Before the
Federal Communications Commission
WASHINGTON, D.C. 20554

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In the Matter of	)	
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Amendment of the Commission's Rules Governing Hearing Aid-Compatible Mobile Handsets	)))	WT Docket No. 07-250

THIRD REPORT AND ORDER

Adopted: April 9, 2012 **Released: April 9, 2012**

By the Chief, Wireless Telecommunications Bureau and the Chief, Office of Engineering and Technology:

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I. INTRODUCTION

1. The Commission's wireless hearing aid compatibility rules ensure that consumers with hearing loss are able to access wireless communications services through a wide selection of handsets without experiencing disabling radio frequency (RF) interference or other technical obstacles. In order to ensure that the hearing aid compatibility rules cover the greatest number of wireless handsets and reflect recent technological advances, the Wireless Telecommunications Bureau (WTB) and Office of Engineering and Technology (OET) adopt in this Third Report and Order, pursuant to authority delegated by the Commission, the most current hearing aid compatibility technical standard.

2. The standard that we adopt today was developed through a voluntary, consensus-driven approach and is broadly supported by both industry and consumer groups. We extend our appreciation for the efforts of the many parties involved in developing this standard. We strongly encourage all parties to continue their efforts to refine and develop standards applicable to new telephone technologies that may create potential for interference with hearing aids.

II. BACKGROUND

3. To ensure that a selection of digital wireless handset models is available to consumers with hearing loss, the Commission's rules require both manufacturers and service providers to meet defined benchmarks for deploying hearing aid-compatible wireless phones. Specifically, manufacturers and service providers are required to offer minimum numbers or percentages of handset models that meet technical standards for compatibility with hearing aids operating in both acoustic coupling and inductive coupling modes.[1] These benchmarks apply separately to each air interface for which the manufacturer or service provider offers handsets.[2]

4. To define and measure the hearing aid compatibility of handsets, the Commission's rules reference the 2007 revision of American National Standards Institute (ANSI) technical standard C63.19 (the "2007 ANSI Standard"), formulated by the Accredited Standards Committee C63® – Electromagnetic Compatibility (ASC C63®).[3] A handset is considered hearing aid-compatible for acoustic coupling if it meets a rating of at least M3 under the 2007 ANSI Standard.[4] A handset is considered hearing aid-compatible for inductive coupling if it meets a rating of at least T3.[5] The 2007 ANSI Standard specifies testing procedures for determining the M-rating and T-rating of digital wireless handsets that operate over the air interfaces that, at the time it was promulgated, were commonly used for wireless services in the 800-950 MHz and 1.6-2.5 GHz bands.

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[1] 47 C.F.R. § 20.19(c), (d). Hearing aids operating in acoustic coupling mode receive through a microphone and then amplify all sounds surrounding the user, including both desired sounds, such as a telephone's audio signal, and unwanted ambient noise. Hearing aids operating in inductive coupling mode turn off their microphone to avoid amplifying unwanted ambient noise, instead using a telecoil to receive only audio signal-based magnetic fields generated by inductive coupling-capable telephones. The hearing aid converts these fields back to sound or a signal appropriate for cochlear implant users.

[2] *Id.* The term air interface refers to the technology that ensures compatibility between mobile radio service equipment, such as handsets, and a service provider's base stations. To further ensure that the handsets available to consumers with hearing loss include the newest and most advanced technologies, manufacturers are required to partially refresh their offerings of hearing aid-compatible phones each year, and service providers must offer a range of hearing aid-compatible phones with differing levels of functionality. *Id.* § 20.19(c)(1)(ii), (c)(4)(ii), (d)(4)(ii).

[3] 47 C.F.R. § 20.19(b)(1)(ii), (b)(2)(ii).

[4] 47 C.F.R. § 20.19(b)(1)(ii). To use a digital wireless phone with a hearing aid or cochlear implant in acoustic coupling mode, RF interference and other electromagnetic interference from the wireless phone must be controlled. ANSI C63.19 specifies ratings for digital wireless phones, M1 through M4, based on their RF emission levels, with M1 being the highest emissions and M4 the lowest emissions. The standard also provides a methodology for rating hearing aids from M1 to M4 based on their immunity to interference, with M1 being the least immune and M4 the most immune. To determine whether a particular digital wireless phone is likely to interfere with a particular hearing aid, the immunity rating of the hearing aid is added to the emissions rating of the wireless phone. A sum of 4 indicates that the wireless phone will be usable; a sum of 5 indicates that the wireless phone will provide normal use; and a sum of 6 or greater indicates that the wireless phone will provide excellent performance with that hearing aid. *See* Accredited Standards Committee C63® – Electromagnetic Compatibility, *American National Standard Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids*, ANSI C63.19-2007 (June 8, 2007) at 5.

[5] 47 C.F.R. § 20.19(b)(2)(ii). Handsets are rated from T1 to T4 for inductive coupling capability in a similar manner to the M-ratings.

5. ASC C63® recently adopted an updated version of ANSI C63.19 (the "2011 ANSI Standard"). The 2011 ANSI Standard was published on May 27, 2011,[6] and ASC C63® subsequently requested that the Commission adopt this newer version of the standard into its rules.[7] The 2011 ANSI Standard expands the operating frequency range for covered wireless devices to 698 MHz - 6 GHz.[8] It also establishes a direct method for measuring the RF interference level of wireless devices to hearing aids, which enables testing procedures to be applied to operations over any RF air interface or protocol.[9] In addition, the 2011 ANSI Standard exempts from testing certain low power transmitters that are unlikely to cause unacceptable RF interference to hearing aids and deems those transmitters to meet an acceptable M rating.[10]

6. To ensure that the hearing aid compatibility standard codified in the rules remains current, the Commission has delegated to the Chief of WTB and the Chief of OET limited authority to update its rules as revisions to ANSI technical standard C63.19 are published.[11] In particular, the Commission delegated the authority to conduct a notice-and-comment rulemaking proceeding on the use of future versions of the standard that do not raise major compliance issues.[12] In addition, the Commission delegated authority to the Chief of WTB and the Chief of OET to conduct rulemaking proceedings to adopt future versions of the ANSI Standard that add frequency bands or air interfaces not covered by previous versions, if the new version does not impose materially greater obligations than those imposed on services already subject to the hearing aid compatibility rules.[13] Under Section 20.19(k)(1), WTB and OET shall set an effective date for new obligations imposed on manufacturers and Commercial Mobile Radio Service (CMRS) providers as a result of their adoption of technical standards for additional frequency bands and air interfaces that is no less than one year after release of the order for manufacturers and Tier I carriers[14] and no less than 15 months after release for other service providers.[15]

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[6] *See* Accredited Standards Committee C63® – Electromagnetic Compatibility, *American National Standard Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids*, ANSI C63.19-2011 (May 27, 2011). The standard is available for purchase from IEEE Operations Center, 445 Hoes Lane, Piscataway, NJ 08854-4141, by calling (732) 981-0060, or going to http://www.ieee.org. A copy of the standard is also available for inspection at the Federal Communications Commission (FCC), 445 12th St., SW., Reference Information Center, Room CY-A257, Washington, DC 20554.

[7] *See* Supplemental Report and Comments of ANSI ASC C63®, WT Docket Nos. 07-250, 01-309, 06-150, at 3 (June 24, 2011) (ASC C63® Supplemental Report).

[8] *See* 2011 ANSI Standard at 13.

[9] *Id.* at 12, 14-15. As a result of the change to a direct measurement methodology, the 2011 ANSI Standard is also able to eliminate certain conservative assumptions that were incorporated into the 2007 ANSI Standard. Thus, for example, it will be approximately 2.2 dB easier for a GSM phone to receive an M3 rating under the 2011 ANSI Standard. *See* ASC C63® Supplemental Report, Annex A at iv.

[10] 2011 ANSI Standard at 12-13; *see* ASC C63® Supplemental Report, Annex A at ii.

[11] *See* Amendment of the Commission's Rules Governing Hearing Aid Compatible Mobile Handsets, WT Docket No. 07-250, *Second Further Notice of Proposed Rulemaking,* 26 FCC Rcd 14991, 14993 ¶ 4 (2011) (*Second Further Notice*) (describing Commission's goal of ensuring that the hearing aid compatibility standard codified in the rules would remain current).

[12] 47 C.F.R. § 20.19(k)(2).

[13] *Id.* § 20.19(k)(1).

[14] Tier I carriers are CMRS providers with nationwide footprints. *See* Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Phase II Compliance Deadlines for Non-Nationwide Carriers, CC Docket No. 94-102, *Order to Stay*, 17 FCC Rcd 14841, 14843 ¶ 7 (2002). Tier II carriers are non-nationwide mid-sized CMRS providers with more than 500,000 subscribers as of the end of 2001. Tier III

7. On November 1, 2011, we released the *Second Further Notice*, which drew upon the request of ASC C63® to adopt the 2011 ANSI Standard as an applicable technical standard for evaluating the hearing aid compatibility of wireless handsets. In the *Second Further Notice*, we tentatively concluded to adopt the 2011 ANSI Standard.[16] We proposed a 12-month transition period during which multi-band and/or multi-mode handset models with certain operations not covered by the 2007 ANSI Standard could continue to be tested under that standard and launched as hearing aid-compatible with appropriate disclosure.[17] We also sought comment on whether a transition period of two years, with an additional three months for non-Tier I service providers, would be appropriate before applying handset deployment benchmarks to handset operations over air interfaces and frequency bands that are newly covered under the 2011 ANSI Standard.[18]

8. Comments were due January 13, 2012, and reply comments were due January 30, 2012. We received six comments and four reply comments. Comments came from parties representing a range of interests, including handset manufacturers, service providers, hearing loss advocacy groups, and hearing aid manufacturers.[19] While commenters generally support adoption of the 2011 ANSI Standard as proposed, they express differing views regarding transition time frames, and some commenters request that we clarify aspects of the 2011 ANSI Standard's implementation.

III. DISCUSSION

9. In the discussion below, we find that the 2011 ANSI Standard offers benefits both to manufacturers and service providers and to consumers, and we therefore add it as an applicable standard alongside the 2007 version of the technical standard in the Commission's rules. We adopt a transition period of 12 months during which new multi-band and multi-mode handsets that include operations not covered by the 2007 version of the standard may be designated as hearing aid-compatible based on testing of only those operations that are covered under the 2007 ANSI Standard. In addition to the current disclosure rule that applies to handsets that have not been tested for hearing aid compatibility for some of their operations,[20] we adopt a general disclosure requirement to inform users about any operations in such handsets that the manufacturer may have tested under the 2011 version and found not to meet hearing aid compatibility criteria for those operations prior to submitting the handset for certification under the 2007 ANSI Standard. We also adopt a 24-27 month transition period for applying the Commission's existing deployment benchmarks to manufacturers' and service providers' offerings of handsets operating over newly covered frequency bands and air interfaces. We find that these rule changes will not impose undue

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carriers are non-nationwide small CMRS providers with no more than 500,000 subscribers as of the end of 2001. *See id.* at 14846-48 ¶¶ 19-24.

[15] 47 C.F.R. § 20.19(k)(1). The current hearing aid compatibility rules apply only to certain CMRS providers and to the manufacturers of handsets used to deliver those services, and the Commission has not delegated authority to expand the rules' applicability beyond those services. In a separate Notice, the Commission has proposed rules to extend hearing aid compatibility requirements to all customer equipment used to provide wireless voice communications over any type of network among members of the public or a substantial portion of the public via a built-in speaker where the equipment is typically held to the ear. *See* Amendment of the Commission's Rules Governing Hearing Aid-Compatible Mobile Handsets, WT Docket No. 07-250, *Policy Statement and Second Report and Order and Further Notice of Proposed Rulemaking*, 25 FCC Rcd 11167, 11192-11200 ¶¶ 74-93 (2010) (*Second R&O and Further Notice*).

[16] *Second Further Notice*, 26 FCC Rcd at 14994 ¶ 6.

[17] *Id.* at 14994-95, 14996 ¶¶ 7, 9.

[18] *Id.* at 14995-96 ¶ 8.

[19] A full list of commenters and the short forms by which they are referenced is in Appendix A.

[20] *See* 47 C.F.R. § 20.19(f)(2).

burdens on manufacturers and service providers, including small wireless carriers and other small entities, and will benefit consumers with hearing loss by facilitating their access to the newest wireless communications services through a wider selection of hearing aid-compatible handsets.

A. Adoption of the 2011 ANSI Standard

10. We hereby adopt the 2011 ANSI Standard, as proposed, as an applicable technical standard for evaluating the hearing aid compatibility of wireless phones. The commenters unanimously support this proposal.[21] Codification of the 2011 ANSI Standard serves the public interest by applying the Commission's hearing aid compatibility rules to operations over additional frequency bands and air interface technologies. The new testing methodologies in the 2011 ANSI Standard will also greatly improve the measurement of potential hearing aid interference. We find that adopting this new technical standard will not raise any major compliance issues or impose materially greater obligations with respect to newly covered frequency bands and air interfaces than those already imposed under the Commission's rules. We also find no evidence that adopting the 2011 ANSI Standard will impose significant costs on manufacturers or service providers.[22]

11. As set forth in the proposed rules in the *Second Further Notice*, the new rules will permit new handset models to be tested for certification using either the 2007 or 2011 ANSI Standard.[23] All existing grants of certification issued under the 2007 ANSI Standard, as well as any pre-2010 grants under earlier versions of ANSI C63.19,[24] remain valid, and no existing handset models will need to be retested or recertified as hearing aid-compatible.[25] Consistent with existing rules that do not permit a handset model to be certified partly under one version of the ANSI Standard and partly under another,[26] manufacturers must test each new handset model either exclusively under the 2007 ANSI Standard or exclusively under the 2011 ANSI Standard both during and after the 12-month transition period discussed below.[27]

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[21] *See* AT&T Reply Comments at 1-2; Consumer Groups Comments at 1; CTIA Comments at 2, 4; HIA Comments at 1-2; RCA Reply Comments at 1-2; Samsung Comments at 2; Sprint Comments at 1; TIA Comments at 2-3.

[22] CTIA states that adoption of the new standard is unlikely to raise any new or additional major compliance issues or impose materially greater obligations with respect to handsets operating in newly covered frequency bands and air interfaces, and CTIA goes on to state that if compliance costs increase significantly in the future, then the Commission should expeditiously revise its rules to address these cost increases. CTIA Comments at 8. We will evaluate any such future costs and address them as necessary in the Commission's ongoing hearing aid compatibility proceedings. *See generally Second Further Notice,* 26 FCC Rcd at 14994 ¶ 5.

[23] *Second Further Notice,* 26 FCC Rcd at 14999 App. A (setting forth proposed rule Sections 20.19(b)(1) and (2)).

[24] 47 C.F.R. § 20.19(b)(1)(ii), (b)(2)(ii) (stating that grants of certification issued before January 1, 2010, under earlier versions of ANSI C63.19 remain valid).

[25] Several commenters requested that we clarify that handsets already certified under the 2007 ANSI Standard will continue to be treated as hearing aid-compatible without any need for recertification. *See* AT&T Reply Comments at 5; CTIA Comments at 6-7; RCA Reply Comments at 2; Sprint Comments at 2. This was our intent, and it is reflected in the rules both as proposed and as adopted. *See infra* App. B (Final Rules Section 20.19(b)(1), (2)).

[26] Wireless Telecommunications Bureau and Office of Engineering and Technology Clarify Use of Revised Wireless Phone Hearing Aid Compatibility Standard, *Public Notice*, 21 FCC Rcd 6384, 6385 (2006) ("Applicants for certification may rely on only one version of the ANSI C63.19 standard, 2001, 2005 or 2006, and must identify which version they are using for compatibility testing and for rating wireless phones, consistent with 47 C.F.R. § 2.947(b)."); Amendment of the Commission's Rules Governing Hearing Aid-Compatible Mobile Handsets, WT Docket No. 07-250, *First Report and Order*, 23 FCC Rcd 3406, 3439 ¶ 82 (2008) ("[A] party can use either the 2006 or 2007 standard for new certifications through 2009, but must use a single version for all certification tests and criteria for both the M and T ratings with respect to a given device.").

[27] *See infra* paras. 14-20.

12. While supporting adoption of the 2011 ANSI Standard, some commenters ask the Commission to provide additional guidance on certain testing techniques under the standard so that test equipment can be developed and the relevant tests applied. In particular, Samsung states that guidelines are required to facilitate use of the Modulation Interference Factor (MIF) testing technique.[28] Similarly, some commenters contend that guidance is necessary to enable hearing aid compatibility testing under the 2011 ANSI Standard for Voice over Long Term Evolution (VoLTE) transmissions.[29] We anticipate that the manufacturers and standards bodies working with OET will be able quickly to develop guidance for the MIF testing techniques and for determination of the M rating for VoLTE transmissions. To the extent such guidance has not been issued, OET will work with manufacturers to the extent of its authority so that the manufacturers can provide test reports that sufficiently demonstrate compliance with the rules as required by Section 2.1033(d) of the rules.[30] We recognize, however, that it may take longer to develop guidance for testing the inductive coupling capability of VoLTE transmissions under the 2011 ANSI Standard. Accordingly, as discussed below, until such guidance is issued, OET will adapt its certification procedures so that manufacturers can use the 2011 ANSI Standard for these handsets during a 12-month transition period.[31] We further note that under the rules we adopt today, as an alternative to using the 2011 ANSI Standard, handsets introduced during the 12-month transition period may be tested under the 2007 ANSI Standard for their operations that are covered under that standard and treated as hearing aid-compatible only for those operations.[32] Finally, because Section 2.1033(d) currently refers to the U-ratings that were used in early versions of ANSI Standard C63.19,[33] we also take this opportunity to conform this rule to the terminology used in the 2007 and 2011 ANSI Standards. We find good cause not to provide public notice and an opportunity for comment on this rule change under Section 553(b)(3)(B) of the Administrative Procedure Act because the change is purely ministerial and necessary to conform the Commission's written rules to ANSI Standard C63.19.[34]

13. In addition to the need for technical guidance, commenters raise two other issues related to the 2011 ANSI Standard. While it supports the standard's adoption, HIA is concerned that certain low power devices that are deemed M4 without testing under the 2011 ANSI Standard because they are unlikely to cause interference may in fact cause interference to hearing aids.[35] As HIA suggests, we will work with ASC C63® to monitor how these handsets perform and will consider future action if needed.

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[28] *See* Samsung Comments at 4-5: *see also* TIA Comments at 4 (stating that additional transition time is necessary so that the Commission can issue guidance and MIF testing equipment can be developed).

[29] *See* AT&T Reply Comments at 3; CTIA Reply Comments at 9-10; Samsung Comments at 5. VoLTE is a technology that will enable LTE systems, which were originally designed for data, to be used for voice communications. Because VoLTE has not yet been implemented, handsets that include LTE capability currently rely on other air interfaces for voice transmissions. VoLTE refers to the native voice capability of an LTE system, and it is distinguished from Voice over Internet Protocol capability that may be provided over LTE through a third-party application. Questions regarding hearing aid compatibility testing for voice capabilities offered through third-party applications will be addressed separately by the Commission. *See Second R&O and Further Notice*, 25 FCC Rcd at 11198-99 ¶ 89 (seeking comment on how rules should address circumstances where voice capability may be enabled by a party other than the manufacturer).

[30] 47 C.F.R. § 2.1033(d).

[31] *See infra* para. 17.

[32] *See infra* paras. 14-20.

[33] *See* 47 C.F.R. § 2.1033(d).

[34] 5 U.S.C. § 553(b)(3)(B); *see also* 47 C.F.R. § 0.241(a)(1) (delegating authority to OET to make editorial changes to rules).

[35] HIA Comments at 4.

Also, Consumer Groups, in light of the more accurate testing methodology under the 2011 ANSI Standard, advocate eliminating the existing rule that allows phones operating over the GSM air interface in the 1900 MHz band to be tested with reduced power under some circumstances.[36] As Consumer Groups acknowledge, this issue is outside the scope of the *Second Further Notice*, and the Commission will address it separately.[37]

B. Transitional Testing and Disclosure Requirements for Multi-Band and Multi-Mode Handsets

14. As proposed in the *Second Further Notice* and Multi-Band Principles,[38] we adopt a 12-month transition period for testing of multi-band and multi-mode handsets that incorporate operations which are not covered under the 2007 ANSI Standard. Specifically, for the 12 months following *Federal Register* publication of rules adopting the 2011 ANSI Standard, as an alternative to using the 2011 ANSI Standard, we will permit manufacturers to certify such handsets as hearing aid-compatible if they meet hearing aid compatibility criteria under the 2007 ANSI Standard for all operations covered under that standard, provided they meet the disclosure obligations set forth below.[39] After the end of the 12-month transition period, any new handset model containing operations that are not covered under the 2007 ANSI Standard will have to meet hearing aid compatibility criteria under the 2011 ANSI Standard for all of its operations in order to be considered hearing aid-compatible over any air interface.[40] Handset models that are certified under the transitional rule during the 12-month transition period, however, may continue to be counted and marketed as hearing aid-compatible after the transition period has ended without additional testing or certification.

15. Several commenters explicitly support adopting a transition period for testing of handsets with newly covered operations,[41] and none oppose this proposal. The transitional rule recognizes that at the time the new rules become effective, some manufacturers will be in product fabrication cycles where it will be impractical to initiate testing of upcoming multi-band or multi-mode handsets under the 2011 ANSI Standard. It is also possible, although unlikely, that multi-band or multi-mode handsets may be planned for near-term introduction that meet the hearing aid compatibility criteria for their operations that are covered under the 2007 ANSI Standard but do not meet those criteria for newly covered operations

[36] Consumer Groups Comments at 2 (referencing Section 20.19(e)(1)(iii) of the Commission's rules).

[37] *See generally Second Further Notice,* 26 FCC Rcd at 14994 ¶ 5 n.22.

[38] On September 11, 2008, an Alliance for Telecommunications Industry Solutions (ATIS) working group filed proposed industry/consumer consensus principles to apply to handsets operating in part over frequency bands or on air interfaces for which no current hearing aid compatibility standards exist. Letter from Thomas Goode, General Counsel, ATIS, and Deirde Y. Cheek, Attorney, ATIS, to Marlene H. Dortch, Secretary, FCC, dated Sept. 11, 2008 (Multi-Band Principles). The Multi-Band Principles provide a proposed framework for evaluating and developing hearing aid compatibility standards for new frequency bands and/or voice technology modes. *Id.* Principle 8 of the Multi-Band Principles states that beginning 12 months after a new standard is adopted by the Commission, a newly produced model would not be counted as hearing aid-compatible for any of its operations unless it meets the hearing aid compatibility standard for the new operation; however, handsets previously counted as hearing aid-compatible would continue to be so counted. *Id.* at 3.

[39] *See infra* paras. 18-20.

[40] *See* 47 C.F.R. § 20.19(b) (general rule that handset must meet hearing aid compatibility technical standards for all of its operations in order to be considered hearing aid-compatible for any of its operations); *see also supra* para. 11 (discussing requirement that each handset be tested using a single version of the ANSI Standard).

[41] *See, e.g.*, CTIA Reply Comments at 6-7; HIA Comments at 2, 3-4; Samsung Comments at 4.

under the 2011 ANSI Standard.[42] Accordingly, a transition period will ease the burden on handset manufacturers that are close to introducing handsets that would have met hearing aid compatibility requirements under the old rules, but that without an accommodation would require retesting, or in some cases redesign, to be hearing aid-compatible under the new rules.

16. Most commenters that address the issue support the 12-month transition period proposed in the *Second Further Notice* as sufficient to meet manufacturers' needs.[43] TIA argues that a 24-month transition period is needed to allow sufficient time for laboratory equipment to be developed and tested, as well as to accommodate possible parts shortages and other unexpected developments.[44] In its comments, TIA does not distinguish clearly between the transition period for multi-band and multi-mode testing and the transition period for applying deployment benchmarks, and to the extent it is concerned about uncertainties that may affect when models can be introduced to or withdrawn from the market, its arguments appear to pertain only to the separate transition for applying existing deployment benchmarks. To the extent TIA is concerned about the availability of testing equipment, we note that nearly 10 months have already passed since the 2011 ANSI Standard was published, and that manufacturers have had the opportunity to use that time to develop such equipment. We are not persuaded that an additional 24 months is needed, particularly in light of the other comments from manufacturers and service providers indicating that 12 months is sufficient.

17. We clarify that during the 12-month transition period, manufacturers that choose to test a multi-band and/or multi-mode handset model only for those operations covered under the 2007 ANSI Standard must use the 2007 ANSI Standard for such testing. Conversely, if manufacturers choose to use the 2011 ANSI Standard, they must test all operations in the handset that fall within the 2011 ANSI Standard, subject only to an accommodation for VoLTE transmissions. We find that permitting use of the 2011 ANSI Standard to test only those operations covered under the 2007 ANSI Standard would be confusing and would discourage early testing of newly covered air interfaces and frequency bands.[45] Some commenters express concern that, given the lack of guidance for testing the inductive coupling capability of VoLTE transmissions, a simple choice between these two alternatives would make it impossible to test any handset with VoLTE capability under the 2011 ANSI Standard for any of its operations.[46] In recognition of this concern, until such guidance is issued during the 12-month transition period, OET will permit handsets to be certified for inductive coupling under the 2011 ANSI Standard if they meet at least a T3 rating for all operations covered under that standard other than for VoLTE.[47] Manufacturers and service providers will be required to disclose that such handsets have not been tested for all their operations as discussed below.[48] We expect that during the next 12 months, industry members will work with the standards bodies to finalize all guidance necessary to facilitate full application of the 2011 ANSI Standard, and we will provide all possible support to this endeavor. In the

[42] *See Second Further Notice,* 26 FCC Rcd at 14996 ¶ 9 ("We understand that most handsets are expected to have little difficulty meeting the hearing aid compatibility rating criteria over Wi-Fi and other currently existing or imminently expected air interfaces that are outside the 2007 ANSI Standard.")

[43] *See* CTIA Reply Comments at 6-7; HIA Comments at 2, 3-4; Samsung Comments at 4.

[44] TIA Comments at 4; TIA Reply Comments at 2-3.

[45] Accordingly, we revise Section 20.19(b)(3)(ii) of our proposed rule to clarify that the 2007 ANSI Standard must be used for these tests during the 12-month transition period. *See infra* App. B.

[46] *See* AT&T Reply Comments at 3-4; CTIA Reply Comments at 7-10; Samsung Comments at 4-5.

[47] Alternatively, to the extent a manufacturer is able to test inductive coupling capability for VoLTE transmissions under the 2011 ANSI Standard prior to the issuance of general guidance, OET will accept such testing if it meets OET's standards under 47 C.F.R. § 2.1033(d).

[48] *See infra* note 48.

event sufficient testing guidance has not been completed by the end of the 12-month period, we will recommend that the Commission address this issue.

18. The Commission's existing rules require manufacturers and service providers to inform consumers, using specific prescribed language, when handsets designated as hearing aid-compatible have not been tested over some of their operations.[49] This requirement will continue to apply to handsets introduced during the 12-month transition period that the manufacturer has not tested for newly covered operations.[50] However, during the 12-month transition period, there may be handsets that the manufacturer tests and finds not to meet hearing aid compatibility requirements for newly covered operations under the 2011 ANSI Standard. The manufacturer may submit such handsets for certification based on hearing aid compatibility ratings under the 2007 ANSI Standard for operations covered by that standard. We proposed in the *Second Further Notice* to require manufacturers and service providers to disclose to consumers that operations in these handsets had been tested and found not to be hearing aid-compatible. We further proposed not to require specific language for this disclosure, but to rely on a general disclosure requirement backed by case-by-case resolution of disputes.[51] In their comments, Consumer Groups and HIA each propose specific disclosure language that they say should be required.[52] These parties argue that we should prescribe language to fully inform consumers and to remove any possibility of inconsistent information. Other commenters, however, oppose prescribing language so as to maintain their flexibility to disclose the most relevant information about a particular handset model.[53]

19. While we recognize that uniform disclosure language can provide benefits of certainty to both regulated entities and consumers, we decline to prescribe such language here. Instead, we require generally that manufacturers and service providers inform users by clear and effective means about any operations in a hearing aid-compatible handset model that they tested under the 2011 ANSI Standard and found not to meet hearing aid compatibility requirements under that standard. We recognize that the Commission already requires specific disclosure language for handset models that have not been tested for some of their operations, and we continue to require such disclosure for these handsets, including handsets introduced during the 12-month transition period that the manufacturer has not tested for newly covered operations.[54] Unlike that case, however, there is no consensus in the record on specific language to be used for handset models that the manufacturer has tested and found to be non-compliant under the 2011 ANSI Standard for some of their operations, and indeed several commenters oppose prescribing specific language.[55]

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[49] *See* 47 C.F.R. § 20.19(f)(2).

[50] We find that this language will also constitute sufficient disclosure for multi-band and/or multi-mode handsets tested under the 2011 ANSI Standard during the 12-month transition period that have not been tested for inductive coupling capability over VoLTE transmissions. Alternatively, manufacturers or service providers may develop more descriptive and informative disclosure language for these handsets. We advise manufacturers and service providers to consult with WTB staff before using any alternative language.

[51] *See Second Further Notice*, 26 FCC Rcd at 14996 ¶ 9.

[52] *See* Consumer Groups Comments at 3; HIA Comments at 5. Consumer Groups also propose requirements regarding the font and location of the disclosure. Consumer Groups Comments at 3. These matters are outside the scope of the *Second Further Notice*, and they will be addressed separately by the Commission. *See Second Further Notice,* 26 FCC Rcd at 14994 ¶ 5.

[53] *See* AT&T Reply Comments at 5-6; CTIA Reply Comments at 10-12; TIA Comments at 6.

[54] *See* 47 C.F.R. § 20.19(f)(2).

[55] *Compare Second R&O and Further Notice,* 25 FCC Rcd at 11179-80 ¶ 32 (2010) (relating that disclosure language for handsets with untested operations was derived from Multi-Band Principles developed by representatives of industry and consumer groups) *with supra* para. 18.

20. In the absence of a consensus or a demonstrated problem, we find it prudent not to prescribe language that may hinder regulated entities from developing and employing more effective disclosures. Moreover, as explained in the *Second Further Notice*, it is likely that few handsets that meet hearing aid compatibility standards for operations that are covered under the 2007 ANSI Standard will not also meet the hearing aid compatibility standards for newly covered operations.[56] Nonetheless, we note that the language proposed by Consumer Groups appears to provide appropriate information to consumers, and to the extent it is applicable to their particular circumstances, we encourage manufacturers and service providers to consider modeling their disclosures on this language.[57] We will resolve any disputes over the adequacy of individual disclosures on a case-by-case basis. In addition, we will revisit the possibility of prescribing disclosure language in the event disputes or misunderstandings develop in practice.

C. Transition Period for Applying Deployment Benchmarks

21. As discussed above, the 2011 ANSI Standard enables handsets to be tested for hearing aid compatibility over a broad range of frequency bands and independent of air interface technology. Therefore, following our adoption of this new standard and completion of the applicable transition period, the Commission's benchmark rules for hearing aid-compatible handset deployment will apply to handset operations over additional air interfaces and frequency bands. Under Section 20.19(k)(1), WTB and OET shall set the date when existing deployment benchmarks, and other attendant Section 20.19 hearing aid compatibility obligations, shall begin to apply to handset operations over newly covered air interfaces and frequency bands no earlier than one year after release of the order for manufacturers and Tier I carriers and no earlier than 15 months after release for other service providers.[58]

22. As proposed in the *Second Further Notice*,[59] we adopt a 24-month transition period for manufacturers and Tier I service providers, and 27 months for non-Tier I service providers, to apply the Commission's existing deployment benchmarks to handset operations over air interfaces and frequency bands that are not covered under the 2007 ANSI Standard but are covered under the 2011 ANSI Standard. Consumer Groups argue that we should adopt the minimum permissible 12-month and 15-month transition periods in order to serve the needs of consumers with hearing loss, stating that the changes in the standard are not dramatic and that manufacturers and service providers have had ample time to anticipate any possible effects.[60] Other commenters contend, however, that a longer, two-year period is necessary to allow affected parties to adjust existing handset inventories.[61]

23. While we recognize that a shorter transition period would benefit consumers if sufficient hearing aid-compatible models were in fact made available within that period to meet the benchmarks, we are not persuaded that meeting these targets is generally feasible for manufacturers and service providers. Meeting deployment benchmarks requires not only that hearing aid-compatible handsets be designed and tested under the new standard, but that manufacturers and service providers adjust their portfolios over

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[56] *Second Further Notice,* 26 FCC Rcd at 14996 ¶ 9.

[57] We note that Consumer Groups modeled their disclosure after the existing language for handsets with untested operations that was previously agreed to by representatives of all interests. *See* 47 C.F.R. § 20.19(f)(2).

[58] *Id.* § 20.19(k)(1).

[59] *Second Further Notice*, 26 FCC Rcd at 15000-01 App. A (setting forth proposed rule Sections 20.19(c), (d)).

[60] *See* Consumer Groups Comments at 2. Indeed, Consumer Groups state that they would prefer an even tighter schedule. *Id.* HIA also states generally that it supports "expeditious transition periods." HIA Comments at 2.

[61] *See* AT&T Reply Comments at 4; CTIA Reply Comments at 5-6; RCA Reply Comments at 2; Sprint Comments at 1-2; TIA Reply Comments at 2-3.

each air interface to include sufficient numbers of models to meet the benchmarks.[62] Moreover, under the rules we adopt today, many new handset models may not even be tested under the new standard during the first 12 months. We agree with CTIA that "[t]he 12-month transition period for testing will help ensure that handsets tested under the 2011 ANSI HAC Standard will be available to service providers and manufacturers so that they can be offered to consumers within the 24-month benchmark compliance period."[63] We also note that a two-year transition period for applying hearing aid compatibility benchmarks and other requirements is consistent with the Commission's proposals for wireless handsets that fall outside the subset of CMRS that is currently covered by Section 20.19(a) of the rules.[64] While we expect manufacturers and service providers to begin offering hearing aid-compatible handsets over the newly covered air interfaces and frequency bands well before the end of the transition period, we agree with most of the commenters that a two-year period will appropriately accommodate their design, engineering, and marketing needs as they adjust their inventories to offer enough of these handset models to meet the benchmarks. In order to ease the burdens on non-Tier I service providers that often have difficulty obtaining the newest handset models, we afford these providers an additional three months to meet newly applicable deployment benchmarks.[65]

IV. PROCEDURAL MATTERS

A. Final Regulatory Flexibility Analysis

24. As required by the Regulatory Flexibility Act of 1980 ("RFA"),[66] the Commission has prepared a Final Regulatory Flexibility Analysis ("FRFA") relating to this Third Report and Order. The FRFA is set forth in Appendix C.

B. Final Paperwork Reduction Act Analysis

25. This document does not contain information collection(s) subject to the Paperwork

[62] For example, Section 20.19(c) of the rules requires service providers to offer a minimum of 10 handset models, or 50 percent of the handset models that they offer, that meet a minimum M3 rating for RF interference reduction over each air interface for which they offer handsets. 47 C.F.R. § 20.19(c)(2),(3). Assume that at a given point in time, a service provider offers some handsets that operate over the GSM air interface (which is covered under the 2007 ANSI Standard), some handsets that operate over the LTE air interface (which is not covered under the 2007 ANSI Standard), and some that operate over both air interfaces. Assume further that some of these handsets operate over the 1900 MHz frequency band (which is covered under the 2007 ANSI Standard), some operate over the 700 MHz frequency band (which is not covered), and some are dual-band. Prior to the date when the benchmarks begin to apply to newly covered operations, this service provider must meet the M3 benchmark only for its phones that operate over GSM, and its phones that operate only over the 700 MHz band are not counted. After the date of expanded benchmark application, it will need to ensure that its portfolios satisfy the benchmark over both the GSM and LTE air interfaces (including dual-mode phones in both the GSM and LTE calculations), and it will need to include 700 MHz-only phones among its totals. The service provider must also ensure that its hearing aid-compatible phones over each air interface include a range of models with differing levels of functionality. *Id.* § 20.19(c)(4)(ii). Furthermore, service providers (and manufacturers) will also need to meet similar benchmarks for inductive coupling capability, and they must do so in the context of constantly changing portfolios of handsets that operate over potentially multiple combinations of air interfaces and frequency bands. We note that manufacturers and service providers are required to report annually on their offerings of hearing aid-compatible handsets, *see id.* § 20.19(i), and that failure to meet the benchmarks over all applicable air interfaces may result in enforcement action.

[63] CTIA Reply Comments at 7.

[64] *See Second R&O and Further Notice*, 25 FCC Rcd at 11200 ¶ 93.

[65] *See* RCA Reply Comments at 2.

[66] *See* 5 U.S.C. § 604. 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). The SBREFA was enacted as Title II of the Contract With America Advancement Act of 1996 ("CWAAA").

Reduction Act of 1995 (PRA), Public Law 104-13. In addition, therefore, it does not contain any new or modified information collection burden for small business concerns with fewer than 25 employees, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. 3506(c)(4).

C. Congressional Review Act

26. The Commission will include a copy of this Third Report and Order in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act, *see* 5 U.S.C. 801(a)(1)(A).

V. ORDERING CLAUSES

27. Accordingly, IT IS ORDERED, pursuant to sections 4(i), 303(r), and 710 of the Communications Act of 1934, 47 U.S.C. §§ 154(i), 303(r), and 610, that this Third Report and Order IS HEREBY ADOPTED.

28. IT IS FURTHER ORDERED that Parts 2 and 20 of the Commission's Rules, 47 C.F.R. Parts 2 & 20, ARE AMENDED as specified in Appendix B, effective 30 days after publication of the Third Report and Order in the *Federal Register*.

29. IT IS FURTHER ORDERED that the Commission's Consumer & Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Third Report and Order, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

30. This action is taken under delegated authority pursuant to Sections 0.241(a)(1), 0.331(d), and 20.19(k) of the Commission's rules, 47 C.F.R §§ 0.241(a)(1), 0.331(d), and 20.19(k).

FEDERAL COMMUNICATIONS COMMISSION

Rick Kaplan
Chief, Wireless Telecommunications Bureau

Julius P. Knapp
Chief, Office of Engineering and Technology

APPENDIX A

List of Commenters

Comments

CTIA – The Wireless Association (CTIA)
Hearing Industries Association (HIA)
Hearing Loss Association of America; Rehabilitation Engineering Research Center on Telecommunications Access; Association of Late Deafened Adults, Inc.; Telecommunications for the Deaf and Hard of Hearing, Inc.; National Association of the Deaf; Deaf and Hard of Hearing Consumer Advocacy Network; and Hands & Voices (Consumer Groups)
Samsung Telecommunications America, LLC (Samsung)
Sprint Nextel Corporation (Sprint)
Telecommunications Industry Association (TIA)

Reply Comments

AT&T Services, Inc. (AT&T)
CTIA
RCA – The Competitive Carriers Association (RCA)
TIA

APPENDIX B

Final Rules

Part 2 of Title 47 of the Code of Federal Regulations is amended as follows:

1. The authority citation for Part 2 reads as follows:

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

2. Section 2.1033 is amended by revising paragraph (d) to read as follows:

§ 2.1033 Application for certification.

* * * * *

(d) Applications for certification of equipment operating under part 20, that a manufacturer is seeking to certify as hearing aid compatible, as set forth in § 20.19 of that part, shall include a statement indicating compliance with the test requirements of § 20.19 and indicating the appropriate M–rating and T-rating for the equipment. The manufacturer of the equipment shall be responsible for maintaining the test results.

Part 20 of Title 47 of the Code of Federal Regulations is amended as follows:

3. The authority citation for Part 20 reads as follows:

AUTHORITY: 47 U.S.C. 154, 160, 201, 251-254, 303, 332, and 710 unless otherwise noted.

4. Section 20.19 is amended by revising paragraphs (a)(1), (b) introductory text, (b)(1), and (b)(2), adding paragraph (b)(3), revising paragraphs (b)(5), (c) introductory text, (d) introductory text, (f)(2), and (f)(2)(i), and adding paragraph (f)(2)(iii) to read as follows:

§ 20.19 Hearing aid-compatible mobile handsets.

(a) * * *

(1) The hearing aid compatibility requirements of this section apply to providers of digital CMRS in the United States to the extent that they offer real-time, two-way switched voice or data service that is interconnected with the public switched network and utilizes an in-network switching facility that enables the provider to reuse frequencies and accomplish seamless hand-offs of subscriber calls, and such service is provided over frequencies in the 698 MHz to 6 GHz bands.

* * * * *

(b) *Hearing aid compatibility; technical standards.*

(1) *For radio frequency interference.* A wireless handset submitted for equipment certification or for a permissive change relating to hearing aid compatibility must meet, at a minimum, the M3 rating associated with the technical standard set forth in either the standard document "American National Standard Methods of Measurement of Compatibility Between Wireless Communication Devices and

Hearing Aids," ANSI C63.19-2007 (June 8, 2007) or ANSI C63.19-2011 (May 27, 2011). Any grants of certification issued before January 1, 2010, under previous versions of ANSI C63.19 remain valid for hearing aid compatibility purposes.

(2) *For inductive coupling.* A wireless handset submitted for equipment certification or for a permissive change relating to hearing aid compatibility must meet, at a minimum, the T3 rating associated with the technical standard set forth in either the standard document "American National Standard Methods of Measurement of Compatibility Between Wireless Communication Devices and Hearing Aids," ANSI C63.19-2007 (June 8, 2007) or ANSI C63.19-2011 (May 27, 2011). Any grants of certification issued before January 1, 2010, under previous versions of ANSI C63.19 remain valid for hearing aid compatibility purposes.

(3) *Handsets operating over multiple frequency bands or air interfaces.*

(i) Except as provided in paragraph (b)(3)(ii) of this section, a wireless handset used for digital CMRS only over the 698 MHz to 6 GHz frequency bands is hearing aid-compatible with regard to radio frequency interference or inductive coupling if it meets the applicable technical standard set forth in paragraph (b)(1) or (b)(2) of this section for all frequency bands and air interfaces over which it operates, and the handset has been certified as compliant with the test requirements for the applicable standard pursuant to § 2.1033(d) of this chapter. A wireless handset that incorporates operations outside the 698 MHz to 6 GHz frequency bands is hearing aid-compatible if the handset otherwise satisfies the requirements of this paragraph.

(ii) A handset that is introduced by the manufacturer prior to [INSERT DATE 12 MONTHS AFTER PUBLICATION IN THE *FEDERAL REGISTER*], and that does not meet the requirements for hearing aid compatibility under paragraph (b)(3)(i) of this section, is hearing aid-compatible for radio frequency interference or inductive coupling only with respect to those frequency bands and air interfaces for which technical standards are stated in ANSI C63.19-2007 (June 8, 2007) if it meets, at a minimum, an M3 rating (for radio frequency interference) or a T3 rating (for inductive coupling) under ANSI C63.19-2007 (June 8, 2007) for all such frequency bands and air interfaces over which it operates, and the handset has been certified as compliant with the test requirements for the applicable standard pursuant to § 2.1033(d) of this chapter.

* * * * *

(5) The following standards are incorporated by reference in this section: Accredited Standards Committee C63™ – Electromagnetic Compatibility, "American National Standard Methods of Measurement of Compatibility Between Wireless Communication Devices and Hearing Aids," ANSI C63.19-2007 (June 8, 2007), Institute of Electrical and Electronics Engineers, Inc., publisher; and Accredited Standards Committee C63™ – Electromagnetic Compatibility, "American National Standard Methods of Measurement of Compatibility Between Wireless Communication Devices and Hearing Aids," ANSI C63.19-2011 (May 27, 2011), Institute of Electrical and Electronics Engineers, Inc., publisher. These incorporations by reference were approved by the Director of the *Federal Register* in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. These materials are incorporated as they exist on the date of the approval, and notice of any change in these materials will be published in the *Federal Register*. The materials are available for inspection at the Federal Communications Commission (FCC), 445 12th St., SW., Reference Information Center, Room CY-A257, Washington, DC 20554 and at the National Archives and Records Administration (NARA). For information on the availability of these materials at NARA, call 202-741-6030, or go to:
http://www.archives.gov/federal_register/code_of_federal_regulations/ ibr_locations.html.

The materials are also available for purchase from IEEE Operations Center, 445 Hoes Lane, Piscataway, NJ 08854-4141, by calling (732) 981-0060, or going to http://www.ieee.org/portal/site.

(c) Phase-in of requirements relating to radio frequency interference. The following applies to each manufacturer and service provider that offers wireless handsets used in the delivery of the services specified in paragraph (a) of this section and that does not fall within the *de minimis* exception set forth in paragraph (e) of this section. However, prior to [INSERT DATE 24 MONTHS AFTER PUBLICATION IN THE *FEDERAL REGISTER*] for manufacturers and Tier I carriers and [INSERT DATE 27 MONTHS AFTER PUBLICATION IN THE *FEDERAL REGISTER*] for service providers other than Tier I carriers, the requirements of this section do not apply to handset operations over frequency bands and air interfaces for which technical standards are not stated in ANSI C63.19-2007 (June 8, 2007).

* * * * *

(d) Phase-in of requirements relating to inductive coupling capability. The following applies to each manufacturer and service provider that offers wireless handsets used in the delivery of the services specified in paragraph (a) of this section and that does not fall within the *de minimis* exception set forth in paragraph (e) of this section. However, prior to [INSERT DATE 24 MONTHS AFTER PUBLICATION IN THE *FEDERAL REGISTER*] for manufacturers and Tier I carriers and [INSERT DATE 27 MONTHS AFTER PUBLICATION IN THE *FEDERAL REGISTER*] for service providers other than Tier I carriers, the requirements of this section do not apply to handset operations over frequency bands and air interfaces for which technical standards are not stated in ANSI C63.19-2007 (June 8, 2007).

* * * * *

(f) * * *

(2) Disclosure requirements relating to handsets treated as hearing aid-compatible over fewer than all their operations.

(i) Each manufacturer and service provider shall ensure that, wherever it provides hearing aid compatibility ratings for a handset that is considered hearing aid-compatible under paragraph (b)(3)(ii) of this section only with respect to those frequency bands and air interfaces for which technical standards are stated in ANSI C63.19-2007 (June 8, 2007) and that has not been tested for hearing aid compatibility under ANSI C63.19-2011 (May 27, 2011), or any handset that operates over frequencies outside of the 698 MHz to 6 GHz bands, it discloses to consumers, by clear and effective means (e.g., inclusion of call-out cards or other media, revisions to packaging materials, supplying of information on Web sites), that the handset has not been rated for hearing aid compatibility with respect to some of its operation(s). This disclosure shall include the following language:

This phone has been tested and rated for use with hearing aids for some of the wireless technologies that it uses. However, there may be some newer wireless technologies used in this phone that have not been tested yet for use with hearing aids. It is important to try the different features of this phone thoroughly and in different locations, using your hearing aid or cochlear implant, to determine if you hear any interfering noise. Consult your service provider or the manufacturer of this phone for information on hearing aid compatibility. If you have questions about return or exchange policies, consult your service provider or phone retailer.

* * * * *

(iii) Each manufacturer and service provider shall ensure that, wherever it provides hearing aid

compatibility ratings for a handset that is considered hearing aid-compatible under paragraph (b)(3)(ii) of this section only with respect to those frequency bands and air interfaces for which technical standards are stated in ANSI C63.19-2007 (June 8, 2007), and that the manufacturer has tested and found not to meet hearing aid compatibility requirements under ANSI C63.19-2011 (May 27, 2011) for operations over one or more air interfaces or frequency bands for which technical standards are not stated in ANSI C63.19-2007 (June 8, 2007), it discloses to consumers, by clear and effective means (e.g., inclusion of call-out cards or other media, revisions to packaging materials, supplying of information on Web sites), that the handset does not meet the relevant rating or ratings with respect to such operation(s).

* * * * *

APPENDIX C

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),[1] an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Second Further Notice of Proposed Rulemaking*.[2] The Wireless Telecommunications Bureau (WTB) and the Office of Engineering and Technology (OET) sought written public comment on the proposals in the *Second Further Notice*, including comment on the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.[3]

2. Although Section 213 of the Consolidated Appropriations Act of 2000 provides that the RFA shall not apply to the rules and competitive bidding procedures for frequencies in the 746-806 MHz Band,[4] we believe that it would serve the public interest to analyze the possible significant economic impact of the proposed policy and rule changes in this band on small entities. Accordingly, this FRFA contains an analysis of this impact in connection with all spectrum that falls within the scope of this Third Report and Order, including spectrum in the 746-806 MHz Band.

A. Need for, and Objectives of, the Third Report and Order

3. The Third Report and Order amends Section 20.19 of the Commission's rules[5] by adopting the new ANSI C63.19-2011 standard (the "2011 ANSI Standard")[6] as an applicable hearing aid compatibility technical standard. The standard specifies testing procedures to establish the M-rating (acoustic coupling) and T-rating (inductive coupling) to gauge the hearing aid compatibility of handsets. Specifically, the Third Report and Order finds that adoption of the new 2011 ANSI Standard will raise no major compliance issues and will not impose materially greater obligations with respect to proposed newly covered frequency bands and air interfaces than those already imposed under the Commission's rules. By bringing operations over additional frequency bands and air interfaces under the hearing aid compatibility regime, and by aligning the Commission's rules with the most current measurement practices, this rule change will help ensure that consumers with hearing loss are able to access wireless communications services through a wide selection of handsets without experiencing disabling interference or other technical obstacles.

4. Under the rules that we adopt, a manufacturer is permitted to submit handsets for

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[1] *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).

[2] *See* Amendment of the Commission's Rules Governing Hearing Aid Compatible Mobile Handsets, WT Docket No. 07-250, *Second Further Notice of Proposed Rulemaking,* 26 FCC Rcd 14991, 15002-15015 App. B (2011) (*Second Further Notice*).

[3] *See* 5 U.S.C. § 604.

[4] In particular, this exemption extends to the requirements imposed by Chapter 6 of Title 5, United States Code, Section 3 of the Small Business Act (15 U.S.C. 632) and Section 3507 and 3512 of Title 44, United States Code. Consolidated Appropriations Act 2000, Pub. L. No. 106-113, 113 Stat. 2502, App. E, Sec. 213(a)(4)(A)-(B); *see* 145 Cong. Rec. H12493-94 (Nov. 17, 1999); 47 U.S.C.A. 337 note at Sec. 213(a)(4)(A)-(B).

[5] 47 C.F.R. § 20.19.

[6] Accredited Standards Committee C63® – Electromagnetic Compatibility, *American National Standard Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids*, ANSI C63.19-2011 (May 27, 2011) ("2011 ANSI Standard").

certification using either ANSI C63.19-2007 ("the 2007 ANSI Standard")[7] or the 2011 ANSI Standard. A multi-band and/or multi-mode handset model launched earlier than 12 months after *Federal Register* publication of these rules codifying the 2011 ANSI Standard may be considered hearing aid-compatible if its operations that are covered under the current 2007 ANSI Standard meet the requirements for hearing aid compatibility, as determined under the 2007 ANSI Standard. For multi-band and/or multi-mode handset models launched after this period, as well as for handset models that only include operations covered under the 2007 ANSI Standard, we will continue to apply the current principle that a handset model must meet ANSI C63.19 technical standards over all frequency bands and air interfaces over which it operates in order to be considered hearing aid-compatible over any air interface.[8] The purpose of the transitional rule for models launched within 12 months after *Federal Register* publication is to limit the compliance burdens on businesses, both large and small, with respect to handset models that are already deployed or in development at the time these final rules become effective.

5. The Third Report and Order also adopts rules to phase in over a defined period of time expanded handset deployment requirements that result from adopting the 2011 ANSI Standard. We adopt a two-year period for applying the hearing aid-compatible handset deployment benchmarks[9] to handset operations over newly covered air interfaces and frequency bands. We also afford non-Tier I[10] service providers three months additional time to meet these deployment benchmarks in order to account for the difficulties they face in timely obtaining new handset models. The purpose of this rule change is to create a time frame for implementation that would be the most efficient and least burdensome for businesses, both large and small, while ensuring that consumers with hearing loss have timely access to wireless communications.

6. Finally, the Third Report and Order adopts a requirement that manufacturers and service providers disclose the hearing aid compatibility status of handsets that meet hearing aid compatibility criteria over previously covered frequency bands or air interfaces but have been tested and found not to meet such criteria over frequency bands or air interfaces that are outside the 2007 ANSI Standard. The Third Report and Order declines to require specific language for this disclosure. This rule change is a minimally intrusive means of ensuring that consumers with hearing loss have the information they need to choose a handset that will operate compatibly with their hearing aid or cochlear implant.

B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA

7. There were no comments filed that specifically addressed the rules and policies proposed in the IRFA.

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

8. The RFA directs agencies to provide a description of, and, where feasible, an estimate of,

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[7] Accredited Standards Committee C63®– Electromagnetic Compatibility, *American National Standard Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids*, ANSI C63.19-2007 (June 8, 2007) ("2007 ANSI Standard").

[8] *See* 47 C.F.R. § 20.19(b).

[9] *See* 47 C.F.R. § 20.19(c), (d).

[10] Tier I carriers are Commercial Mobile Radio Service (CMRS) providers with nationwide footprints. *See* Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems; Phase II Compliance Deadlines for Non-Nationwide Carriers, CC Docket No. 94-102, *Order to Stay*, 17 FCC Rcd 14841, 14843 ¶ 7 (2002). In contrast, Tier II carriers are non-nationwide mid-sized CMRS providers, specifically providers with greater than 500,000 subscribers as of the end of 2001, while Tier III carriers are non-nationwide small CMRS providers with no more than 500,000 subscribers as of the end of 2001. *See id.* at 14846-48 ¶¶ 19-24.

the number of small entities that may be affected by the rules adopted herein.[11] The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[12] In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.[13] 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 Small Business Administration (SBA).[14]

9. *Small Businesses, Small Organizations, and Small Governmental Jurisdictions.* Our action may, over time, affect small entities that are not easily categorized at present. We therefore describe here, at the outset, three comprehensive, statutory small entity size standards.[15] First, nationwide, there are a total of approximately 27.5 million small businesses, according to the SBA.[16] In addition, a "small organization" is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field."[17] Nationwide, as of 2007, there were approximately 1,621,315 small organizations.[18] Finally, the term "small governmental jurisdiction" is defined generally as "governments of cities, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand."[19] Census Bureau data for 2011 indicate that there were 89,476 local governmental jurisdictions in the United States.[20] We estimate that, of this total, as many as 88,506 entities may qualify as "small governmental jurisdictions."[21] Thus, we estimate that most governmental jurisdictions are small.

10. *Cellular Licensees.* The SBA has developed a small business size standard for small

[11] 5 U.S.C. § 604(a)(3).

[12] 5 U.S.C. § 601(6).

[13] 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."

[14] 15 U.S.C. § 632.

[15] *See* 5 U.S.C. §§ 601(3)–(6).

[16] *See* SBA, Office of Advocacy, "Frequently Asked Questions," web.sba.gov/faqs (last visited May 6, 2011; figures are from 2009).

[17] 5 U.S.C. § 601(4).

[18] INDEPENDENT SECTOR, THE NEW NONPROFIT ALMANAC & DESK REFERENCE (2010).

[19] 5 U.S.C. § 601(5).

[20] U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES: 2011, Table 427 (2007)

[21] The 2007 U.S Census data for small governmental organizations are not presented based on the size of the population in each such organization. There were 89, 476 small governmental organizations in 2007. If we assume that county, municipal, township and school district organizations are more likely than larger governmental organizations to have populations of 50,000 or less, , the total of these organizations is 52,125. If we make the same assumption about special districts, and also assume that special districts are different from county, municipal, township, and school districts, in 2007 there were 37,381 special districts. Therefore, of the 89,476 small governmental organizations documented in 2007, as many as 89,506 may be considered small under the applicable standard. This data may overestimate the number of such organizations that has a population of 50,000 or less. U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES 2011, Tables 427, 426 (Data cited therein are from 2007).

businesses in the category "Wireless Telecommunications Carriers (except satellite)."[22] Under that SBA category, a business is small if it has 1,500 or fewer employees.[23] The census category of "Cellular and Other Wireless Telecommunications" is no longer used and has been superseded by the larger category "Wireless Telecommunications Carriers (except satellite)". The Census Bureau defines this larger category to include ". . . establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular phone services, paging services, wireless Internet access, and wireless video services."[24]

11. In this category, the SBA has deemed a wireless telecommunications carrier to be small if it has fewer than 1,500 employees.[25] For this category of carriers, Census data for 2007 shows 1,383 firms in this category.[26] Of these 1,383 firms, only 15 (approximately 1%) had 1,000 or more employees.[27] While there is no precise Census data on the number of firms in the group with fewer than 1,500 employees, it is clear that at least the 1,368 firms with fewer than 1,000 employees would be found in that group. Thus, at least 1,368 of these 1,383 firms (approximately 99%) had fewer than 1,500 employees. Accordingly, the Commission estimates that at least 1,368 (approximately 99%) had fewer than 1,500 employees and, thus, would be considered small under the applicable SBA size standard.

12. *Broadband Personal Communications Service.* The broadband personal communications services (PCS) spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission initially defined a "small business" for C- and F-Block licenses as an entity that has average gross revenues of $40 million or less in the three previous calendar years.[28] For F-Block licenses, an additional small business size standard for "very small business" was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than $15 million for the preceding three calendar years.[29] These small business size standards, in the context of broadband PCS auctions, have been approved by the SBA.[30] No small businesses within the SBA-approved small business size standards bid successfully for licenses in Blocks A and B. There were 90 winning bidders that claimed small business status in the first two C-Block auctions. A total of 93 bidders that claimed small business status won approximately 40 percent of the 1,479 licenses in the first auction for the D, E, and F Blocks.[31] On April 15, 1999, the Commission

[22] 13 C.F.R. § 121.201, North American Industry Classification System (NAICS) code 517210.

[23] *Id.*

[24] U.S. Census Bureau, 2007 NAICS Definitions, "Wireless Telecommunications Carriers (Except Satellites)"; http://www.census.gov/econ/industry/def/d517210.htm

[25] 13 C.F.R. § 121.201, NAICS Code 517210.

[26] U.S. Census Bureau, American FactFinder, 2007 Economic Census, Industry Series, Industry Statistics by Employment Size, NAICS code 517210 (rel. Nov. 19, 2010); http://factfinder.census.gov.

[27] *Id.*

[28] *See Amendment of Parts 20 and 24 of the Commission's Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap; Amendment of the Commission's Cellular/PCS Cross-Ownership Rule*; WT Docket No. 96-59, GN Docket No. 90-314, Report and Order, 11 FCC Rcd 7824, 7850–52, paras. 57–60 (1996) ("*PCS Report and Order*"); *see also* 47 C.F.R. § 24.720(b).

[29] *See PCS Report and Order*, 11 FCC Rcd at 7852, para. 60.

[30] *See* Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated December 2, 1998.

[31] *See Broadband PCS, D, E and F Block Auction Closes*, Public Notice, Doc. No. 89838 (rel. Jan. 14, 1997).

completed the re-auction of 347 C-, D-, E-, and F-Block licenses in Auction No. 22.[32] Of the 57 winning bidders in that auction, 48 claimed small business status and won 277 licenses.

13. On January 26, 2001, the Commission completed the auction of 422 C and F Block Broadband PCS licenses in Auction No. 35. Of the 35 winning bidders in that auction, 29 claimed small business status.[33] Subsequent events concerning Auction 35, including judicial and agency determinations, resulted in a total of 163 C and F Block licenses being available for grant. On February 15, 2005, the Commission completed an auction of 242 C-, D-, E-, and F-Block licenses in Auction No. 58. Of the 24 winning bidders in that auction, 16 claimed small business status and won 156 licenses.[34] On May 21, 2007, the Commission completed an auction of 33 licenses in the A, C, and F Blocks in Auction No. 71.[35] Of the 12 winning bidders in that auction, five claimed small business status and won 18 licenses.[36] On August 20, 2008, the Commission completed the auction of 20 C-, D-, E-, and F-Block Broadband PCS licenses in Auction No. 78.[37] Of the eight winning bidders for Broadband PCS licenses in that auction, six claimed small business status and won 14 licenses.[38]

14. *Specialized Mobile Radio.* The Commission awards "small entity" bidding credits in auctions for Specialized Mobile Radio (SMR) geographic area licenses in the 800 MHz and 900 MHz bands to firms that had revenues of no more than $15 million in each of the three previous calendar years.[39] The Commission awards "very small entity" bidding credits to firms that had revenues of no more than $3 million in each of the three previous calendar years.[40] The SBA has approved these small business size standards for the 900 MHz Service.[41] The Commission has held auctions for geographic area licenses in the 800 MHz and 900 MHz bands. The 900 MHz SMR auction was completed in 1996. Sixty bidders claiming that they qualified as small businesses under the $15 million size standard won 263 geographic area licenses in the 900 MHz SMR band. The 800 MHz SMR auction for the upper 200 channels was conducted in 1997. Ten bidders claiming that they qualified as small businesses under the $15 million size standard won 38 geographic area licenses for the upper 200 channels in the 800 MHz

[32] *See C, D, E, and F Block Broadband PCS Auction Closes*, Public Notice, 14 FCC Rcd 6688 (WTB 1999). Before Auction No. 22, the Commission established a very small standard for the C Block to match the standard used for F Block. *Amendment of the Commission's Rules Regarding Installment Payment Financing for Personal Communications Services (PCS) Licensees*, WT Docket No. 97-82, Fourth Report and Order, 13 FCC Rcd 15743, 15768, para. 46 (1998).

[33] *See C and F Block Broadband PCS Auction Closes; Winning Bidders Announced*, Public Notice, 16 FCC Rcd 2339 (2001).

[34] *See Broadband PCS Spectrum Auction Closes; Winning Bidders Announced for Auction No. 58*, Public Notice, 20 FCC Rcd 3703 (2005).

[35] *See Auction of Broadband PCS Spectrum Licenses Closes; Winning Bidders Announced for Auction No. 71*, Public Notice, 22 FCC Rcd 9247 (2007).

[36] *Id.*

[37] *See Auction of AWS-1 and Broadband PCS Licenses Closes; Winning Bidders Announced for Auction 78*, Public Notice, 23 FCC Rcd 12749 (WTB 2008).

[38] *Id.*

[39] 47 C.F.R. § 90.814(b)(1).

[40] *Id.*

[41] *See* Letter to Thomas Sugrue, Chief, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated August 10, 1999.

SMR band.[42] A second auction for the 800 MHz band was conducted in 2002 and included 23 Basic Economic Area licenses. One bidder claiming small business status won five licenses.[43]

15. The auction of the 1,050 800 MHz SMR geographic area licenses for the General Category channels was conducted in 2000. Eleven bidders that won 108 geographic area licenses for the General Category channels in the 800 MHz SMR band qualified as small businesses under the $15 million size standard.[44] In an auction completed in 2000, a total of 2,800 Economic Area licenses in the lower 80 channels of the 800 MHz SMR service were awarded.[45] Of the 22 winning bidders, 19 claimed "small business" status and won 129 licenses. Thus, combining all three auctions, 40 winning bidders for geographic area licenses in the 800 MHz SMR band claimed status as small business.

16. In addition, there are numerous incumbent site-by-site SMR licensees and licensees with extended implementation authorizations in the 800 and 900 MHz bands. We do not know how many firms provide 800 MHz or 900 MHz geographic area SMR service pursuant to extended implementation authorizations, nor how many of these providers have annual revenues of no more than $15 million. One firm has over $15 million in revenues. In addition, we do not know how many of these firms have 1500 or fewer employees.[46] We assume, for purposes of this analysis, that all of the remaining existing extended implementation authorizations are held by small entities, as that small business size standard is approved by the SBA.

17. *Advanced* Wireless *Services (1710–1755 MHz and 2110–2155 MHz bands (AWS-1); 1915–1920 MHz, 1995–2000 MHz, 2020–2025 MHz and 2175–2180 MHz bands (AWS-2); 2155–2175 MHz band (AWS-3)).* For the AWS-1 bands, the Commission has defined 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.[47] In 2006, the Commission conducted its first auction of AWS-1 licenses.[48] In that initial AWS-1 auction, 31 winning bidders identified themselves as very small businesses.[49] Twenty-six of the winning bidders identified themselves as small businesses.[50] In a subsequent 2008 auction, the Commission offered 35 AWS-1 licenses.[51] Four winning bidders identified themselves as very small

[42] *See* "Correction to Public Notice DA 96-586 'FCC Announces Winning Bidders in the Auction of 1020 Licenses to Provide 900 MHz SMR in Major Trading Areas,'" *Public Notice*, 18 FCC Rcd 18367 (WTB 1996).

[43] *See* "Multi-Radio Service Auction Closes," *Public Notice*, 17 FCC Rcd 1446 (WTB 2002).

[44] *See* "800 MHz Specialized Mobile Radio (SMR) Service General Category (851-854 MHz) and Upper Band (861-865 MHz) Auction Closes; Winning Bidders Announced," *Public Notice*, 15 FCC Rcd 17162 (2000).

[45] *See*, "800 MHz SMR Service Lower 80 Channels Auction Closes; Winning Bidders Announced," *Public Notice*, 16 FCC Rcd 1736 (2000).

[46] *See generally* 13 C.F.R. § 121.201, NAICS code 517210.

[47] *See* Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, *Report and Order*, 18 FCC Rcd 25,162, App. B (2003), *modified by* Service Rules for Advanced Wireless Services In the 1.7 GHz and 2.1 GHz Bands, *Order on Reconsideration*, 20 FCC Rcd 14,058, App. C (2005).

[48] *See* "Auction of Advanced Wireless Services Licenses Scheduled for June 29, 2006; Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments and Other Procedures for Auction No. 66," AU Docket No. 06-30, *Public Notice*, 21 FCC Rcd 4562 (2006) ("*Auction 66 Procedures Public Notice*").

[49] *See* "Auction of Advanced Wireless Services Licenses Closes; Winning Bidders Announced for Auction No. 66," *Public Notice*, 21 FCC Rcd 10,521 (2006) ("*Auction 66 Closing Public Notice*").

[50] *See id.*

[51] *See AWS-1 and Broadband PCS Procedures Public Notice*, 23 FCC Rcd at 7499. Auction 78 also included an auction of broadband PCS licenses.

businesses, and three of the winning bidders identified themselves as small businesses.[52] For AWS-2 and AWS-3, although we do not know for certain which entities are likely to apply for these frequencies, we note that these bands are comparable to those used for cellular service and personal communications service. The Commission has not yet adopted size standards for the AWS-2 or AWS-3 bands but has proposed to treat both AWS-2 and AWS-3 similarly to broadband PCS service and AWS-1 service due to the comparable capital requirements and other factors, such as issues involved in relocating incumbents and developing markets, technologies, and services.[53]

18. *Rural Radiotelephone Service.* The Commission has not adopted a size standard for small businesses specific to the Rural Radiotelephone Service.[54] A significant subset of the Rural Radiotelephone Service is the Basic Exchange Telephone Radio System ("BETRS").[55] In the present context, we will use the SBA's small business size standard applicable to Wireless Telecommunications Carriers (except Satellite), *i.e.*, an entity employing no more than 1,500 persons.[56] There are approximately 1,000 licensees in the Rural Radiotelephone Service, and we estimate that there are 1,000 or fewer small entity licensees in the Rural Radiotelephone Service that may be affected by the rules and policies adopted herein.

19. *Wireless Communications Services.* This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses in the 2305-2320 MHz and 2345-2360 MHz bands. The Commission defined "small business" for the wireless communications services (WCS) auction as an entity with average gross revenues of $40 million for each of the three preceding years, and a "very small business" as an entity with average gross revenues of $15 million for each of the three preceding years.[57] The SBA has approved these definitions.[58] The Commission auctioned geographic area licenses in the WCS service. In the auction, which commenced on April 15, 1997 and closed on April 25, 1997, there were seven bidders that won 31 licenses that qualified as very small business entities, and one bidder that won one license that qualified as a small business entity.

20. *700 MHz Guard Band Licenses.* In the *700 MHz Guard Band Order*, the Commission adopted size standards for "small businesses" and "very small businesses" for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.[59] A small

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[52] *See* "Auction of AWS-1 and Broadband PCS Licenses Closes, Winning Bidders Announced for Auction 78, Down Payments Due September 9, 2008, FCC Forms 601 and 602 Due September 9, 2008, Final Payments Due September 23, 2008, Ten-Day Petition to Deny Period," *Public Notice*, 23 FCC Rcd 12,749 (2008).

[53] Service Rules for Advanced Wireless Services in the 1915–1920 MHz, 1995–2000 MHz, 2020–2025 MHz and 2175–2180 MHz Bands et al., *Notice of Proposed Rulemaking*, 19 FCC Rcd 19,263, App. B (2005); Service Rules for Advanced Wireless Services in the 2155–2175 MHz Band, *Notice of Proposed Rulemaking*, 22 FCC Rcd 17,035, App. (2007); Service Rules for Advanced Wireless Services in the 2155-2175 MHz Band, *Further Notice of Proposed Rulemaking*, 23 FCC Rcd 9859, App. B (2008).

[54] The service is defined in § 22.99 of the Commission's Rules, 47 C.F.R. § 22.99.

[55] BETRS is defined in §§ 22.757 and 22.759 of the Commission's Rules, 47 C.F.R. §§ 22.757 and 22.759.

[56] 13 C.F.R. § 121.201, NAICS code 517210.

[57] Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service (WCS), *Report and Order*, 12 FCC Rcd 10785, 10879 ¶ 194 (1997).

[58] *See* Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, from Aida Alvarez, Administrator, Small Business Administration, dated December 2, 1998.

[59] Service Rules for the 746-764 MHz Bands, and Revisions to Part 27 of the Commission's Rules, *Second Report and Order*, 15 FCC Rcd 5299 (2000). Service rules were amended in 2007, but no changes were made to small

business in this service is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $40 million for the preceding three years.[60] Additionally, a "very small business" is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $15 million for the preceding three years.[61] SBA approval of these definitions is not required.[62] In 2000, the Commission conducted an auction of 52 Major Economic Area ("MEA") licenses.[63] Of the 104 licenses auctioned, 96 licenses were sold to nine bidders. Five of these bidders were small businesses that won a total of 26 licenses. A second auction of 700 MHz Guard Band licenses commenced and closed in 2001. All eight of the licenses auctioned were sold to three bidders. One of these bidders was a small business that won a total of two licenses.[64]

21. *Upper 700 MHz Band Licenses.* In the *700 MHz Second Report and Order*, the Commission revised its rules regarding Upper 700 MHz licenses.[65] On January 24, 2008, the Commission commenced Auction 73 in which several licenses in the Upper 700 MHz band were available for licensing: 12 Regional Economic Area Grouping licenses in the C Block, and one nationwide license in the D Block.[66] The auction concluded on March 18, 2008, with 3 winning bidders claiming very small business status (those with attributable average annual gross revenues that do not exceed $15 million for the preceding three years) and winning five licenses.

22. *Lower 700 MHz Band Licenses.* The Commission previously adopted criteria for defining three groups of small businesses for purposes of determining their eligibility for special provisions such as bidding credits.[67] The Commission defined a "small business" as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $40 million for the preceding three years.[68] A "very small business" is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $15 million for

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business size categories. *See* Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, WT Docket No. 06-150, Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones, WT Docket No. 01-309, Biennial Regulatory Review – Amendment of Parts 1, 22, 24, 27, and 90 to Streamline and Harmonize Various Rules Affecting Wireless Radio Services, WT Docket 03-264, Former Nextel Communications, Inc. Upper 700 MHz Guard Band Licenses and Revisions to Part 27 of the Commission's Rules, WT Docket No. 06-169, Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band, PS Docket No. 06-229, Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010, WT Docket No. 96-86, *Report and Order and Further Notice of Proposed Rulemaking*, 22 FCC Rcd 8064 (2007).

[60] *Id.* at 5343 ¶ 108.

[61] *Id.*

[62] *Id.* at 5343 ¶ 108 n.246 (for the 746-764 MHz and 776-704 MHz bands, the Commission is exempt from 15 U.S.C. § 632, which requires Federal agencies to obtain Small Business Administration approval before adopting small business size standards).

[63] *See* "700 MHz Guard Bands Auction Closes: Winning Bidders Announced," *Public Notice*, 15 FCC Rcd 18026 (2000).

[64] *See* "700 MHz Guard Bands Auction Closes: Winning Bidders Announced," *Public Notice*, 16 FCC Rcd 4590 (WTB 2001).

[65] *700 MHz Second Report and Order*, 22 FCC Rcd 15289.

[66] *See* Auction of 700 MHz Band Licenses Closes, *Public Notice*, 23 FCC Rcd 4572 (WTB 2008).

[67] *See* Reallocation and Service Rules for the 698–746 MHz Spectrum Band (Television Channels 52–59), *Report and Order*, 17 FCC Rcd 1022 (2002) ("*Channels 52–59 Report and Order*").

[68] *See id.*, 17 FCC Rcd at 1087–88 ¶ 172.

the preceding three years.[69] Additionally, the lower 700 MHz Service had a third category of small business status for Metropolitan/Rural Service Area (MSA/RSA) licenses—"entrepreneur"—which is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $3 million for the preceding three years.[70] The SBA approved these small size standards.[71] An auction of 740 licenses (one license in each of the 734 MSAs/RSAs and one license in each of the six Economic Area Groupings (EAGs)) was conducted in 2002. Of the 740 licenses available for auction, 484 licenses were won by 102 winning bidders. Seventy-two of the winning bidders claimed small business, very small business or entrepreneur status and won licenses.[72] A second auction commenced on May 28, 2003, closed on June 13, 2003, and included 256 licenses.[73] Seventeen winning bidders claimed small or very small business status, and nine winning bidders claimed entrepreneur status.[74] In 2005, the Commission completed an auction of 5 licenses in the Lower 700 MHz band. All three winning bidders claimed small business status.

23. In *2007*, the Commission reexamined its rules governing the 700 MHz band in the *700 MHz Second Report and Order*.[75] An auction of A, B and E block 700 MHz licenses was held in 2008.[76] Twenty winning bidders claimed small business status (those with attributable average annual gross revenues that exceed $15 million and do not exceed $40 million for the preceding three years). Thirty three winning bidders claimed very small business status (those with attributable average annual gross revenues that do not exceed $15 million for the preceding three years).

24. *Offshore Radiotelephone Service.* This service operates on several UHF television broadcast channels that are not used for television broadcasting in the coastal areas of states bordering the Gulf of Mexico.[77] There are presently approximately 55 licensees in this service. The Commission is unable to estimate at this time the number of Offshore Radiotelephone Service licensees that would qualify as small under the SBA's small business size standard for the category of Wireless Telecommunications Carriers (except Satellite).[78] Under that SBA small business size standard, a business is small if it has 1,500 or fewer employees.[79] Census data for 2007 show that there were 1,383 firms in this category that operated that year.[80] Of those 1,383, 1,368 had fewer than 1000 employees, and 15 firms had more than 1000 employees. Thus under this category and the associated small business size standard, the majority of firms can be considered small.

25. *Broadband Radio Service and Educational Broadband Service.* Broadband Radio

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[69] *See id.*

[70] *See id.*, 17 FCC Rcd at 1088 ¶ 173.

[71] *See Alvarez Letter 1998.*

[72] *See* Lower 700 MHz Band Auction Closes, *Public Notice*, 17 FCC Rcd 17,272 (2002).

[73] *See* Lower 700 MHz Band Auction Closes, *Public Notice*, 18 FCC Rcd 11,873 (2003).

[74] *See id.*

[75] 700 MHz Second Report and Order, *Second Report and Order*, 22 FCC Rcd 15,289, 15,359 n.434 (2007).

[76] *See* Auction of 700 MHz Band Licenses Closes, *Public Notice*, 23 FCC Rcd 4572 (2008).

[77] This service is governed by Subpart I of Part 22 of the Commission's Rules. *See* 47 C.F.R. §§ 22.1001-22.1037.

[78] 13 C.F.R. § 121.201, NAICS code 517210.

[79] *Id.*

[80] U.S. Census Bureau, 2007 Economic Census, Sector 51, 2007 NAICS code 517210 (rel. Oct. 20, 2009), http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-fds_name=EC0700A1&-_skip=700&-ds_name=EC0751SSSZ5&-_lang=en.

Service systems, previously referred to as Multipoint Distribution Service ("MDS") and Multichannel Multipoint Distribution Service ("MMDS") systems, and "wireless cable," transmit video programming to subscribers and provide two-way high speed data operations using the microwave frequencies of the Broadband Radio Service ("BRS") and Educational Broadband Service ("EBS") (previously referred to as the Instructional Television Fixed Service ("ITFS")).[81] In connection with the 1996 BRS auction, the Commission established a small business size standard as an entity that had annual average gross revenues of no more than $40 million in the previous three calendar years.[82] The BRS auctions resulted in 67 successful bidders obtaining licensing opportunities for 493 Basic Trading Areas ("BTAs"). Of the 67 auction winners, 61 met the definition of a small business. BRS also includes licensees of stations authorized prior to the auction. At this time, we estimate that of the 61 small business BRS auction winners, 48 remain small business licensees. In addition to the 48 small businesses that hold BTA authorizations, there are approximately 392 incumbent BRS licensees that are considered small entities.[83] After adding the number of small business auction licensees to the number of incumbent licensees not already counted, we find that there are currently approximately 440 BRS licensees that are defined as small businesses under either the SBA standard or the Commission's rules. In 2009, the Commission conducted Auction 86, the sale of 78 licenses in the BRS areas.[84] The Commission offered three levels of bidding credits: (i) a bidder with attributed average annual gross revenues that exceed $15 million and do not exceed $40 million for the preceding three years (small business) received a 15 percent discount on its winning bid; (ii) a bidder with attributed average annual gross revenues that exceed $3 million and do not exceed $15 million for the preceding three years (very small business) received a 25 percent discount on its winning bid; and (iii) a bidder with attributed average annual gross revenues that do not exceed $3 million for the preceding three years (entrepreneur) received a 35 percent discount on its winning bid.[85] Auction 86 concluded in 2009 with the sale of 61 licenses.[86] Of the ten winning bidders, two bidders that claimed small business status won four licenses; one bidder that claimed very small business status won three licenses; and two bidders that claimed entrepreneur status won six licenses.

26. In addition, the SBA's Cable Television Distribution Services small business size standard is applicable to EBS. There are presently 2,032 EBS licensees. All but 100 of these licenses are held by educational institutions. Educational institutions are included in this analysis as small entities.[87] Thus, we estimate that at least 1,932 licensees are small businesses. Since 2007, Cable Television

[81] *Amendment of Parts 21 and 74 of the Commission's Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act – Competitive Bidding*, MM Docket No. 94-131 and PP Docket No. 93-253, Report and Order, 10 FCC Rcd 9589, 9593, para. 7 (1995) (*"MDS Auction R&O"*).

[82] 47 C.F.R. § 21.961(b)(1).

[83] 47 U.S.C. § 309(j). Hundreds of stations were licensed to incumbent MDS licensees prior to implementation of section 309(j) of the Communications Act of 1934, 47 U.S.C. § 309(j). For these pre-auction licenses, the applicable standard is SBA's small business size standard.

[84] Auction of Broadband Radio Service (BRS) Licenses, Scheduled for October 27, 2009, Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments, and Other Procedures for Auction 86, *Public Notice*, 24 FCC Rcd 8277 (2009).

[85] *Id.* at 8296.

[86] Auction of Broadband Radio Service Licenses Closes, Winning Bidders Announced for Auction 86, Down Payments Due November 23, 2009, Final Payments Due December 8, 2009, Ten-Day Petition to Deny Period, *Public Notice*, 24 FCC Rcd 13572 (2009).

[87] The term "small entity" within SBREFA applies to small organizations (nonprofits) and to small governmental jurisdictions (cities, counties, towns, townships, villages, school districts, and special districts with populations of less than 50,000). 5 U.S.C. §§ 601(4)–(6). We do not collect annual revenue data on EBS licensees.

Distribution Services have been defined within the broad economic census category of Wired Telecommunications Carriers; that category is defined as follows: "This industry comprises establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired telecommunications networks. Transmission facilities may be based on a single technology or a combination of technologies."[88] For these services, the Commission uses the SBA small business size standard for the category "Wireless Telecommunications Carriers (except satellite)," which is 1,500 or fewer employees.[89] To gauge small business prevalence for these cable services we must, however, use the most current census data. Census data for 2007 show that there were 1,383 firms that operated that year.[90] Of those 1,383, 1,368 had fewer than 100 employees, and 15 firms had more than 100 employees. Thus under this category and the associated small business size standard, the majority of firms can be considered small.

27. *Government Transfer Bands.* The Commission adopted small business size standards for the unpaired 1390-1392 MHz, 1670-1675 MHz, and the paired 1392-1395 MHz and 1432-1435 MHz bands.[91] Specifically, with respect to these bands, the Commission defined an entity with average annual gross revenues for the three preceding years not exceeding $40 million as a "small business," and an entity with average annual gross revenues for the three preceding years not exceeding $15 million as a "very small business."[92] SBA has approved these small business size standards for the aforementioned bands.[93] Correspondingly, the Commission adopted a bidding credit of 15 percent for "small businesses" and a bidding credit of 25 percent for "very small businesses."[94] This bidding credit structure was found to have been consistent with the Commission's schedule of bidding credits, which may be found at

[88] U.S. Census Bureau, 2007 NAICS Definitions, "517110 Wired Telecommunications Carriers," (partial definition), www.census.gov/naics/2007/def/ND517110.HTM#N517110.

[89] 13 C.F.R. § 121.201, NAICS code 517210.

[90] U.S. Census Bureau, 2007 Economic Census, Sector 51, 2007 NAICS code 517210 (rel. Oct. 20, 2009), http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-fds_name=EC0700A1&-_skip=700&-ds_name=EC0751SSSZ5&-_lang=en.

[91] *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, 17 FCC Rcd 9980 (2002) (*Government Transfer Bands Service Rules Report and Order*).

[92] *See* Reallocation of 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 No. 02-8, *Notice of Proposed Rulemaking,* 17 FCC Rcd 2500, 2550-51 ¶¶ 144-146 (2002). To be consistent with the size standard of "very small business" proposed for the 1427-1432 MHz band for those entities with average gross revenues for the three preceding years not exceeding $3 million, the *Service Rules Notice* proposed to use the terms "entrepreneur" and "small business" to define entities with average gross revenues for the three preceding years not exceeding $40 million and $15 million, respectively. Because the Commission did not adopt small business size standards for the 1427-1432 MHz band, it instead uses the terms "small business" and "very small business" to define entities with average gross revenues for the three preceding years not exceeding $40 million and $15 million, respectively.

[93] *See* Letter from Hector V. Barreto, Administrator, Small Business Administration, to Margaret W. Wiener, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, Federal Communications Commission, dated Jan. 18, 2002.

[94] Such bidding credits are codified for the unpaired 1390-1392 MHz, paired 1392-1395 MHz, and the paired 1432-1435 MHz bands in 47 C.F.R. § 27.807. Such bidding credits are codified for the unpaired 1670-1675 MHz band in 47 C.F.R. § 27.906.

Section 1.2110(f)(2) of the Commission's rules.[95] The Commission found that these two definitions will provide a variety of businesses seeking to provide a variety of services with opportunities to participate in the auction of licenses for this spectrum and will afford such licensees, who may have varying capital costs, substantial flexibility for the provision of services.[96] The Commission noted that it had long recognized that bidding preferences for qualifying bidders provide such bidders with an opportunity to compete successfully against large, well-financed entities.[97] The Commission also noted that it had found that the use of tiered or graduated small business definitions is useful in furthering its mandate under Section 309(j) to promote opportunities for and disseminate licenses to a wide variety of applicants.[98] An auction for one license in the 1670-1674 MHz band commenced on April 30, 2003 and closed the same day. One license was awarded. The winning bidder was not a small entity.

28. *Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing.* The Census Bureau defines this category as follows: "This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment." The SBA has developed a small business size standard for Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing, which is: all such firms having 750 or fewer employees.[99] According to Census Bureau data for 2007, there were a total of 939 establishments in this category that operated for part or all of the entire year. Of this total, 784 had fewer than 500 employees and 155 had more than 100 employees.[100] Thus, under this size standard, the majority of firms can be considered small.

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

29. The rules will not impose any new reporting or recordkeeping requirements on small entities. As described in Section A of this FRFA, manufacturers and service providers, including small entities, will be required after a transition period, when applying the existing hearing aid-compatible handset deployment benchmarks, to include handset operations over air interfaces and frequency bands that are newly covered under the 2011 ANSI Standard. Non-Tier I carriers, many of which are small

[95] In the *Part 1 Third Report and Order*, the Commission adopted a standard schedule of bidding credits, the levels of which were developed based on its auction experience. *Part 1 Third Report and Order*, 13 FCC Rcd at 403-04 ¶ 47; *see also* 47 C.F.R. § 1.2110(f)(2).

[96] *See Service Rules Notice,* 17 FCC Rcd at 2550-51 ¶ 145.

[97] *See, e.g.,* Revision of Part 22 and Part 90 of the Commission's Rules to Facilitate Future Development of Paging Systems; Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, WT Docket No. 96-18, PR Docket No. 93-253, *Memorandum Opinion and Order on Reconsideration and Third Report and Order*, 14 FCC Rcd 10030, 10091 ¶ 112 (1999).

[98] 47 U.S.C. § 309(j)(3)(B), (4)(C)-(D). The Commission will also not adopt special preferences for entities owned by minorities or women, and rural telephone companies. The Commission did not receive any comments on this issue, and it does not have an adequate record to support such special provisions under the current standards of judicial review. *See Adarand Constructors v. Peña*, 515 U.S. 200 (1995) (requiring a strict scrutiny standard of review for government 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).

[99] 13 C.F.R. § 121.201, NAICS code 334220.

[100] The NAICS Code for this service 334220. See 13 C.F.R 121/201. See also http://factfinder.census.gov/servlet/IBQTable?_bm=y&-fds_name=EC0700A1&-geo_id=&-_skip=300&-ds_name=EC0731SG2&-_lang=en

entities, will have an additional three months to meet this requirement. For handset models introduced during the first 12 months after the rules are published in the *Federal Register*, manufacturers and service providers will be required, when disclosing hearing aid compatibility information about a handset, to indicate if a handset has been tested and found not to meet hearing aid compatibility criteria over frequency bands and air interfaces that are outside the 2007 ANSI Standard. Manufacturers and service providers, including small entities, are already subject to similar requirements under the existing hearing aid compatibility rules, and the new rules will not impose materially greater compliance obligations on these entities.

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

30. The RFA requires an agency to describe any significant, specifically small business alternatives that it has considered in developing its 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 and 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 such small entities."[101]

31. In adopting the Third Report and Order, we codify the new 2011 ANSI Standard as an applicable technical standard, in addition to the 2007 ANSI Standard, for evaluating the hearing aid compatibility of wireless phones. Permitting a choice of standards within the rule may ease burdens on manufacturers, including small entities. Commenters, including those representing the interests of small wireless carriers,[102] requested that we clarify that handsets already certified under the 2007 ANSI Standard will continue to be treated as hearing aid-compatible without any need for recertification. Under the rules we adopt, existing handset models will not need to be retested or recertified as hearing aid-compatible.

32. We also adopt a 12-month transition period for testing of new multi-band and multi-mode handset models in order to reduce burdens on small entities and others with respect to handset models that are currently in development. Under the rules that we adopt, multi-band and multi-mode handset models launched earlier than 12 months after *Federal Register* publication of these rule changes will be considered hearing aid-compatible for operations covered under the 2007 ANSI Standard even if they are not certified as hearing aid-compatible for their other operations. We considered the alternative proposal of a 24-month testing transition period.[103] We conclude based on all the comments that a 12-month period is sufficient for manufacturers, including small entities, to arrange for testing under the new rules of their products that are in development, and that a shorter period would better meet the needs of consumers with hearing loss.

33. For handsets launched during the 12-month transition period that meet hearing aid compatibility criteria over previously covered air interfaces and frequency bands, but that have been tested and found not to meet such criteria over one or more newly covered air interfaces or frequency bands, we require that manufacturers and service providers disclose to consumers by clear and effective means that the handset does not meet hearing aid compatibility ratings for some of its operations. We considered the alternative proposal of prescribing specific disclosure language, but we find it more prudent to rely on a general disclosure requirement backed by case-by-case resolution in the event of disputes given the lack of consensus for specific language and the fact that the situation is likely rarely to

[101] 5 U.S.C. § 603(c)(1) – (c)(4).

[102] *See generally* RCA Reply Comments.

[103] *See* TIA Comments at 4-5.

occur. Nonetheless, to the extent it will reduce burdens for affected small entities, we encourage them to consider modeling their disclosures on language proposed by groups representing the interest of consumers with hearing loss.[104]

34. Finally, we adopt a transition period before the deployment benchmark rules set forth in paragraphs (c) and (d) of Section 20.19 begin to apply to handset operations over newly covered frequency bands and air interfaces.[105] We sought comment on several alternatives in order to appropriately balance the design, engineering, and marketing requirements of manufacturers and service providers with the needs of consumers with hearing loss for compatible handsets that operate over the newest network technologies. While we adopt a 24-month transition period for manufacturers and Tier I service providers, we afford non-Tier I service providers, including small entities, an additional three months before the expanded benchmark requirements become applicable to them. We take this step in order to ease the burden of compliance on these entities that often have difficulty obtaining the newest handset models.[106]

35. **Report to Congress:** The Commission will send a copy of the Third Report and Order, including this FRFA, in a report to be sent to Congress pursuant to the Congressional Review Act.[107] In addition, the Commission will send a copy of the Third Report and Order, including this FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of the Third Report and Order and FRFA (or summaries thereof) will also be published in the *Federal Register*.[108]

[104] *See* Consumer Groups Comments at 3.

[105] 47 C.F.R. § 20.19(c), (d).

[106] *See* RCA Reply Comments at 2.

[107] *See* 5 U.S.C. § 801(a)(1)(A).

[108] *See* 5 U.S.C. § 604(b).