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

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

POLICY STATEMENT AND SECOND REPORT AND ORDER AND FURTHER NOTICE OF PROPOSED RULEMAKING

Adopted: August 5, 2010 **Released: August 5, 2010**

Comment Date: (45 days after publication in the Federal Register)
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By the Commission: Chairman Genachowski and Commissioners Copps, McDowell, Clyburn, and Baker issuing separate statements.

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I. INTRODUCTION

1. The Commission's wireless hearing aid compatibility rules are intended to 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. The expansion and evolution of wireless handsets and services bring tremendous benefits to consumers and businesses, and it is essential that Americans with hearing loss have access to the full range of wireless communications, wherever they need to communicate – at work, at home, or in the community. Today, consistent with a recommendation in the National Broadband Plan,[1] we take actions to ensure that consumers with hearing loss can continue to have access to innovative and advanced handsets and services in a rapidly evolving wireless marketplace, and can participate fully in the American economy and society.

2. We take the following actions in this document:

- In a Policy Statement, we affirm that our hearing aid compatibility rules must provide people who use hearing aids and cochlear implants with continuing access to the most advanced and innovative technologies as science and markets develop, while maximizing the conditions for innovation and investment.
- In a Second Report and Order, we take several actions to clarify our rules and to keep pace with developments in technology and the market.
    - We clarify that our hearing aid compatibility rules cover customer equipment that contains a built-in speaker and is designed to be typically held to the ear.
    - We adopt a streamlined procedure for amending our rules to incorporate an anticipated revision of the hearing aid compatibility technical standard that will make it generically applicable across frequency bands and interface modes.
    - We extend our disclosure requirement to provide consumers with information about multi-band and multi-mode phones that operate in part over bands or modes for which technical standards have not been established.
    - In order to ensure that people with hearing loss will have access to new and popular models, while continuing to protect the ability of small companies to compete and to foster innovation by new entrants, we modify the *de minimis* exception in our existing rule so that all large entities will be required to offer at least one hearing aid-compatible model after a two-year initial period. In recognition of specific challenges that this rule change will impose for handsets operating over the legacy GSM air interface in the 1900 MHz band, we permit companies that will no longer qualify for the *de minimis* exception to meet hearing aid compatibility requirements by installing software that enables customers to reduce the power output by a limited amount for such operations.
    - We amend our rules requiring manufacturers to deploy hearing aid-compatible

[1] Federal Communications Commission, Connecting America: The National Broadband Plan, Recommendation 9.10, at 182 (2010) *available at* http://download.broadband.gov/plan/national-broadband-plan.pdf.

handsets so that they apply to handsets sold through all distribution channels, and not only through service providers.

- In a Further Notice of Proposed Rulemaking (Further Notice), we seek comment on potential revisions to our rules in three additional areas to ensure that people with hearing loss have the fullest possible access to the means of wireless communication.
    - We propose to extend our rules broadly to include 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. We seek comment on whether considerations of technological feasibility or marketability prevent application of these requirements to any such devices.
    - We seek comment on whether to extend our requirement to offer consumers in-store testing of hearing aid-compatible handsets beyond retail stores owned or operated by service providers to some or all other retail outlets.
    - We seek comment on whether generally to permit a user-controlled reduction of power as a means to meet the hearing aid compatibility standard for operations over the legacy GSM air interface in the 1900 MHz band.

3. We also note that later this year, we intend to initiate a comprehensive review of the operation of our wireless hearing aid compatibility rules. In that review, we will evaluate the success of our rules in making a broad selection of wireless phones accessible to individuals with hearing loss, and we will consider whether further revisions to those rules are appropriate.

II. BACKGROUND

4. The Commission is required by law to ensure that persons with hearing loss have access to telephone service.[2] The Hearing Aid Compatibility Act of 1988 required all telephones manufactured or imported for use in the United States to meet established technical standards for hearing aid compatibility, with certain exceptions, among them an exception for telephones used with mobile wireless services.[3] The statute required the Commission to revoke or limit the exemption if it determined that:

- such revocation or limitation is in the public interest;
- continuation of the exemption without such revocation or limitation would have an adverse effect on people with hearing loss;
- compliance with the requirements adopted is technologically feasible for the telephones to which the exemption applies; and
- compliance with the requirements adopted would not increase costs to such an extent that the

[2] *See* Hearing Aid Compatibility Act, Pub. L. No. 100-394, 102 Stat. 976 (1988), *codified at* 47 U.S.C. § 610 (Hearing Aid Compatibility Act).

[3] 47 U.S.C. § 610(b)(2)(A)(i). The statute references "public mobile services," which are defined to include certain services covered under Part 22 of our rules, and "private radio services," defined as private land mobile radio services and other services characterized by the Commission as private radio services. 47 U.S.C. § 610(b)(4)(B), (C); 47 C.F.R. § 68.3. In 1994, Congress amended Section 332 of the Communications Act, replacing the public mobile service and private radio service categories with commercial mobile [radio] services (CMRS) and private mobile [radio] service (PMRS). *See* Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones, WT Docket 01-309, *Report and Order*, 18 FCC Rcd 16753, 16764-65 ¶ 26 (2003) (*2003 Hearing Aid Compatibility Order*).

telephones to which the exemption applies could not be successfully marketed.[4]

5. In the *2003 Hearing Aid Compatibility Order*, the Commission found that the increasing reliance of consumers on digital mobile telephony, the American National Standards Institute's (ANSI's) establishment of a technical standard to measure compatibility, and technological advances which made compatibility more possible created a situation where the public interest required that the exemption for public mobile services be partially revoked. The Commission established requirements for manufacturers and service providers to offer appropriate numbers of hearing aid-compatible handset models to their customers.[5] These requirements were later modified slightly in the *2005 Reconsideration Order and Further Notice*,[6] reviewed but not changed in the *2007 Second Report and Order*,[7] and then upheld and revised in the *First Report and Order* in February 2008.[8]

6. *Current Hearing Aid Compatibility Requirements*. The Commission's requirements apply generally to providers of digital commercial mobile radio services (CMRS) "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," as well as to manufacturers of wireless phones used in the delivery of such services.[9] The applicability of the requirements is further limited to those air interfaces[10] and frequency bands (800-950 MHz and 1.6-2.5 GHz) for which technical standards are stated in the most recent revision of the ANSI standard governing wireless hearing aid compatibility (ANSI C63.19-2007).[11]

7. The Commission's hearing aid compatibility requirements address hearing aids that operate in either of two modes – acoustic coupling or inductive coupling. Hearing aids operating in acoustic coupling mode receive sound 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.[12]

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[4] 47 U.S.C. § 610(b)(2)(C). In addition, the existence of an established, applicable technical standard is a statutory requirement for imposing hearing aid compatibility obligations. *See* 47 U.S.C. § 610(b)(1).

[5] *See generally 2003 Hearing Aid Compatibility Order*, 18 FCC Rcd 16753.

[6] Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones, WT Docket No. 01-309, *Order on Reconsideration and Further Notice of Proposed Rulemaking*, 20 FCC Rcd 11221 (2005) (*2005 Reconsideration Order and Further Notice*).

[7] Amendment of the Commission's Rules Governing Hearing Aid Compatible Mobile Handsets, Section 68.4(a) of the Commission's Rules Governing Hearing Aid Compatible Telephones, WT Docket No. 01-309, *Second Report and Order and Notice of Proposed Rulemaking*, 22 FCC Rcd 19670, 19679 ¶ 22 (2007) (*2007 Second Report and Order*).

[8] 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 (2008) (*First Report and Order*).

[9] 47 C.F.R. § 20.19(a)(1) and (2). CMRS is defined as mobile service that is provided for profit, interconnected, and available to the public. 47 C.F.R. § 20.3; *see* 47 U.S.C. § 332(d)(1).

[10] The term air interface refers to the system that ensures compatibility between mobile radio service equipment, such as handsets, and the service provider's base stations. Currently, the leading air interfaces include Code Division Multiple Access (CDMA), Global System for Mobile Communications (GSM), Integrated Digital Enhanced Network (iDEN), and Wideband Code Division Multiple Access (W-CDMA). We note that W-CDMA is also known as Universal Mobile Telecommunications System (UMTS).

[11] 47 C.F.R. § 20.19(a)(1).

[12] The *2003 Hearing Aid Compatibility Order* described acoustic coupling as follows:

(continued….)

Hearing aids operating in inductive coupling mode turn off the 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.[13]

8. The rules codify the ANSI C63.19 performance levels as the applicable technical standard for hearing aid compatibility.[14] Beginning January 1, 2010, new applications for certification must use the 2007 version of the ANSI standard, although earlier grants of certification using prior versions of the standard remain valid.[15] The Commission has delegated to the Wireless Telecommunications Bureau (WTB) and Office of Engineering and Technology (OET) authority to adopt by rulemaking future revisions of ANSI C63.19, including extensions of the technical standards to new frequency bands and air interfaces, provided the revisions do not raise major compliance issues.[16]

9. The Commission generally requires each covered manufacturer to offer to service providers, and each service provider to offer to its customers, specific numbers of handset models per air interface in its product line that meet, at a minimum, an M3 rating for reduction of radio frequency (RF) interference between handsets and hearing aids operating in acoustic coupling mode[17] and a T3 rating to enable inductive coupling with hearing aids operating in telecoil mode.[18] These minimum deployment requirements vary depending on the total number of models that the manufacturer or service provider offers over the air interface, and they increase over time from February 15, 2009, to May 15, 2011.

10. The rules also contain a *de minimis* exception to the deployment benchmarks for certain digital wireless handset manufacturers and wireless service providers. Specifically, manufacturers or providers that only offer one or two handset models per air interface are exempt from all hearing aid compatibility requirements, other than the reporting requirements; those that only offer three models are required to offer one that is hearing aid-compatible.[19]

11. In addition, the rules require service providers to make hearing aid-compatible models available for consumer testing in their owned or operated retail stores.[20] The rules also require service

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> In acoustic coupling mode, the microphone picks up surrounding sounds, desired and undesired, and converts them into electrical signals. The electrical signals are amplified as needed and then converted back into sound by the hearing aid speaker.

2003 Hearing Aid Compatibility Order, 18 FCC Rcd at 16763 ¶ 22.

[13] In telecoil mode, with the microphone turned off, the telecoil picks up the audio signal-based magnetic field generated by the voice coil of a dynamic speaker in hearing aid-compatible telephones, audio loop systems, or powered neck loops. The hearing aid converts the magnetic field into electrical signals, amplifies them as needed, and converts them back into sound via the speaker. Using a telecoil avoids the feedback that often results from putting a hearing aid up against a telephone earpiece, can help prevent exposure to over amplification, and eliminates background noise, providing improved access to the telephone.

[14] *See* 47 C.F.R. § 20.19(b)(1)-(2).

[15] *Id.*

[16] 47 C.F.R. § 20.19(k).

[17] *See* 47 C.F.R. § 20.19(b)(1), (c)(1)-(3).

[18] *See* 47 C.F.R. § 20.19(b)(2), (d). Manufacturers also are required to refresh their offerings periodically with new hearing aid-compatible handset models. 47 C.F.R. § 20.19(c)(1)(ii). Service providers must offer hearing aid-compatible models with differing levels of functionality. 47 C.F.R. § 20.19(c)(4)(ii), (d)(4)(i).

[19] 47 C.F.R. § 20.19(e)(1)-(2); *see also 2005 Reconsideration Order and Further Notice*, 20 FCC Rcd at 11244 ¶ 53.

[20] *See* 47 C.F.R. § 20.19(c)(4)(i), (d)(4)(i).

providers and manufacturers to disclose in their packaging materials certain information about hearing aid-compatible handsets.[21] Manufacturers and service providers must report annually on efforts toward compliance with the hearing aid compatibility requirements.[22] In addition, manufacturers and service providers that operate publicly accessible websites are required to list on their websites all hearing aid-compatible models that they offer along with the ratings of those models and an explanation of the ratings.[23]

12. *The Current Proceeding.* On November 7, 2007, we issued the *Notice* seeking comment on revisions to the hearing aid compatibility rules.[24] Nineteen parties filed comments and sixteen parties filed reply comments.[25] In the *First Report and Order* in February 2008, the Commission revised the hearing aid compatibility requirements applicable to providers of public mobile services and manufacturers of digital wireless handsets used in the delivery of those services. Many of these revisions were based on the proposals in a Joint Consensus Plan developed by an Alliance for Telecommunications Industry Solutions (ATIS) working group that included carriers with nationwide footprints, handset manufacturers, and several organizations representing the interests of consumers with hearing loss.[26]

13. Specifically, in the *First Report and Order*, the Commission adopted changes, going forward, to the numbers of hearing aid-compatible handset models that manufacturers and service providers must offer.[27] It also adopted an updated version of the technical standard for measuring hearing aid compatibility in both acoustic coupling and inductive coupling modes, extended the scope of the hearing aid compatibility requirements to the full range of frequencies covered by the established standard, and adopted the current version of the reporting and disclosure requirements.[28] The Commission also, as an interim measure, permitted handsets that have been tested and rated as hearing aid-compatible except for incorporated Wi-Fi capabilities to be counted as hearing aid-compatible as long as consumers are informed up front that these handset models have not been rated for hearing aid compatibility with respect to those Wi-Fi functions.[29]

14. Several other issues raised in the *Notice* were not addressed in the *First Report and Order*, but were left by the Commission to be addressed subsequently. These include issues related to the possible extension of the hearing aid compatibility rules to address new technologies, rules to govern handsets that operate in part over air interfaces or frequency bands for which no hearing aid compatibility

[21] Phone packaging material for hearing aid-compatible models must display the compatibility ratings, and the owner's manual or a packaging insert must contain information on the rating system. 47 C.F.R. § 20.19(f)(1). For handsets that incorporate a Wi-Fi air interface, manufacturers and service providers are required to disclose to consumers, by clear and effective means, that the handset has not been rated for hearing aid compatibility with respect to that operation. 47 C.F.R. § 20.19(f)(2).

[22] *See* 47 C.F.R. § 20.19(i).

[23] *See* 47 C.F.R. § 20.19(h).

[24] Amendment of the Commission's Rules Governing Hearing Aid Compatible Mobile Handsets, Section 68.4(a) of the Commission's Rules Governing Hearing Aid Compatible Telephones, WT Docket No. 01-309, *Second Report and Order and Notice of Proposed Rulemaking*, 22 FCC Rcd 19670 (2007) (*Notice*).

[25] *See* list of commenters in Appendix A.

[26] *See* Supplemental Comments of ATIS in WT Docket No. 06-203 (filed June 25, 2007) (Joint Consensus Plan).

[27] *See First Report and Order*, 23 FCC Rcd at 3415 ¶¶ 26-27.

[28] *See id.*

[29] *Id.* at 3431 ¶ 63.

technical standards exist, possible limitation of the *de minimis* exception, possible amendment of the rules to address the growth of new distribution channels, and whether rules are appropriate regarding volume controls and display screens. With respect to multi-band and multi-mode handsets specifically, the Commission left the record open in anticipation of receiving a consensus plan from industry and consumer representatives regarding how the Commission's hearing aid compatibility rules should treat handsets that are hearing aid-compatible in all incorporated frequencies and interfaces for which standards exist, but which also incorporate frequencies and/or interfaces for which no standards exist.[30] The Commission also expressly left the record open for *ex parte* comments regarding possible limitation of the *de minimis* rule.[31]

15. *The Multi-Band Principles and the Draft Standard Revision*. On September 11, 2008, an 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.[32] 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. On September 12, 2008, ANSI Accredited Standards Committee C63™ filed a Report and Comments including technical details relevant to how those principles might be implemented in practice.

16. When service rules were established for the 698-749, 747-762 and 777-792 MHz bands in 2007, the Commission encouraged ANSI and the various stakeholders in the hearing aid compatibility process to work together towards adoption of technical standards in these bands so that hearing aid users will have the same accessibility to services in these bands as they do in the bands addressed in Section 20.19(a) of the Commission's rules.[33] Therefore, ANSI C63.19 initiated a revision to the current C63.19-2007 Standard to expand hearing aid compatibility testing to wireless handsets in these bands as well as other bands. Upon completion, this revision is expected to provide guidance and a test method that can be used for wireless handsets over any existing or future air interface in a broad range of frequency bands. ANSI projects that it will complete the balloting of its members that is necessary to adopt the new revised standard by the fourth quarter 2010.[34]

17. *The 2010 Review*. In the *First Report and Order*, the Commission also stated that it would begin a review of its hearing aid compatibility rules for digital wireless services and handsets in 2010 after the May deployment benchmarks have passed.[35] We remain committed to initiate that review later this year. In that review, we will comprehensively evaluate the operation of the current hearing aid compatibility rules and their success in making a broad selection of phones that are accessible to people who use hearing aids and cochlear implants,[36] as well as information about those phones, available to the

[30] *Id.* at 3431-32 ¶ 65.

[31] Parties filing *ex parte* comments pursuant to these invitations are also listed in Appendix A.

[32] 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).

[33] *See* Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, WT Docket No. 06-150, *Report and Order and Further Notice of Proposed Rulemaking*, 22 FCC Rcd 8064, 8120 ¶ 148 (2007).

[34] *See* Report and Comments of American National Standards Institute Accredited Standards Committee C63® (July 12, 2010) (*July 2010 ANSI Report*); *see also* Letter from Deirde Y. Cheek, Attorney, ATIS, to Jeffrey S. Steinberg, Deputy Chief, Spectrum and Competition Policy Division, at 1, dated Apr. 21, 2010.

[35] *First Report and Order*, 23 FCC Rcd at 3411 ¶ 13.

[36] Cochlear implants bypass the external and middle ears by using electrical stimulation of electrodes implanted in the cochlea to reintroduce the signals carried by auditory nerve fibers to the brain. In adopting the hearing aid compatibility requirements, the Commission stated, "to the extent the modification of the exemption from the (continued….)

public. On the basis of that evaluation, we will consider revisions to the rules, including possible increases in the deployment benchmarks, strengthening of requirements intended to ensure that hearing aid-compatible phones will have a variety of functionalities, and changes to reporting and outreach requirements.

III. POLICY STATEMENT

18. Consistent with Congressional intent to afford equal access to communications networks to the fullest extent feasible and longstanding Federal Communications Commission precedent, it is the policy of the Commission that our hearing aid compatibility rules provide people who use hearing aids and cochlear implants with continuing access to the most advanced and innovative technologies as science and markets develop. We believe that following three principles will ensure that all Americans, including Americans with hearing loss, will reap the full benefits of new technologies as they are introduced into the marketplace. To maximize the number of accessible products for this population, our policies must adhere to these principles:

- First, given that consideration of accessibility from the outset is more efficient than identifying and applying solutions retroactively, we intend for developers of new technologies to consider and plan for hearing aid compatibility at the earliest stages of the product design process;
- Second, we will continue to account for technological feasibility and marketability as we promulgate rules pertaining to hearing aid compatibility, thereby maximizing conditions for innovation and investment; and
- Third, we will provide industry with the ability to harness innovation to promote inclusion by allowing the necessary flexibility for developing a range of solutions to meet consumers' needs while keeping up with the rapid pace of technological advancement.

IV. SECOND REPORT AND ORDER

A. Handsets and Services Covered

19. In this section, we take several actions that relate to the coverage of our hearing aid compatibility rules in light of ongoing technological developments. First, we clarify that our hearing aid compatibility requirements apply broadly to devices that contain a built-in speaker and are designed to be typically held to the ear. Next, we establish a streamlined procedure for amending our rules to incorporate an anticipated revision of ANSI Standard C63.19, expected within the next several months, under which hearing aid compatibility technical standards will be generically applicable across frequency bands and interface modes. Finally, as an interim measure until a broader technical standard may become effective, we extend the existing disclosure regime applicable to otherwise hearing aid-compatible phones that incorporate Wi-Fi capabilities so that it covers multi-band and multi-mode phones that operate in part over other bands or modes for which technical standards have not been established.

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[Hearing Aid Compatibility] Act for wireless phones facilitates usage by hearing aid users, we expect that individuals with cochlear implants will likewise benefit." *2003 Hearing Aid Compatibility Order,* 18 FCC Rcd at 16766 ¶ 29. Although little data are available, there is anecdotal evidence of people with cochlear implants who have had success using wireless devices. *See generally* Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones, WT Docket No. 01-309, *Report on the Status of Implementation of the Commission's Hearing Aid Compatibility Requirements*, 22 FCC Rcd 17709, 17746-47 ¶¶ 91-94 (Wireless Tel. Bur. 2007) (*2007 Staff Report*). In the 2010 review, we will seek to develop information regarding any differences in access to wireless devices between people with cochlear implants and those with hearing aids.

1. Handsets Covered by the Rule

20. As an initial matter, we amend our rules to clarify that hearing aid compatibility requirements apply to otherwise covered handsets that contain a built-in speaker and are typically held to the ear. This determination is consistent with the first of the Multi-Band Principles, which states that those principles apply to "handsets operating in a normal voice mode and typically held to the ear."[37] In the *2003 Hearing Aid Compatibility Order*, we stated that devices that do not have any built-in speaker or ear piece would not be required to meet hearing aid compatibility requirements because they were unlikely to cause RF interference to hearing aids and they could not be feasibly equipped with a functioning telecoil.[38] Consistent with that observation, we amend our rules to define a covered "handset" as a device that contains a built-in speaker and is typically held to the ear in any of its ordinary uses. Thus, if a wireless device is not designed to be typically held to the ear in any ordinary use, but only provides voice communication through a speakerphone, headphone or other instrument that carries voice communications from the handset to the ear,[39] or other means that does not involve holding it to the ear, it is not subject to our hearing aid compatibility requirements. We clarify that in this respect, "typically" encompasses any intended or anticipated ordinary use, and does not mean "usually" or "most often." If a device is configured so as to enable a user to hold it to the ear to receive voice communications in any ordinary anticipated application, it is a "handset" covered by the rule even if the manufacturer or service provider expects that most users will operate it in a speakerphone or other mode.

21. In the *Notice*, we asked "[w]hat constitutes a telephone in the context of devices that more closely resemble mobile computers but have voice communications capabilities" and whether the Commission should broaden or otherwise modify the scope of Section 20.19 in order to maintain technology neutrality and ensure the continuing availability of a selection of wireless services and features that is comparable to that available to the general population.[40] In response, VON Coalition argues that hearing aid compatibility requirements should not cover multi-function devices that are only incidentally capable of being used for voice communications.[41] HIA, to the contrary, contends that a telephone subject to the Commission's hearing aid compatibility requirements is any device that may be used to make voice telephone calls.[42] Consistent with our general determination, a device that includes both computing and covered voice communication capabilities is subject to hearing aid compatibility requirements so long as it has a built-in speaker and is designed to be typically held to the ear. This scope is necessary to ensure that people with hearing loss will have access to all means of voice communication as devices become increasingly multifunctional and the lines among device categories continue to blur.

2. Application of Technical Standard to New Bands and Air Interfaces

22. Background. ANSI Standard C63.19-2007 provides hearing aid compatibility tests for wireless handsets that use voice communications technologies that are in common use in the 800 MHz to 950 MHz and 1600 MHz to 2500 MHz bands. Accordingly, our rules impose hearing aid compatibility

[37] *See* Multi-Band Principles, Principle 1.

[38] *2003 Hearing Aid Compatibility Order*, 18 FCC Rcd at 16783 ¶ 77.

[39] As noted above, the Commission's conclusion not to apply hearing aid compatibility requirements to devices that operate through a headphone or earphone was based on its finding that these devices are unlikely to cause RF interference. To the extent this may not always be true for current earphone technologies, interested parties will be invited to comment in the 2010 review.

[40] *Notice*, 22 FCC Rcd at 19704 ¶ 92.

[41] *See* VON Coalition Reply Comments at 7-9.

[42] HIA Comments at 4.

requirements only on handsets that provide service over these frequency bands using any air interface for which technical standards exist in the ANSI C63.19 standard.[43] We have delegated to WTB and OET limited authority by rulemaking to adopt new technical standards for additional frequency bands and air interfaces as they are established by the ANSI Accredited Standards Committee C63™ and to approve new hearing aid compatibility standards adopted subsequently to ANSI C63.19-2007.[44]

23. On September 11, 2008, an ATIS working group filed its proposed Multi-Band Principles to address the hearing aid compatibility of handsets that operate over multiple frequency bands or voice technology modes, some of which have no established hearing aid compatibility standards. The Multi-Band Principles propose a sequence of events to be followed when a new service is developed over a frequency band or air interface that is not yet subject to a hearing aid compatibility technical standard. Specifically, the Multi-Band Principles propose that a preliminary predictive analysis method should be employed to determine the likelihood of hearing aid compatibility issues for handsets when they operate over new frequency bands or air interfaces.[45] If no issues are identified by this analysis and the handset is otherwise hearing aid-compatible, then the handset would be deemed hearing aid-compatible over all frequencies and bands in which it operates, including new technologies, and no further testing would be required.[46] If a potential hearing aid compatibility issue is identified, then an ANSI-accredited body would devise a hearing aid compatibility standard within a timeframe to be set by the Commission.[47] Beginning 12 months after standards for hearing aid compatibility have been developed and adopted by the Commission, a new handset model that operates in a new frequency band or air interface could not be labeled or counted as hearing aid-compatible if it does not meet the newly adopted hearing aid compatibility standard, although handsets certified prior to that point could continue to be counted as hearing aid-compatible.[48]

24. More recently, ANSI Committee C63 has developed a new draft standard that would revise the current ANSI C63.19-2007 standard. The new draft standard provides for a testing method that could be used for handsets using any air interface and operating over any frequency between 698 MHz and 6 GHz.[49] Under this testing method, a product testing threshold has been established based on certain RF power levels and modulation characteristics. The new draft standard provides that handsets operating at or below the testing threshold will be exempt from further testing and will be considered to have an M4 rating.[50] Handsets incorporating air interfaces and frequency bands that fail the testing threshold criteria will be required to undergo full testing in accordance with the revised ANSI C63.19 standard.[51] ANSI states that the revised standard has completed an initial round of balloting and round-robin testing, and

[43] 47 C.F.R. § 20.19(a)(1).

[44] 47 C.F.R. §20.19(k)(1), (2).

[45] Multi-Band Principles at 1-2, Principle 4.

[46] *Id.* at 2, Principle 6.

[47] *Id.* at 2-3, Principle 7.

[48] *Id.* at 3, Principle 8.

[49] *July 2010 ANSI Report* at 2. The new testing method will apply across air interfaces because it will measure RF interference potential directly, rather than measuring RF field intensity and adjusting to estimate the potential for hearing aid interference. *See id*. at 3-4.

[50] *Id.* at 3.

[51] *Id.*

that it expects final balloting to be completed by the fourth quarter of 2010.[52]

25. Discussion. In anticipation that ANSI will adopt the draft standard or something similar, we find it unnecessary to adopt the full regime set forth in the Multi-Band Principles for handsets operating over air interfaces or frequency bands that lack standards. Rather, the ANSI draft standard enables testing over frequency bands or air interfaces expected to be incorporated in wireless handsets in the near future. Consistent with Sections 20.19(k)(1) and (2) of our rules, we delegate to WTB and OET the authority to adopt a new standard similar to the draft revision by rulemaking, and we direct them to complete such a proceeding promptly following the adoption of such a standard by ANSI. In the event ANSI has not adopted a standard similar to the draft revision by March 31, 2011, we will revisit our decision to withhold action on this portion of the Multi-Band Principles.

26. Under Section 20.19(k)(1), new obligations imposed on manufacturers and service providers as a result of WTB's and OET's adoption of technical standards for additional frequency bands and/or air interfaces shall become effective no less than one year after release of the adopting order for manufacturers and Tier I carriers[53] and no less than 15 months after release for other service providers.[54] Consistent with this delegation of authority, we expect that rules implementing the ANSI draft standard, if adopted, will apply as follows: No less than 12 months after release of the order adopting the standard, but at a later date if WTB and OET determine that a longer transition period is warranted, the benchmarks then in effect for other air interfaces will apply to manufacturers and Tier I carriers offering handsets using newly covered frequency bands or air interfaces. No less than 15 months after release of the order adopting the standard, but at a later date if WTB and OET determine that a longer transition period is warranted, the same benchmarks will apply to other service providers.[55] These rules will apply to all handsets and services within the scope of the rule unless otherwise specified by the Commission. The authority delegated to WTB and OET does not permit any actions that depart substantially from this regime.

27. While we find it unnecessary to adopt the Multi-Band Principles in whole, we focus special attention on Principle 3, which encourages wireless carriers and manufacturers to consider hearing aid compatibility and identify issues early in the design and development of handsets. Early identification of hearing aid compatibility issues enables their resolution earlier and, in many cases, less expensively than when interference is identified in the end stages of handset development. Addressing hearing aid compatibility early on also ensures that handsets that operate over new frequency bands or voice technology modes will be made available to consumers with hearing loss as closely as possible to their availability to the general public.[56]

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[52] *Id.* at 6-7.

[53] 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). 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.

[54] 47 C.F.R. §20.19(k)(1).

[55] We note, however, that manufacturers and service providers offering only one or two handset models over an air interface will have two years after adoption of the new standard before they are required to offer hearing aid-compatible handsets. *See infra*, Section IV.B.

[56] Multi-Band Principles at 1, Principle 3.

3. Multi-Band and Multi-Mode Handsets

28. Background. Under the Commission's rules, in order to be offered as hearing aid-compatible, a handset must meet hearing aid compatibility standards for every frequency band and air interface that it uses for which standards have been adopted by the Commission.[57] In the *Notice*, we tentatively concluded that, consistent with this principle, multi-band and multi-mode phones should not be counted as compatible in any band or mode if they operate over any air interface or frequency band for which technical standards have not been established. We reasoned that this limitation would conform to consumers' expectation that a phone labeled "hearing aid-compatible" is compatible in all its operations, and also that it would create incentives to develop new compatibility standards more quickly.[58] HIA and RERC-TA agreed with the Commission's proposal that multi-band and multi-mode phones should not be counted as hearing aid-compatible if they operate in frequencies or over air interfaces for which technical standards have not been established.[59] In contrast, commenters representing handset manufacturers and service providers opposed the disqualification of handsets from hearing aid compatibility certification because they operate in frequency bands or over air interfaces for which there are no established compatibility standards.[60] Some commenters expressed concern that this effective exclusion of handsets incorporating new technologies from the possibility of being considered hearing aid-compatible would hamper innovation and delay the deployment of new technologies for all consumers, including consumers with hearing loss, even absent evidence of interference with hearing aids and cochlear implants.[61]

29. In the *First Report and Order*, we did not resolve whether, or to what extent, multi-band and multi-mode handsets should be counted as hearing aid-compatible if they operate in part over frequency bands or air interfaces for which technical standards have not yet been established. We noted that, with the exception of handsets incorporating Wi-Fi capability, no such handsets then existed, and we left the record open for industry and consumer representatives to file a consensus proposal within the next six months.[62] We recognized, however, that multi-mode handsets were already on the market that included Wi-Fi capability, and we adopted an interim rule to address their status. Under the interim rule, such handsets may be counted as hearing aid-compatible if they meet hearing aid compatibility standards over all frequency bands and air interfaces for which standards exist, but the manufacturer and service provider must clearly disclose to consumers that the handset has not been rated for hearing aid compatibility with respect to Wi-Fi operation.[63]

30. The Multi-Band Principles propose that operations over frequency bands or air interfaces for which standards do not exist be tested using either the nearest existing approved standard or a preliminary predictive analysis method that the parties would work with ANSI to develop.[64] If the preliminary predictive analysis determines that such operations raise no hearing aid compatibility issues,

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[57] 47 C.F.R. § 20.19(b); *see also First Report and Order*, 23 FCC Rcd at 3431 ¶ 64.

[58] *See Notice*, 22 FCC Rcd at 19700 ¶ 81.

[59] HIA Comments at 2, 3; RERC-TA Comments at iii.

[60] *See, e.g.,* Apple Reply Comments at 5-7; CTIA Reply Comments at 5-6; Motorola Reply Comments at 7-8; RIM Reply Comments at 5.

[61] *See* Nokia Comments at 7-8; RIM Comments at 16; Sony Ericsson Comments at 6; Apple Reply Comments at 5; Motorola Reply Comments at 8; Nokia Reply Comments at 3-5.

[62] *First Report and Order,* 23 FCC Rcd at 3432 ¶ 65.

[63] 47 C.F.R. § 20.19(b), (f)(2); *see also First Report and Order*, 23 FCC Rcd at 3432-33 ¶¶ 66-67.

[64] Multi-Band Principles at 1-2, Principle 4.

it would not be necessary to develop a measurement procedure for the operations, and handsets operating over these frequency bands or air interfaces would be considered hearing aid-compatible if they meet hearing aid compatibility standards over all frequency bands and air interfaces for which such standards exist.[65] If hearing aid compatibility issues are identified, then during the period until a measurement procedure is developed and adopted by the Commission, such handsets that otherwise meet hearing aid compatibility standards would be considered hearing aid-compatible, but information that they have not been tested for all operations would have to be conveyed in writing to consumers at the point of sale and through company websites.[66] Beginning 12 months after the new standard is adopted by the Commission, a newly produced model could 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 could continue to be so counted.[67]

31. Discussion. As discussed previously, if the expected draft revision of Standard C63.19 is adopted by ANSI and the Commission, the treatment of multi-band and multi-mode handsets will become moot because there will be no operations without technical standards in the foreseeable future. Nonetheless, we expect it will take a minimum of two years until any such standards have been adopted and compliance becomes mandatory for all services. Meanwhile, handsets that incorporate new frequency bands and air interfaces capable of supporting voice services other than Wi-Fi are already coming on the market.[68] Therefore, for this interim period, we extend to all handsets that incorporate these new frequency bands and air interfaces the same counting and disclosure rules that currently apply to handsets with Wi-Fi.[69] In other words, a handset that meets hearing aid compatibility requirements over all air interfaces and frequency bands for which technical standards have been established, but that is also capable of supporting voice operations in new frequency bands and air interfaces for which standards do not exist, may be counted as hearing aid-compatible, provided consumers are clearly informed that it has not been tested for the operations for which there are no standards.[70] This is consistent with the proposal in the Multi-Band Principles, which informs consumers that the handset has not been tested and rated in all wireless technologies incorporated in the phone, and that the consumer should thoroughly test all phone features to determine whether the consumer experiences any interfering noise.

32. As recommended in the Multi-Band Principles, we require that for newly manufactured handsets covered by this rule, the following disclosure language be clearly and effectively conveyed to consumers wherever the hearing aid compatibility rating for the handset is provided, including at the point

[65] *Id.* at 2, Principle 6.

[66] *Id.* at 2-3, Principle 7.

[67] *Id*. at 3, Principle 8.

[68] For example, smartphones such as the Apple iPhone, HTC EVO 4G, Motorola Droid X, and others include 3G and 4G-capable air interfaces over which voice communications may be enabled using software. A handset is capable of supporting voice operations if such operations can be enabled through handset software without replacing any hardware component of the handset.

[69] *See* Letter from Lisa Conkwright, Acting General Counsel, Samsung, to Marlene H. Dortch, Secretary, FCC, at 1, dated July 29, 2010 (advocating a rule change so that "handsets with WiMAX or LTE are . . . treated the same as devices with Wi-Fi capability.")

[70] This would include, for example, a phone that seamlessly uses Wi-Fi or another air interface to support voice CMRS when in the presence of the service provider's femtocells, as well as a phone for which use of the other air interface for voice may be enabled through software.

of sale[71] and on company websites: "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." We have slightly revised the language proposed in the Multi-Band Principles in recognition that not all handsets are obtained from service providers. We conclude that a uniform text will ensure that consumers are provided with consistent and sufficient information. However, handsets that are already on the market with other disclosure language that complies with our current rule will not be required to replace this with the newly prescribed language.

33. This disclosure rule will apply to all handsets that operate in part over an air interface or frequency band that is not covered by the ANSI C63.19-2007 standard until the date when rules adopting any new standard become effective. The rule will also apply after rules adopting a new standard become effective to the extent that a handset model in fact has not been tested for previously uncovered operations under the new standard. However, a handset that has actually completed testing and been found to meet hearing aid compatibility standards under the new standard should not be described as not tested, but should be labeled with its hearing aid compatibility rating. Consistent with the recommendation in the Multi-Band Principles, a handset model launched earlier than 12 months after publication in the *Federal Register* of rules adopting any new standard could continue to be counted as hearing aid-compatible for operations covered under ANSI C63.19-2007 even if it does not meet the newly adopted standard for all other operations. Rather than describing such handsets as not fully tested, the disclosure should indicate that the phone does not meet hearing aid compatibility standards for some new technologies. WTB and OET shall promulgate rules to implement this modified disclosure requirement in their proceeding to consider adopting any revision of the ANSI standard.

34. Finally, we clarify that the disclosure requirement includes handsets that are capable of supporting software that can activate additional voice capability.[72] For example, some handsets that transmit and receive data over a Wi-Fi air interface do not contain within them the software to use Wi-Fi for voice communications, but will accommodate commercially available software to enable voice transmissions over Wi-Fi. Other air interfaces such as LTE and WiMAX, while not currently used for voice transmissions, may accommodate software that would enable them to be used for voice communication without any change to the hardware in the underlying handset. Unless they are informed to the contrary, consumers may reasonably expect that handsets which are labeled as hearing aid-compatible will function properly with their hearing aids in all modes of operation for voice communication that can be reasonably anticipated. We therefore find that this disclosure requirement will afford consumers with hearing loss the opportunity to inquire further about their ability to use the device in all voice modes and make an informed choice about whether the device meets the consumer's needs and expectations.

B. *De Minimis* Exception

35. Background. Section 20.19 provides a *de minimis* exception to hearing aid compatibility obligations for those manufacturers and mobile service providers that only offer a small number of

[71] Means of providing this language at the point of sale could include, for example, call-out cards or an insert in the handset's packaging.

[72] In the Further Notice, we seek comment on how such handsets should be treated for purposes of substantive hearing aid compatibility regulation. *See infra,* para. 89.

handset models.[73] Specifically, Section 20.19(e)(1) provides that manufacturers and mobile service providers offering two handset models or fewer in the United States over an air interface are exempt from the requirements of Section 20.19, other than the reporting requirement.[74] Section 20.19(e)(2) provides that manufacturers or mobile service providers that offer three handset models over an air interface must offer at least one compliant model.[75]

36. The Commission first adopted the *de minimis* rule together with the initial wireless hearing aid compatibility requirements in 2003, recognizing that such requirements could have a disproportionate impact on small manufacturers or those that sell only a small number of digital wireless handset models in the United States, as well as on service providers that offer only a small number of digital wireless handset models.[76] In the *2005 Hearing Aid Compatibility Reconsideration Order and Further Notice*, the Commission clarified that the *de minimis* rule applies on a per air interface basis, rather than across a manufacturer's or service provider's entire product line.[77] The Commission also sought comment on whether to narrow the *de minimis* rule so as to exempt from the hearing aid compatibility requirements only those wireless service providers and handset manufacturers that offer one digital wireless handset model per air interface, or whether the *de minimis* exception should be narrowed in some other way.[78]

37. The Commission addressed the resulting record in the *2007 Second Report and Order* that was issued together with the *Notice*, and concluded that the record did not support any change to the *de minimis* rule at that time.[79] At the same time, the Commission sought further comment on this issue.[80] In comments to the *Notice*, HLAA/TDI and Gallaudet/RERC proposed that the *de minimis* rule be modified so that it not apply on a permanent basis to large businesses that produce only one or two handsets with mass appeal, such as Apple's iPhone.[81] In the *First Report and Order*, the Commission decided to adopt the proposal of the Joint Consensus Plan to retain the existing *de minimis* rule.[82]

38. Although the Commission did not adopt at that time the new limitation proposed by HLAA/TDI and Gallaudet/RERC, it left the record open for commenters to address the proposal pursuant to our *ex parte* procedures.[83] In particular, it invited parties to discuss with specificity the operational details and effects of any limitation on the *de minimis* rule that they may propose, as well as the need for the limitation to protect consumers' access to phones with advanced or desirable technologies and features.

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[73] *See* 47 C.F.R. § 20.19(e).

[74] *See* 47 C.F.R. § 20.19(e)(1).

[75] *See* 47 C.F.R. § 20.19(e)(2).

[76] *See 2003 Hearing Aid Compatibility Order*, 18 FCC Rcd at 16781 ¶ 69; *see also 2005 Reconsideration Order and Further Notice*, 20 FCC Rcd at 11244 ¶ 51.

[77] *2005 Reconsideration Order and Further Notice*, 20 FCC Rcd at 11244 ¶ 53.

[78] *Id*. at 11249 ¶ 66.

[79] *2007 Second Report and Order*, 22 FCC Rcd at 19681 ¶ 31.

[80] *Notice*, 22 FCC Rcd at 19701-02 ¶ 85.

[81] *See* Gallaudet/RERC Comments at 13-14; HLAA/TDI Comments at 6.

[82] *See First Report and Order*, 23 FCC Rcd at 3435 ¶ 72. The Commission also codified the principle that the *de minimis* exception applies on a per-air interface basis. *Id*.

[83] *First Report and Order*, 23 FCC Rcd at 3435-36 ¶ 73; *see* 47 C.F.R. § 1.1206.

39. In general, handset manufacturers oppose any change to the current rule. They contend that the *de minimis* rule allows new entrants to the handset manufacturing marketplace to develop innovative handsets.[84] Industry associations share the viewpoint of handset manufacturers.[85] TIA states that the exception is "critical to industry's ability to promote innovation through new technologies."[86] On the other hand, hearing loss groups argue that the *de minimis* rule was not intended to promote innovation, but to protect companies with small product lines from competitive impacts, and should be limited in its application to companies that satisfy the Small Business Administration (SBA) definition of a small business.[87] Apple proposes that if the Commission eliminates or alters the *de minimis* rule, it should permit manufacturers to comply with the hearing aid compatibility rules for operations over the GSM air interface in the 1900 MHz band by installing software that allows consumers to reduce maximum power for only these operations.[88]

40. Discussion. In order to ensure that consumers who use hearing aids have access to a variety of phones, while preserving competitive opportunities for small companies as well as opportunities for innovation and investment, we modify the *de minimis* rule as applied to companies that are not small entities. Specifically, we decide that beginning two years after it offers its first handset model over an air interface, a manufacturer or service provider that is not a small entity, as defined herein, must offer at least one model that is rated M3 or higher and at least one model that is rated T3 or higher if it offers one, two or three total handset models. In order to maintain parity and to allow entities that have been relying on the *de minimis* rule a reasonable period for transition, this obligation will become effective for manufacturers and service providers that offer one or two handset models over an air interface two years after the latest of the following: the date the manufacturer or service provider began offering handsets over the air interface, the date this Order is published in the *Federal Register*, the date a hearing aid compatibility technical standard is adopted for the relevant operation, or the date a previously small entity no longer meets our small entity definition. In addition, we permit manufacturers and service providers that would have come under the amended *de minimis* rule but for their size to satisfy hearing aid compatibility deployment requirements for the legacy GSM air interface by relying on a handset that allows consumers to reduce the maximum power output only for operations over the GSM air interface in the 1900 MHz band by no more than 2.5 decibels (dB) in order to meet the RF interference standard.

41. In conjunction with these modifications to the *de minimis* rule, we also revise our "refresh" rule to clarify its application to manufacturers that will be newly subject to hearing aid compatibility requirements. The refresh rule states that if a manufacturer offers any new models for a particular air interface, it must offer in each calendar year a number of new models rated M3 or higher

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[84] RIM Comments at 18; Apple Reply Comments at 2; Motorola Reply Comments at 4-6; Nokia Reply Comments at 8; T-Mobile Reply Comments at 7; RIM *Ex Parte* Comments at 3; Letter from Paul Margie, counsel for Apple, to Marlene H. Dortch, Secretary, FCC, at 1-2, dated July 9, 2010 (*July 9, 2010 Apple Letter*); *see also* Letter from Robert G. Morse, counsel for RIM, to Marlene H. Dortch, Secretary, FCC, at 2, dated July 29, 2010 (*July 29, 2010 RIM Letter*).

[85] CTIA Reply Comments at 6; VON Coalition Reply Comments at 10; *see also* Letter from Rebecca Schwartz, TIA, to Marlene H. Dortch, Secretary, FCC, at 1, dated July 29, 2010 (*July 29, 2010 TIA Letter*); Letter from Scott Bergmann, Assistant Vice President, CTIA, to Marlene H. Dortch, Secretary, FCC, at 3, dated July 29, 2010 (*July 29, 2010 CTIA Letter*).

[86] TIA *Ex Parte* Comments at 3.

[87] HLAA / TDI Comments at 8; HLAA *et al*. *Ex Parte* Comments at 3-4; RERC-TA *Ex Parte* Comments at 5; Letter from Lise Hamlin, Director of Public Policy, Hearing Loss Association of America, to Marlene H. Dortch, Secretary, FCC, dated July 13, 2010 (*July 13, 2010 HLAA Letter*).

[88] *See July 9, 2010 Apple Letter.*

that is equal to at least half of its total required number of models rated M3 or higher, except that a manufacturer that offers three models over an air interface must offer at least one new model rated M3 or higher every other calendar year.[89] Consistent with the purposes of this rule, we now require manufacturers that are not small entities that offer two models over an air interface, after the first two years, to introduce at least one new model rated M3 or higher every other year.

42. *Retention of de minimis rule for small entities.* The *de minimis* rule serves two purposes. One purpose is to ensure that small manufacturers and service providers have an opportunity to compete in the market. When the Commission first adopted the *de minimis* exception in 2003, it stressed the disproportionate impact that hearing aid compatibility requirements could have on small manufacturers or those that sell only a small number of digital wireless handset models in the United States, as well as on service providers that offer only a small number of digital wireless handset models.[90] Thus, RERC-TA notes that the Commission's original justification for the rule was that "certain manufacturers and service providers may have only a small presence in the market," and need the exception to compete fairly and effectively in the marketplace.[91] HLAA *et al.* contend that the focus of the *de minimis* rule should be on competition and whether the hearing aid compatibility requirements impede the competitiveness of manufacturers and service providers that have a "small presence in the market."[92] In order to further this procompetitive interest, we retain the *de minimis* exception in full for small entities. We conclude that the benefits to competition outweigh any consumer harm from not requiring these small entities to offer hearing aid-compatible telephones.

43. For purposes of this rule, we define "small entity" by adopting size standards consistent with those of the SBA. The relevant SBA categories are: (1) wireless communications service providers (except satellite),[93] and (2) radio and television broadcasting and wireless communications equipment manufacturing. A wireless communications service provider is small if it is independently owned and operated, is not dominant in its field of operation, and has 1,500 or fewer employees.[94] Independently owned and operated, non-dominant firms in the category of radio and television broadcasting and wireless communications equipment manufacturers are considered small if they have 750 or fewer employees.[95] Accordingly, we will use 1,500 or fewer employees for wireless communications service providers and 750 or fewer employees for wireless communications equipment manufacturers as the size standards for applying the *de minimis* rule.

44. *Limitation of the de minimis rule for companies that are not small entities.* In addition to preserving competitive opportunities for small entities, the *de minimis* rule also helps ensure that new entrants to the market have the opportunity to innovate. In the *First Report and Order*, the Commission expressed its concern that the *de minimis* rule "not be limited in a manner that would compromise its effectiveness in promoting innovation and competition."[96] Apple contends that the *de minimis* rule

[89] *See* 47 CFR 20.19(c)(1)(ii).

[90] *See 2003 Hearing Aid Compatibility Order*, 18 FCC Rcd at 16781 ¶ 69; *see also 2007 Reconsideration Order and Further Notice*, 20 FCC Rcd at 11244 ¶ 51.

[91] RERC-TA *Ex Parte* Comments at 2-3.

[92] HLAA *et al. Ex Parte* Comments at 3-4.

[93] While we recognize that a few service providers may fall outside this category, for ease of administration we adopt this definition for all service providers.

[94] 13 C.F.R. § 121.201, North American Industry Classification System (NAICS) code 517210.

[95] 13 C.F.R. § 121.201, NAICS code 334220.

[96] *First Report and Order*, 23 FCC Rcd 3406 ¶ 73.

allows new entrants to the handset manufacturing marketplace, like Apple, to develop innovative handsets, like the iPhone, and expeditiously bring them to market.[97] RIM states that the *de minimis* rule "remains a critical avenue for manufacturers of all sizes to introduce small portfolios of new products using new technologies."[98] TIA's position is that the *de minimis* exception is important for all manufacturers, regardless of size, to enable them to expeditiously bring innovative products to market.[99]

45. We recognize that new entrants may bring innovations to the wireless handset market, and that they may be discouraged from doing so if their first products are required to meet specific technical mandates. Thus, we continue to apply the existing *de minimis* rule during the first two years that a manufacturer or service provider of any size is offering handsets, and during the first two years that an established entity is offering handsets over a particular air interface. We are not persuaded, however, that the interest in innovation requires preserving the *de minimis* exception for large entities indefinitely. Once an entity with substantial resources is established as a manufacturer or service provider, it should be able to offer some handsets that meet the needs of consumers with hearing aids at the same time as it is innovating and investing.

46. We note that while several commenters argue that the *de minimis* rule is necessary to allow new entrants to innovate, they generally do not specifically argue that this requires the exception to be maintained indefinitely. To the contrary, they contend that manufacturers will typically expand their product offerings and meet hearing aid compatibility requirements after an initial period.[100] Indeed, RIM and other parties have recently proposed a limitation of the *de minimis* exception to two years as a possible alternative to the current rule.[101] We note that Apple has used the *de minimis* rule over the past three years to continue offering the iPhone without full hearing aid compatibility. However, Apple's stated need for the *de minimis* exception is due to technical circumstances surrounding GSM operation over the 1900 MHz band by products with thin form configurations, which we address below.[102] To the extent other unique circumstances may arise in the future, we find they would be better addressed through case-by-case consideration,[103] rather than by retaining an overly broad *de minimis* rule that potentially denies access to handsets by people with hearing loss.

47. We are not persuaded by arguments that market forces render modification of the *de minimis* rule unnecessary. Several commenters argue that after a period of time, manufacturers will naturally expand their product offerings and thereby become subject to hearing aid compatibility requirements.[104] While such an expansion of portfolios occurs in many instances, it has not occurred, for example, with Apple. Other commenters argue that in light of the large number of hearing aid-compatible

[97] Apple Reply Comments at 2; *see also July 9, 2010 Apple Letter* at 1.

[98] RIM Comments at 18, *Ex Parte* Comments at 3; *see also July 29, 2010 RIM Letter* at 2.

[99] TIA Reply Comments at 10; *see also July 29, 2010 TIA Letter* at 1.

[100] *See, e.g.*, Nokia Reply Comments at 8 (stating that situations where a large business maintains a small portfolio in a technology "occur infrequently"); *July 29, 2010 TIA Letter* at 1.

[101] *July 29, 2010 RIM Letter* at 3; *see also July 29, 2010 CTIA Letter* at 2; Letter from Katie Peters, Director, Global Government Affairs, Motorola, to Marlene H. Dortch, Secretary, FCC, at 2-3, dated July 29, 2010 (*July 29, 2010 Motorola Letter*); *July 29, 2010 TIA Letter* at 2

[102] *See infra,* paras. 51-56.

[103] *See* 47 U.S.C. § 610(b)(3) (authorizing waivers of hearing aid compatibility requirements for new telephones for reasons of technological infeasibility or prohibitive costs); *see also* 47 C.F.R. § 1.3 (Commission may waive its rules for good cause).

[104] *See* Nokia Reply Comments at 8; Motorola *Ex Parte* Comments at 3-4; TIA *Ex Parte* Comments at 5.

handsets that are currently on the market, it is unnecessary to apply hearing aid compatibility requirements to large entities with limited product lines.[105] This argument overlooks that each company that offers a hearing aid-compatible handset adds to the diversity of choices on the market, and therefore there is a public interest benefit to defining the exception no more broadly than necessary to promote competition and innovation.

48. Several commenters argue that the limitations proposed by HLAA/TDI and Gallaudet/RERC are too vague to be enforceable. For example, Motorola argues that the standards proposed by consumer groups are not workable and cannot be clearly defined.[106] RIM contends that the classifications proposed by consumer groups are either subjective, impracticable, or both.[107] The rule that we adopt avoids these concerns by lifting the *de minimis* exception when a company exceeds a defined small business size standard and has been in the relevant business for at least two years. Whether a company meets these objective standards can generally be determined with a high degree of clarity.

49. *The two-year entry period*. In order to preserve the opportunity for new entrants to develop innovative products and services, the *de minimis* rule will continue to be available during the first two years that a manufacturer or service provider is in the relevant business. Similarly, a manufacturer or service provider of any size may continue to use the *de minimis* rule during the first two years that it offers handsets that operate over a particular air interface. We find that, in light of typical industry product cycles, two years is an appropriate period for a company that is not a small entity to introduce a hearing aid-compatible handset. For example, Apple introduced its third iPhone model within approximately two years after bringing the original iPhone to market.[108] While the interest in innovation counsels in favor of permitting any company to introduce its first handset model over an air interface without meeting hearing aid compatibility standards, the public interest requires that a sizable company, once it is on its second or third generation of handsets, place a high enough priority on hearing aid compatibility to meet these standards for at least one model.

50. We also allow a similar two-year transition period in other circumstances where an entity that offers one or two handsets over an air interface becomes newly required to offer hearing aid-compatible handsets. We recognize that companies, and particularly manufacturers, that until now have not been required to offer hearing aid-compatible handsets will need a transition period to begin doing so. Accordingly, the new requirements will not become applicable to entities that are currently in the relevant business until two years after this Order is published in the *Federal Register*.[109] Similarly, we provide a two-year transition when a previously small business first exceeds the small business size standard. In addition, when hearing aid compatibility standards are newly adopted for an air interface or frequency

[105] *See* CTIA *Ex Parte* Comments at 3; RIM *Ex Parte* Comments at 5; TIA *Ex Parte* Comments at 6.

[106] Motorola *Ex Parte* Comments at 4.

[107] RIM *Ex Parte* Comments at 3-4.

[108] Apple introduced the original version of the iPhone on June 29, 2007. *Apple Sells One Millionth iPhone*, Press Release, Apple, Sept. 10, 2007, *available at* http://www.apple.com/pr/library/2007/09/10iphone.html (last visited Aug. 2, 2010). Then, on July 11, 2008, Apple introduced its second iPhone model, the iPhone 3G. *Apple Sells One Million iPhone 3Gs in First Weekend*, Press Release, Apple, July 14, 2008, *available at* http://www.apple.com/pr/library/2008/07/14iphone.html (last visited Aug. 2, 2010). On June 18, 2009, less than two years after introducing the original iPhone, Apple released its third model, the iPhone 3GS. *Apple Sells Over One Million iPhone 3GS Models*, Press Release, Apple, June 22, 2009, *available at* http://www.apple.com/pr/library/2009/06/22iphone.html (last visited Aug. 2, 2010).

[109] *See July 29, 2010 Motorola Letter* at 2; *July 29, 2010 RIM Letter* at 3; *July 29, 2010 TIA Letter* at 2 (all advocating a transition period of at least two years after publication of the modified rule).

band, manufacturers and service providers that offer one or two handset models over that air interface or frequency band will not be required to offer a hearing aid-compatible model until two years after rules adopting the technical standard are published in the *Federal Register*. While we recognize that manufacturers are typically aware of proposed standards well before they are adopted,[110] we are persuaded that businesses with small product lines, because they have less flexibility to work with multiple form factors and other design features, may need more time to introduce hearing aid-compatible products under these circumstances than the minimum of one year afforded to other manufacturers and service providers.[111] The two-year transition period places companies in all of these circumstances on an equal footing with companies that are newly entering the market.

51. *GSM in the 1900 MHz band.* In recognition of the special technical challenges of meeting hearing aid compatibility standards for handsets with certain desirable form factors operating over the legacy 2G GSM air interface in the 1900 MHz band, we permit companies that would come under the amended *de minimis* rule but for their size to satisfy the hearing aid-compatible handset deployment requirement for GSM using a handset that allows the customer to reduce the maximum output power for GSM operations in the 1900 MHz band by up to 2.5 dB in order to meet the RF interference standard. In a recent filing, Apple advocates that the Commission make an exception for handsets operating over the GSM air interface at 1900 MHz to the usual rule that a handset is not considered hearing aid-compatible if the user is required to reduce the RF output power in order to meet hearing aid compatibility standards.[112] Specifically, Apple proposes that the Commission should permit manufacturers in this unique situation to comply with hearing aid compatibility rules by programming a software setting in consumers' wireless handsets so that they may reduce maximum transmit power for only these operations by up to 2.5 dB to meet hearing aid compatibility standards.[113] It contends that allowing this option would be particularly appropriate if the Commission eliminates or alters the *de minimis* rule because companies have made significant investments in expectation that the *de minimis* rule would remain unchanged.[114] In response, HLAA, while urging the Commission to either eliminate the *de minimis* rule or limit it to small entities, agrees that allowing manufacturers to meet hearing aid compatibility standards for GSM operations at 1900 MHz through a user option to reduce the output power would be a reasonable way to account for the company expectations and technical challenges that Apple identifies. HLAA states that any power reduction should be limited to 2.5 dB to "ensure that the power reduction does not have an unacceptable impact on performance."[115]

52. We find that a special allowance to meet hearing aid compatibility standards for handsets

[110] *See* Letter from Lise Hamlin, Director of Public Policy, HLAA, to Marlene H. Dortch, Secretary, FCC, at 2, dated July 29, 2010 (*July 29, 2010 HLAA Letter*) (expressing concern that affording two years for transition in addition to time taken to develop and adopt standard could lead to a period of years when no hearing aid-compatible handsets would be available).

[111] *See, e.g.*, *July 29, 2010 RIM Letter*, App. at 1.

[112] *July 9, 2010 Apple Letter*; *see* 47 C.F.R. § 20.19(b)(1)(ii) (". . . a wireless handset submitted for equipment certification … must meet, at a minimum, the M3 rating associated with the technical standard set forth in ANSI C63.19-2007 (June 8, 2007) . . . .") and ANSI C63.19-2007, Section 4.3, Test Setup and Validation at 20 ("The [wireless device] shall be operated at its maximum RF output power setting … as specified by the manufacturer"); *see also* FCC Office of Engineering and Technology, Equipment Authorization Guidance for Hearing Aid Compatibility, KDB 285076, at 4 (Oct. 2009), *available at* www.fcc.gov/labhelp (*OET Guidance*).

[113] *See July 9, 2010 Apple Letter* at 2.

[114] *Id*. at 2.

[115] *July 13, 2010 HLAA Letter* at 2.

operating over the 2G GSM network at 1900 MHz, in the narrow context of companies that but for their size would be eligible for the amended *de minimis* exception, is in the public interest. Achieving hearing aid compatibility for GSM handsets in the 1900 MHz band implicates special technological challenges.[116] The Commission has noted that "technological issues make it difficult to produce a wide variety of [GSM] handsets that both meet the M3 standard for reduced RF interference for acoustic coupling and include certain popular features."[117] For example, based on the hearing aid compatibility status reports filed by handset manufacturers in July 2010 for the reporting period from July 1, 2009, to June 30, 2010, 121 out of 122 CDMA handsets, or 99%, were rated M3 or better, whereas only 82 of 153 GSM handsets, or 54%, were rated M3 or better.[118] Certain technological choices in handset form and function, such as thin form factors and touch screens, increase the difficulty of meeting the ANSI standard for these handsets while bringing unique benefits to consumers.[119] If we were to apply hearing aid compatibility technical standards strictly to manufacturers that narrowly specialize in phones with these features, we are concerned that such handsets might become unavailable to consumers with and without hearing loss alike. Alternatively, such manufacturers may choose to produce additional models with no unique features that are not demanded by the market simply to meet the new benchmarks that will apply to them two years following the release of this Order. A targeted approach that allows some flexibility in the hearing aid compatibility technical standards, to accommodate this narrow situation, will avoid these consequences and better promote access for people with hearing loss.

53. We further find that allowing hearing aid-compatible phones to incorporate a limited user-controlled power reduction option under such circumstance is an appropriate means to address these concerns. A 2.5 dB reduction in power will have limited impact on the ability of people with hearing loss to use the affected phones. For one thing, any impact would be limited to those times when a handset is operating on GSM and at 1900 MHz. Furthermore, the diminution in power that occurs from a 2.5 dB loss should generally have an effect only when a handset is operated near the edge of reliable service coverage. Handsets usually operate at no more power than needed in order to prolong the battery charge and minimize potential interference, and they typically transmit at full power only to overcome signal fading in areas where there are obstructions or a large distance between the handset and the nearest base station. In addition, the modified rule applies only to 2G GSM technology, which is being phased out in favor of 3G alternatives.[120] Also, the new version of the ANSI C63.19 standard that is currently under consideration, because it will measure RF interference potential directly and eliminate the need for certain conservative assumptions, will make it approximately 2.2 dB easier for a GSM phone to achieve an M3 rating.[121] We expect that if the new standard is adopted, manufacturers will find it in their interest to abandon the power reduction if possible, or diminish it to the extent they can, in order to make their phones most attractive to people with hearing loss.

54. We recognize, as certain parties have argued, that the Commission has previously

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[116] While some parties contend that if we adopt a power-down option for GSM operations at 1900 MHz we should consider doing so for other frequency bands and air interfaces as well, they have not made any showing that similar technical challenges exist elsewhere. *See, e.g., July 29, 2010 Motorola Letter* at 3-4; *July 29, 2010 TIA Letter* at 2.

[117] *See Notice*, 22 FCC Rcd at 19685 ¶ 43.

[118] The status reports can be accessed at http://wireless.fcc.gov/hac/index.htm?job=home.

[119] For example, the Apple iPhone incorporates features to enable easy navigation by consumers with vision loss. *See, e.g.*, *Apple Announces the New iPhone 3GS—The Fastest, Most Powerful iPhone Yet*, Press Release, June 8, 2009, *available at* http://www.apple.com/pr/library/2009/06/08iphone.html (last visited Aug. 3, 2010).

[120] *See July 9, 2010 Apple Letter* at 3; *July 13, 2010 HLAA Letter* at 2.

[121] *See July 2010 ANSI Report* at 5.

disfavored reduction in output power as a means of meeting hearing aid compatibility requirements.[122] Consistent with these prior holdings, we affirm that the requirement to test for hearing aid compatibility at full power generally serves the important goal of ensuring that people with hearing loss have equal access to all of the service quality and performance that a given wireless phone provides.[123] We find, however, in this narrow context, that the interest in fully equal access is outweighed by the importance of preserving the availability of a small category of phones that have desirable and beneficial features, and that will be made substantially accessible to people with hearing loss, from companies that specialize in producing only such phones. In the Further Notice below, we request comment on whether to extend this exception to the full power testing requirement beyond companies that offer only one or two handset models.[124] In addition, as proposed by HLAA, we will monitor the impact of this rule and revisit the need for it in the future. In particular, in the event a new ANSI technical standard is adopted, we will initiate a review of this rule shortly thereafter.[125]

55. Accordingly, subject to the conditions set forth below, we amend our rules so that a company offering one or two handset models over the GSM air interface that would have been eligible for the amended *de minimis* exception rule but for its size may satisfy its obligation to offer one hearing aid-compatible handset over the GSM air interface through a handset that lets the consumer reduce maximum transmit power for GSM operations in the 1900 MHz band by up to 2.5 decibels and that then meets the ANSI criteria for an M3 rating after such power reduction. The power reduction must affect only 2G GSM operations in the 1900 MHz band, and the phone's default setting must be for full power operation. Once a handset meeting these criteria has been introduced in order to satisfy this hearing aid compatibility deployment requirement, the manufacturer or service provider may continue to count it as a hearing aid-compatible handset even if it increases its number of handset models operating over the GSM air interface beyond two.

56. We do find that two conditions on this rule are necessary in the public interest. First, through software or other programming, we require these handsets to operate at full transmit power when calling 911 on GSM at 1900 MHz.[126] Although some parties have argued that powering the phone back up in this circumstance would raise consumer awareness and education issues,[127] we find that the public interest is better served by maximizing the coverage for a 911 call even if some interference is experienced by consumers who use hearing aids. In addition, we require that consumers be adequately informed of the need to select the power reduction option to achieve hearing aid compatibility and of the consequences of doing so. Specifically, wherever a manufacturer or service provider provides the hearing aid compatibility rating for such a handset, it shall indicate that user activation of a special mode is necessary to meet the hearing aid compatibility standard. In addition, the handset manual or a product insert must explain how to activate the special mode and that doing so may result in a diminution of

[122] Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones, Cingular Wireless LLC Petition for Waiver of Section 20.19(c)(3)(i)(A) of the Commission's Rules, *Memorandum Opinion and Order*, 20 FCC Rcd 15108, 15113 ¶ 10 (2005) (*Cingular Waiver Order*); *see July 29, 2010 CTIA Letter* at 4; *July 29, 2010 Motorola Letter* at 3 (arguing that risks of reducing maximum output power as Apple proposes are unknown); *July 29, 2010 TIA Letter* at 2.

[123] *See also OET Guidance* at 4.

[124] *See infra,* Section V.C.

[125] *See July 13, 2010 HLAA Letter* at 3.

[126] *See id.* at 2.

[127] *See, e.g.*, *July 29, 2010 CTIA Letter* at 4.

coverage.[128]

57. *Other circumstances*. In recent filings, RIM has urged the Commission to retain a *de minimis* rule that would apply in situations where handsets are being phased out of production or retail sales portfolios.[129] RIM states that "if a manufacturer or service provider is phasing out a particular air interface but still offers two or three handsets for a particular air interface, absent the current *de minimis* exception or a similar provision it would be compelled (regardless of carrier or consumer demand) to either discontinue all of the models concurrently with the HAC model, or maintain the HAC model solely for the purposes of enabling it to continue offering the non-HAC model(s)."[130] RIM suggests a possible rule under which if a manufacturer or service provider offers four or more handsets over an air interface during a given calendar year, in the next calendar year offers three or fewer handsets, and in subsequent calendar years offers one or two of those remaining handsets, it would not need to offer any hearing aid-compatible handsets beginning in the third year.[131] In response, HLAA expresses concern that retaining the *de minimis* rule for both new air interfaces and legacy situations, in combination, may unduly limit the options available to consumers with hearing loss.[132]

58. We decline to take action on RIM's proposal in the absence of a developed record or concrete evidence of a problem that needs to be addressed. While the scenario that RIM poses is plausible on its face, it provides no example of any instance where a manufacturer or service provider has actually used or will use the *de minimis* rule to manage its phasing out of a portfolio in which it previously offered hearing aid-compatible handsets. In the event a situation arises where retaining a hearing aid-compatible offering over an air interface that is being discontinued would cause hardship to a manufacturer or service provider, and discontinuing the handset would not unduly disadvantage people with hearing loss, we would entertain a request for waiver.

59. *Review of the de minimis rule*. HLAA proposes that whatever actions the Commission takes, we should revisit any changes to the *de minimis* rule in a timely manner to see what impact they have in the real world.[133] While we believe the actions we take today will best balance the interests of industry and consumers, we recognize that these rules are complex and their consequences over time cannot be predicted with certainty. We therefore will undertake a comprehensive review of the *de minimis* rule no later than 2015.

C. New Distribution Channels

60. Background. Under current rules, manufacturers are required to produce a certain number or percentage of handset models that meet the Commission's hearing aid compatibility standards. These hearing aid compatibility deployment benchmarks for manufacturers, however, are codified in terms of the handsets that they offer to service providers.[134] Thus, the rules apply only to handsets that manufacturers offer to service providers and that service providers then offer to consumers. If handsets

[128] The need for the consumer to reduce the power in order to meet the RF interference technical standard should also be clearly stated in the filing for equipment certification.

[129] *July 29, 2010 RIM Letter*, App. at 1-2; *see also July 29, 2010 TIA Letter* at 1-2 (arguing that manufacturers use the *de minimis* rule to diminish their selection of outdated technologies).

[130] *July 29, 2010 RIM Letter* at 2.

[131] *Id.*

[132] *July 29, 2010 HLAA Letter* at 2.

[133] *Id.*

[134] *See* 47 C.F.R. § 20.19(c)(1)(i), (d)(1).

are not offered to service providers, then the benchmarks in Section 20.19 do not apply.

61. In the *Notice*, the Commission sought comment on whether to expand the hearing aid compatibility requirements to recognize the growing distribution of wireless handsets through channels other than service providers. The Commission noted that its "open platforms" mandate for licensees on the Upper 700 MHz Band C Block[135] might particularly spur an increase in sales through alternate distribution channels, and it sought comment on whether to modify its rules in this context.[136] We also sought comment on how the hearing aid compatibility rules should apply in joint venture situations, such as where one partner produces phones on a build-to-suit basis for a second party that markets and prices them to service providers or directly to consumers.[137]

62. In response to the *Notice*, several handset manufacturers and service providers contend that imposing new hearing aid compatibility requirements on manufacturers would be premature.[138] Other commenters assert that there is no principled reason to distinguish between handsets sold by service providers and handsets sold independently, including those marketed for use with open platform systems.[139]

63. Discussion. Based on the record in this proceeding, we update our rules and amend Section 20.19(c) and (d) to apply the deployment benchmarks to all handsets that a wireless handset manufacturer produces for distribution in the United States that are within the scope of Section 20.19(a) of the rule. This rule change will address new handset manufacturer distribution models in existing networks and ensure that wireless handsets will be covered by our hearing aid compatibility obligations regardless of distribution and sales channels.

64. We find this rule change will serve the public interest as a better and more proactive approach to ensure the availability of hearing aid-compatible handsets in the developing handset marketplace. Whatever may have been the case in 2007, and regardless of the development of service on the 700 MHz C Block, it is not now premature to apply hearing aid compatibility requirements to all distribution channels. To the contrary, a variety of phones is readily available to consumers through outlets ranging from online retailers to convenience stores to electronics specialty outlets, as well as directly from manufacturers. Indeed, Google recently experimented with selling the Nexus One handset only directly to consumers.[140] While we cannot predict how the market will develop, extending the scope of the manufacturer requirement to all handsets will ensure that wireless handsets are available to people

[135] The Commission requires licensees of the Upper 700 MHz Band C Block spectrum to provide "open platforms" for devices and applications in order to allow customers, device manufacturers, third party application developers, and others to use the devices and applications of their choosing in C Block networks, subject to certain reasonable network management conditions that allow the licensee to protect the network from harm. Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, WT Docket 06-150, *Second Report and Order*, 22 FCC Rcd 15289, 15365 ¶ 206 (2007).

[136] *See Notice*, 22 FCC Rcd at 19705 ¶ 96.

[137] *Id*.

[138] *See, e.g.*, Motorola Comments at 10-12; Nokia Comments at 7; RIM Comments at 21; TIA Comments at 12; RIM Reply Comments at 6; VON Coalition Reply Comments at 9.

[139] *See* HIA Comments at 2 n.1; RERC-TA Comments at 18.

[140] Although Google has now changed its policy and will market the Nexus One through service providers, T-Mobile.com currently refers customers seeking to purchase the Nexus One phone to Google.com. *See* http://find.t-mobile.com/controller?N=0&Ntk=primary&Ntx=mode+matchpartialmax&Ntt=nexus%20one (last visited Aug. 3, 2010).

with hearing loss regardless of distribution and sales channels. Moreover, no commenter has identified, and we cannot conceive, any reason why meeting deployment benchmarks for hearing aid-compatible handsets might be more difficult or burdensome as a result of the method of distribution.

65. We recognize that manufacturers may need time to meet the requirements of the changed rule. For example, a manufacturer that does not produce any handsets for sale through service providers is not currently required to offer any hearing aid-compatible handsets, and therefore may need to make technological adjustments to meet these requirements. Therefore, we conclude that manufacturers will have until 12 months from publication of the rule in the *Federal Register* to come into compliance with this new provision. This is the same as the minimum compliance period that our rules currently provide when we adopt hearing aid compatibility standards for a new frequency band or air interface.[141]

66. We clarify that handsets covered by this rule include handsets that manufacturers sell to businesses for distribution to their employees. For example, a business may distribute handsets to its employees that are intended primarily for internal communications or for data tracking, but that also incorporate external voice communications capability within the scope of Section 20.19(a). If the handset incorporates a built-in speaker and is typically held to the ear, then the manufacturer must count that handset in determining whether it meets the benchmarks for deploying hearing aid-compatible handsets.

67. Finally, in the absence of any comment on joint venture situations, we do not make any changes to our rules in this regard. We clarify that the manufacturer of a phone is the party that produces it. We expect to consider this issue further in the 2010 review.

D. Volume Controls

68. Background. In the *Notice,* consistent with the Joint Consensus Plan's recommendation, we urged all interested parties to specifically look into adding volume controls to wireless handsets.[142] We noted earlier statements by some in the deaf and hard of hearing community that one of hearing aid users' most important concerns regarding wireless devices is the lack of adequate volume control on handsets.[143] The *Notice* sought comment on whether any volume control requirements should be incorporated into our rules, and if so what they should be.[144]

69. Discussion. RERC-TA states that a decision about whether volume control requirements are needed cannot be made until more is known about the interaction between the audio output of wireless handsets and the programming characteristics of modern digital hearing aids. RERC-TA notes that as part of the Joint Consensus Plan, the ATIS Incubator Solutions Program #4 - Hearing Aid Compatibility (AISP.4-HAC) has formed a working group, denominated WG-11, to investigate the interaction of these two devices. RERC-TA states that the findings of this investigation, including recommendations for achieving adequate listening levels for consumers who wear hearing aids while using wireless phones, will be shared with the Commission upon the completion of this group's efforts.[145]

70. A number of commenters agree with RERC-TA that because the AISP.4-HAC working group will study and make recommendations to the Commission regarding audio output levels and volume controls, it would be premature for us to take action at this time.[146] We concur. As we are

[141] *See* 47 C.F.R. § 20.19(k)(1).

[142] *Notice*, 22 FCC Rcd at 19702 ¶ 87.

[143] *See 2007 Staff Report*, 22 FCC Rcd at 17736 ¶ 66.

[144] We note that the Joint Consensus Plan did not propose adopting any rules in this regard.

[145] RERC-TA Comments at 19.

[146] ATIS Comments at 11-12; HLAA/TDI Comments at 8; Nokia Comments at 9; RIM Comments at 19; TIA (continued….)

awaiting input from the AISP.4-HAC working group, we are taking no action in this Second Report and Order. We will further consider this issue as part of the 2010 review.

E. Display Screens

71. Background. The *Notice* noted that the Technology Access Program of Gallaudet University had pointed out that the display screens on smart phones emit electromagnetic energy that may interfere with the operation of hearing aids.[147] It therefore invited comment on this issue, including whether any measures are appropriate to promote the deployment of phones that enable users to turn off their screens.

72. Discussion. RERC-TA suggests that not having the screen light up when volume is adjusted would greatly ameliorate the problem.[148] Similarly, PRC states that a simple one touch "hot button" to turn off the screen during a voice call would address this concern.[149] Apple strongly opposes a rule that could be interpreted to require a handset to have physical counterparts to on-screen controls.[150] Nokia states that display screen requirements should not be incorporated into the Commission's hearing aid compatibility rules because it would be premature to do so.[151] Consistent with Nokia's position, RERC-TA recommends that the Commission address this issue of display screen interference with hearing aids as part of its review of the hearing aid compatibility rules in 2010.[152] We find that the existing record does not establish a need for Commission action at this time. We will seek further comment on this issue in the 2010 review.

V. FURTHER NOTICE OF PROPOSED RULE MAKING

73. In this Further Notice, we seek comment on potential changes to our hearing aid compatibility rules in three respects. First, we propose to extend the scope of the rules beyond the current category of CMRS to include handsets used to provide wireless voice communications over any type of network among members of the public or a substantial portion of the public. We seek comment on this proposal, on whether considerations of technological feasibility or marketability prevent application of our hearing aid compatibility requirements to any class of these handsets, and on what transition period is appropriate for applying the requirements to newly covered handsets. Second, we seek further comment on whether to extend our in-store testing requirement beyond retail stores owned or operated by service providers to some or all other retail outlets. Third, we seek comment on whether to extend to all circumstances the ability to meet hearing aid compatibility RF reduction standards for GSM operations in the 1900 MHz band through software that enables the user to reduce maximum power output by up to 2.5 dB.

A. Extension of Hearing Aid Compatibility Rules to New Technologies and Networks

74. Background. Under current Commission rules, manufacturers and service providers are required to meet the Commission's hearing aid compatibility standards only to the extent that handsets are

(Continued from previous page)
Comments at ii, 9.

[147] *Notice*, 22 FCC Rcd at 19702 ¶ 88, *citing* Comments of Technology Access Program of Gallaudet University in WT Docket No. 06-203 at 7.

[148] RERC-TA Comments at 20.

[149] PRC Reply Comments at 6.

[150] Apple Reply Comments at 9.

[151] Nokia Comments at 9.

[152] RERC-TA Comments at 20.

associated with digital CMRS networks that "offer real-time, two-way switched voice or data service that is interconnected with the public switched network and utilize an in-network switching facility that enables the provider to reuse frequencies and accomplish seamless hand-offs of subscriber calls."[153] In the *Notice*, the Commission sought comment on whether it should extend some or a portion of the hearing aid compatibility requirements under Section 20.19 to wireless handsets that may fall outside the definition of CMRS and the criteria in Section 20.19(a), such as handsets that operate on unlicensed Wi-Fi networks that do not employ "an in-network switching facility that enables the provider to reuse frequencies and accomplish seamless hand-offs."[154] The Commission also sought comment on how its current hearing aid compatibility requirements apply to Mobile Satellite Services (MSS) providers that offer CMRS and whether any revisions to the hearing aid compatibility rules are appropriate respecting such providers.[155]

75. Generally, wireless handset manufacturers and service providers argue against adopting hearing aid compatibility requirements for emerging technologies, such as Voice over Internet Protocol (VoIP) provided over Wi-Fi networks, while those technologies are in a nascent state of development. Instead, they suggest that the Commission consider adopting a rule during its anticipated 2010 review of the hearing aid compatibility rules.[156] Similarly, ANSI ASC C63 suggests that the appropriate place for working out issues of hearing aid compatibility with respect to new and emerging technologies is in the collaborative process of ANSI ASC C63.[157] On the other hand, HIA argues that the Commission should attend early on to the framing and adoption of hearing aid compatibility requirements for new technologies and new frequency bands, which will allow equipment designers and manufacturers to understand their obligations and to plan accordingly.[158] In addition, HLAA and TDI contend that the hearing aid compatibility rules should apply to all emerging technologies so that affected consumers will not be left without access to these new technologies and networks. They also suggest that companies should have procedures in place to automatically include hearing aid compatibility in new designs and emerging technologies. They further state that the Wi-Fi and VoIP industries should be given notice now that the Commission will be prepared to issue a rule on emerging technologies at the 2010 review.[159]

76. With respect to MSS issues raised in the *Notice*, AT&T contends that terrestrial-capable MSS handsets with an ancillary terrestrial component should be subject to hearing aid compatibility requirements and deadlines in order to fulfill the Commission's statutory obligations and achieve competitive parity.[160] SIA, by contrast, urges the Commission not to apply hearing aid compatibility requirements to MSS providers at this time,[161] or, if the Commission were to impose requirements, at a minimum, (1) to provide manufacturers and providers sufficient time to study how any new obligations could be implemented in the context of each MSS system's technology, (2) to grandfather handsets

[153] 47 C.F.R. § 20.19(a).

[154] *See Notice*, 22 FCC Rcd at 19702-03 ¶ 89.

[155] *Id.* at 19700 ¶ 79.

[156] *See, e.g.*, AT&T Comments at 7; RIM Comments at 21; TIA Comments at ii, 7; Apple Reply Comments at 9-10; Nokia Reply Comments at 6-7; RIM Reply Comments at 6; VON Coalition Reply Comments at 4-7.

[157] *See* ANSI ASC C63 Reply Comments at 3.

[158] *See* HIA Comments at 2.

[159] *See* HLAA/TDI Comments at 8.

[160] AT&T Reply Comments at 10-11.

[161] SIA Comments at 3-6.

already in existence or under development, and (3) to apply a *de minimis* exception to all MSS providers. Specifically, SIA requests that MSS providers be given three years after they launch service or after the effective date of new rules to come into compliance with hearing aid compatibility requirements.[162]

77. Discussion. In the Policy Statement above, we conclude that our wireless hearing aid compatibility rules must provide people who use hearing aids and cochlear implants with continuing access to the most advanced and innovative communications technologies as they develop, while at the same time maximizing the conditions for innovation and investment.[163] Consistent with this principle, we propose that our hearing aid compatibility requirements should apply 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, so long as meeting hearing aid compatibility standards is technologically feasible and would not increase costs to an extent that would preclude successful marketing.

78. *Statutory Scope*. First, we propose to find that the scope of the Hearing Aid Compatibility Act broadly encompasses devices used to provide voice communications. The Hearing Aid Compatibility Act directs the Commission to establish regulations to ensure reasonable access by persons with hearing loss to "telephone service."[164] To achieve this end, the Act directs that we require "telephones" to meet hearing aid compatibility standards. The Act provides exemptions for, among other things, "telephones used with public mobile services" and "telephones used with private radio services,"[165] but stipulates, as discussed above, that the Commission should periodically review these exemptions and revoke or limit them if necessary to reflect developments over time in technology and usage patterns.[166] The Commission modified the exemption for wireless phones in 2003.[167]

79. Neither the Hearing Aid Compatibility Act nor the broader Communications Act defines the terms "telephone" or "telephone service." In view of the other provisions in the Act, however, we propose to interpret the term "telephone," as used in Section 710, to encompass anything that is commonly understood to be a telephone or to provide telephone service, as that understanding may evolve over time, regardless of regulatory classifications evoked elsewhere in the Communications Act.[168] We seek comment on this proposed finding and whether such a reading best fulfills the Congressional intent that "all persons should have available the best telephone service which is technologically and economically feasible."[169] Moreover, we seek comment on whether an evolving definition of "telephone," for purposes of the Hearing Aid Compatibility Act, is consistent with the directive that the Commission revoke or limit the exemptions for public mobile services and private radio services over

[162] *Id.* at 2, 6-7.

[163] *See supra,* Section III.

[164] 47 U.S.C. § 610(a).

[165] 47 U.S.C. § 610(b).

[166] 47 U.S.C. § 610(b)(2)(C). *See 2003 Hearing Aid Compatibility Order*, 18 FCC Rcd at 16765 ¶ 27 (noting that Congress initially exempted wireless phones because it then viewed them as complements, not substitutes, for wireline telephones), *citing* H.R. Rep. No. 100-674, at 8 (1988) (*House Report*).

[167] *See 2003 Hearing Aid Compatibility Order,* 18 FCC Rcd 16753.

[168] Congress enacted the Hearing Aid Compatibility Act in 1988 to provide access to telephone service for individuals with hearing loss. In adopting the Act, the House of Representatives Report stated that "the inability to use all telephones imposes social and economic costs on not only the hearing impaired, but the whole nation." *See House Report* at 7.

[169] 47 U.S.C. § 610, Note 1.

time to reflect developments in technology and usage patterns.[170]

80. Through the Act, Congress charged the Commission with the responsibility of establishing regulations as necessary to ensure access to telephone service by persons with hearing loss.[171] As cell phone use became integrated into everyday American life, the Commission lifted the prior exemption for digital wireless telephones and subjected them to hearing aid compatibility requirements under its rules.[172] We propose to find that to carry out Congress's mandate to ensure access to telephone service by persons with hearing loss, it would serve the public interest to interpret the definition of telephone to include wireless handsets that are used for voice communications among members of the public or a substantial portion of the public, regardless of whether the services provisioned through the handset may fall beyond the currently covered category of CMRS. We seek comment on this proposed finding.

81. In addition, we propose to find that this broad interpretation of the definition of telephone should include multi-use devices that can function as traditional telephones typically used by being held to the ear, but which may have other capabilities and serve additional purposes. While we recognize that rendering the telephone feature of such a device hearing aid-compatible may require adjustments to other features over which we might otherwise not have jurisdiction, we propose to find that under these circumstances, we nevertheless would have authority to require adjustments to both telephone features and other aspects of the device in order to render the device hearing aid-compatible. Under the Hearing Aid Compatibility Act, the Commission is specifically directed to establish such regulations as are necessary to ensure access to telephone service by persons with hearing loss. To the extent achievement of this goal may require imposing hearing aid compatibility requirements on multi-use devices with telephonic capabilities, as described above, we propose to find that we have jurisdiction to require hearing aid compatibility for such devices, and we seek comment on this proposed finding.

82. *Scope of Proposed Rule*. Our proposal herein to extend the scope of the hearing aid compatibility rules is limited to wireless handsets that afford an opportunity to communicate by voice with members of the public or with users of a network that is open to the public or a substantial portion of the public.[173] Thus, in a manner broadly consistent with the distinction drawn in the Hearing Aid Compatibility Act between "public mobile services" and "private radio services," we propose not to extend the rules to certain non-interconnected systems that are used solely for internal communications, such as public safety or dispatch networks.[174] While we recognize that there may be important interests in

[170] 47 U.S.C. § 610(b)(2)(C). We note in particular that "telephones" includes devices used to provide private radio services, thereby indicating that the term is not limited to devices providing services that are solely interconnected services. "Private radio services" is defined as "private land mobile radio services and other communications services characterized by the Commission in its rules as private radio services." 47 U.S.C. § 610(b)(4)(C). In 1994, Congress amended Section 332 of the Communications Act, replacing the public mobile service and private radio service categories with CMRS and private mobile [radio] service (PMRS). *See 2003 Hearing Aid Compatibility Order*, 18 FCC Rcd at 16764-65 ¶ 26. PMRS includes certain dispatch, monitoring, and other services that are not interconnected. *See* 47 C.F.R. § 20.3.

[171] *See* 47 U.S.C. § 610(a).

[172] *2003 Hearing Aid Compatibility Order*, 18 FCC Rcd 16753.

[173] Our proposal is limited to wireless handsets consistent with the scope of ANSI Standard C63.19. Thus, cordless telephones, including those commonly used in wireless PBXs, that are covered under Electronics Industries Association Recommended Standard RS-504 would remain subject to Section 68.4 of the Commission's rules and would not be affected by this proposal.

[174] We note that the statutory definitions of "public mobile services" and "private radio services" refer to regulatory distinctions that are no longer reflected in the Act and our rules, and that do not cover many services introduced (continued….)

affording access to these systems to employees who use hearing aids, we tentatively conclude that given the very different circumstances of the market for these handsets, and in the absence of an existing universe of handsets meeting hearing aid compatibility standards, the burdens on manufacturers and system operators of satisfying hearing aid compatibility requirements would outweigh the public benefits. We seek comment on this analysis, and in particular on whether the four criteria for revoking or limiting the wireless exemption are satisfied for any such internal systems.

83. At the same time, our proposal would include all otherwise covered handsets that are used for voice communication with members of the public or a substantial portion of the public, including those that may not be interconnected with the public switched telephone network but can access another network that is open to members of the public. To the extent a handset otherwise used for internal communications can also be used for voice communications with members of the public outside the internal network, it would also be covered under our proposal.[175] In addition, our proposal would cover handsets used for MSS that otherwise fall within the scope of the rule. In addressing the four criteria set forth below, commenters should consider whether the circumstances surrounding these or any other classes of handset should cause such handsets to be excluded from the rule.

84. *Statutory Criteria*. Under the Hearing Aid Compatibility Act, we are to revoke or limit the wireless exemption if four criteria are satisfied: (1) such revocation or limitation is in the public interest; (2) continuation of the exemption without such revocation or limitation would have an adverse effect on individuals with hearing loss; (3) compliance with the requirements adopted is technologically feasible for the telephones to which the exemption applies; and (4) compliance with the requirements adopted would not increase costs to such an extent that the telephones to which the exemption applies could not be successfully marketed.[176] We seek comment on whether these criteria are met with respect to handsets used for voice communications with members of the public or a substantial portion of the public.

85. *Adverse Effect on People with Hearing Loss.* We propose to find that failure to extend hearing aid compatibility requirements broadly to handsets used for voice communications with members of the public or a substantial portion of the public would have an adverse effect on people with hearing loss. In the *2003 Hearing Aid Compatibility Order*, we determined that continuing to exempt handsets providing certain CMRS from hearing aid compatibility requirements would have an adverse effect on individuals with hearing loss because the lack of hearing aid-compatible digital phones rendered them unable to take advantage of features of these phones that were becoming increasingly central to American life.[177] We propose to find that this is now true broadly for the range of handsets used to provide wireless voice communications, including those operating over new and developing technologies. If these new handsets are not made hearing aid-compatible, consumers with hearing loss would be largely denied the opportunity to use advanced functionalities and services that are rapidly becoming commonplace in our society. Given the rapid pace of technological innovation and the development of new modes of wireless voice communication, we are concerned about the consequences of waiting until a particular technology

(Continued from previous page)

since 1988. Moreover, the Act clearly grants us authority to revoke or modify the exemption for both public mobile services and private radio services. Nonetheless, while we do not rely on the public/private distinction to draw the line between those devices that we propose to cover under the hearing aid compatibility requirements and those we do not, we find the existence of the statutory distinction to be instructive.

[175] *See supra*, para. 66 (extending hearing aid compatibility rules to handsets that a business distributes to its employees primarily for internal communications but that can also be used for external voice communications within the scope of Section 20.19(a)).

[176] 47 U.S.C. § 610(b)(2)(C).

[177] *2003 Hearing Aid Compatibility Order*, 18 FCC Rcd at 16766-68 ¶¶ 30-34.

is in widespread use before beginning a proceeding to determine that lack of access to that technology adversely affects individuals with hearing loss. Rather, we suggest that it is the inability to access innovative technologies *as they develop* that has an adverse effect. We therefore propose, in order to encourage manufacturers to consider hearing aid compatibility at the earliest stages of the product design process, to establish a broad scope for hearing aid compatibility obligations that is not dependent on particular forms of network technology. We propose to find that this broad scope is necessary to fulfill the goal of the Hearing Aid Compatibility Act that people who use hearing aids and cochlear implants have access to the fullest feasible extent to all means of voice communication. We seek comment on this analysis.

86. *Public Interest*. We also propose to find that expanding the scope of our hearing aid compatibility requirements as described would serve the public interest. In 2003, we found that modifying the wireless hearing aid compatibility exemption promoted the public interest because, among other reasons, it enabled people with hearing loss to enjoy the public safety and other benefits of digital wireless phones and it enabled all consumers to communicate more easily with those who have hearing loss.[178] The Hearing Aid Compatibility Act makes clear that consumers with hearing loss should be afforded equal access to communications networks to the fullest extent feasible.[179] To ensure the public interest is served in such fashion, our stated policy is to encourage manufacturers to consider hearing aid compatibility at the earliest stages of the product design process. Commenters should address our proposed finding that further modification of the exemption to reach handsets using new technologies is in the public interest today.

87. In addition, we are unconvinced to date by arguments that applying hearing aid compatibility requirements to MSS would not confer significant public benefits.[180] To the contrary, even if MSS has relatively few consumer users, both users who subscribe as individuals and those who are provided access to MSS by their employers would benefit from the option to obtain hearing aid-compatible telephones.[181] Furthermore, the usage of MSS may increase. Indeed, due to its ubiquitous coverage and its resistance to disruption from terrestrial disasters, in some situations MSS has important advantages over terrestrial wireless service.[182] Therefore, we propose to find that failure to apply hearing aid compatibility requirements to MSS handsets would adversely affect individuals with hearing loss, and that it would serve the public interest to ensure that individuals with hearing loss have access to hearing aid-compatible MSS handsets.[183] We seek comment on this analysis.

88. *Technological Feasibility*. In the *2003 Hearing Aid Compatibility Order*, we found that meeting hearing aid compatibility standards was technologically feasible for the telephones covered by

[178] *Id.* at 16768-69 ¶¶ 35-37.

[179] 47 U.S.C. § 610 note.

[180] *See* SIA Comments at 3-6.

[181] As discussed above, we are applying our hearing aid compatibility rules to include otherwise covered handsets that are provided by an employer for internal communications if they also have the capability to be used for voice communications outside the internal network. *See supra*, para. 66.

[182] Federal Communications Commission, Connecting America: The National Broadband Plan, at 87 (2010); *see also* SkyTerra Communications, Inc., Transferor and Harbinger Capital Partners Funds, Transferee, Applications for Consent to Transfer of Control of SkyTerra Subsidiary, LLC, *Memorandum Opinion and Order and Declaratory Ruling*, 24 FCC Rcd 3059, 3077 ¶ 30 (IB 2010).

[183] We further note that there is no record evidence that achieving hearing aid compatibility for MSS handsets is technologically infeasible or would impose costs that would preclude marketability.

that order in large part because several handsets were already on the market that met those standards.[184] To the extent that handsets are currently on the market or are planned for introduction that fall within the rule coverage that we propose today, but that are not covered by the existing rule, we seek comment on whether they would meet the existing ANSI standard (or a similar performance standard, for frequency bands and air interfaces that are not addressed by the existing standard). Moreover, because the hearing aid compatibility standards are already being met for handsets that operate on a variety of 2G and 3G air interfaces over two well separated frequency bands, we consider it likely, in the absence of evidence to the contrary, that the same standards could also be met for handsets used for similar services that are not within the class of currently covered CMRS. While we recognize that technological feasibility cannot be predicted with certainty for future handsets, we note that that the Hearing Aid Compatibility Act expressly provides for waivers for new telephones or telephones associated with a new technology or service in cases of technological infeasibility.[185] Therefore, absent evidence that meeting hearing aid compatibility standards is not technologically feasible for any class of handsets or service, we anticipate that compliance will be technologically feasible. Commenters arguing that compliance is not technologically feasible should provide specific engineering evidence related to a defined class of handsets.

89. We seek comment on how our hearing aid compatibility rules should address circumstances where voice capability may be enabled on a handset by a party other than the manufacturer, particularly where adding the new voice capability may affect operating parameters of the handset such as the frequency range, modulation type, maximum output power, or other parameters specified in the Commission's rules. Our rules for equipment authorization hold the grantee to be the responsible party to ensure continued compliance of the handset and require the grantee to inform the Commission if these parameters change.[186] We seek comment on the proper procedures for a manufacturer to test the hearing aid compatibility of voice functions that are not initially installed into the phone but may be enabled, for example, by the installation of a software program that affects the circumstances under which the transmitter operates.[187] We seek comment on whether there are other ways to ascertain and regulate the hearing aid compatibility of such functions, for example, at the time the service provider or applications store enables that software. We also seek comment on the appropriate regulatory treatment if the hearing aid compatibility of these functions cannot be tested; in particular, whether a handset that meets hearing aid compatibility standards for all voice operations built into the phone but can also accommodate software-added voice operations that cannot be tested may be counted as hearing aid-compatible.[188] Commenters should consider handsets that can provide additional voice capabilities to those already available in the off-the-shelf handset via the installation of software, as well as handsets whose only, or initial, voice capability is not incorporated off the shelf but is instead available through commercial sources. In addressing these issues, commenters should consider how voice services may be offered over new technologies such as WiMax and LTE interfaces and who may manage these

[184] *2003 Hearing Aid Compatibility Order*, 18 FCC Rcd at 16771, 16774 ¶¶ 44, 49. We also discussed the availability of technology that could be incorporated into phones to enable them to meet the standards. *Id.* at 16772-74, ¶¶ 45-48.

[185] 47 U.S.C. § 610(b)(3).

[186] *See* 47 C.F.R. §§ 2.909, 2.932, 2.1043.

[187] We note that unless a phone is approved as a Software Defined Radio (SDR) under Section 2.944(b) of our rules, third party software cannot modify "the circumstances under which the transmitter operates in accordance with Commission rules." 47 C.F.R § 2.944(b).

[188] As an interim measure, such handsets may be considered hearing aid-compatible but must be labeled as not having been tested for all operations. *See supra*, Section IV A 3.

capabilities.

90. *Marketability*. We previously found that the costs of compliance would not preclude successful marketing for phones covered under the current rules because some phones meeting the standard for acoustic coupling compliance were already being marketed, the modifications needed to achieve inductive coupling capability did not appear unduly costly, and increased demand was anticipated to drive down production costs.[189] Based on the number of hearing aid-compatible models that are already being successfully marketed across multiple air interfaces and frequency bands, we anticipate, in the absence of convincing evidence to the contrary, that other telephones offering similar capabilities and meeting the same or comparable compliance standards could also be successfully marketed. We seek comment, supported by evidence, on whether this is so, and whether there is any class of handsets for which the cost of achieving compliance would preclude successful marketing. Again, we note the availability of waivers in the event future new telephones or telephones used with new technologies could not be successfully marketed due to hearing aid compatibility compliance costs.[190]

91. Absent convincing evidence of technological infeasibility or costs that preclude marketability, we intend to apply to all handsets that will be covered under our broadened rule, after an appropriate transition period,[191] the same hearing aid compatibility requirements that apply to currently covered handsets. We seek comment on whether, for reasons of technological infeasibility or prohibitive costs, these numerical benchmarks or other rule provisions cannot be applied to any class of handsets. Again, we seek specific evidence as to why particular requirements cannot be met and what alternative requirements would be feasible and appropriate.

92. *Transition Period*. Ever since the Commission adopted the first wireless hearing aid compatibility rules in 2003, we have consistently recognized that it takes time for handsets with new specifications to be designed, produced, and brought to market, and accordingly we have afforded meaningful transition periods before new hearing aid-compatible handset deployment benchmarks and other requirements have become effective.[192] For example, the initial benchmarks for acoustic coupling compatibility became effective only two years after the *2003 Hearing Aid Compatibility Order*.[193] For inductive coupling capability, we afforded three years in recognition that greater design changes might be necessary to meet the standard.[194] Similarly, our limited delegation of authority to WTB and OET to adopt new technical standards provides that any new obligations imposed as a result of such standards cannot become effective on manufacturers and Tier I carriers less than one year after release of the adopting order, and on other service providers less than 15 months after release.[195] In the Second Report and Order above, we provide that newly launched models must meet hearing aid compatibility standards for new frequency bands and air interfaces in order to be counted as hearing aid-compatible beginning 12

[189] *2003 Hearing Aid Compatibility Order*, 18 FCC Rcd at 16775 ¶¶ 51-52.

[190] 47 U.S.C. § 610(b)(3).

[191] *See infra*, paras. 92-93.

[192] We note that our rules only require, on a going-forward basis, that manufacturers and service providers offer minimum numbers of hearing aid-compatible models. So long as these benchmarks are met, we do not limit, and do not propose to limit, the sale of any handset that does not meet hearing aid compatibility standards.

[193] *See 2003 Hearing Aid Compatibility Order*, 18 FCC Rcd at 16780 ¶ 65. We note that the benchmarks set forth numeric obligations that do not necessarily require existing models to be retrofitted or discontinued.

[194] *Id.* at 16781 ¶ 71.

[195] 47 C.F.R. § 20.19(k)(1).

months after the standard is adopted by the Commission,[196] and we provide various two-year transition periods for manufacturers and service providers that will be newly excluded from the *de minimis* rule.[197]

93. We seek comment on the appropriate transition period for applying hearing aid compatibility benchmarks and other requirements to lines of handsets that are outside the subset of CMRS that is currently covered by Section 20.19(a). Would a two-year transition be appropriate, consistent with the lead time the Commission afforded to comply with the original requirements for acoustic coupling compatibility? Would a shorter period, such as one year, be reasonable given that manufacturers are already meeting hearing aid compatibility requirements for currently covered classes of handsets, and many of the engineering solutions reached for those handsets may be transferrable to others? Is it likely that many handsets will already meet hearing aid compatibility standards either as already marketed or as currently planned, and therefore all that will be required is testing of existing handsets rather than introduction of new products? On the other hand, are there special design difficulties that may render a longer transition period necessary for some classes of handsets? For example, are there any special characteristics of satellite transmission that may require particular transition rules for MSS?[198] In consideration of the time needed for phones to progress from the production line to service providers' offerings, should the transition period be longer for service providers than for manufacturers, and should it be longer for smaller service providers than for Tier I carriers?[199] Parties are invited to comment on these and any other transition issues, either for all newly covered handsets or some subset of those handsets.

B. In-Store Testing Requirement for Independent Retailers

94. Background. Section 20.19(c) and (d) of the Commission's rules requires that wireless service providers make their hearing aid-compatible handset models available for consumer testing in each retail store that they own or operate.[200] This testing requirement does not apply to non-service providers, such as individuals, independent retailers, importers, or manufacturers. In the *2007 Second Report and Order*, the Commission found that the record at that time did not support a change to the in-store testing requirement, but it sought further comment on this issue in the *Notice* in light of "changes to the marketplace and regulatory environment since 2005."[201]

95. Discussion. We seek further, more targeted comment on whether the in-store testing requirement should be extended to some or all retail outlets other than those owned or operated by service providers. Given the growth of new channels of distribution, extension of the in-store testing requirement would help to ensure that consumers have the information they need to choose a handset that will operate correctly with their hearing aid or cochlear implant. We seek comment as to whether, if we do extend the in-store testing requirement to some retail stores other than those owned or operated by service providers, we should extend it to all entities that sell handsets to consumers through physical locations[202] or whether

[196] *See supra*, para. 33.

[197] *See supra*, paras 49-50.

[198] We note that SIA has suggested a three-year transition period before hearing aid compatibility requirements are applied to handsets that are used to provide MSS. SIA Comments at 7.

[199] *See First Report and Order*, 23 FCC Rcd at 3424 ¶ 46 (affording service providers other than Tier I carriers an additional three months to meet deployment benchmarks in recognition of delays they encounter obtaining new model handsets from manufacturers and vendors).

[200] 47 C.F.R. § 20.19(c), (d).

[201] *2007 Second Report and Order,* 22 FCC Rcd at 19681 ¶ 27; *Notice*, 22 FCC Rcd at 19705-06 ¶ 97.

[202] We recognize that it is infeasible to require an opportunity for testing in advance of purchase for online sales.

some of these retailers should be excluded from the requirement based on their general customer service practices, the types or numbers of handsets that they sell, their size, or other considerations.

96. In addition to allowing consumers to test handsets, we seek comment on whether we should require independent retailers to allow a customer with hearing loss to return a handset without penalty, either instead of or in addition to an in-store testing requirement. We note that the Commission previously encouraged wireless service providers to provide a 30 day trial period or otherwise be flexible on their return policies for consumers seeking access to compliant phones.[203] We reiterate that a flexible return policy could help consumers with hearing loss by providing them with additional time and opportunity to ensure that their handset is compatible with their hearing aid.

97. We also seek comment on the Commission's authority to extend the in-store testing requirement beyond service providers. First, we seek comment on interpreting Sections 1 and 2 of the Communications Act,[204] coupled with that Act's Section 3 definition of "radio communications,"[205] to cover retail operations that have become enmeshed in the provision of wireless service.[206] We seek comment on whether a retailer engaged in the sale of wireless handsets is subject to our general jurisdictional grant because it is engaged in providing "services," including the sale of "instrumentalities, facilities, [and] apparatus . . . incidental to… transmission."

98. Further, the Act authorizes the Commission to "make reasonable regulations . . . governing the interference potential of handsets which in their operation are capable of emitting radio frequency energy . . . in sufficient degree to cause harmful interference to radio communications . . ."[207] The Act further provides that "[n]o person shall . . . sell, offer for sale, . . . , or use devices, which fail to comply with regulations promulgated pursuant to this section."[208] We seek comment on whether expanding in-store testing requirements to help consumers operate equipment in a manner that does not cause interference to their hearing aids would fall within our jurisdiction under these provisions. In addition, the language of the Hearing Aid Compatibility Act itself is expansive, and it clearly envisions that the Commission should exercise its mandate broadly by "establish[ing] such regulations as are necessary" to ensure access to telephone service by persons with hearing loss.[209] We seek comment on whether this language provides a basis for exercising our jurisdiction over additional parties so that we may continue to fulfill the mandate of the Hearing Aid Compatibility Act.

C. GSM Operations at 1900 MHz

99. In the Second Report and Order above, we amend our rules so that a manufacturer or

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[203] *See 2003 Hearing Aid Compatibility Order*, 18 FCC Rcd at 16788 ¶ 93; *2005 Reconsideration Order and Further Notice,* 20 FCC Rcd at 11240 ¶ 40.

[204] 47 U.S.C. §§ 151, 152(a).

[205] 47 U.S.C. § 153(33). Section 3(33) defines "communications by radio" as including not only "transmission" of content, but also "all instrumentalities, facilities, apparatus, and services . . . incidental to such transmission."

[206] We note that, in the past, the Commission has found that its authority to impose hearing aid compatibility requirements extended to entities beyond service providers and manufacturers. *See* Access to Telecommunications Equipment by the Hearing Impaired and Other Disabled Persons, 49 Fed. Reg. 1352, 1357-58 ¶¶ 31-36 (Jan. 11, 1984).

[207] 47 U.S.C. § 302a(a).

[208] 47 U.S.C. § 302a(b).

[209] 47 U.S.C. § 610(a); *see also House Report* at 7 (stating that "the inability to use all telephones imposes social and economic costs on not only the hearing impaired, but the whole nation").

service provider that offers one or two handset models over the GSM air interface, which would not have to offer any hearing aid-compatible GSM models but for its size, may meet its hearing aid compatibility deployment obligation by offering one handset that allows consumers to reduce the maximum transmit power only for operations over the GSM air interface in the 1900 MHz band by up to 2.5 decibels and that meets the criteria for an M3 rating after such power reduction.[210] We here seek comment on whether we should treat such handsets as hearing aid-compatible for all purposes.

100. Section 20.19(b) of our rules provides that a newly certified handset is hearing aid-compatible if it meets the standard set forth in the 2007 revision of ANSI Standard C63.19,[211] and that standard states that the handset must be tested using its maximum rated RF output power.[212] As discussed above, the requirement to test for hearing aid compatibility at full power serves the important goal of ensuring that people with hearing loss have equal access to all of the service quality and performance that a given wireless phone provides.[213] At the same time, meeting the RF interference reduction standard for phones operating over the GSM air interface in the 1900 MHz band poses significant technical challenges, particularly for phones with certain desirable form factors.[214] Moreover, as a legacy 2G network, GSM is in the process of being supplanted by newer and more powerful technologies.[215] Under these circumstances, we seek comment on whether it is in the public interest to relax the requirement to test handsets for hearing aid compatibility at full power in order to facilitate the near-term availability of desirable handsets to consumers. We welcome data on the effects that a 2.5 dB reduction in maximum power output will have on coverage, as well as any other effects on consumers with or without hearing loss. In addition, we ask commenters to address how the proposed revision of ANSI Standard C63.19, which would make it approximately 2.2 dB easier for a GSM phone to achieve an M3 rating,[216] should affect our analysis. Does the expected revision, by making it likely that many handsets will no longer need to reduce their power to meet the M3 criteria, ameliorate any negative effects of a rule change by rendering it less likely that companies will use that rule change beyond the near term? Or does the imminent prospect of a standards change that may largely eliminate the apparent problem counsel against further adjustments to our rules to address that problem?

101. We propose to find that if we were to extend the ability to meet hearing aid compatibility standards by allowing the user to reduce the maximum power for GSM operations in the 1900 MHz band, we would do so subject to the same conditions that we have imposed in the context of the *de minimis* rule. Thus, the handset would have to operate at full power when calling 911, and the manufacturer or service provider would have to disclose that activation of a special mode is required to meet the hearing aid compatibility standard and must explain how to activate the special mode and the possibility of a loss of coverage in the device manual or product insert.[217] We seek comment on these and any other possible conditions.

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[210] *See supra*, paras. 51-56.

[211] 47 C.F.R. § 20.19(b), (b)(1)(ii).

[212] *See* IEEE American National Standard Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids, ANSI C63.19-2007; *see also OET Guidance*.

[213] *See, e.g., Cingular Waiver Order,* 20 FCC Rcd at 15113 ¶ 10.

[214] *See supra,* para. 52.

[215] *See July 9, 2010 Apple Letter* at 3.

[216] *See July 2010 ANSI Report* at 5.

[217] *See supra,* para. 56.

VI. PROCEDURAL MATTERS

A. Final Regulatory Flexibility Analysis

102. As required by the Regulatory Flexibility Act of 1980 ("RFA"),[218] the Commission has prepared a Final Regulatory Flexibility Analysis ("FRFA") relating to this Second Report and Order. The FRFA is set forth in Appendix D.

B. Final Paperwork Reduction Act Analysis

103. The Second Report and Order contains modified information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. It will be submitted to the Office of Management and Budget (OMB) for review under Section 3507(d) of the PRA. OMB, the general public, and other Federal agencies are invited to comment on the modified information collection requirements contained in this proceeding. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. 3506(c)(4), we sought specific comment on how we might further reduce the information collection burden for small business concerns with fewer than 25 employees.

104. In this present document, we have assessed the effects of extending to all handsets that incorporate new frequency bands and air interfaces for which hearing aid compatibility technical standards do not yet exist the same counting and disclosure rules that currently apply to handsets with Wi-Fi capability, as well as the disclosure requirements associated with modifying the hearing aid compatibility technical standards for manufacturers and service providers that offer one or two handsets operating over the legacy 2G GSM air interface in the 1900 MHz band. We find that these disclosure requirements are necessary to ensure that consumers are adequately informed of the underlying measures that, taken as a whole, will increase the availability of innovative handsets and reduce the burden of complying with the hearing aid compatibility requirements for entities including small businesses.

C. Initial Regulatory Flexibility Analysis

105. As required by the Regulatory Flexibility Act, *see* 5 U.S.C. § 603, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities of the policies and rules proposed in this document. The IRFA is set forth in Appendix E. Written public comments are requested on the IRFA. These comments must be filed in accordance with the same filing deadlines as comments filed in response to this Further Notice of Proposed Rule Making as set forth in Section VI.F.2. below and have a separate and distinct heading designating them as responses to the IRFA.

D. Initial Paperwork Reduction Act Analysis

106. The Further Notice does not contain proposed information collection(s) subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. 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).

E. Congressional Review Act

107. The Commission will include a copy of this Report and Order and Further Notice of Proposed Rulemaking in a report to be sent to Congress and the Government Accountability Office

[218] *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").

pursuant to the Congressional Review Act, *see* 5 U.S.C. 801(a)(1)(A).

F. Other Procedural Matters

1. *Ex Parte* Presentations

108. The rulemaking shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's *ex parte* rules.[219] Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentations must contain summaries of the substance of the presentations and not merely a listing of the subjects discussed. More than a one or two sentence description of the views and arguments presented generally is required.[220] Other requirements pertaining to oral and written presentations are set forth in Section 1.1206(b) of the Commission's rules.[221]

2. Comment Filing Procedures

109. Pursuant to Sections 1.415 and 1.419 of the Commission's rules, 47 C.F.R. §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. All filings related to this Second Report and Order and Further Notice of Proposed Rulemaking should refer to WT Docket No. 07-250. Comments may be filed using: (1) the Commission's Electronic Comment Filing System (ECFS), (2) the Federal Government's eRulemaking Portal, or (3) by filing paper copies. *See Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: http://fjallfoss.fcc.gov/ecfs2/ or the Federal eRulemaking Portal: http://www.regulations.gov. Filers should follow the instructions provided on the website for submitting comments.

    - ECFS filers must transmit one electronic copy of the comments for WT Docket No. 07-250. In completing the transmittal screen, filers should include their full name, U.S. Postal Service mailing address, and the applicable docket number. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions, filers should send an e-mail to ecfs@fcc.gov, and include the following words in the body of the message, "get form." A sample form and directions will be sent in response.

- Paper Filers: Parties who choose to file by paper must file an original and four copies of each filing. Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail). All filings must be addressed to the Commission's Secretary, Marlene H. Dortch, Office of the Secretary, Federal Communications Commission, 445 12th St., S.W., Washington, DC 20554.

    - All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. The filing hours at this location are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building.

[219] 47 C.F.R. §§ 1.200 *et seq.*

[220] *See* 47 C.F.R. § 1.1206(b)(2).

[221] 47 C.F.R. § 1.1206(b).

- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.

- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

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

111. For further information regarding the Further Notice of Proposed Rule Making, contact John Borkowski, Wireless Telecommunications Bureau, (202) 418-0626, e-mail John.Borkowski@fcc.gov.

112. Parties should send a copy of their filings to John Borkowski, Federal Communications Commission, Room 6404, 445 12th Street, S.W., Washington, D.C. 20554, or by e-mail to John.Borkowski@fcc.gov. Parties shall also serve one copy with the Commission's copy contractor, Best Copy and Printing, Inc. (BCPI), Portals II, 445 12th Street, S.W., Room CY-B402, Washington, D.C. 20554, (202) 488-5300, or via e-mail to fcc@bcpiweb.com.

113. Documents in WT Docket No. 07-250 will be available for public inspection and copying during business hours at the FCC Reference Information Center, Portals II, 445 12th Street S.W., Room CY-A257, Washington, D.C. 20554. The documents may also be purchased from BCPI, telephone (202) 488-5300, facsimile (202) 488-5563, TTY (202) 488-5562, e-mail fcc@bcpiweb.com.

VII. ORDERING CLAUSES

114. IT IS ORDERED that, pursuant to the authority of Sections 4(i), 303(r), and 710 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(r), and 610, this Second Report and Order IS HEREBY ADOPTED.

115. IT IS FURTHER ORDERED that Part 20 of the Commission's Rules, 47 C.F.R. Part 20, IS AMENDED as specified in Appendix B, effective 30 days after publication of the Order in the *Federal Register*, except for the amendments to Section 20.19(f), which contain an information collection that is subject to OMB approval.[222]

116. IT IS FURTHER ORDERED that the information collection contained in this Second Report and Order WILL BECOME EFFECTIVE following approval by the Office of Management and Budget. The Commission will publish a document at a later date establishing the effective date.

117. IT IS FURTHER ORDERED that, pursuant to the authority of sections 4(i), 303(r), and 710 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(r), and 610, this Further Notice of Proposed Rulemaking IS HEREBY ADOPTED.

118. IT IS FURTHER ORDERED that pursuant to applicable procedures set forth in Sections 1.415 and 1.419 of the Commission's Rules, 47 C.F.R. §§ 1.415, 1.419, interested parties may file comments on this Further Notice of Proposed Rulemaking on or before 45 days after publication of the Further Notice of Proposed Rulemaking in the *Federal Register* and reply comments on or before 75 days after publication in the *Federal Register*.

119. IT IS FURTHER ORDERED that the Commission's Consumer Information Bureau,

[222] *See* 5 U.S.C. § 553(d)(3) ("[t]he required publication or service of a substantive rule shall be made not less than 30 days before its effective date, except . . . as otherwise provided by the agency for good cause found and published with the rule"); s*ee also* 47 C.F.R. §§ 1.103(a), 1.427(b).

Reference Information Center, SHALL SEND a copy of the Policy Statement and Second Report and Order and Further Notice of Proposed Rulemaking, including the Final Regulatory Flexibility Analysis and Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

List of Commenters

Comments

Alliance for Telecommunications Industry Solutions (ATIS)
American National Standards Institute Accredited Standards Committee C63® (ANSI ASC C63®)
AT&T, Inc. (AT&T)
Chinook Wireless
Consumer Electronics Retailers Coalition (CERC)
Gallaudet University Technology Access program and Rehabilitation Engineering Research Center on Telecommunications Access (RERC-TA)
Hearing Industries Association (HIA)
Hearing Loss Association of America and Telecommunications for the Deaf and Hard of Hearing, Inc. (HLAA /TDI)
MetroPCS Communications, Inc. (MetroPCS)
Motorola, Inc. (Motorola)
Nokia Inc. (Nokia)
Radioshack Corporation (Radioshack)
Rehabilitation Engineering Research Center for Wireless Technologies (Wireless RERC)
Research in Motion Limited (RIM)
Rural Cellular Association (RCA)
The Satellite Industry Association (SIA)
Sony Ericsson Mobile Communications (Sony Ericsson)
T-Mobile USA, Inc. (T-Mobile)
Telecommunications Industry Association (TIA)

Reply Comments

ATIS
ANSI ASC C63®
Apple, Inc. (Apple)
AT&T
CTIA – The Wireless Association (CTIA)
Iowa Wireless Services, LLC
MetroPCS
Motorola
Nokia
PerrineCrest Radio Consulting (PRC)
RIM
SouthernLINC Wireless
T-Mobile
Verizon Wireless
Voice on the Net Coalition (VON Coalition)
Virgin Mobile, USA, L.P. (Virgin Mobile)

***Ex Parte* Comments of 08/28/08**

CTIA
Hearing Loss Association of America, Telecommunications for the Deaf and Hard of Hearing, Inc., Association of Late-Deafened Adults, Inc., Deaf & Hard of Hearing Consumer Advocacy Network, and National Association of the Deaf (HLAA *et al*.)

Motorola
RERC-TA
RIM
TIA

APPENDIX B

Final Rules

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

1. 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.

2. Section 20.19 is amended by adding a new paragraph (a)(3)(i), redesignating existing paragraphs (a)(3)(i)-(a)(3)(iv) as (a)(3)(ii)-(a)(3)(v), revising paragraph (b), revising paragraph (c)(1), adding a new paragraph (c)(1)(ii)(C), revising paragraph (d)(1), redesignating paragraph (e)(1) as paragraph (e)(1)(A), adding new paragraphs (e)(1)(B) and (e)(1)(C), revising paragraph (f)(2), adding a new paragraph (f)(3), and amending paragraph (k)(1) to read as follows:

§ 20.19 Hearing aid-compatible mobile handsets.

(a) * * *

(3) * * *

(i) *Handset* refers to a device used in delivery of the services specified in paragraph (a)(1) of this section that contains a built-in speaker and is typically held to the ear in any of its ordinary uses.

* * * * *

(b) *Hearing aid compatibility; technical standards*. A wireless handset used for digital CMRS only over the frequency bands and air interfaces referenced in paragraph (a)(1) of this section is hearing aid-compatible with regard to radio frequency interference or inductive coupling if it meets the applicable technical standard(s) set forth in paragraphs (b)(1) and (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 Sec. 2.1033(d) of this chapter. A wireless handset that incorporates an air interface or operates over a frequency band for which no technical standards are stated in ANSI C63.19-2007 (June 8, 2007) is hearing aid-compatible if the handset otherwise satisfies the requirements of this paragraph.

* * * * *

(c) * * *

(1) *Manufacturers*.

(i) *Number of hearing aid-compatible handset models offered*. For each digital air interface for which it offers wireless handsets in the United States or imported for use in the United States, each manufacturer of wireless handsets must offer handset models that comply with paragraph (b)(1) of this section as set forth below. Prior to [**INSERT DATE ONE YEAR AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**], handset models for purposes of this paragraph include only models offered to service providers in the United States.

(A) If it offers four to six models, at least two of those handset models must comply with the requirements set forth in paragraph (b)(1) of this section.

(B) If it offers more than six models, at least one-third of those handset models (rounded down to the nearest whole number) must comply with the requirements set forth in paragraph (b)(1) of this section;.

(ii) * * *

(C) Beginning [**INSERT DATE TWO YEARS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**], for manufacturers that together with their parent, subsidiary, or affiliate companies under common ownership or control, have had more than 750 employees for at least two years and that offer two models over an air interface for which they have been offering handsets for at least two years, at least one new model rated M3 or higher shall be introduced every other calendar year.

* * * * *

(d) * * *

(1) *Manufacturers*. Each manufacturer offering to service providers four or more handset models, and beginning [**INSERT DATE ONE YEAR AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**], each manufacturer offering four or more handset models, in a digital air interface for use in the United States or imported for use in the United States must ensure that it offers to service providers, and beginning [**INSERT DATE ONE YEAR AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**] must ensures that it offers, at a minimum, the following number of handset models that comply with the requirements set forth in paragraph (b)(2) of this section, whichever number is greater in any given year.

* * * * *

(e) * * *

(1) * * *

(B) Notwithstanding paragraph (e)(1)(A) of this section, beginning [**INSERT DATE TWO YEARS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**], manufacturers that have had more than 750 employees for at least two years and service providers that have had more than 1500 employees for at least two years, and that have been offering handsets over an air interface for at least two years, that offer one or two digital wireless handsets in that air interface in the United States must offer at least one handset model compliant with paragraphs (b)(1) and (b)(2) of this section in that air interface, except as provided in paragraph (e)(1)(C) of this section. Service providers that obtain handsets only from manufacturers that offer one or two digital wireless handset models in an air interface in the United States, and that have had more than 750 employees for at least two years and have offered handsets over that air interface for at least two years, are required to offer at least one handset model in that air interface compliant with paragraphs (b)(1) and (b)(2) of this section, except as provided in paragraph (e)(1)(C) of this section. For purposes of this paragraph, employees of a parent, subsidiary, or affiliate company under common ownership or control with a manufacturer or service provider are considered employees of the manufacturer or service provider. Manufacturers and service providers covered by this paragraph must also comply with all other requirements of this section.

(C) Manufacturers and service providers that offer one or two digital handset models that operate over the GSM air interface in the 1900 MHz band may satisfy the requirements of paragraph (e)(1)(B) of this section by offering at least one handset model that complies with paragraph (b)(2) of this section and that

either complies with paragraph (b)(1) of this section or meets the following conditions: (i) the handset enables the user optionally to reduce the maximum power at which the handset will operate by no more than 2.5 decibels, except for emergency calls to 911, only for GSM operations in the 1900 MHz band; (ii) the handset would comply with paragraph (b)(1) of this section if the power as so reduced were the maximum power at which the handset could operate; and (iii) customers are informed of the power reduction mode as provided in paragraph (f)(3) of this section. Manufacturers and service providers covered by this paragraph must also comply with all other requirements of this section.

* * * * *

(f) * * *

(2) *Disclosure requirement relating to handsets that operate over an air interface or frequency band without hearing aid compatibility technical standards.* Each manufacturer and service provider shall ensure that, wherever it provides hearing aid compatibility ratings for a handset that incorporates an air interface or operates over a frequency band for which no technical standards are 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 has not been rated for hearing aid compatibility with respect to that operation. 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.

However, service providers are not required to include this language in the packaging material for handsets that incorporate a Wi-Fi air interface and that were obtained by the service provider before **[INSERT DATE 6 MONTHS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER**], provided that the service provider otherwise discloses by clear and effective means that the handset has not been rated for hearing aid compatibility with respect to Wi-Fi operation.

(3) *Disclosure requirement relating to handsets that allow the user to reduce the maximum power for GSM operation in the 1900 MHz band.* Handsets offered to satisfy paragraph (e)(1)(C) of this section shall be labeled as meeting an M3 rating. Each manufacturer and service provider shall ensure that, wherever this rating is displayed, 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 user activation of a special mode is necessary to meet the hearing aid compatibility standard. In addition, each manufacturer or service provider shall ensure that the device manual or a product insert explains how to activate the special mode and that doing so may result in a reduction of coverage.

* * * * *

(k) *Delegation of rulemaking authority.* (1) The Chief of the Wireless Telecommunications Bureau and the Chief of the Office of Engineering and Technology are delegated authority, by notice-and-comment rulemaking, to issue an order amending this section to the extent necessary to adopt technical standards

for additional frequency bands and/or air interfaces upon the establishment of such standards by ANSI Accredited Standards Committee C63™, provided that the standards do not impose with respect to such frequency bands or air interfaces materially greater obligations than those imposed on other services subject to this section. Any new obligations on manufacturers and Tier I carriers pursuant to paragraphs (c) through (i) of this section as a result of such standards shall become effective no less than one year after release of the order adopting such standards and any new obligations on other service providers shall become effective no less than 15 months after the release of such order, except that any new obligations on manufacturers and service providers subject to paragraph (e)(1)(B) of this section shall become effective no less than two years after the release of such order.

* * * * *

APPENDIX C

Proposed Rules

The Federal Communications Commission proposes to amend Part 20 of Title 47 of the Code of Federal Regulations as follows:

1. 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.

2. The Federal Communications Commission proposes to amend Section 20.19 by revising paragraph (a)(1), adding a new paragraph (a)(3), redesignating existing paragraph (a)(3) as (a)(4), revising paragraphs (a)(4)(iv) and (a)(4)(v) as redesignated, revising paragraph (b), adding new paragraph (b)(1)(iii), revising paragraph (c)(4), deleting paragraph (c)(4)(i)-(ii), revising paragraph (d)(4), deleting paragraph (d)(4)(i)-(ii), revising the first sentence of paragraph (f)(3), and adding paragraph (l) to read as follows:

§ 20.19 Hearing aid-compatible mobile handsets.

(a) Scope of section; definitions. (1) The hearing aid compatibility requirements of this section apply to providers of wireless service that can be used for voice communications among members of the public or a substantial portion of the public, where such service is provided over frequencies in the 800–950 MHz or 1.6–2.5 GHz bands using any air interface for which technical standards are stated in the standard document "American National Standard Methods of Measurement of Compatibility Between Wireless Communication Devices and Hearing Aids," American National Standards Institute (ANSI) C63.19–2007 (June 8, 2007).

* * * * *

(3) The requirements of paragraph (l) of this section apply to all entities that sell wireless handsets that are used in delivery of the services specified in paragraph (a)(1) of this section to consumers through a physical location, whether or not those entities are included in paragraph (a)(1) or (a)(2) of this section.

(4) *Definitions*. For the purposes of this section:

* * * * *

(iv) *Service provider* refers to a provider of wireless service to which the requirements of this section apply.

(v) *Tier I carrier* refers to a service provider that offers commercial mobile radio service nationwide.

(b) *Hearing aid compatibility; technical standards.* A wireless handset used only over the frequency bands and air interfaces referenced in paragraph (a)(1) of this section is hearing aid-compatible with regard to radio frequency interference or inductive coupling if it meets the applicable technical standard(s) set forth in paragraphs (b)(1) and (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 an air interface or operates over a frequency band for which no technical standards are stated in ANSI C63.19-2007 (June 8, 2007) is hearing aid-compatible if the handset otherwise satisfies the requirements of this paragraph.

(1) * * *

(iii) *GSM operations at 1900 MHz.* Notwithstanding paragraphs (b)(1)(i) and (ii) of this section, a wireless handset that operates over the GSM air interface in the 1900 MHz frequency band is hearing aid-compatible for radio frequency interference if (A) the handset enables the user optionally to reduce the maximum power at which the handset will operate by no more than 2.5 decibels, except for emergency calls to 911, only for GSM operations in the 1900 MHz band; (B) the handset would meet, at a minimum, the M3 rating associated with the technical standard set forth in ANSI C63.19-2007 (June 8, 2007) if the power as so reduced were the maximum power at which the handset could operate; and (C) customers are informed of the power reduction mode as provided in paragraph (f)(3) of this section.

* * * * *

(c) * * *

* * * * *

(4) *All service providers.* Each Tier I carrier and other service provider must offer its customers a range of hearing aid-compatible models with differing levels of functionality (*e.g.*, operating capabilities, features offered, prices). Each provider may determine the criteria for determining these differing levels of functionality, and must disclose its methodology to the Commission pursuant to paragraph (i)(3)(vii) of this section.

(d) * * *

* * * * *

(4) *All service providers.* Each Tier I carrier and other service provider must offer its customers a range of hearing aid-compatible models with differing levels of functionality (*e.g.*, operating capabilities, features offered, prices). Each provider may determine the criteria for determining these differing levels of functionality, and must disclose its methodology to the Commission pursuant to paragraph (i)(3)(vii) of this section.

* * * * *

(f) * * *

(3) *Disclosure requirement relating to handsets that allow the user to reduce the maximum power for GSM operation in the 1900 MHz band.* Handsets that meet the technical standard for radio frequency interference pursuant to paragraph (b)(1)(iii) of this section shall be labeled as meeting an M3 rating.
* * *

* * * * *

(l) *In-store testing.* Any entity that sells wireless handsets to consumers through a physical location must make available for consumers to test, in each retail store that it owns or operates, all of its handset models that comply with paragraph (b)(1) or (b)(2) of this section.

APPENDIX D

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),[1] the Federal Communications Commission (Commission) included an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities of the policies and rules considered in the *Notice* in WT Docket No. 07-250.[2] The Commission sought written public comment on the *Notice* in this docket, including comment on the IRFA. This Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.

A. Need for, and Objectives of, the Rules

2. In the Second Report and Order, the Commission makes several changes to its existing hearing aid compatibility requirements so that they will continue effectively to ensure in an evolving marketplace of new technologies and services 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. First, the Commission provides that multi-band and multi-mode handsets that meet hearing aid compatibility requirements over all air interfaces and frequency bands for which technical standards have been established, but that also accommodate voice operations for which standards do not exist, may be counted as hearing aid-compatible, provided consumers are informed that they have been tested for the operations for which there are not standards. This rule change extends to all such handsets the same regulatory regime that currently applies to handsets that incorporate Wi-Fi capability, and it ensures that consumers will have the information they need to best evaluate how a handset will operate with their hearing aids. In order to further ensure that consumers are provided with consistent and sufficient information, the Commission also prescribes specific language to be used in the disclosure.

3. Second, the Commission refines the *de minimis* exception in its existing rule so that companies that are not small entities will be required to offer at least one hearing aid-compatible model after a two-year initial period. Manufacturers subject to this rule will also be required to offer at least one new model that is hearing aid-compatible for acoustic coupling every other calendar year. The Commission thereby helps ensure that people with hearing loss will have access to new and popular models, while continuing to protect the ability of small companies to compete and to foster innovation by new entrants. Further, in recognition of specific challenges that this rule change will impose for companies offering handsets operating over the legacy GSM air interface in the 1900 MHz band, the Commission permits companies that will no longer qualify for the *de minimis* exception under this rule change to meet hearing aid compatibility requirements by installing software that enables customers to reduce the power output by a limited amount for such operations.

4. Third, the Commission extends the hearing aid-compatible handset deployment requirements applicable to manufacturers to include handsets distributed by the manufacturer through channels other than service providers. This action ensures that consumers will continue to experience the benefits of hearing aid compatibility as innovative business plans give rise to a diversity of distribution

[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] Amendment of the Commission's Rules Governing Hearing Aid-Compatible Mobile Handsets, WT Docket No. 07-250, Section 68.4(a) of the Commission's Rules Governing Hearing Aid Compatible Telephones, WT Docket No. 01-309, Petition of American National Standards Institute Accredited Standards Committee C63 (EMC) ANSI ASC C63®, *Notice of Proposed Rulemaking*, 22 FCC Rcd 19760 (2007) (*Notice*).

channels.

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

5. No comments specifically addressed the IRFA. Nonetheless, small entity issues raised in comments are addressed in this FRFA in Sections D and E.

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

6. The RFA directs agencies to provide a description of, and, where feasible, an estimate of, the number of small entities that may be affected by the proposed rules, if adopted.[3] The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[4] In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.[5] 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).[6]

7. *Small Businesses*. Nationwide, there are a total of approximately 29.6 million small businesses, according to the SBA.[7]

8. *Cellular Licensees*. The SBA has developed a small business size standard for small businesses in the category "Wireless Telecommunications Carriers (except satellite)."[8] Under that SBA category, a business is small if it has 1,500 or fewer employees.[9] 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)". However, since currently available data was gathered when "Cellular and Other Wireless Telecommunications" was the relevant category, earlier Census Bureau data collected under the category of "Cellular and Other Wireless Telecommunications" will be used here. Census Bureau data for 2002 show that there were 1,397 firms in this category that operated for the entire year.[10] Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.[11] Thus, under this category and size standard, the majority of firms can be considered small.

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[3] 5 U.S.C. § 604(a)(3).

[4] 5 U.S.C. § 601(6).

[5] 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."

[6] 15 U.S.C. § 632.

[7] *See* SBA, Office of Advocacy, "Frequently Asked Questions," http://web.sba.gov/faqs (last visited Jan. 2009).

[8] 13 C.F.R. § 121.201, North American Industry Classification System (NAICS) code 517210.

[9] *Id*.

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

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

9. *Broadband Personal Communications Service*. The broadband Personal Communications Service (PCS) spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission has created a small business size standard for Blocks C and F as an entity that has average gross revenues of less than $40 million in the three previous calendar years.[12] For Block F, 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.[13] These small business size standards, in the context of broadband PCS auctions, have been approved by the SBA.[14] 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 qualified as small entities in the C Block auctions. A total of 93 "small" and "very small" business bidders won approximately 40 percent of the 1,479 licenses for Blocks D, E, and F.[15] On March 23, 1999, the Commission reauctioned 155 C, D, E, and F Block licenses; there were 113 small business winning bidders.[16]

10. On January 26, 2001, the Commission completed the auction of 422 C and F Block PCS licenses in Auction 35.[17] Of the 35 winning bidders in this auction, 29 qualified as "small" or "very small" businesses. 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. In 2005, the Commission completed an auction of 188 C block licenses and 21 F block licenses in Auction 58. There were 24 winning bidders for 217 licenses.[18] Of the 24 winning bidders, 16 claimed small business status and won 156 licenses. In 2007, the Commission completed an auction of 33 licenses in the A, C, and F Blocks in Auction 71.[19] Of the 14 winning bidders, six were designated entities.[20] In 2008, the Commission completed an auction of 20 Broadband PCS licenses in the C, D, E, and F Block licenses in Auction 78.[21]

11. *Specialized Mobile Radio*. The Commission awards "small entity" bidding credits in

[12] *See* Amendment of Parts 20 and 24 of the Commission's Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap, *Report and Order*, 11 FCC Rcd 7824, 7850-7852 ¶¶ 57-60 (1996); *see also* 47 C.F.R. § 24.720(b).

[13] *See* Amendment of Parts 20 and 24 of the Commission's Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap, *Report and Order*, 11 FCC Rcd 7824, 7852 ¶ 60.

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

[15] FCC News, "Broadband PCS, D, E and F Block Auction Closes," No. 71744 (rel. Jan. 14, 1997).

[16] *See* "C, D, E, and F Block Broadband PCS Auction Closes," *Public Notice*, 14 FCC Rcd 6688 (WTB 1999).

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

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

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

[20] *Id*.

[21] *See* Auction of AWS-1 and Broadband PCS Licenses Rescheduled For August 13, 2008, Notice of Filing Requirements, Minimum Opening Bids, Upfront Payments and Other Procedures For Auction 78, *Public Notice*, 23 FCC Rcd 7496 (2008) (*AWS-1 and Broadband PCS Procedures Public Notice*).

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.[22] 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.[23] The SBA has approved these small business size standards for the 900 MHz Service.[24] The Commission has held auctions for geographic area licenses in the 800 MHz and 900 MHz bands. The 900 MHz SMR auction began on December 5, 1995, and closed on April 15, 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 began on October 28, 1997, and was completed on December 8, 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 SMR band.[25] A second auction for the 800 MHz band was held on January 10, 2002 and closed on January 17, 2002 and included 23 licenses. One bidder claiming small business status won five licenses.[26]

12. The auction of the 1,053 800 MHz SMR geographic area licenses for the General Category channels began on August 16, 2000, and was completed on September 1, 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. In an auction completed on December 5, 2000, a total of 2,800 Economic Area licenses in the lower 80 channels of the 800 MHz SMR service were sold. Of the 22 winning bidders, 19 claimed "small business" status and won 129 licenses. Thus, combining all three auctions, 40 winning bidders for geographic licenses in the 800 MHz SMR band claimed status as small business.

13. In addition, there are numerous incumbent site-by-site SMR licensees and licensees with extended implementation authorizations in the 800 and 900 MHz bands. The Commission does 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.[27] The Commission assumes, for purposes of this analysis, that all of the remaining existing extended implementation authorizations are held by small entities.

14. *Advanced Wireless Services*. In 2008, the Commission conducted the auction of Advanced Wireless Services ("AWS") licenses.[28] This auction, which was designated as Auction 78, offered 35 licenses in the AWS 1710-1755 MHz and 2110-2155 MHz bands ("AWS-1"). The AWS-1 licenses were licenses for which there were no winning bids in Auction 66. That same year, the Commission completed Auction 78. A bidder with attributed average annual gross revenues that exceeded $15 million and did not exceed $40 million for the preceding three years ("small business")

[22] 47 C.F.R. § 90.814(b)(1).

[23] *Id*.

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

[25] *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).

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

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

[28] *See AWS-1 and Broadband PCS Procedures Public Notice*, 23 FCC Rcd 7496. Auction 78 also included an auction of Broadband PCS licenses.

received a 15 percent discount on its winning bid. A bidder with attributed average annual gross revenues that did not exceed $15 million for the preceding three years ("very small business") received a 25 percent discount on its winning bid. A bidder that had a combined total assets of less than $500 million and combined gross revenues of less than $125 million in each of the last two years qualified for entrepreneur status.[29] Four winning bidders that identified themselves as very small businesses won 17 licenses.[30] Three of the winning bidders that identified themselves as small business won five licenses. Additionally, one other winning bidder that qualified for entrepreneur status won 2 licenses.

15. *Rural Radiotelephone Service*. The Commission has not adopted a size standard for small businesses specific to the Rural Radiotelephone Service.[31] A significant subset of the Rural Radiotelephone Service is the Basic Exchange Telephone Radio System ("BETRS").[32] In the present context, we will use the SBA small business size standard applicable to Wireless Telecommunication Carriers (except satellite), *i.e.*, an entity employing no more than 1,500 persons.[33] There are approximately 1,000 licensees in the Rural Radiotelephone Service, and the Commission estimates 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.

16. *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 or less for each of the three preceding years, and a "very small business" as an entity with average gross revenues of $15 million or less for each of the three preceding years.[34] The SBA has approved these definitions.[35] 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.

17. *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.[36] There is presently one licensee in this service. We do not have information whether that licensee would qualify as small under the SBA's small business size standard for Wireless Telecommunications Carriers (except Satellite) services.[37] Under the SBA small business size standard, a

[29] *Id*. at 7521-22.

[30] *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 12749 (2008).

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

[32] BETRS is defined in Sections 22.757 and 22.759 of the Commissions Rules, 47 C.F.R. §§ 22.757 and 22.759.

[33] 13 C.F.R. § 121.201, NAICS code 517210.

[34] 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).

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

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

[37] 13 C.F.R. § 121.201, NAICS code 517210.

business is small if it has 1,500 or fewer employees.[38]

18. *Broadband Radio Service and Educational Broadband Service*. The Broadband Radio Service ("BRS"), formerly known as the Multipoint Distribution Service ("MDS"), and the Educational Broadband Service ("EBS"), formerly known as the Instructional Television Fixed Service ("ITFS"),[39] use 2 GHz band frequencies to transmit video programming and provide broadband services to residential subscribers.[40] These services, collectively referred to as "wireless cable," were originally designed for the delivery of multichannel video programming, similar to that of traditional cable systems, but over the past several years licensees have focused their operations instead on providing two-way high-speed Internet access services.[41] We estimate that the number of wireless cable subscribers is approximately 100,000, as of March 2005. The SBA small business size standard for the broad census category of Cable and Other Program Distribution, which consists of such entities generating $13.5 million or less in annual receipts, appears applicable to MDS and ITFS.[42] Note that the census category of "Cable and Other Program Distribution" is no longer used and has been superseded by the larger category "Wireless Telecommunications Carriers (except satellite). This category provides that a small business is a wireless company employing no more than 1,500 persons.[43] However, since currently available data was gathered when "Cable and Other Program Distribution" was the relevant category, earlier Census Bureau data collected under the category of "Cable and Other Program Distribution" will be used here. Other standards also apply, as described.

19. The Commission has defined small MDS (now BRS) entities in the context of Commission license auctions. In the 1996 MDS auction,[44] the Commission defined a small business as an entity that had annual average gross revenues of less than $40 million in the previous three calendar years.[45] This definition of a small entity in the context of MDS auctions has been approved by the SBA.[46] In the MDS auction, 67 bidders won 493 licenses. Of the 67 auction winners, 61 claimed status as a small business. At this time, the Commission estimates that of the 61 small business MDS auction winners, 48 remain small business licensees. In addition to the 48 small businesses that hold BTA authorizations,

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[38] *Id*.

[39] S*ee* 47 C.F.R. Part 27, subpart M; Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands; Part 1 of the Commission's Rules - Further Competitive Bidding Procedures; Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and the Instructional Television Fixed Service Amendment of Parts 21 and 74 to Engage in Fixed Two-Way Transmissions; Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Licensing in the Multipoint Distribution Service and in the Instructional Television Fixed Service for the Gulf of Mexico, 19 FCC Rcd 14165 (2004).

[40] *See Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Eleventh Annual Report,* 20 FCC Rcd 2507, 2565 ¶ 131 (2006).

[41] *Id*.

[42] 13 C.F.R. § 121.201, NAICS code 515210.

[43] 13 C.F.R. § 121.201, NAICS code 517210.

[44] MDS Auction No. 6 began on November 13, 1995, and closed on March 28, 1996. (67 bidders won 493 licenses.)

[45] 47 C.F.R. § 21.961(b)(1).

[46] *See* 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, Docket No. 94-131, *Report and Order*, 10 FCC Rcd 9589 (1995).

there are hundreds of MDS licensees and wireless cable operators that did not receive their licenses as a result of the MDS auction and that fall under the former SBA small business size standard for Cable and Other Program Distribution.[47] Information available to us indicates that there are approximately 850 of these licensees and operators that do not generate revenue in excess of $13.5 million annually. Therefore, we estimate that there are approximately 850 of these small entity MDS (or BRS) providers, as defined by the SBA and the Commission's auction rules.

20. Educational institutions are included in this analysis as small entities; however, the Commission has not created a specific small business size standard for ITFS (now EBS).[48] We estimate that there are currently 2,452 EBS licenses, held by 1,524 EBS licensees, and all but 100 of the licenses are held by educational institutions. Thus, we estimate that at least 1,424 EBS licensees are small entities.

21. *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.[49] 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."[50] SBA has approved these small business size standards for the aforementioned bands.[51] Correspondingly, the Commission adopted a bidding credit of 15 percent for "small businesses" and a bidding credit of 25 percent for "very small businesses."[52] This bidding credit structure was found to have been consistent with the Commission's schedule of bidding credits, which may be found at

[47] 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 for "Cable and Other Program Distribution" (annual receipts of $13.5 million or less). *See* 13 C.F.R. § 121.201, NAICS code 515210.

[48] In addition, the term "small entity" under 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.

[49] *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).

[50] *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 is not adopting 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.

[51] *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.

[52] 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.[53] 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.[54] 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.[55] 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.[56] 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.

22. *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 firms in this category, which is: all such firms having 750 or fewer employees.[57] According to Census Bureau data for 2002, there were a total of 1,041 establishments in this category that operated for the entire year. Of this total, 1,010 had employment of under 500, and an additional 13 had employment of 500 to 999. 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

23. The Commission adopts several reporting, recordkeeping, and other compliance requirements which could affect small entities. First, as an interim measure, the Commission extends to all handsets that incorporate new frequency bands and air interfaces usable for voice services other than Wi-Fi the same counting and disclosure rules that currently apply to handsets with Wi-Fi. In other words, a handset that meets hearing aid compatibility requirements over all air interfaces and frequency bands for which technical standards have been established, but that also accommodates voice operations for which standards do not exist, may be counted as hearing aid-compatible provided consumers are clearly informed that it has not been tested for the operations for which there are not standards.

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[53] 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).

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

[55] *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).

[56] 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).

[57] 13 C.F.R. § 121.201, NAICS code 334220.

24. The Commission further requires that for newly manufactured handsets covered by this rule, the following disclosure language be used: "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 phone retailer about its return and exchange policies. 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." The Commission concludes that a uniform text will ensure that consumers are provided with consistent and sufficient information. However, handsets that are already on the market with other disclosure language that complies with the current rule will not be required to replace this with the newly prescribed language. This disclosure rule will apply to all handsets that operate in part over an air interface or frequency band that is not covered by the current hearing aid compatibility technical standard until the date that rules adopting any new standard become effective.

25. In order to ensure that consumers who use hearing aids and cochlear implants have access to a variety of phones, while preserving competitive opportunities for small companies as well as opportunities for innovation and investment, the Commission modifies the *de minimis* rule as applied to companies that are not small entities. Specifically, the Commission decides that beginning two years after it offers its first handset model over an air interface, a manufacturer or service provider that is not a small entity must offer at least one model that is rated M3 or higher and at least one model that is rated T3 or higher if it offers between one and three total handset models. Consistent with the SBA size standards, a "small entity" is defined as a service provider that, together with its parent, subsidiary, or affiliate companies under common ownership or control, has 1500 or fewer employees or a manufacturer that, together with its parent, subsidiary, or affiliate companies under common ownership or control, has 750 or fewer employees. In order to maintain parity and to allow entities that have been relying on the *de minimis* rule a reasonable period for transition, this obligation will become effective for manufacturers and service providers that offer one or two handset models over an air interface two years after the latest of the following: the date the manufacturer or service provider began offering handsets over the air interface, the date the amended rule is published in the *Federal Register*, the date a hearing aid compatibility technical standard is adopted for the relevant operation, or the date a previously small entity no longer meets our small entity definition. The Commission also revises the "refresh" rule to require manufacturers that are not small entities that offer two models over an air interface, after the first two years, to introduce at least one new model rated M3 or higher every other year.

26. In recognition of the special technical challenges of meeting hearing aid compatibility technical standards for handsets with certain desirable form factors operating over the legacy 2G GSM air interface in the 1900 MHz band, the Commission permits companies that would come under the amended *de minimis* rule but for their size to satisfy the hearing aid-compatible handset deployment requirement for GSM using a handset that allows the customer to reduce the maximum output power for GSM operations in the 1900 MHz band by up to 2.5 decibels, except for emergency calls to 911, in order to meet the standard for radio frequency interference reduction. Wherever a manufacturer or service provider provides the hearing aid compatibility rating for such a handset, it shall indicate that user activation of a special mode is necessary to meet the hearing aid compatibility standard. In addition, the handset manual or product insert must explain how to activate the special mode and that doing so may result in a diminution of coverage. These actions are taken to ensure that consumers who use hearing aids and cochlear implants have access to a variety of phones and are adequately informed about the functionality and the limitations of the handsets, while preserving competitive opportunities for small companies as well as opportunities for innovation and investment.

27. Currently, wireless handsets are increasingly distributed through channels other than

service providers. The Commission therefore amends Section 20.19(c) and (d) to apply the hearing aid-compatible handset deployment benchmarks to all handsets that a wireless handset manufacturer produces for distribution in the United States that are within the scope of Section 20.19(a) of the rule. Manufacturers will have until 12 months from publication of the rule in the *Federal Register* to come into compliance with it. The Commission clarifies that handsets covered by this rule include handsets that manufacturers sell to businesses for distribution to their employees. This rule change will address new handset manufacturer distribution models in existing networks and ensure that wireless handsets will be covered by the Commission's hearing aid compatibility obligations regardless of distribution and sales channels. The Commission finds that this rule change will serve the public interest as a better and more proactive approach to ensure the availability of hearing aid-compatible handsets in the developing handset marketplace.

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

28. The RFA requires an agency to describe in the IRFA any significant alternatives that it has considered in reaching its proposed approach, which may include (among others) the following four alternatives: (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.[58] The Commission considered these alternatives with respect to all of the requirements that it is imposing on small entities in the Second Report and Order, and this FRFA incorporates by reference all discussion in the Second Report and Order that considers the impact on small entities of the rules adopted by the Commission. In addition, the Commission's consideration of those issues as to which the impact on small entities was specifically discussed in the record is summarized below:

29. Until such time as any revision of the hearing aid compatibility technical standard may be adopted by the Commission, the Commission extends to all handsets that incorporate frequency bands and air interfaces other than Wi-Fi usable for voice services for which no hearing aid compatibility standards exist the same counting and disclosure rules that currently apply to handsets with Wi-Fi capability. The disclosure requirement is necessary in order to count these handsets as hearing aid-compatible without misleading consumers, and therefore no exception is appropriate for small entities. The Commission further prescribes uniform disclosure language to ensure that consumers are provided with consistent and sufficient information. This uniform language will also streamline and simplify the disclosure process, thereby easing the burden on regulated entities. However, handsets that are already on the market bearing another label that complies with the current rule will not be required to replace this label with the newly prescribed language. This transitional exception will ease the regulatory burden on small service providers that may have a slower turnover of their inventory.

30. The Commission modifies the *de minimis* rule as applied to companies that are not small entities. Specifically, the Commission decides that beginning two years after it offers its first handset model over an air interface, a manufacturer or service provider that is not a small entity, as defined herein, must offer at least one model that is rated M3 or higher and at least one model that is rated T3 or higher if it offers between one and three total handset models. The Commission also revises the "refresh" rule to require manufacturers that are not small entities that offer two models over an air interface, after the first two years, to introduce at least one new model rated M3 or higher every other year. Consistent with the SBA size standards, a "small entity" is defined as a service provider that, together with its parent,

[58] 5 U.S.C. § 603(c).

subsidiary, or affiliate companies under common ownership or control, has 1500 or fewer employees or a manufacturer that, together with its parent, subsidiary, or affiliate companies under common ownership or control, has 750 or fewer employees. In order to minimize the economic impact on small manufacturers and service providers and preserve their opportunity to compete in the market and innovate, the existing *de minimis* rule will continue to apply to small entities. In addition, in order to ease the burden of transition, the new rule will become applicable to a manufacturer or service provider two years after the latest of: the date the manufacturer or service provider began offering handsets over the air interface, the date the amended rule is published in the *Federal Register*, the date a hearing aid compatibility technical standard is adopted for the relevant operation, or the date a previously small entity no longer meets our small entity definition.

31. In recognition of the special technical challenges of meeting hearing aid compatibility technical standards for handsets with certain desirable form factors operating over the legacy 2G GSM air interface in the 1900 MHz band, the Commission permits companies that would come under the amended *de minimis* rule but for their size to satisfy the hearing aid-compatible handset deployment requirement for GSM using a handset that allows the customer, except for emergency calls to 911, to reduce the maximum output power for GSM operations in the 1900 MHz band in order to meet the RF interference standard. However, wherever a manufacturer or service provider provides the hearing aid compatibility rating for such a handset, it shall indicate that user activation of a special mode is necessary to meet the hearing aid compatibility standard. In addition, the handset manual or product insert must explain how to activate the special mode and that doing so may result in a diminution of coverage. These actions will reduce the regulatory burden on small businesses that do not come under the *de minimis* rule by making it easier to satisfy hearing aid compatibility requirements for this class of handsets, while ensuring that consumers who use hearing aids and cochlear implants have access to a variety of phones and are adequately informed about the functionality and the limitations of their handsets.

32. The Commission amends Section 20.19 to expand its scope for manufacturers such that the rule will apply to all covered handsets that they manufacture for sale and use in the United States, regardless of whether those handsets are offered to service providers, intermediaries, businesses for use by their employees, or directly to the public. Manufacturers will have until 12 months from publication of the rule in the *Federal Register* to come into compliance with it. The Commission finds that this rule change will serve the public interest as a better and more proactive approach to ensure the availability of hearing aid-compatible handsets in the developing handset marketplace, and that no exception to or modification of the rule for small entities is appropriate consistent with the rule's purpose. The 12-month transition period will ease the burden of coming into compliance for small entities.

F. Report to Congress

33. The Commission will send a copy of the Second Report and Order, including this FRFA, in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act.[59] In addition, the Commission will send a copy of the Second Report and Order, including this FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of the Second Report and Order and FRFA (or summaries thereof) will also be published in the *Federal Register*.[60]

[59] *See* 5 U.S.C. § 801(a)(1)(A).

[60] *See* 5 U.S.C. § 604(b).

APPENDIX E

Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),[1] the Commission has prepared this present Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities of the policies and rules proposed in this Further Notice of Proposed Rule Making (Further Notice). Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the Further Notice provided in Section VI.F.2. of the item. The Commission will send a copy of the Further Notice, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).[2] In addition, the Further Notice and IRFA (or summaries thereof) will be published in the Federal Register.[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] the Commission believes 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 IRFA contains an analysis of this impact in connection with all spectrum that falls within the scope of this Further Notice, including spectrum in the 746-806 MHz Band.

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

3. The Further Notice proposes to find that the scope of the Commission's hearing aid compatibility rules should be extended so as to cover all customer equipment used to provide wireless communications 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, so long as meeting hearing aid compatibility standards is technologically feasible and would not raise costs to an extent that would preclude successful marketing of the equipment. The Further Notice seeks comment on: (1) whether considerations of technological feasibility or marketability prevent application of the hearing aid compatibility requirements, or require modification of those requirements, as to any class of handsets; and (2) what transition period is appropriate for applying the requirements to newly covered handsets. This proposed rule change would ensure that people with hearing loss will have access to new and advanced handsets regardless of the frequency over which they operate or the voice technology mode deployed, while maintaining consistency with the technological feasibility and marketability criteria set forth in the Hearing Aid Compatibility Act.[5]

4. The Further Notice also seeks comment on whether the current requirement to make hearing aid-compatible handsets available in-store for consumer testing should be extended to some or all retail outlets other than those owned or operated by service providers. The Commission seeks comment

[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* 5 U.S.C. § 603(a).

[3] *See* 5 U.S.C. § 603(a).

[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 U.S.C. § 610.

on how to define the class of independent retailers that would be required to make hearing aid-compatible handsets available for in-store testing. This rule change would ensure that consumers have the information they need to choose a handset that will operate correctly with their hearing aid or cochlear implant.

5. Additionally, the Further Notice seeks comment on whether the Commission should treat handsets that allow consumers to reduce the maximum transmit power only for operations over the GSM air interface in the 1900 MHz band by up to 2.5 decibels, except for calls to 911, and that meet the criteria for an M3 rating after such power reduction, as hearing aid-compatible for all purposes. This rule change would help ensure the near-term availability of desirable handsets over the legacy GSM air interface while still affording substantial access to people with hearing loss. The Commission also proposes, for all such handsets, that the manufacturer or service provider would have to disclose that activation of a special mode is required to meet the hearing aid compatibility standard, how to activate the special mode, and the possibility of a loss of coverage if the special mode is activated. This rule change would ensure that consumers have the information they need to choose and operate a handset that will best function with their hearing aid or cochlear implant.

B. Legal Basis

6. The potential actions about which comment is sought in this Notice would be authorized pursuant to the authority contained in Sections 4(i), 303(r), and 710 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(r), and 610.

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

7. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by proposed rules.[6] The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[7] In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.[8] 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").[9] To assist the Commission in analyzing the total number of potentially affected small entities, the Commission requests commenters to estimate the number of small entities that may be affected by any rule changes that might result from this Further Notice.

8. *Small Businesses*. Nationwide, there are a total of approximately 29.6 million small businesses, according to the SBA.[10]

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

[6] 5 U.S.C. § 604(a)(3).

[7] 5 U.S.C. § 601(6).

[8] 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."

[9] 15 U.S.C. § 632.

[10] *See* SBA, Office of Advocacy, "Frequently Asked Questions," http://web.sba.gov/faqs (last visited Jan. 2009).

businesses in the category "Wireless Telecommunications Carriers (except satellite)."[11] Under that SBA category, a business is small if it has 1,500 or fewer employees.[12] 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)". However, since currently available data was gathered when "Cellular and Other Wireless Telecommunications" was the relevant category, earlier Census Bureau data collected under the category of "Cellular and Other Wireless Telecommunications" will be used here. Census Bureau data for 2002 show that there were 1,397 firms in this category that operated for the entire year.[13] Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.[14] Thus, under this category and size standard, the majority of firms can be considered small.

10. *Broadband Personal Communications Service*. The broadband Personal Communications Service (PCS) spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission has created a small business size standard for Blocks C and F as an entity that has average gross revenues of less than $40 million in the three previous calendar years.[15] For Block F, 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.[16] These small business size standards, in the context of broadband PCS auctions, have been approved by the SBA.[17] 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 qualified as small entities in the C Block auctions. A total of 93 "small" and "very small" business bidders won approximately 40 percent of the 1,479 licenses for Blocks D, E, and F.[18] On March 23, 1999, the Commission reauctioned 155 C, D, E, and F Block licenses; there were 113 small business winning bidders.[19]

11. On January 26, 2001, the Commission completed the auction of 422 C and F Block PCS licenses in Auction 35.[20] Of the 35 winning bidders in this auction, 29 qualified as "small" or "very

[11] 13 C.F.R. § 121.201, North American Industry Classification System (NAICS) code 517210.

[12] *Id*.

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

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

[15] *See* Amendment of Parts 20 and 24 of the Commission's Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap, *Report and Order*, 11 FCC Rcd 7824, 7850-7852 ¶¶ 57-60 (1996); *see also* 47 C.F.R. § 24.720(b).

[16] *See* Amendment of Parts 20 and 24 of the Commission's Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap, *Report and Order*, 11 FCC Rcd 7824, 7852 ¶ 60.

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

[18] FCC News, "Broadband PCS, D, E and F Block Auction Closes," No. 71744 (rel. Jan. 14, 1997).

[19] *See* "C, D, E, and F Block Broadband PCS Auction Closes," *Public Notice*, 14 FCC Rcd 6688 (WTB 1999).

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

small" businesses. 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. In 2005, the Commission completed an auction of 188 C block licenses and 21 F block licenses in Auction 58. There were 24 winning bidders for 217 licenses.[21] Of the 24 winning bidders, 16 claimed small business status and won 156 licenses. In 2007, the Commission completed an auction of 33 licenses in the A, C, and F Blocks in Auction 71.[22] Of the 14 winning bidders, six were designated entities.[23] In 2008, the Commission completed an auction of 20 Broadband PCS licenses in the C, D, E and F Block licenses in Auction 78.[24]

12. *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.[25] 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.[26] The SBA has approved these small business size standards for the 900 MHz Service.[27] The Commission has held auctions for geographic area licenses in the 800 MHz and 900 MHz bands. The 900 MHz SMR auction began on December 5, 1995, and closed on April 15, 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 began on October 28, 1997, and was completed on December 8, 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 SMR band.[28] A second auction for the 800 MHz band was held on January 10, 2002 and closed on January 17, 2002 and included 23 licenses. One bidder claiming small business status won five licenses.[29]

13. The auction of the 1,053 800 MHz SMR geographic area licenses for the General Category channels began on August 16, 2000, and was completed on September 1, 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. In an auction completed on December 5, 2000, a total of 2,800 Economic Area licenses in the lower 80 channels of the 800 MHz SMR service were sold. Of the 22 winning bidders, 19 claimed "small business" status and won 129 licenses. Thus, combining all three auctions, 40 winning bidders for geographic licenses in the 800 MHz SMR band

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

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

[23] *Id*.

[24] *See* Auction of AWS-1 and Broadband PCS Licenses Rescheduled For August 13, 2008, Notice of Filing Requirements, Minimum Opening Bids, Upfront Payments and Other Procedures For Auction 78, *Public Notice*, 23 FCC Rcd 7496 (2008) (*AWS-1 and Broadband PCS Procedures Public Notice*).

[25] 47 C.F.R. § 90.814(b)(1).

[26] *Id*.

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

[28] *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).

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

claimed status as small business.

14. In addition, there are numerous incumbent site-by-site SMR licensees and licensees with extended implementation authorizations in the 800 and 900 MHz bands. The Commission does not know how many firms provide 800 MHz or 900 MHz geographic area SMR services 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. The Commission assumes, for purposes of this analysis, that all of the remaining existing extended implementation authorizations are held by small entities.

15. *Advanced Wireless Services*. In 2008, the Commission conducted the auction of Advanced Wireless Services ("AWS") licenses.[30] This auction, which was designated as Auction 78, offered 35 licenses in the AWS 1710-1755 MHz and 2110-2155 MHz bands ("AWS-1"). The AWS-1 licenses were licenses for which there were no winning bids in Auction 66. That same year, the Commission completed Auction 78. A bidder with attributed average annual gross revenues that exceeded $15 million and did not exceed $40 million for the preceding three years ("small business") received a 15 percent discount on its winning bid. A bidder with attributed average annual gross revenues that did not exceed $15 million for the preceding three years ("very small business") received a 25 percent discount on its winning bid. A bidder that had a combined total assets of less than $500 million and combined gross revenues of less than $125 million in each of the last two years qualified for entrepreneur status.[31] Four winning bidders that identified themselves as very small businesses won 17 licenses.[32] Three of the winning bidders that identified themselves as small business won five licenses. Additionally, one other winning bidder that qualified for entrepreneur status won 2 licenses.

16. *Rural Radiotelephone Service*. The Commission has not adopted a size standard for small businesses specific to the Rural Radiotelephone Service.[33] A significant subset of the Rural Radiotelephone Service is the Basic Exchange Telephone Radio System ("BETRS").[34] In the present context, we will use the SBA small business size standard applicable to Wireless Telecommunication Carriers (except satellite), *i.e.*, an entity employing no more than 1,500 persons.[35] There are approximately 1,000 licensees in the Rural Radiotelephone Service, and the Commission estimates 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.

17. *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 or less for each of the three preceding years, and a "very small business" as an entity with average gross revenues of $15 million or less for each

[30] *See* AWS-1 and Broadband PCS Procedures Public Notice, 23 FCC Rcd 7496. Auction 78 also included an auction of Broadband PCS licenses.

[31] *Id*. at 7521-22.

[32] *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 12749 (2008).

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

[34] BETRS is defined in Sections 22.757 and 22.759 of the Commissions Rules, 47 C.F.R. §§ 22.757 and 22.759.

[35] 13 C.F.R. § 121.201, NAICS code 517210.

of the three preceding years.[36] The SBA has approved these definitions.[37] 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.

18. *700 MHz Guard Bands Licenses.* In the *700 MHz Guard Bands 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.[38] A 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.[39] 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.[40] SBA approval of these definitions is not required.[41] An auction of 52 Major Economic Area (MEA) licenses for each of two spectrum blocks commenced on September 6, 2000, and closed on September 21, 2000.[42] 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 remaining 700 MHz Guard Bands licenses commenced on February 13, 2001, and closed on February 21, 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.[43] Subsequently, in the *700 MHz Second Report and Order*, the Commission reorganized the licenses pursuant to an agreement among most of the licensees, resulting in a spectral relocation of the first set of paired spectrum block licenses, and an elimination of the second set of paired spectrum block licenses (many of which were already vacant, reclaimed by the Commission from Nextel).[44] A single licensee that did not participate in the agreement was grandfathered in the initial spectral location for its two licenses in the second set of paired spectrum blocks.[45] Accordingly, at this time there are 54 licenses in the 700 MHz Guard Bands.

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[36] 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).

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

[38] *See* 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).

[39] *Id*. at 5343 ¶ 108.

[40] *Id*.

[41] *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).

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

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

[44] *See* In the Matter of Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, WT Docket 06-150, *Second Report and Order,* 22 FCC Rcd 15289, 15339-15344 ¶¶ 118-134 (2007) (*700 MHz Second Report and Order*).

[45] *Id.*

19. *700 MHz Band Commercial Licenses*. There is 80 megahertz of non-Guard Band spectrum in the 700 MHz Band that is designated for commercial use: 698-757, 758-763, 776-787, and 788-793 MHz Bands. With one exception, the Commission adopted criteria for defining two groups of small businesses for purposes of determining their eligibility for bidding credits at auction. These two categories are: (1) "small business," which is defined as an entity with attributed average annual gross revenues that exceed $15 million and do not exceed $40 million for the preceding three years; and (2) "very small business," which is defined as an entity with attributed average annual gross revenues that do not exceed $15 million for the preceding three years.[46] In Block C of the Lower 700 MHz Band (710-716 MHz and 740-746 MHz), which was licensed on the basis of 734 Cellular Market Areas, the Commission adopted a third criterion for determining eligibility for bidding credits: an "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.[47] The SBA has approved these small size standards.[48]

20. An auction of 740 licenses for Blocks C (710-716 MHz and 740-746 MHz) and D (716-722 MHz) of the Lower 700 MHz Band commenced on August 27, 2002, and closed on September 18, 2002. Of the 740 licenses available for auction, 484 licenses were sold to 102 winning bidders. Seventy-two of the winning bidders claimed small business, very small business, or entrepreneur status and won a total of 329 licenses.[49] A second auction commenced on May 28, 2003, and closed on June 13, 2003, and included 256 licenses: five EAG licenses and 251 CMA licenses.[50] Seventeen winning bidders claimed small or very small business status and won 60 licenses, and nine winning bidders claimed entrepreneur status and won 154 licenses.[51]

21. The remaining 62 megahertz of commercial spectrum was auctioned on January 24 through March 18, 2008. As explained above, bidding credits for all of these licenses were available to "small businesses" and "very small businesses." Auction 73 concluded with 1090 provisionally winning bids covering 1091 licenses and totaling $19,592,420,000. The provisionally winning bids for the A, B, C, and E Block licenses exceeded the aggregate reserve prices for those blocks. The provisionally winning bid for the D Block license, however, did not meet the applicable reserve price and thus did not become a winning bid. Approximately 55 small businesses had winning bids.[52] Currently, the 10 remaining megahertz associated with the D block have not yet been assigned.[53]

22. *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

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[46] *See* Auction of 700 MHz Band Licenses Scheduled for Jan. 24, 2008, AU Docket No. 07-157, *Notice and Filing Requirements, Minimum Opening Bids, Reserve Prices, Upfront Payments, and Other Procedures for Auctions 73 and 76*, DA 07-4171 at ¶ 70 (WTB rel. Oct. 5, 2007); Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), *Report and Order*, 17 FCC Rcd 1022, 1087-88 (2002).

[47] *Id.* at 1088.

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

[49] *See* "Lower 700 MHz Band Auction Closes," *Public Notice*, 17 FCC Rcd 17272 (WTB 2002).

[50] *See* "Lower 700 MHz Band Auction Closes," *Public Notice*, 18 FCC Rcd 11873 (WTB 2003).

[51] *Id*.

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

[53] *See* fcc.gov website at http://wireless.fcc.gov/auctions/default.htm?job=auction_summary&id=73.

Mexico.[54] There is presently one licensee in this service. We do not have information whether that licensee would qualify as small under the SBA's small business size standard for Wireless Telecommunications Carriers (except Satellite) services.[55] Under the SBA small business size standard, a business is small if it has 1,500 or fewer employees.[56]

23. *Broadband Radio Service and Educational Broadband Service*. The Broadband Radio Service ("BRS"), formerly known as the Multipoint Distribution Service ("MDS"),[57] and the Educational Broadband Service ("EBS"), formerly known as the Instructional Television Fixed Service ("ITFS"),[58] use 2 GHz band frequencies to transmit video programming and provide broadband services to residential subscribers.[59] These services, collectively referred to as "wireless cable," were originally designed for the delivery of multichannel video programming, similar to that of traditional cable systems, but over the past several years licensees have focused their operations instead on providing two-way high-speed Internet access services.[60] We estimate that the number of wireless cable subscribers is approximately 100,000, as of March 2005. The SBA small business size standard for the broad census category of Cable and Other Program Distribution, which consists of such entities generating $13.5 million or less in annual receipts, appears applicable to MDS and ITFS.[61] Note that the census category of "Cable and Other Program Distribution" is no longer used and has been superseded by the larger category "Wireless Telecommunications Carriers (except satellite). This category provides that a small business is a wireless company employing no more than 1,500 persons.[62] However, since currently available data was gathered when "Cable and Other Program Distribution" was the relevant category, earlier Census Bureau data collected under the category of "Cable and Other Program Distribution" will be used here. Other standards also apply, as described.

24. The Commission has defined small MDS (now BRS) entities in the context of Commission license auctions. In the 1996 MDS auction,[63] the Commission defined a small business as an entity that had annual average gross revenues of less than $40 million in the previous three calendar

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

[55] 13 C.F.R. § 121.201, NAICS code 517210.

[56] *Id*.

[57] S*ee* 47 C.F.R. Part 21, subpart K; Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands; Part 1 of the Commission's Rules - Further Competitive Bidding Procedures; Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and the Instructional Television Fixed Service Amendment of Parts 21 and 74 to Engage in Fixed Two-Way Transmissions; Amendment of Parts 21 and 74 of the Commission's Rules With Regard to Licensing in the Multipoint Distribution Service and in the Instructional Television Fixed Service for the Gulf of Mexico, 19 FCC Rcd 14165 (2004).

[58] S*ee* 47 C.F.R. Part 74, subpart I; *MDS/ITFS Order*, 19 FCC Rcd 14165 (2004).

[59] *See Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Eleventh Annual Report,* 20 FCC Rcd 2507, 2565 ¶ 131 (2006).

[60] *Id*.

[61] 13 C.F.R. § 121.201, NAICS code 515210.

[62] 13 C.F.R. § 121.201, NAICS code 517210.

[63] MDS Auction No. 6 began on November 13, 1995, and closed on March 28, 1996. (67 bidders won 493 licenses.)

years.[64] This definition of a small entity in the context of MDS auctions has been approved by the SBA.[65] In the MDS auction, 67 bidders won 493 licenses. Of the 67 auction winners, 61 claimed status as a small business. At this time, the Commission estimates that of the 61 small business MDS auction winners, 48 remain small business licensees. In addition to the 48 small businesses that hold BTA authorizations, there are hundreds of MDS licensees and wireless cable operators that did not receive their licenses as a result of the MDS auction and that fall under the former SBA small business size standard for Cable and Other Program Distribution.[66] Information available to us indicates that there are approximately 850 of these licensees and operators that do not generate revenue in excess of $13.5 million annually. Therefore, we estimate that there are approximately 850 of these small entity MDS (or BRS) providers, as defined by the SBA and the Commission's auction rules.

25. Educational institutions are included in this analysis as small entities; however, the Commission has not created a specific small business size standard for ITFS (now EBS).[67] We estimate that there are currently 2,452 EBS licenses, held by 1,524 EBS licensees, and all but 100 of the licenses are held by educational institutions. Thus, we estimate that at least 1,424 EBS licensees are small entities.

26. *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.[68] 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."[69] SBA has approved these small business size standards for the aforementioned

[64] 47 C.F.R. § 21.961(b)(1).

[65] *See* 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, Docket No. 94-131, *Report and Order*, 10 FCC Rcd 9589 (1995).

[66] 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 for "Cable and Other Program Distribution" (annual receipts of $13.5 million or less). *See* 13 C.F.R. § 121.201, NAICS code 515210.

[67] In addition, the term "small entity" under 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.

[68] *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*).

[69] *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 is not adopting 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.

bands.[70] Correspondingly, the Commission adopted a bidding credit of 15 percent for "small businesses" and a bidding credit of 25 percent for "very small businesses."[71] This bidding credit structure was found to have been consistent with the Commission's schedule of bidding credits, which may be found at Section 1.2110(f)(2) of the Commission's rules.[72] 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.[73] 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.[74] 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.[75] 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.

27. *Mobile Satellite Service Carriers.* Neither the Commission nor the U.S. Small Business Administration has developed a small business size standard specifically for mobile satellite service licensees. The appropriate size standard is therefore the SBA standard for Satellite Telecommunications. The category of Satellite Telecommunications "comprises establishments primarily engaged in providing telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications."[76] The category has a small business size standard of $15 million or less in average annual receipts, under SBA rules.[77] For this category, Census Bureau data for 2002 show that

[70] *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.

[71] 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.

[72] 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).

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

[74] *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).

[75] 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).

[76] U.S. Census Bureau, 2007 NAICS Definitions, "517410 Satellite Telecommunications"; http://www.census.gov/naics/2007/def/ND517410.HTM.

[77] 13 C.F.R. § 121.201, NAICS code 517410.

there were a total of 371 firms that operated for the entire year.[78] Of this total, 307 firms had annual receipts of under $10 million, and 26 firms had receipts of $10 million to $24,999,999.[79] Consequently, we estimate that the majority of Satellite Telecommunications firms are small entities that might be affected by our action.

28. *Internet Service Providers.* In the Notice, the Commission seeks comment on whether to extend hearing aid compatibility requirements to entities offering access to Voice over Internet Protocol (VoIP) applications over Wi-Fi[80] and other wireless technologies that may fall outside the definition of CMRS and/or the criteria in Section 20.19(a), such as those operating on networks that do not employ "an in-network switching facility that enables the provider to reuse frequencies and accomplish seamless hand-offs." Such applications may be provided, for example, by Internet Service Providers (ISPs). ISPs are Internet Publishing and Broadcasting and Web Search Portals[81] that provide clients access to the Internet and generally provide related services such as web hosting, web page designing, and hardware or software consulting related to Internet connectivity. To gauge small business prevalence for these Internet Publishing and Broadcasting and Web Search Portals, we must, however, use current census data that are based on the previous category of Internet Service Providers and its associated size standard. That standard was: all such firms having $23.5 million or less in annual receipts. Accordingly, to use data available to us under the old standard and Census Bureau data for 2002, there were 2,529 firms in this category that operated for the entire year.[82] Of these, 2,437 firms had annual receipts of under $10 million, and an additional 47 firms had receipts of between $10 million and $24,999,999. Consequently, we estimate that the majority of these firms are small entities that may be affected by our action.

29. *All Other Information Services.* "This industry comprises establishments primarily engaged in providing other information services (except new syndicates and libraries and archives)."[83] VoIP services over wireless technologies could be provided by entities that provide other services such as email, online gaming, web browsing, video conferencing, instant messaging, and other, similar IP-enabled services. The SBA has developed a small business size standard for this category; that size standard is $6.5 million or less in average annual receipts.[84] According to Census Bureau data for 1997, there were 195 firms in this category that operated for the entire year.[85] Of these, 172 had annual receipts of under

[78] U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 4, NAICS code 517410 (issued Nov. 2005).

[79] *Id*. An additional 38 firms had annual receipts of $25 million or more.

[80] Wi-Fi (Wireless Fidelity) is a wireless technology that is based on the Institute of Electrical and Electronics Engineers 802.11 standards.

[81] U.S. Census Bureau, "Internet Publishing and Broadcasting and Web Search Portals," NAICS code 519130.

[82] U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 4, NAICS code 518111 (issued Nov. 2005).

[83] U.S. Census Bureau, "2002 NAICS Definitions: 519190 All Other Information Services" (Feb. 2004) <www.census.gov>. We note that the Commission has not reached conclusions as to whether, or under what conditions, VoIP services constitute communications or information services under the Communications Act, and our identification of this group of small entities as providers of "information services" under the Census Bureau definition is not intended to indicate any conclusions in this regard.

[84] 13 C.F.R. § 121.201, NAICS code 519190.

[85] U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," Table 4, NAICS code 514199 (issued Oct. 2000). This category was created for the 2002 Economic Census by taking a portion of the superseded 1997 category, "All Other Information Services," NAICS code 514199. The data cited in the text above are derived from the superseded category.

$5 million, and an additional nine firms had receipts of between $5 million and $9,999,999. Consequently, we estimate that the majority of these firms are small entities that may be affected by our action.

30. *Part 15 Handset Manufacturers.* Manufacturers of unlicensed wireless handsets may also become subject to requirements in this proceeding for their handsets used to provide VoIP applications. The Commission has not developed a definition of small entities applicable to unlicensed communications handset manufacturers. Therefore, we will utilize the SBA definition applicable to 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."[86] 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.[87] According to Census Bureau data for 2002, there were a total of 1,041 establishments in this category that operated for the entire year.[88] Of this total, 1,010 had employment of under 500, and an additional 13 had employment of 500 to 999.[89] Thus, under this size standard, the majority of firms can be considered small.

31. *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 firms in this category, which is: all such firms having 750 or fewer employees.[90] According to Census Bureau data for 2002, there were a total of 1,041 establishments in this category that operated for the entire year. Of this total, 1,010 had employment of under 500, and an additional 13 had employment of 500 to 999. Thus, under this size standard, the majority of firms can be considered small.

32. *Radio, Television, and Other Electronics Stores.* The Census Bureau defines this economic census category as follows: "This U.S. industry comprises: (1) establishments known as consumer electronics stores primarily engaged in retailing a general line of new consumer-type electronic

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[86] U.S. Census Bureau, 2002 NAICS Definitions, "334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing"; http://www.census.gov/epcd/naics02/def/NDEF334.HTM#N3342.

[87] 13 C.F.R. § 121.201, NAICS code 334220.

[88] U.S. Census Bureau, American FactFinder, 2002 Economic Census, Industry Series, Industry Statistics by Employment Size, NAICS code 334220 (rel. May 26, 2005); http://factfinder.census.gov. The number of "establishments" is a less helpful indicator of small business prevalence in this context than would be the number of "firms" or "companies," because the latter take into account the concept of common ownership or control. Any single physical location for an entity is an establishment, even though that location may be owned by a different establishment. Thus, the numbers given may reflect inflated numbers of businesses in this category, including the numbers of small businesses. In this category, the Census breaks out data for firms or companies only to give the total number of such entities for 2002, which was 929.

[89] *Id*. An additional 18 establishments had employment of 1,000 or more.

[90] 13 C.F.R. § 121.201, NAICS code 334220.

products; (2) establishments specializing in retailing a single line of consumer-type electronic products (except computers); or (3) establishments primarily engaged in retailing these new electronic products in combination with repair services."[91] The SBA has developed a small business size standard for Radio, Television, and Other Electronics Stores, which is: all such firms having $9 million or less in annual receipts.[92] According to Census Bureau data for 2002, there were 10,380 firms in this category that operated for the entire year.[93] Of this total, 10,080 firms had annual sales of under $5 million, and 177 firms had sales of $5 million or more but less than $10 million.[94] Thus, the majority of firms in this category can be considered small.

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

33. The Commission proposes to extend broadly to providers of wireless communications among members of the public or a substantial portion of the public using equipment that contains a built-in speaker and is typically held to the ear, and to the manufacturers of such equipment, the same hearing aid compatibility rules that currently apply to a defined category of commercial mobile radio service (CMRS). These regulations include: (1) requirements to deploy a certain number or percentage of handset models that meet hearing aid compatibility standards, (2) "refresh" requirements on manufacturers to meet their hearing aid-compatible handset deployment benchmarks in part using new models, (3) a requirement that service providers offer hearing aid-compatible handsets with varying levels of functionality, (4) a requirement that service providers make their hearing aid-compatible models available to consumers for testing at their owned or operated stores, (5) point of sale disclosure requirements, (6) requirements to make consumer information available on the manufacturer's or service provider's website, and (7) annual reporting requirements. There is a *de minimis* exception from all of the requirements except reporting for small entities, and for all entities during their first two years of offering handsets, that offer two or fewer handset models over an air interface. The Commission seeks comment on whether there are any classes of handsets for which either it is technically infeasible to meet the hearing aid compatibility requirements or satisfying those requirements would increase costs to the point where the handsets could not be successfully marketed. The Commission also seeks comment on the appropriate transition period for applying hearing aid compatibility requirements to telephones that are outside the currently covered subset of CMRS.

34. The Commission's rules require that wireless service providers make their hearing aid-compatible handset models available for consumer testing in each retail store that they own or operate. The Commission seeks comment on whether it should extend the in-store testing requirement to some or all entities that sell handsets to consumers through physical locations. In addition, the Commission seeks comment about whether it should adopt a rule providing that a return policy allowing a customer with hearing loss to return a handset without penalty would qualify as an alternative means of satisfying the in-store testing requirement.

35. Under the Commission's rules, handsets must be tested for hearing aid compatibility at their maximum output power. The Commission seeks comment on whether it should treat as hearing aid-

[91] U.S. Census Bureau, 2002 NAICS Definitions, "443112 Radio, Television, and Other Electronics Stores"; http://www.census.gov/epcd/naics02/def/NDEF443.HTM.

[92] 13 C.F.R. § 121.201, NAICS code 443112.

[93] U.S. Census Bureau, 2002 Economic Census, Industry Series: Retail Trade, Table 4, Sales Size of Firms for the United States: 2002, NAICS code 443112 (issued Nov. 2005).

[94] *Id*. An additional 123 firms had annual sales of $10 million or more. As a measure of small business prevalence, the data on annual sales are roughly equivalent to what one would expect from data on annual receipts.

compatible for all purposes handsets that allow consumers to reduce the maximum transmit power only for operations over the GSM air interface in the 1900 MHz band by up to 2.5 decibels and that meet the criteria for an M3 rating after such power reduction. The Commission proposes that if it were to extend the ability to meet hearing aid compatibility standards in this manner, it should require the handset to operate at full power when calling 911, the manufacturer or service provider would have to disclose that activation of a special mode is required to meet the hearing aid compatibility standard, and the device manual or product insert would have to explain how to activate the special mode and the possibility of a loss of coverage. The Commission seeks comment on these and any other possible conditions on this rule change.

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

36. The RFA requires an agency to describe any significant, specifically small business alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): "(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) exemption from coverage of the rule, or any part thereof, for small entities."[95]

37. The Commission seeks comment generally on the effect the rule changes considered in this Further Notice would have on small entities, on whether alternative rules should be adopted for small entities in particular, and on what effect such alternative rules would have on those entities. The Commission invites comment on ways in which it can achieve its goals while minimizing the burden on small wireless service providers, equipment manufacturers, and other entities.

38. More specifically, the Commission seeks comment on whether there are any classes of handsets that provide wireless communications 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 for which either it is technologically infeasible to meet hearing aid compatibility requirements or satisfying those requirements would increase costs to the point where the handsets could not be successfully marketed. The Commission seeks comment on whether, for reasons of technological infeasibility or prohibitive costs, the specific numerical benchmarks set forth in the Commission's rules or other rule provisions cannot be applied to any class of handsets. The Commission seeks specific evidence as to why particular requirements cannot be met and what alternative requirements would be feasible and appropriate. The Commission also asks commenters to suggest alternatives that may further reduce possible burdens on small entities regarding meeting the hearing aid compatibility requirements.

39. The Commission recognizes that it takes time for handsets with new specifications to be designed, produced, and brought to market. The Commission therefore seeks comment on the appropriate transition period for applying hearing aid compatibility requirements to telephones that are outside the subset of CMRS that is currently covered by Section 20.19(a). In recognition that smaller service providers may encounter delays in obtaining new model handsets from manufacturers and vendors, the Commission specifically asks whether smaller service providers should have a longer transition period than Tier I carriers. The Commission also asks commenters to suggest other alternative transition periods that could further lessen the burden on small businesses.

40. The Commission also seeks comment as to whether the Commission should extend the in-store testing requirement to some or all entities other than those owned or operated by service

[95] 5 U.S.C. §§ 603(c)(1)-(c)(4).

providers that sell handsets to consumers through physical locations. The Commission further seeks comment, if it decides to extend this requirement to some but not all retail outlets, on how the scope of the requirement should be defined. Among other things, the Commission asks whether the size of an entity should be a factor in this definition. The Commission's goal is to arrive at a definition that is clear and easy to apply, and at the same time closely identifies those retailers for which the benefits of the rule outweigh the burdens while reducing the burden on small entities. The Commission also seeks comment on alternatives to extending the in-store testing requirement, including whether a return policy allowing a customer with hearing loss to return a handset without penalty should qualify as an alternative means of satisfying the requirement. The Commission asks commenters to suggest alternatives that may further reduce the impact on small entities.

41. Additionally, the Further Notice seeks comment on whether the Commission should treat handsets that allow consumers to reduce the maximum transmit power only for operations over the GSM air interface in the 1900 MHz band by up to 2.5 decibels and that meet criteria for an M3 rating after such power reduction as hearing aid-compatible for all purposes. This rule change would ease the burden on small entities by making it easier to satisfy hearing aid compatibility requirements for this class of handsets.

42. Finally, if the Commission were to extend the ability to meet hearing aid compatibility standards by allowing the user to reduce the maximum power for GSM operations in the 1900 MHz band, it proposes to do so subject to the same conditions that it has imposed in the context of the *de minimis* rule. Thus, the handset would have to operate at full power when calling 911, the manufacturer or service provider would have to disclose that activation of a special mode is required to meet the hearing aid compatibility standard, and the device manual or product insert would have to explain how to activate the special mode and the possibility of a loss of coverage. This rule change would ensure that consumers have the information they need to choose and operate a handset that will best function with their hearing aid or cochlear implant. The Commission seeks to receive alternative proposals that would achieve this goal while further reducing the burdens on small business.

43. For each of the proposals in the Further Notice, the Commission seeks discussion, and where relevant, alternative proposals, on the effect that each prospective new requirement, or alternative rules, might have on small entities. For each proposed rule or alternative, the Commission seeks discussion about the burden that the prospective regulation would impose on small entities and how the Commission could impose such regulations while minimizing the burdens on small entities. For each proposed rule, the Commission asks whether there are any alternatives the Commission could implement that could achieve the Commission's goals while at the same time minimizing the burdens on small entities. For the duration of this docketed proceeding, the Commission will continue to examine alternatives with the objectives of eliminating unnecessary regulations and minimizing any significant economic impact on small entities.

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

44. None.

STATEMENT OF
CHAIRMAN JULIUS GENACHOWSKI

Re: *Amendment of the Commission's Rules Governing Hearing Aid-Compatible Mobile Handsets, WT Docket No. 07-250*.

Today we take important steps in our ongoing effort to ensure that Americans with disabilities have access to modern communications technology. This is part of our broader mission to bring the benefits of broadband and other modern communications to all Americans. It is almost befitting of our recent celebration of the 20th anniversary of the Americans with Disabilities Act, an act that has sought to achieve full integration, independence and self-sufficiency of all persons with disabilities in our democracy, our economy and in other facets of our society.

This item addresses the challenges faced by the 8 million Americans who use hearing aids. The Commission's actions today will help Americans with hearing loss have meaningful access to the most exciting and innovative wireless communications devices on the market.

We adopt today an unprecedented agency Statement of Policy that emphasizes to developers of new technologies the necessity of considering and planning for hearing aid compatibility at the earliest stages of the product design process. For too many years, Americans who have hearing loss have faced the uphill battle of attempting to obtain hearing aid compatibility long after essential communications devices completed their development cycle and went on the market. By turning the collective focus to the development stage, innovators and entrepreneurs can account for compatibility issues *before* devices are produced. This is an important change, which will result in real benefits to Americans with hearing loss.

To ensure our policies will yield real-world results, I am pleased to announce that the FCC will convene a roundtable of industry and disability group leaders to renew the collaborative process to address the challenges of hearing aid compatibility up front in the development process.

Today's item does something else. It sets the stage for some of the latest wireless phones – such as the iPhone – to meet hearing aid compatibility standards. It does so in a way designed to incentivize the broadest possible innovation and investment. As a result of positive discussions with both industry and the hearing loss community, the Commission has refocused the *de minimis* exception to our hearing aid compatibility rules on the small companies and new entrants it was originally designed to protect, while creating appropriate transition periods and an alternative route to compliance for larger manufacturers who develop innovative devices.

The bottom line: what we do today will ensure as quickly as possible that a wider range of smartphones will be usable by people with hearing aids.

I thank the staff for their hard work and collaboration on this item, and my colleagues for working together to tackle this important issue.

STATEMENT OF
COMMISSIONER MICHAEL J. COPPS

Re: *Amendment of the Commission's Rules Governing Hearing Aid-Compatible Mobile Handsets, WT Docket No. 07-250*.

Today we reaffirm our commitment that every American has a right to full inclusion in this age of technology revolution. Throughout my time at the Commission, I have had countless inspiring opportunities to work with the disabilities communities. These experiences have reinforced in me the critical role this agency must play in ensuring that these Americans are not left behind as technology advances—that their accessibility needs are being met when communicating over the telephone (as we address here), watching television or accessing and using broadband. We have made progress, to be sure—good progress. But there is more to do and, as opportunity-creating new technologies keep coming at us, we need to be always ready to make sure these new products and services—so full of promise for our disabilities communities—are available to them.

So I welcome the clear going-forward statement of policy we make today that persons with hearing aids and cochlear implants must have access to the most advanced and innovative technologies that science and markets allow. And I am pleased that we tighten our existing hearing aid compatibility rules by modifying the *de minimis* exception that applied to companies offering two or fewer handsets over a given air interface to now require all large companies to offer at least one hearing aid-compatible model after an initial two-year period. Strong and clear rules are critical to accomplishing our statutory obligation of ensuring that our nation's telecommunications networks are accessible to Americans with hearing loss.

Our decision will ensure that the hearing loss community has far greater access to the newest and most popular smartphones. And, I am particularly pleased that the outcome we reach today was shaped in no small measure by the input and contributions of the Hearing Loss Association of America and others from the hearing loss community. If I have learned one thing from my years of fighting for greater inclusion for persons with disabilities, it is that accessibility must be addressed at the earliest stages of both product design and agency rule-making. It is far more efficient and cost-effective to have these communities present at the creation of new products and services and new government regulations than it is to retrofit after it's discovered that something wasn't properly designed or considered.

I want to express my gratitude to Ruth Milkman and her team in the Wireless Telecommunications Bureau for their hard work on this item. I would also like to express my deep thanks to the Consumer and Governmental Affairs Bureau, especially Joel Gurin and Karen Peltz Strauss, for their ongoing work on accessibility. In the wake of last month's celebrations in honor of the twentieth anniversary of the landmark Americans with Disabilities Act, I hope that we are all re-energized to tackle the outstanding issues in this proceeding as well as the wide range of accessibility issues facing this Commission.

STATEMENT OF
COMMISSIONER ROBERT M. McDOWELL

Re: *Amendment of the Commission's Rules Governing Hearing Aid-Compatible Mobile Handsets, WT Docket No. 07-250*.

I am pleased to support today's policy statement, order and notice of proposed rulemaking. Workable and effective hearing aid compatibility is a matter that I have supported with enthusiasm throughout my time at the Commission, and I am proud of the leadership role that the Commission continues to play in this area. Coordinating with industry and representatives of citizens with hearing loss, our action today collectively preserves conditions for innovation and investment while also ensuring that these consumers are positioned to enjoy the benefit of new technologies as they are introduced into the marketplace.

I thank the Chairman and my colleagues for their willingness to indulge me by supporting my edits to today's order. The teamwork was outstanding. I am confident that we have created certainty for the marketplace, thereby ensuring a smooth and timely glide path for compliance.

I also congratulate Ruth Milkman and the team from the Wireless Telecommunications Bureau for your efforts here. Thanks to all of you for your creativity and thoughtful work.

STATEMENT OF
COMMISSIONER MIGNON L. CLYBURN

Re: *Amendment of the Commission's Rules Governing Hearing Aid-Compatible Mobile Handsets, WT Docket No. 07-250*.

When Congress enacted the Hearing Aid Compatibility Act of 1988, it found that "to the fullest extent made possible by technology and medical science, hearing-impaired persons should have equal access to the national telecommunications network." Today's item will help achieve that goal by adopting policies that are intended to ensure that the more than seven million Americans who currently use hearing aids, have continuing access to the most advanced communications technologies as they develop. Therefore, I am pleased that the Commission was able to reach unanimous consent on the policy decisions in this item.

The Policy Statement we adopt today makes two points that have been missing from the Commission's principles on hearing aid compatibility. The first point is that the goal of this Commission is "[t]o maximize the number of accessible products for [the hearing-impaired] population." The second point is that, to achieve this goal, the Commission's policies must adhere to the principle of "encourag[ing] manufacturers of new technologies, to consider hearing aid compatibility at the earliest stages of the product design process." I have long been a proponent of the idea that those living with disabilities should not be an afterthought in our policymaking process. Similarly, industry should be encouraged to consider how it can design networks and devices to allow those with disabilities equivalent access to communications services. Thus, I am pleased that my colleagues agree on this score with respect to hearing aid compatibility.

The changes that the Report and Order adopt should significantly increase the number of advanced handsets that are accessible to those that use hearing aids. Modifying the *de minimis* exception so all large entities will be required to offer at least one hearing aid-compatible model within two years after entry, will ensure, that more handsets are covered by our hearing aid compatibility rules. It should also lead to the most advanced handsets, such as the popular iPhone, being accessible earlier to those with hearing loss. I applaud the recent efforts of handset manufacturers and consumer advocates to find consensus on such an important issue in order to expedite our decision.

I also support the rule changes proposed in the Further Notice. As new technologies take hold, it is important that our hearing aid compatibility rules apply so that all consumers, including the hearing-impaired, benefit. I hope the Commission will expeditiously consider the record on the tentative conclusion that our hearing aid compatibility rules should extend beyond just CMRS services, to include customer equipment used for wireless voice communications over any type of network by a substantial portion of the public. This would allow the hearing aid compatibility rules to apply to telephone services such as Voice over Internet Protocol Services, when provided through a handset that is designed to make phone calls. I look forward to seeing the innovations that unfold in the design of hearing aid compatible equipment. But I am most excited to see the opportunities that will flourish as more members of the hearing impaired community, gain access to more advanced handsets.

I thank the staffs of the Wireless Telecommunications Bureau, the Consumer and Governmental Affairs Bureau, and the Office of the General Counsel, for their hard work on this item.

STATEMENT OF
COMMISSIONER MEREDITH ATTWELL BAKER

Re: *Amendment of the Commission's Rules Governing Hearing Aid-Compatible Mobile Handsets, WT Docket No. 07-250*.

Today we have taken an important step to update our rules on hearing aid compatibility. We are acting to ensure that people across America who rely on hearing aids will be able to join those who already use the most advanced handsets that are driving the wireless broadband revolution. Informed through close consultation with a broad cross section of stakeholders, our approach balances the needs of the hearing impaired community with the need to promote and encourage investment and innovation in handsets. It is a significant achievement and a good result. I would like add my thanks to everyone for their hard work on this item.