Room CY-B402, Washington, D.C. 20554, telephone 202-863-2893, facsimile 202-863-2898, or via e-mail qualexint@aol.com.

128. Alternative formats (computer diskette, large print, audio cassette and Braille) are available to **persons** with disabilities by contacting Brian Millin at (202) 418-7426, TTY (202) 418-7365 or via e-mail to bmillin@fcc.gov/oet. This **Notice** can also be downloaded at <http://www.fcc.gov/oet>.

129. For further information concerning this **Notice of Proposed Rule Making**, contact Michael Marcus, Office of Engineering and Technology, (202) 418-2418, TTY (202) 418-2989, email mmarcus@fcc.gov, or Brian O'Donnell, Policy and Rules Branch, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau, (202) 418-2135, email hodonnell@fcc.gov.

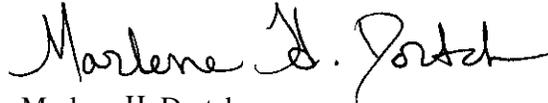
130. The World Wide Web addresses/URLs that we give here were correct at the time this document was prepared but may change over time. They are included herein in addition to the conventional citations as a convenience to readers. We are unable to update these URLs after adoption of this **Notice**, and readers may find some URLs to be out of date **as** time progresses. We also advise readers that the only definitive text of FCC documents is the one that is published in the FCC Record. **In** case of discrepancy between the electronic documents cited here and the FCC Record, the version in the FCC Record is definitive.

E. ORDERING CLAUSES

131. IT IS ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this *Notice of Proposed Rule Making*, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the **Small Business Administration** in accordance with Section 603(a) of the Regulatory Flexibility Act, 5 U.S.C. § 603(a).

132. IT IS FURTHER ORDERED, that pursuant to the authority contained in Sections 4, 4(i), 157, 303, 303(g), 303(r), 307 and 332(c)(7) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154, 154(i), 157, 303, 303(g), 303(r), 307, this *Notice of Proposed Rule Making* IS ADOPTED.

FEDERAL COMMUNICATIONS COMMISSION



Marlene H. Dortch
Secretary

APPENDIX A: INITIAL REGULATORY FLEXIBILITY ANALYSIS

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),²⁵⁷ the Commission has prepared this present Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in this *Notice of Proposed Rule Making (Notice)*. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the *Notice* provided in paragraph 124 of the item. The Commission will send a copy of this *Notice*, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).²⁵⁸ In addition, the *Notice* and IRFA (or summaries thereof) will be published in the Federal Register.²⁵⁹

A. Need for, and Objectives of, the Proposed Rules.

2. In this *Notice*, we examine methods to promote the development and growth of the in the 71-76 GHz, 81-86 GHz and 92-95 GHz bands to encourage the provisions of new technologies and services to the public and encourage the larger and more effective use of wireless in the public interest. We believe that this *Notice* will set the framework for the establishment of new wireless services in the 71-76 GHz, 81-86 GHz and 92-95 GHz bands.

3. We seek comment on the following issues under consideration in this *Notice*:

- Reallocating the 71-76 GHz, 81-86 GHz and 92-95 GHz bands in order to more fully comply with the allocations established at the World Administrative Radio Conference;
- Providing licensees in the 71-76 GHz and 81-86 GHz access to the entire spectrum to provide sufficient capacity for licensees to utilize and provide new innovative services to the public;
- Dividing the 92-95 GHz band into licensed use and unlicensed use in order to stimulate growth in the band while providing adequate protection to the Government operations in the band and to operations in the adjacent spectrum;
- Authorizing the 71-76 GHz, 81-86 GHz and portions of the 92-95 GHz under Part 101 of our Rules in order to facilitate investment capital for business;
- Whether to license the new services by geographic service areas or by site-by-site licensing;
- Licensing the spectrum to individual licensees and band managers to optimize the use of the spectrum and to provide maximum flexibility for potential licensees and new services;

²⁵⁷ See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996, (SBREFA) Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

²⁵⁸ See 5 U.S.C. § 603(a).

²⁵⁹ See 5 U.S.C. § 603(a).

- Proposing open eligibility, rather than imposing eligibility restrictions, to allow market forces to guide license assignment absent a compelling showing that regulatory intervention to exclude potential participants is necessary;
- Adopting a 10-year license term and providing licensees with a renewal expectancy upon establishing substantial service in order to provide a stable regulatory environment that will be attractive to investors and will thus encourage development of the spectrum; and
- Allowing licensees to partition and disaggregate their spectrum to provide an opportunity for a wide range of applicants, including small business, rural telephone, minority-owned and women-owned applicants.

B. Legal Basis

4. The proposed action is authorized under Sections 4(i), 301, 302, 303(e), 303(f), 303(r), 304 and 307 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 301, 302, 303(e), 303(f), 303(r), 304, 307.

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply.

5. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules.²⁶⁰ The RFA generally defines the term “small entity” as having the same meaning as the terms, “small business,” “small organization,” and “small governmental jurisdiction.”²⁶¹ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.²⁶² A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.²⁶³ A small organization is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”²⁶⁴ Nationwide, as of 1992, there were approximately 275,801 small organizations.²⁶⁵

6. The Commission has not developed a definition of small entities applicable to Radio Frequency Equipment Manufacturers (RF Manufacturers). Therefore, the applicable definition of small

²⁶⁰ 5 U.S.C. § 603(b)(3).

²⁶¹ 5 U.S.C. § 601(6).

²⁶² 5 U.S.C. § 601(3) (incorporating by reference the definition of “small business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.” 5 U.S.C. § 601(3).

²⁶³ 15 U.S.C. § 632.

²⁶⁴ 5 U.S.C. § 601(4).

²⁶⁵ 1992 Economic Census, U.S. Bureau of the Census, Table 6 (special tabulation of data under contract to Office of Advocacy of the U.S. Small Business Administration).

entity is the definition under the SBA rules applicable to manufacturers of "Radio and Television Broadcasting and Communications Equipment." According to the SBA's regulation, an RF manufacturer must have 750 or fewer employees in order to qualify as a small business.²⁶⁶ Census Bureau data indicates that there are 858 companies in the United States that manufacture radio and television broadcasting and communications equipment, and that 778 of these firms have fewer than 750 employees and would be classified as small entities.²⁶⁷ Therefore, we believe that many of the companies that manufacture RF equipment may qualify as small entities.

7. The Commission has proposed to assign licenses in the 71-76 GHz, 81-86 GHz and 92-95 GHz bands by competitive bidding. The Commission has not yet determined how many licenses will be awarded. Moreover, the Commission does not know how many licensees will partition their license areas or disaggregate their spectrums, if partitioning and disaggregation are allowed.²⁶⁸ Therefore, the exact number of smaller licensees in these bands to which the proposed rules will apply cannot be known precisely at this time.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements.

8. Equipment designed for unlicensed use will be subject to the existing requirements of Subpart J of Part 2²⁶⁹ of our Rules, which governs equipment authorization procedures. In addition, winning bidders for licensed use must submit long-form license applications through the Universal Licensing System using FCC Form 601,²⁷⁰ and other appropriate forms.²⁷¹ Licensees will also be required to apply for an individual station license by filing FCC Form 601 for those individual stations that (1) require submission of an Environmental Assessment of the facilities under Section 1.1307 of our Rules;²⁷² (2) require international coordination of the application;²⁷³ or (3) require coordination with the Frequency Assignment Subcommittee (FAS) of the Interdepartment Radio Advisory Committee (IRAC). While these requirements are new with respect to potential licensees in the 71-76 GHz, 81-86 GHz and 92-95 GHz bands, the Commission has applied these requirements to licensees in other bands.

E. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered.

9. The RFA requires an agency to describe any significant alternatives that it has considered in

²⁶⁶ See 13 C.F.R. § 121.201, NAICS Code 334220.

²⁶⁷ See U.S. Department of Commerce, 1992 Census of Transportation, Communications and Utilities (issued May 1995), NAICS category 334220.

²⁶⁸ See para. 91.

²⁶⁹ 47 C.F.R. §§ 2.901, 2.1093.

²⁷⁰ 47 C.F.R. § 1.913(a)(1).

²⁷¹ 47 C.F.R. § 1.2107.

²⁷² 47 C.F.R. § 1.1307.

²⁷³ See e.g., 47 C.F.R. § 1.928 (regarding frequency coordination arrangements between the U.S. and Canada).

reaching its proposed approach, which may include the following four alternatives: “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for such small entities; (3) the use of performance, rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.”²⁷⁴

10. We believe that the rules proposed in this *Notice* provide a flexible and efficient approach to spectrum management. To minimize any negative impact on smaller entities, however, we propose certain incentives for small entities that will be to their benefit. For example, we seek comment on licensing the spectrum to band managers that will be authorized to lease portions of their spectrum to all entities, including smaller entities, and to allow partitioning and spectrum disaggregation. These provisions will enable smaller entities, which sometimes may lack sufficient resources to bid in the auction on an equally competitive basis, to acquire smaller portions of the spectrum. The use of smaller licensing areas could also benefit small entities by reducing costs and build out expenses.

11. We also propose bidding credits for smaller entities that participate in auctions of licenses that are conducted pursuant to the rules proposed in this *Notice*. Specifically, we propose to define an “entrepreneur” as an entity with average annual gross revenues not exceeding \$40 million for three preceding years and we propose to define a “small business” as an entity with an average annual gross revenues not exceeding \$15 million for three preceding years. We believe that these small business definitions and bidding credits will help small entities compete in our auctions and acquire licenses.²⁷⁵

12. In addition, we propose to adopt a 10-year license term and provide licensees with a renewal expectancy upon establishing substantial service. We believe these provisions will provide a stable regulatory environment that will be attractive to investors and thus enable smaller entities to acquire the necessary capital to operate in the spectrum.

13. The regulatory burdens we have retained, such as filing applications on appropriate forms, are necessary in order to ensure that the public receives the benefits of innovative new services in a prompt and efficient manner and apply equally to large and small entities, thus without differential impact. We will continue to examine alternatives in the future with the objectives of eliminating unnecessary regulations and minimizing any significant impact on small entities.

F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rule.

15. None.

G. Ordering Clause

16. IT IS FURTHER ORDERED that the Commission’s Consumer & Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this *Notice for Proposed Rule Making*, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

²⁷⁴ See 5 U.S.C. § 603(c).

²⁷⁵ Currently, these special small business size standards are being coordinated with the U.S. Small Business Administration.

APPENDIX B

PROPOSED DEFINITIONS AND RULES

1. For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend 47 CFR Parts 2, 15, 97, and 101 as follows:

PART 2 -- FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

2. The authority citation for part 2 continues to read as follows:

Authority: 47 U.S.C. 154, 302a, 303, and 336, unless otherwise noted.

3. Section 2.106, the Table of Frequency Allocations, is amended as follows:

a. Revise pages 81 through 83.

b. In the list of International Footnotes, under I., revise footnotes 5.149, 5.556, and 5.561; and add footnotes 5.559A, 5.560A, 5.561A, and 5.562A.

c. In the list of United States (US) Footnotes, revise footnotes US211, US297, and US342; remove footnote US270; and add footnotes USwww, USxxx, USyyy, and USzzz.

The additions and revisions read as follows:

§ 2.106 Table of Frequency Allocations.

* * * * *

65-94.1 GHz (EHF)

International Table		United States Table		FCC Rule Part(s)
Region 1	Region 2	Federal Government	Non-Federal Government	
Region 3				
65-66 EARTH EXPLORATION-SATELLITE FIXED INTER-SATELLITE MOBILE except aeronautical mobile SPACE RESEARCH		65-66 EARTH EXPLORATION-SATELLITE FIXED MOBILE except aeronautical mobile SPACE RESEARCH	65-66 EARTH EXPLORATION-SATELLITE FIXED INTER-SATELLITE MOBILE except aeronautical mobile SPACE RESEARCH	
5.547				
66-71 INTER-SATELLITE MOBILE 5.553 5.558 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE		66-71 MOBILE 5.553 5.558 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE	66-71 INTER-SATELLITE MOBILE 5.553 5.558 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE	
5.554		5.554	5.554	Fixed Microwave (101)
71-74 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth)		71-74 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE MOBILE-SATELLITE (space-to-Earth)		
74-76 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE BROADCASTING BROADCASTING-SATELLITE Space research (space-to-Earth)		74-76 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE Space research (space-to-Earth)	74-76 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE BROADCASTING BROADCASTING-SATELLITE Space research (space-to-Earth)	
5.559A 5.561		US211 USwww USyyy	US211 USwww USyyy	
76-81 RADIOLOCATION Amateur Amateur-satellite Space research (space-to-Earth)		76-81 RADIOLOCATION	76-77 RADIOLOCATION Amateur 77-77.5 RADIOLOCATION Amateur Amateur-satellite 77.5-78 RADIOLOCATION AMATEUR AMATEUR-SATELLITE	RF Devices (15) Amateur (97)

5.560		5.560	78-81 RADIOLOCATION Amateur Amateur-satellite 5.560	
81-84		81-84	FIXED FIXED-SATELLITE (Earth-to-space) US297 MOBILE MOBILE-SATELLITE (Earth-to-space) RADIO ASTRONOMY USzzz Space research (space-to-Earth)	Fixed Microwave (101)
5.149 5.560A		US342		
84-86		84-86	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE RADIO ASTRONOMY USzzz	
5.149		US342		
86-92		86-92	EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY US74 SPACE RESEARCH (passive)	
5.340		US246		
92-94		92-94	FIXED MOBILE RADIO ASTRONOMY USzzz RADIOLOCATION	Fixed Microwave (101)
5.149		US342 USxxx		
94-94.1		94-94.1	EARTH EXPLORATION-SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) Radio astronomy	
5.562 5.562A		5.562 5.562A	94-94.1 RADIOLOCATION Radio astronomy 5.562A	

94.1 - 150 GHz (EHF)

International Table		United States Table		FCC Rule Part(s)
Region 1	Region 2	Region 3	Non-Federal Government	
94.1-95 FIXED MOBILE RADIO ASTRONOMY RADIOLOCATION			Federal Government 94.1-95 FIXED MOBILE RADIO ASTRONOMY USzzz RADIOLOCATION US342 USxxx	Fixed Microwave (101)
5.149				
95-100 MOBILE S5.553 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE Radiolocation			95-100 MOBILE S5.553 MOBILE-SATELLITE RADIONAVIGATION RADIONAVIGATION-SATELLITE Radiolocation S5.149 S5.554	
S5.149 S5.554 S5.555				
100-102 EARTH EXPLORATION-SATELLITE (passive) FIXED MOBILE SPACE RESEARCH (passive)			100-102 EARTH EXPLORATION-SATELLITE (passive) SPACE RESEARCH (passive) S5.341 US246	
S5.341				
102-105 FIXED FIXED-SATELLITE (space-to-Earth) MOBILE			102-105 FIXED FIXED-SATELLITE (space-to-Earth) S5.341 US211	
S5.341				
105-116 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY SPACE RESEARCH (passive)			105-116 EARTH EXPLORATION-SATELLITE (passive) RADIO ASTRONOMY US74 SPACE RESEARCH (passive) S5.341 US246	
S5.340 S5.341				
116-119.98 EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE MOBILE S5.558 SPACE RESEARCH (passive)			116-119.98 EARTH EXPLORATION-SATELLITE (passive) FIXED INTER-SATELLITE MOBILE S5.558 SPACE RESEARCH (passive) S5.341 US211 US263	
S5.341				

* * * * *

INTERNATIONAL FOOTNOTES

* * * * *

5.149 In making assignments to stations of other services to which the bands:

13360-13410 kHz,	4990-5000 MHz,	94.1-100 GHz,
25550-25670 kHz,	6650-6675.2 MHz,	102-109.5 GHz,
37.5-38.25 MHz,	10.6-10.68 GHz,	111.8-114.25 GHz,
73-74.6 MHz in Regions 1 and 3,	14.47-14.5 GHz,	128.33-128.59 GHz,
150.05-153 MHz in Region 1,	22.01-22.21 GHz,	129.23-129.49 GHz,
322-328.6 MHz,	22.21-22.5 GHz,	130-134 GHz,
406.1-410 MHz,	22.81-22.86 GHz,	136-148.5 GHz,
608-614 MHz in Regions 1 and 3,	23.07-23.12 GHz,	151.5-158.5 GHz,
1330-1400 MHz,	31.2-31.3 GHz,	168.59-168.93 GHz,
1610.6-1613.8 MHz,	31.5-31.8 GHz in Regions 1 and 3,	171.11-171.45 GHz,
1660-1670 MHz,	36.43-36.5 GHz,	172.31-172.65 GHz,
1718.8-1722.2 MHz,	42.5-43.5 GHz,	173.52-173.85 GHz,
2655-2690 MHz,	42.77-42.87 GHz,	195.75-196.15 GHz,
3260-3267 MHz,	43.07-43.17 GHz,	209-226 GHz,
3332-3339 MHz,	43.37-43.47 GHz,	241-250 GHz,
3345.8-3352.5 MHz,	48.94-49.04 GHz,	252-275 GHz
4825-4835 MHz,	76-86 GHz,	
4950-4990 MHz,	92-94 GHz,	

are allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful interference. Emissions from spaceborne or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. S4.5 and S4.6 and Article S29).

* * * * *

5.556 In the bands 51.4-54.25 GHz, 58.2-59 GHz and 64-65 GHz, radio astronomy observations may be carried out under national arrangements.

* * * * *

5.559A The band 75.5-76 GHz is also allocated to the amateur and amateur-satellite services on a primary basis until the year 2006.

* * * * *

5.560A The 81-81.5 GHz band is also allocated to the amateur and amateur-satellite services on a secondary basis.

* * * * *

5.561 In the band 74-76 GHz, stations in the fixed, mobile and broadcasting services shall not cause harmful interference to stations of the fixed-satellite service or stations of the broadcasting-satellite service operating in accordance with the decisions of the appropriate frequency assignment planning conference for the broadcasting-satellite service.

5.561A In Japan, use of the band 84-86 GHz, by the fixed-satellite service (Earth-to-space) is limited to feeder links in the broadcasting-satellite service using the geostationary-satellite orbit.

* * * * *

5.562A Transmissions from space stations of the Earth exploration-satellite service (active) that are directed into the main beam of a radio astronomy antenna have the potential to damage some radio astronomy receivers. Space agencies operating the transmitters and the radio astronomy stations concerned should mutually plan their operations so as to avoid such occurrences to the maximum extent possible.

* * * * *

United States (US) Footnotes

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US211 In the bands 1670-1690, 5000-5250 MHz and 10.7-11.7, 15.1365-15.35, 15.4-15.7, 22.5-22.55, 24-24.05, 31.0-31.3, 31.8-32.0, 40.5-42.5, 102-105, 116-126, 151-164, 176.5-182, 185-190, 231-235, 252-265 GHz, applicants for airborne or space station assignments are urged to take all practicable steps to protect radio astronomy observations in the adjacent bands from harmful interference; however, US74 applies.

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US297 The bands 47.2-49.2 GHz and 81-82.5 GHz are also available for feeder links for the broadcasting-satellite service.

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US342 In making assignments to stations of other services to which the bands:

13360-13410 kHz,	14.47-14.5 GHz,*	92-94 GHz,
37.5-38.25 MHz,	22.01-22.21 GHz,*	94.1-95 GHz,
322-328.6 MHz,*	22.21-22.5 GHz,	97.88-98.08 GHz,*
1330-1400 MHz,*	22.81-22.86 GHz,*	140.69-140.98 GHz,*
1610.6-1613.8 MHz,*	23.07-23.12 GHz,*	144.68-144.98 GHz,*
1660-1670 MHz,	31.2-31.3 GHz,	145.45-145.75 GHz,*
3260-3267 MHz,*	36.43-36.5 GHz,*	146.82-147.12 GHz,*
3332-3339 MHz,*	42.5-43.5 GHz,	262.24-262.76 GHz,*
3345.8-3352.5 MHz,*	48.94-49.04 GHz,*	265-275 GHz
4825-4835 MHz,*	81-86 GHz,	

are allocated (* indicates radio astronomy use for spectral line observations), all practicable steps shall be taken to protect the radio astronomy service from harmful interference. Emissions from spaceborne or airborne stations can be particularly serious sources of interference to the radio astronomy service (see Nos. 4.5 and 4.6 and Article 29 of the ITU Radio Regulations).

* * * * *

USwww In the band 74-76 GHz, stations in the fixed, mobile and broadcasting services shall not cause harmful interference to stations of the Federal Government fixed-satellite service.

USxxx In the band 92-95 GHz, Federal and non-Federal users may operate low power, unlicensed devices. In the band 92-92.3 GHz and 93.2-94.1 GHz, Federal assignments shall operate on a primary basis. In the bands 92.3-93.2 GHz and 94.1-95 GHz, non-Federal licensed systems shall operate on a primary basis and Federal assignments may operate on a secondary basis, except that Federal assignments at the following military installations shall operate on a primary basis: [NTIA will supply the list of large military installations prior to the adoption of the Report and Order].

USyyy The band 75.5-76 GHz is also allocated to the amateur and amateur-satellite services on a secondary basis until January 1, 2006.

USzzz In the bands 81-86 GHz, 92-94 GHz, and 94.1-95 GHz, the radio astronomy service shall not receive protection from other allocated services, except within the maximum coordination distances listed for the following radio astronomy observatories.

Telescope and site	150 kilometer (93 mile) radius centered on:	
	North Latitude	West Longitude
National Radio Astronomy Observatory (NRAO), Robert C. Byrd Telescope, Green Bank, WV	38° 25' 59"	79° 50' 24"
NRAO, Very Large Array, Socorro, NM	34° 04' 44"	107° 37' 06"
University of Arizona 12-m Telescope, Kitt Peak, AZ	31° 57' 10"	111° 36' 50"
BIMA Telescope, Hat Creek, CA	40° 49' 04"	121° 28' 24"
Caltech Telescope, Owens Valley, CA	37° 13' 54"	118° 17' 36"
Five Colleges Observatory, Amherst, MA	42° 23' 33"	72° 20' 40"
Haystack Observatory, Westford, MA	42° 37' 23"	71° 29' 19"
James Clerk Maxwell Telescope, Mauna Kea, HI	19° 49' 33"	155° 28' 20"
NRAO, Very Long Baseline Array Stations	25 kilometer (15.5 mile) radius centered on:	
	North Latitude	West Longitude
Brewster, WA	48° 07' 52"	119° 41' 00"
Fort Davis, TX	30° 38' 06"	103° 56' 41"
Hancock, NH	42° 56' 01"	71° 59' 12"
Kitt Peak, AZ	31° 57' 23"	111° 36' 45"
Los Alamos, NM	35° 46' 31"	106° 14' 44"
Mauna Kea, HI	19° 48' 05"	155° 27' 19"
North Liberty, IA	41° 46' 17"	91° 34' 27"
Owens Valley, CA	37° 13' 54"	118° 16' 37"
Pie Town, NM	34° 18' 04"	108° 07' 09"
Saint Croix, VI	17° 45' 24"	64° 35' 01"

* * * * *

4. Part 15 of Title 47 of the Code of Federal Regulations is proposed to be amended as follows:

PART 15 – RADIO FREQUENCY DEVICES

5. The authority citation continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 302, 303, 304, 307, 336 and 544A

6. Section 15.257 is added to Subpart C to read as follows:

§ 15.257 Operation within the band 92–95 GHz.

(a) Operation under the provisions of this section is not permitted for equipment used on aircraft or satellites.

(b) Within the 92-95 GHz band, emission levels shall not exceed the following:

(1) The average power density of any emission, measured during the transmit interval, shall not exceed $9 \mu\text{W}/\text{cm}^2$, as measured 3 meters from the radiating structure, and the peak power density of any emission shall not exceed $18 \mu\text{W cm}^2$, as measured 3 meters from the radiating structure.

(2) Peak power density shall be measured with an RF detector that has a detection bandwidth that encompasses the band being used and has a video bandwidth of at least 10 MHz, or using an equivalent measurement method.

(3) The average emission limits shall be calculated, based on the measured peak levels, over the actual time period during which transmission occurs.

(c) Limits on spurious emissions:

(1) The power density of any emissions outside the band being used band shall consist solely of spurious emissions.

(2) Radiated emissions below 40 GHz shall not exceed the general limits in Sec. 15.209.

(3) Between 40 GHz and 200 GHz, the level of these emissions shall not exceed 90 pW/cm² at a distance of 3 meters.

(4) The levels of the spurious emissions shall not exceed the level of the fundamental emission.

(i) The total peak transmitter output power shall not exceed 500 mW.

(ii) Fundamental emissions must be contained within the frequency bands specified in this section during all conditions of operation. Equipment is presumed to operate over the temperature range -20 to +50 degrees celsius with an input voltage variation of 85% to 115% of rated input voltage, unless justification is presented to demonstrate otherwise.

(iii) Regardless of the power density levels permitted under this section, devices operating under the provisions of this section are subject to the radiofrequency radiation exposure requirements specified in 47 C.F.R. §§ 1.1307(b), 2.1091 and 2.1093, as appropriate. Applications for equipment authorization of devices operating under this section must contain a statement confirming compliance with these requirements for both fundamental emissions and unwanted emissions. Technical information showing the basis for this statement must be submitted to the Commission upon request.

PART 97--AMATEUR RADIO SERVICE

7. The authority citation for Part 97 continues to read as follows:

Authority: 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303. Interpret or apply 48 Stat. 1064-1068, 1081-1105, as amended; 47 U.S.C. 151-155, 301-609, unless otherwise noted.

8. Section 97.303 is revised by adding new paragraph 97.303(r)(3) to read as follows:

§ 97.303 Frequency sharing requirements.

* * * * *

(r) * * *

* * * * *

(3) No amateur or amateur-satellite station transmitting in the 75.5-76 GHz segment shall cause interference to, nor is protected from interference due to the operation of, stations in the fixed service. After January 1, 2006, the 75.5-76 GHz segment is no longer allocated to the amateur service or to the amateur-satellite

Part 101 of title 47 of the Code of Federal Regulations is proposed to be amended as follows:

PART 101 – FIXED MICROWAVE SERVICES

9. The authority citation for Part 101 continues to read as follows:

AUTHORITY: 47 U.S.C. 154 and 303, unless otherwise noted.

10. Section 101.101 is amended by adding four new entries in numerical order as follows:

§ 101.101 Frequency Availability

Frequency band (MHz)	Radio Service				
	Common carrier (Part 101)	Private radio (Part 101)	Broadcast auxiliary (Part 74)	Other (Parts 15, 21, 22, 24, 25, 74, 78 & 100)	Notes
*	*	*	*	*	**
71,000-76,000	CC.....	OFS.....	.....	.....	F/M/TF
81,000-86,000	CC.....	OFS.....	.....	.....	F/M/TF
92,300-93,200	CC.....	OFS.....	.....	.....	F/M/TF.
94,100-95,000	CC.....	OFS.....	.....	.....	F/M/TF.

11. Section 101.107(a) is amended by adding four new entries in numerical order as follows:

§ 101.107 Frequency tolerance

(a)*****

Frequency (MHz)	Frequency Tolerance (percent)		
	All fixed and base stations	Mobile stations over 3 watts	Mobile stations 3 watts or less
*	*	*	****
71,000 to 76,000 \9\	0.03	0.03	0.03
81,000 to 86,000 \9\	0.03	0.03	0.03
92,300 to 93,200 \9\			
94,100 to 95,000 \9\			

\9\ Equipment authorized to be operated in the 38,600-40,000 MHz, 71,000-76,000 MHz, 81,000-86,000 MHz, 92,300-93,200 MHz and 94,100-95,000 MHz bands are exempt from the frequency tolerance requirement noted in the above table.

12. Section 101.113(a) is amended by adding four entries in numerical order as follows:

§ 101.113 Transmitter power limitations

(a) *****

Frequency band (MHz)	Maximum Allowable EIRP	
	Fixed (dBW)	Mobile (dBW)
*	*	*****
71,000-76,000	+55	+55
81,000-86,000	+55	+55
92,300-93,200	+55	+55
94,100-95,000	+55	+55

13. Section 101.147(a) is amended by adding four entries in numerical order as follows:

§ 101.147 Frequency assignments

(a) *****

- 71,000-76,000 MHz \4\ \5\ \11\ \17\ \19\
- 81,000-86,000 MHz \4\ \5\ \11\ \17\ \19\
- 92,300-93,200 MHz \17\
- 94,100-95,000 MHz \17\

APPENDIX C
LIST OF COMMENTERS

Comments:

The Boeing Company

DMC Stratex Networks, Inc.

Endwave Corporation

Fixed Wireless Communications Coalition

Kauai Economic Development Board

The National Association of for Amateur Radio (AARL)

Pacific LightNet

The Personal Communications Industry Association, Inc.

Wireless Communications Association International

Reply Comments:

Loea Communications Corporation

**SEPARATE STATEMENT OF
COMMISSIONER KATHLEEN Q. ABERNATHY**

Re: Service Rules for Use of the 71-76 GHz, 81-86 GHz and 92-95 GHz Bands, Notice of Proposed Rulemaking.

As technology advances and the pressure to “find” more spectrum increases, commercial and government research efforts increasingly focus on spectrum in upper bands. There was certainly a time when commercial RF interests looked askance at spectrum at 40 GHz, let alone the 70, 80, and 90 GHz bands we examine today. Innovation, technological change, and increasing encumbrances in the lower bands have driven the regulatory process to open these new bands to commercial operations. Over the past few months I have spoken often about the challenges presented by new technologies and the increasingly encumbered FCC-administered spectrum space, today’s decision is the positive outgrowth of the spectrum draught in the lower bands.

As currently conceived the 70, 80 and 90 GHz bands will use “pencil beams” of radio energy to transmit data relatively short distances between fixed sites. In many cases there could be thousands of these “hops” in a relatively small geographic area – but because of the narrow beam it is believed multiple systems can co-exist without interference. This deployment model is unlike anything we have ever seen and may require new thinking on the appropriate licensing approach.

As I have stated before, spectrum management in our age requires that we consider the full panoply of tools that Congress gave us for spectrum distribution: licensed and unlicensed, site-by-site and geographic, large and small service areas, paired and unpaired. Here I strongly believe that this new technology requires a cautious approach to the licensing question. That is, I am not prepared to tentatively conclude that an auction or even licensing is required. I am pleased that the item reflects this approach and I look forward to a full record on this issue with the type of creative thinking that new technologies may require to succeed.

Commercial operations also must share these new bands with federal government spectrum users. However, we have an obligation to ensure that our new licensees are not ultimately surprised to learn that the nature of the federal government uses in a band preclude commercial development. I understand that some of this information regarding government systems is classified, but we must find a way to protect national security while also developing the commercial spectrum resource. I look forward to working with my colleagues at NTIA to ensure the greatest transparency possible in this and other bands.

* * * * *

Thanks to Loea Communications Corporation – the party that petitioned for the rulemaking we begin today, the other innovators in the bands, and the hard work of OET and the WTB, with today’s Notice we begin to open a new spectrum frontier for the American people.

**STATEMENT OF COMMISSIONER
MICHAEL J. COPPS**

RE: In the Matter of Service Rules for Use of the 71-76 GHz, 81-86 GHz and 92-95 GHz Bands, Notice of Proposed Rulemaking.

I want to commend the Chairman, the Wireless Bureau and OET for initiating this proceeding. Today's NPRM begins the process of commercializing around 13 GHz – or 13,000 MHz – of spectrum. We may be dealing with apples and oranges in comparing this spectrum with other bands, but that's as much spectrum as currently occupied by all AM and FM broadcasting, all the television channels, all of the CMRS spectrum, all the way up to the DBS bands. That's a lot of room to cover with one NPRM, so good work.

I'm glad that we leave this NPRM open, with few tentative conclusions. These bands are very different than most of our other bands, and we should keep our minds open. I'm particularly glad to see that we seek comments on where unlicensed operations are feasible. Unlicensed service has had great success elsewhere, and we should do our best to explore this option when we encounter new opportunities.

**SEPARATE STATEMENT OF
COMMISSIONER KEVIN J. MARTIN**

Re: Allocations and Service Rules for the 71-76 GHz, 81-86 GHz, and 92-95 GHz Bands; Loea Communications Corporation Petition for Rulemaking, Notice of Proposed Rulemaking, WT Docket No. 02-146, RM-10288

I am pleased to approve this item, which initiates a rulemaking to enable commercial use of the 71-76 GHz, 81-86 GHz, and 92-95 GHz bands. As I have previously discussed, the amount of available spectrum is ultimately limited only by technology. *See generally* Separate Statement of Commissioner Kevin J. Martin, *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*, Memorandum Opinion and Order and Further Notice of Proposed Rulemaking, 16 FCC Rcd 16043 (2001). This item is a perfect illustration of that point. The 71-76 GHz, 81-86 GHz, and 92-95 GHz bands – which have wavelengths of about three to five millimeters – have never before been used commercially, and it was previously unclear how these bands could be used. Now, commercial interests are experimenting with different uses for these bands, and this spectrum may ultimately be used commercially for high-speed wireless local area networks, broadband access systems for the Internet, point-to-point communications, and point-to-multipoint communications. I am glad that, through this rulemaking, we can enable these kinds of commercial uses.

While, at present, the Commission must regard spectrum as a scarce natural resource, I am hopeful that future technological development will reduce this sense of scarcity – by allowing us to use previously unusable spectrum bands and enabling us to use the spectrum we are already using more efficiently. Today's item only increases my optimism.