

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 1, 15, 27, 90, and 101

[WT Docket No. 07–195; FCC 07–164]

Service Rules for Advanced Wireless Services in the 2155–2175 MHz Band

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: In this document, we seek comment on service rules for licensed fixed and mobile services, including Advanced Wireless Services (AWS), in the 2155–2175 MHz band (AWS–3). We seek comment on rules for licensing this newly designated spectrum in a manner that will permit it to be fully and promptly utilized to bring advanced wireless services to American consumers. Our objective is to allow for the most effective and efficient use of the spectrum in this band, while also encouraging development of robust wireless broadband services. We propose to apply our flexible, market-oriented rules to the band in order to meet this objective.

DATES: Comments must be filed on or before December 14, 2007, and reply comments must be filed on or before January 14, 2008.

ADDRESSES: Federal Communications Commission, 445 12th Street, SW., Washington, DC 20554. You may submit comments, identified by WT Docket No. 07–195, by any of the following methods:

- Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments.

- Federal Communications Commission's Web site: <http://www.fcc.gov/cgb/ecfs/>. Follow the instructions for submitting comments.

- People with Disabilities: Contact the FCC to request reasonable accommodations (accessible format documents, sign language interpreters, CART, etc.) by e-mail: FCC504@fcc.gov or phone: 202–418–0530 or TTY: 202–418–0432.

For detailed instructions for submitting comments and additional information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: Kevin Holmes, Esq., at 202–418–0564.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's *Notice of Proposed Rulemaking*, released September 19, 2007. The complete text of this document, including attachments and related Commission documents, is

available for inspection and copying during normal business hours in the FCC Reference Center (Room CY–A257), 445 12th Street, SW., Washington, DC 20554. The complete text of the *Notice of Proposed Rulemaking* and related Commission documents may be purchased from the Commission's copy contractor, Best Copy and Printing, Inc., 445 12th Street, SW., Room CY–B402, Washington, DC 20554, telephone 202–488–5300, facsimile 202–488–5563, or you may contact BCPI at its Web site <http://www.BCPIWEB.com>. When ordering documents from BCPI please provide the appropriate FCC document number, for example, FCC 07–38. The *Notice of Proposed Rulemaking* is available on the Commission's Web site: http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-07-164A1.doc.

Pursuant to sections 1.415 and 1.419 of the Commission's rules, 47 CFR 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using: (1) The Commission's Electronic Comment Filing System (ECFS), (2) the Federal Government's eRulemaking Portal, or (3) by filing paper copies. See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://www.fcc.gov/cgb/ecfs/> or the Federal eRulemaking Portal: <http://www.regulations.gov>. Filers should follow the instructions provided on the Web site for submitting comments.

- For ECFS filers, if multiple docket or rulemaking numbers appear in the caption of this proceeding, filers must transmit one electronic copy of the comments for each docket or rulemaking number referenced in the caption. In completing the transmittal screen, filers 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, filers should send an e-mail to ecfs@fcc.gov, and include the following words in the body of the message, "get form." A sample form and directions will be sent in response.

- Paper Filers: Parties who choose to file by paper must file an original and four copies of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers 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). All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- The Commission's contractor will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, NE., Suite 110, Washington, DC 20002. The filing hours at this location are 8 a.m. to 7 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, Express, and Priority mail should be addressed to 445 12th Street, SW., Washington, DC 20554.

People with Disabilities: To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202–418–0530 (voice), 202–418–0432 (tty).

I. Summary of Notice of Proposed Rulemaking

1. In this Notice of Proposed Rulemaking, we consider application, licensing, operating, and technical rules for Advanced Wireless Services (AWS)¹ in the 2155–2175 MHz band (AWS–3). Moreover, because the available spectrum is one 20-megahertz segment as opposed to two separate bands, the symmetrical pairing approach previously used by the Commission for

¹ Advanced Wireless Services is the collective term we use for new and innovative fixed and mobile terrestrial wireless applications using bandwidth that is sufficient for the provision of a variety of applications, including those using voice and data (such as Internet browsing, message services, and full-motion video) content. Although AWS is commonly associated with so-called third generation (3G) applications and has been predicted to build on the successes of such current-generation commercial wireless services as cellular and Broadband Personal Communications Services (PCS), the services ultimately provided by AWS licensees are limited only by the Fixed and Mobile designation of the spectrum we allocate for AWS and the service rules we ultimately adopt for the bands.

AWS spectrum² is not possible.

Therefore, among other things, we:

- ▶ Seek comment on the use of an “uplink/downlink approach” to licensing the spectrum, which would permit the use of technologies that allow for both mobile and base transmissions in the band, such as technologies based on Time Division Duplexing (TDD) or Half-Duplex Frequency Division Duplexing (HFDD),³ and on methods to resolve any interference challenges that may be associated with such an approach.

- ▶ Seek comment on a “structured uplink/downlink approach,” which would permit both mobile-plus-base transmit operations and base transmit operations, but only in particular parts of the band, as dictated by the band plan set by the Commission.

- ▶ Seek comment on a “downlink approach” for the AWS-3 spectrum, which would limit use of the 2155–2175 MHz band to base transmissions only, but would enable licensees to use this spectrum in combination with other Frequency Division Duplexing (FDD) bands.⁴

- ▶ Seek comment on whether an auction of licenses in a simplified subset of alternative band plans might best further our overall goals in this proceeding.

- ▶ Seek comment on the appropriate license block size for the 2155–2175 MHz band under each of the three

² See Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, WT Docket No. 02–353, *Report and Order*, 18 FCC Rcd 25162 (2003) (AWS-1 Service Rules Report and Order); modified by Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, WT Docket No. 02.353, *Order on Reconsideration*, WT Docket No. 02–353, 20 FCC Rcd 14058 (2005); see also Service Rules for Advanced Wireless Services in the 1915–1920 MHz, 1995–2000 MHz, 2020–2025 MHz and 2175–2180 MHz Bands; Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, WT Docket No. 04–356; WT Docket No. 02–353, *Notice of Proposed Rulemaking*, 19 FCC Rcd 19263 (2004) (AWS-2 Service Rules NPRM).

³ TDD, for example, places base and mobile transmissions on the same channel, but in different time slots, while HFDD uses separate, adjacent channels in different time slots for base and mobile transmissions. We note that several of the recently dismissed applications for licenses in this band, see *infra* note 5, proposed technologies that would allow the use of both mobile and base station transmissions. FDD, on the other hand, employs spectrally separated base and mobile transmit channels with base and mobile transmissions occurring at the same time. WiMax is a new application, which supports TDD, FDD, and HFDD access technologies.

⁴ For example, if the AWS-3 spectrum at 2155–2175 MHz is used for base-transmit, it could theoretically be paired with mobile-transmit spectrum from the Personal Communications Services (PCS) at 1850–1910 MHz, AWS-1 at 1710–1755 MHz, proposed AWS-2 spectrum at 1915–1920 MHz or 2020–2025 MHz, or Nextel/1.9 GHz spectrum at 1910–1915 MHz.

technical approaches under consideration for this band.

- ▶ Seek comment on whether to license the band using a geographic area licensing scheme, under our flexible, market-oriented part 27 rules, as well as on the appropriate geographic license block size for the band.

- ▶ Seek comment on interference issues specific to the band under each of the three technical approaches under consideration for this band.

- ▶ Seek comment on whether to adopt a boundary limit approach to limit co-channel interference that could be caused by AWS licensees operating in the 2155–2175 MHz band.

- ▶ Propose that AWS licensees operating in the 2155–2175 MHz band should be required to coordinate with incumbent Fixed Service (FS) licensees operating on co-channel and adjacent channel spectrum in the band prior to initiating operations.

- ▶ Seek comment on our proposals on the power limits, out-of-band emission restrictions, and other technical or operational requirements that might be needed to prevent harmful interference to operations in adjacent bands.

- ▶ Seek comment on whether any limit should be placed on the height-above-average-terrain (HAAT) of base or fixed station antennas operating in the 2155–2175 MHz band.

- ▶ Propose to permit any use of this spectrum that is consistent with the band’s fixed and mobile allocations.

- ▶ Seek comment on whether we should adopt any of the various specific conditions proposed by parties that filed applications for operation in this band and other parties, including conditions to govern the provision of broadband services at particular data rates, with specific build out requirements, and pricing plans, with potential access requirements, content restrictions and free access to public safety entities.⁵ For example, M2Z Networks, Inc. (M2Z), has suggested that the licensees in this

⁵ Seven parties filed applications for licenses to provide service in the 2155–2175 MHz band, which we recently dismissed without prejudice in an Order released August 31, 2007. See Applications for License and Authority to Operate in the 2155–2175 MHz Band, WT Docket No. 07–16, *Order*; Petitions for Forbearance Under 47 U.S.C. 160, WT Docket No. 07–30, *Order*, FCC 07–161 (rel. Aug. 31, 2007) (AWS-3 Applications and Forbearance Petitions Order), Appeal and Petitions for Reconsideration pending. On May 5, 2006, M2Z filed an application seeking an exclusive, nationwide, 15-year license in the 2155–2175 MHz band to operate a wireless broadband network. Six additional applications for license and authority to operate in the band were filed in March 2007—by Commet Wireless, LLC; McElroy Electronics Corp.; NetfreeUS, LLC; NextWave Broadband, Inc.; Open Range Communications, Inc.; and TowerStream Corporation.

band should be subject to certain public interest requirements, including the provision of free broadband Internet service at certain data rates and certain population-based build out benchmarks. NextWave Broadband, Inc., suggested the Commission should consider licensing this spectrum in a manner that would avoid the filing of mutually exclusive applications, and accordingly allow licensing on a non-auctioned basis.

- ▶ Seek comment on the benefits and costs of establishing an unlicensed regime, either in lieu of a licensed regime or as a complement to the licensed regime (by permitting an unlicensed underlay).

- ▶ Seek comment on using a non-exclusive licensing approach for this band, similar to the rules adopted in the 3650–3700 MHz band.

- ▶ Propose that the foreign ownership provisions of § 27.12 should apply to applicants applying for licenses in the 2155–2175 MHz band.

- ▶ Propose not to impose a spectrum aggregation limit or eligibility restrictions for the 2155–2175 MHz band.

- ▶ Note that, to the extent that a licensee in the 2155–2175 MHz band provides a Commercial Mobile Radio Service, such service would be subject to the provisions of part 20 of the Commission’s rules, including 911/E911 and hearing aid-compatibility (HAC) requirements, along with the provisions in the rule part under which the license was issued.

- ▶ Propose that the threshold for environmental review of fixed transmission facilities should be an effective radiated power (ERP) greater than 1000 Watts.

- ▶ Propose to employ our part 1 competitive bidding rules, if the Commission establishes a licensing regime that requires the use of competitive bidding to resolve mutually exclusive applications; seek comment on whether any of our part 1 rules would be inappropriate or should be modified for an auction of licenses in this band.

- ▶ Propose to define a small business as an entity with average annual gross revenues for the preceding 3 years not exceeding \$40 million, and a very small business as an entity with average annual gross revenues for the preceding 3 years not exceeding \$15 million.

- ▶ Propose to provide small businesses with a bidding credit of 15 percent and very small businesses with a bidding credit of 25 percent if we establish non-nationwide service areas, and seek comment on whether, if we decide to license the 2155–2175 MHz

band on a nationwide basis, small business credits would be appropriate for this band.

2. Since 2001, the Commission has designated 130 megahertz of spectrum for use by advanced wireless services.⁶ Corresponding service rules have been adopted for 90 megahertz of the spectrum in the 1710–1755 MHz and 2110–2155 MHz bands (AWS–1).⁷ In addition, service rules have been proposed for another 20 megahertz in the 1915–1920 MHz, 1995–2000 MHz, 2020–2025 MHz, and 2175–2180 MHz bands (AWS–2).⁸ In this Notice of Proposed Rulemaking, the Commission proposes service rules for an additional 20 megahertz of spectrum for a third AWS block (AWS–3) at 2155–2175 MHz, adjacent to the 2110–2155 MHz

⁶ In the November, 2002 *AWS Allocation Second Report and Order*, the Commission identified and reallocated 90 megahertz (1710–1755 MHz and 2110–2155 MHz bands) to the fixed and mobile services for AWS. See 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, ET Docket No. 00–258, *Second Report and Order*, 17 FCC Rcd 23193 (2002) (*AWS Allocation Second Report and Order*). In the September, 2004 *AWS Allocation Sixth Report and Order*, the Commission designated 20 megahertz (1915–1920 MHz, 1995–2000 MHz, 2020–2025 MHz, and 2175–2180 MHz bands) for fixed and mobile services that include AWS. See 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, ET Docket No. 00–258, *Sixth Report and Order, Third Memorandum Opinion and Order and Fifth Memorandum Opinion and Order*, 19 FCC Rcd 20720 (2004) (*AWS Allocation Sixth Report and Order*). With regard to the 20-megahertz block at 2155–2175 MHz, the 2160–2165 MHz band was already allocated for non-Federal Government fixed services and mobile services. See 47 CFR 21, 22, and 101. In the *AWS Allocation Third Report and Order*, the 2165–2180 MHz band was reallocated for fixed and mobile services, including AWS. See 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, ET Docket No. 00–258, *Third Report and Order, Third Notice of Proposed Rulemaking and Second Memorandum Opinion and Order*, 18 FCC Rcd. 2223, 2238 ¶ 28 (2002) (*AWS Allocation Third Report and Order & NPRM*). In 2005, the Commission allocated 2155–2160 MHz for fixed and mobile services, including AWS, and designated the entire 2155–2175 MHz band as AWS spectrum. See 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, ET Docket No. 00–258, *Eighth Report and Order and Fifth Notice of Proposed Rulemaking and Order*, 20 FCC Rcd 15866, 15872 ¶ 9 (2005) (*AWS Allocation Eighth Report and Order and Fifth NPRM*).

⁷ See *AWS–1 Service Rules Report and Order*, *supra* note 2.

⁸ See *AWS–2 Service Rules NPRM*, *supra* note 2.

band of AWS–1 and the 2175–2180 MHz band of AWS–2.

3. There are numerous incumbents in the 2155–2175 MHz band, which contains over 1,800 active licenses. These incumbents consist primarily of Fixed Microwave Service (FS) and Broadband Radio Service (BRS) licensees, who are subject to relocation by emerging technology (ET) licensees (including future AWS–3 licensees). The Commission has already addressed relocation and cost-sharing issues with respect to the 2155–2175 MHz band in a separate proceeding based on the assumption that the AWS–3 band would be exclusively licensed.⁹ Generally, incumbents retain primary status unless and until an ET licensee requires use of the spectrum. AWS–3 licensees will be required to relocate, or share in the cost of a relocation paid for by other AWS licensees (including, possibly, AWS–1 licensees), until the relocation and cost sharing rules “sunset.” For FS, the rules sunset ten years after the first ET license is issued in the 2160–2175 MHz band.¹⁰ For BRS, the rules sunset 15 years after the first AWS license is issued in the 2150–2160/62 MHz band.¹¹ Although we do not anticipate having to adopt any further rules regarding these issues, we do seek comment on whether changes may be necessary in light of the service rules we adopt.

Procedural Matters

Ex Parte Rules—Permit-But-Disclose

4. This is a permit-but-disclose notice and comment rulemaking proceeding. *Ex parte* presentations are permitted, except during the Sunshine Agenda period, provided they are disclosed pursuant to the Commission's rules.¹²

Initial Regulatory Flexibility Analysis

5. As required by the Regulatory Flexibility Act of 1980 (RFA),¹³ the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities of the policies and rules proposed in the NPRM. The analysis is found in the attached Appendix. We request written public

⁹ See 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, ET Docket No. 00–258, *Ninth Report and Order and Order*, FCC 06–45 (rel. April 21, 2006) (*AWS Ninth R&O*). See also *AWS Allocation Eighth Report and Order and Fifth NPRM*.

¹⁰ See 47 CFR 101.79(a)(1) (10-year sunset date); 27 CFR 27.1174 (Termination of Cost-Sharing Obligations).

¹¹ See 47 CFR 27.1253(a) (Sunset Provisions).

¹² See generally 47 CFR 1.1202, 1.1203, 1.1206.

¹³ 5 U.S.C. 603.

comment on the analysis. Comments must be filed by the dates listed in this NPRM, and must have a separate and distinct heading designating them as responses to the IRFA. The Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, will send a copy of this NPRM, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.

Initial Paperwork Reduction Analysis

6. This document contains proposed new or modified information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection requirements contained in this document, as required by the Paperwork Reduction Act of 1995, Pub. L. 104–13. Public and agency comments are due 60 days after date of publication in the **Federal Register**. Comments should address: (a) 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; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) 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. In addition, pursuant to the Small Business Paperwork Relief Act of 2002,¹⁴ we seek specific comment on how we might “further reduce the information collection burden for small business concerns with fewer than 25 employees.”

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

7. The NPRM contemplates service rules for licensed fixed and mobile services, including advanced wireless services (AWS), in the 2155–2175 MHz band. These service rules include application, licensing, operating and technical rules and competitive bidding provisions for the AWS–3 spectrum band.¹⁵ Consistent with the Commission's policy objective of affording licensees the flexibility to deploy new technologies, to implement service innovations, and to respond to market forces, the NPRM proposes service rules that provide AWS–3 licensees with the flexibility to provide

¹⁴ Pub. L. 107–198, see 44 U.S.C. 3506(c)(4).

¹⁵ See NPRM, para. 1, *supra*.

any fixed or mobile service, including advanced wireless services, that is consistent with the allocations¹⁶ for this spectrum. To promote flexibility, the NPRM also proposes to license this spectrum under the Commission's market-oriented part 27 rules. The substantial flexibility provided by the part 27 rules would encourage the deployment of a wide variety of fixed and mobile services. The market-oriented licensing framework for these bands would ensure that this spectrum is efficiently utilized and will foster the development of new and innovative technologies and services, as well as encourage the growth and development of broadband services, ultimately leading to greater benefits to consumers.

8. The NPRM seeks to adopt rules that will reduce regulatory burdens, promote innovative services, and encourage flexible use of this spectrum. Such an approach opens up economic opportunities to a variety of spectrum users, which could include small businesses. The NPRM considers various proposals and alternatives partly because the Commission seeks to minimize, to the extent possible, the economic impact on small businesses.

9. The NPRM contemplates three different technological approaches. First, the NPRM contemplates an approach that would allow uplink/downlink in the band, possibly resulting in an unpaired 20-megahertz spectrum band that could be used for Time Division Duplexing (TDD) or Half-Duplex Frequency Division Duplexing (HFDD) based technology. Second, the Commission could also adopt a structured uplink/downlink approach where a mix of both base-transmit and mobile-and-base transmit services would be utilized in the band. Under this approach, some or portions of the 2155–2175 MHz band could be asymmetrically paired with other base- and mobile-transmit spectrum blocks with pairings composed of different bandwidths. Alternatively, the NPRM seeks comment on an approach that would permit only base transmissions in the band. Under this approach, some or portions of the 2155–2175 MHz band could be asymmetrically paired with other base- and mobile-transmit spectrum blocks with pairings composed of different bandwidths. The Commission contemplates rules which will determine the appropriate approach to utilize.

10. Prior to the adoption of the NPRM, the Commission adopted an *Eighth Report and Order*, in ET Docket No. 00–258, allocating 2155–2160 MHz for fixed

and mobile services, including AWS, and designated the entire 2155–2175 MHz band as AWS spectrum.¹⁷ The Commission's goal is to enable service providers to maximize the use of this spectrum with minimal transaction costs. Within the limits of the licensed fixed and mobile allocation, the marketplace and not the Commission will determine how this spectrum is used. Thus, the NPRM's proposals allow flexibility for licensees to provide third generation (3G) and other advanced wireless services in the near term, while fostering innovation and agility so they can quickly adapt to changes in technological capabilities and marketplace conditions into the future. It is the Commission's belief that the licensing and service rules proposed in the NPRM will benefit consumers by giving them the services and value that they demand, and thereby provide the new business opportunities necessary to support continued service enhancements by licensees.

11. The Commission also contemplates rules which will have the effect of setting performance requirements. An issue we frame is whether licensees in the 2155–2175 MHz band should be subject to any performance requirements in addition to a substantial service requirement at license renewal. The NPRM notes that in some services the Commission has imposed minimum coverage requirements on licensees to ensure that spectrum is used effectively and service is implemented promptly. A related issue is whether the Commission should establish any specific coverage requirements in the 2155–2175 MHz band, or whether coverage criteria should be adopted as one means, but not the exclusive means, of meeting a substantial service requirement. We propose for consideration the issue of whether licensees should be subject to interim performance requirements prior to the end of the license term.

12. The NPRM also contemplates rules that will allow licensees in the 2155–2175 MHz band to partition their service areas and to disaggregate their spectrum. If the Commission permits partitioning, then the partitioning licensee would have to include with its request a description of the partitioned service area, a calculation of the population of the partitioned service area, and the licensed geographic service area.

13. The NPRM also contemplates rules on a number of technical issues and licensing obligations. A major

concern in this context is about how best to control in-band and out-of-band interference, appropriate power limits, RF safety limits, and Canadian and Mexican coordination.¹⁸ The NPRM also proposes to permit applicants to request common carrier status as well as non-common carrier status for authorization in a single license, rather than to require the applicant to choose between common carrier and non-common services.¹⁹

14. In addition, the NPRM contemplates operations for licensing the new services. For example, the FCC is considering whether to license the AWS–3 spectrum using geographic licensing, as opposed to site-by-site licensing.

15. The Commission contemplates the appropriate size(s) of the geographic service area or areas on which licenses should be based. The Commission also contemplates the benefits and costs of establishing an unlicensed regime, either in lieu of a licensed regime or as a complement to a licensed regime, and/or non-exclusive licensing approach.²⁰

16. Although the Commission does not know precisely what types of services may be developed in the 2155–2175 MHz band, the Commission anticipates that the services that will be deployed in the band may have capital requirements comparable to those in the broadband PCS service and AWS–1 in the 1710–1755 MHz and 2110–2155 MHz bands because of their adjacency, or close proximity, to the AWS–3 spectrum band and the record in related proceedings suggest similar services are being contemplated for all these bands. In particular, the Commission anticipates that licensees in the 2155–2175 MHz band will be presented with issues and capital and other cost requirements similar to those presented to broadband PCS licensees and licensees in the 1710–1755 MHz and 2110–2155 MHz bands, including issues and costs involved in relocating incumbents, and developing markets, technologies, and services. Because of those anticipated similarities and other technical and spectral benefits, the Commission is considering the possibility of uplink/downlink use, or structured uplink/downlink and or downlink use, involving asymmetrically pairing AWS–3 spectrum with adjacent AWS or PCS spectrum bands.

17. In light of these similarities, the NPRM concurrently contemplates the adoption of the same small business size standards for the 2155–2175 MHz band

¹⁸ See NPRM, para. 1, *supra*.

¹⁹ *Id.*

²⁰ *Id.*

¹⁶ *Id.*

¹⁷ See *AWS Allocation Eighth Report and Order and Fifth NPRM*.

as the Commission adopted for broadband PCS and AWS-1 in the 1710-1755 MHz and 2110-2155 MHz bands. Accordingly, if the Commission adopts bidding credits, the NPRM proposes to define a small business as an entity with average annual gross revenues for the preceding three years not exceeding \$40 million, and a very small business as an entity with average annual gross revenues for the preceding three years not exceeding \$15 million.²¹

18. The Commission also proposes, in the event that it establishes non-nationwide service areas, to provide small businesses with a bidding credit of 15 percent and very small businesses with a bidding credit of 25 percent, as set forth in the standardized schedule in part 1 of the Commission's rules. Accordingly, we frame the issue of the use of these standards and associated bidding credits for applicants to be licensed in the 2155-2175 MHz band, with particular focus on the appropriate definitions of small and very small businesses as they may relate to the size of the geographic area to be covered and the spectrum allocated to each license. In discussing these issues, commenters are requested to address the expected capital requirements for services in these bands and other characteristics of the service. Commenters are also invited to use comparisons with other services for which the Commission has already established auction procedures as a basis for their comments regarding the appropriate small business size standards.

19. The FCC seeks comment on all the rules contemplated above and on optional ways of implementing such contemplated rules, and on any other possible rules which commenters wish to suggest and discuss relative to the Regulatory Flexibility Act.

B. Legal Basis

20. The proposed action is authorized pursuant to §§ 1, 2, 4(i), 7, 10, 201, 214, 301, 302, 303, 307, 308, 309, 310, 319, 324, 332 and 333 of the Communications Act of 1934, 47 U.S.C. §§ 151, 152, 154(i), 157, 160, 201, 214, 301, 302, 307, 308, 309, 310, 319, 324, 332, 333.

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

21. 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, if adopted.²² The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small government jurisdiction."²³ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.²⁴ A small business 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.²⁵

22. The Commission has not yet determined how many licenses will be awarded in the 2155-2175 MHz bands. Moreover, the Commission does not yet know how many applicants or licensees in these bands will be small entities. Thus, the Commission assumes, for purposes of this IRFA, that all prospective licensees are small entities as that term is defined by the SBA or by our proposed small business definitions for these bands. Though the Commission does not know for certain which entities are likely to apply for these frequencies, we note that the 2155-2175 MHz bands are comparable to cellular service and personal communications service.²⁶

Accordingly, we believe the following regulated entities will be directly affected by our contemplated rules.

23. *Wireless Service Providers.* The SBA has developed a small business size standard for wireless firms within the two broad economics census categories of "Paging"²⁷ and "Cellular and Other Wireless Telecommunications."²⁸ Under both categories, the SBA deems a wireless business to be small if it has 1,500 or fewer employees.

Paging. For the census category of Paging, Census Bureau data for 2002 show that there were 807 firms in this category that operated for the entire year.²⁹ Of this total, 804 firms had

²² 5 U.S.C. 603(b)(3).

²³ 5 U.S.C. 601(6).

²⁴ 5 U.S.C. 601(3) (incorporating by reference the definition of "small business concern" in 15 U.S.C. 632) Pursuant to the RFA, 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).

²⁵ Small Business Act, 15 U.S.C. 632 (1996).

²⁶ See IRFA at para. 19, *supra*.

²⁷ 13 CFR 121.201, NAICS code 517211.

²⁸ 13 CFR 121.201, NAICS code 517212.

²⁹ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization," Table 5, NAICS code 517211 (issued Nov. 2005).

employment of 999 or fewer employees, and three firms had employment of 1,000 employees or more.³⁰ Thus, under this category and associated small business size standard, the majority of firms can be considered small.

Cellular and Other Wireless Telecommunications. For the census category of Cellular and Other Wireless Telecommunications, Census Bureau data for 2002 show that there were 1,397 firms in this category that operated for the entire year.³¹ Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.³² Thus, under this second category and size standard, the majority of firms can, again, be considered small.

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

24. New recordkeeping or reporting requirements are contemplated in the NPRM. However, until the FCC resolves how to assign license(s) for the band, *e.g.*, unlicensed vs. licensed approach, these requirements are difficult to describe with great specificity because the Commission does not know precisely what types of services may be developed in the 2155-2175 MHz band.

25. Nonetheless, the following recordkeeping or reporting requirements seem applicable under a licensed approach. Entities interested in acquiring an initial license to use the spectrum in the 2155-2175 MHz band will be required to file license applications using the Commission's automated Universal Licensing System (ULS). ULS is an online electronic filing system that also serves as a powerful information tool that enables potential licensees to research applications, licenses, and antenna structures. It also keeps the public informed with weekly public notices, FCC rulemakings, processing utilities, and a telecommunications glossary. ULS also features a Geographic Information System (GIS), a digital mapping technology that identifies spectrum use in relation to geographic areas. As in other services, licensees in these bands

³⁰ *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with "1000 employees or more."

³¹ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization," Table 5, NAICS code 517212 (issued Nov. 2005).

³² *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with "1000 employees or more."

²¹ We are coordinating these proposed small business size standards with the U.S. Small Business Administration.

would be allowed to provide all allowable services anywhere within their licensed area. The Commission's current mobile service license application requires an applicant for mobile services to identify the regulatory status of the service(s) they intend to provide, since service offerings may bear on eligibility and other statutory and regulatory requirements.

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

26. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its adopted approach, which may include the following four alternatives (among others): (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 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.³³

27. Specifically to assist small businesses, the NPRM proposes to establish small business size standards and associated small business bidding credits for the 2155–2175 MHz band in the event that licenses are assigned by competitive bidding and licensing is based on non-nationwide geographic areas.³⁴ The NPRM proposes a bidding credit of 15 percent for small businesses and a bidding credit of 25 percent for very small businesses. The NPRM seeks comment on whether small business bidding credits would be appropriate if a nationwide licensing scheme is adopted for the 2155–2175 MHz band. The NPRM notes that the implementation costs associated with a nationwide license in these bands is presumed to be very high, and it is not clear whether small businesses could attract the capital necessary to implement and provide nationwide service. Accordingly, we ask commenters to address the expected capital requirements for services in these bands and other characteristics of the service. The Commission invites commenters to use comparisons with other services for which the Commission has already established auction procedures as a basis for their comments regarding the appropriate small business size standards and

associated small business bidding credits. The Commission requests comment on any other alternatives to minimize significant economic impact on small entities.

28. The NPRM solicits comment on various alternatives regarding the service rules for the 2155–2175 MHz band.³⁵ The NPRM seeks to adopt rules that will reduce regulatory burdens, promote innovative services and encourage flexible use of this spectrum. The NPRM also seeks to open up economic opportunities to a variety of spectrum users, which could include small businesses. The NPRM considers various proposals and alternatives partly because the Commission seeks to minimize, to the extent possible, the economic impact on small businesses.³⁶ The Commission requests comment on any other alternatives to minimize significant economic impact on small entities.

29. The NPRM invites comment on various alternative licensing and service rules and on a number of issues relating to how the Commission should craft service rules for the AWS–3 spectrum that could have an impact on small entities. For example, the Commission seeks comment on the size of spectrum blocks for these frequencies and how the size of spectrum blocks would impact small entities. The NPRM proposes a geographic area approach to service areas, as opposed to a station-defined licensing approach, and seeks comment on the appropriate size of service areas. Specifically, the NPRM asks for comment on whether smaller geographic areas would better serve the needs of small entities. The NPRM explains that the Commission's approach to determining optimum geographic area license size(s) attempts to accommodate the likely range of applicant desires by balancing efficiency with the policy goal of disseminating licenses among a wide variety of applicants. The NPRM notes that the Commission wishes to foster service to rural areas and tribal lands, and to promote investment in and rapid deployment of new technologies and services. The NPRM also notes that small license areas may favor smaller entities and regional business plans and no interest in providing large-area service. In summary, the NPRM seeks comment on the advantages and disadvantages to small entities of a large geographic licensing scheme over a small one in terms of impact on rural and small entities. The Commission

requests comment on any other alternatives to minimize significant economic impact on small entities.

30. As noted earlier, the NPRM seeks comment on permitting geographic partitioning and spectrum disaggregation. The NPRM notes that geographic partitioning and spectrum disaggregation is a tool utilized by the Commission to promote efficient spectrum use and economic opportunity for a wide variety of applicants, including small business, rural telephone, minority-owned, and women-owned applicants. The NPRM seeks comment on the benefits and costs of partitioning and disaggregation, and whether it promotes the public interest. Finally, the NPRM, seeks comment on whether any band-specific limits on spectrum aggregation are necessary or appropriate in this case, and how this would impact the marketplace, including small entities. The Commission requests comments on any other alternatives to minimize significant economic impact on small entities.

F. Federal Rules That May Duplicate, Overlap, or Conflict With the Proposed Rules

31. None.

Ordering Clauses

32. Pursuant to sections 1, 2, 4(i), 7, 10, 201, 214, 301, 302, 303, 307, 308, 309, 310, 319, 324, 332 and 333 of the Commissions Act of 1934, 47 U.S.C. 151, 152, 154(i), 157, 160, 201, 214, 301, 302, 303, 307, 308, 309, 310, 319, 324, 332, 333, that this Notice of Proposed Rulemaking is hereby adopted.

33. Notice is given of the proposed regulatory changes described in this Notice of Proposed Rulemaking, and that comment is sought on these proposals.

34. The Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, shall send a copy of this Notice of Proposed Rulemaking, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

Federal Communications Commission.

Marlene H. Dortch,

Secretary.

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³³ See U.S.C. 603(c)(1)–(4).

³⁴ See IRFA para. 19, *supra*.

³⁵ See, e.g., NPRM, para. 1, *supra*.

³⁶ See, e.g., NPRM, para. 1 (competitive bidding provisions for designated entities), *supra*.