

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

In the Matter of
Amendment of the Commission’s Rules Governing
Standards for Hearing Aid-Compatible Handsets
WT Docket No. 20-3

REPORT AND ORDER

Adopted: February 16, 2021

Released: February 22, 2021

By the Commission: Acting Chairwoman Rosenworcel issuing a statement.

TABLE OF CONTENTS

Table with 2 columns: Heading and Paragraph #. Includes sections like I. INTRODUCTION, II. BACKGROUND, III. DISCUSSION, IV. PROCEDURAL MATTERS, V. ORDERING CLAUSES, and various appendices.

I. INTRODUCTION

1. Section 710 of the Communications Act of 1934, as amended, requires the Commission to establish regulations “to ensure reasonable access to telephone service by persons with impaired hearing,” and to “establish or approve such technical standards as are required” to do so. Today, we update our wireless hearing aid compatibility requirements to ensure that our rules take advantage of the latest technical developments and standards, and to continue on the path to making 100% of wireless handsets hearing aid-compatible.

1 47 U.S.C. § 610(a).

2 Id., § 610(c).

meet specified technical criteria for hearing aid compatibility.<sup>3</sup> In 2017, the Commission revised its rules to provide that, beginning on March 1, 2021, handset manufacturers must ensure that all wireless handset models newly submitted for hearing aid compatibility certification meet a volume control requirement.<sup>4</sup> The Commission's current rules, however, are based on an outdated 2011 standards document from the American National Standards Institute (ANSI) that does not include a volume control requirement.

2. A new ANSI standard (the 2019 ANSI Standard)<sup>5</sup> was developed through a voluntary, consensus-driven approach. The 2019 ANSI Standard is broadly supported by both industry and consumer groups. The new standard requires that the handset meet volume control specifications, applies to a wider range of frequency bands and technologies, replaces the current rating system with a more consumer-friendly approach, and harmonizes testing methodologies with international standards. We now update the Commission's rules to include the 2019 ANSI Standard. We also provide for a two-year transition to the exclusive use of the 2019 ANSI Standard, and we extend the current volume control deadline so that the implementation of the requirement coincides with this transition period. In addition, we modify our rules to implement the new standard and transition period and to provide for other updates and simplification. Our actions today will improve the listening experience for consumers with hearing loss and will reduce regulatory burdens for handset manufacturers and service providers.

## II. BACKGROUND

3. The Commission's rules require both device manufacturers and service providers to offer consumers a minimum number of wireless handset models that meet specified technical standards for compatibility with different types of hearing aids through acoustic coupling and inductive coupling.<sup>6</sup> Manufacturers and service providers must offer a minimum number of compliant handset models for each "air interface" based on the total number of handset models that they offer.<sup>7</sup> The Commission's rules currently require handset manufacturers to ensure that at least 66% of their handset models are hearing aid-compatible, with that minimum increasing to 85% on October 21, 2021.<sup>8</sup> Likewise, national wireless carriers are currently required to ensure that at least 66% of their handset models are hearing aid-

---

<sup>3</sup> 47 CFR § 20.19(c)-(d).

<sup>4</sup> 47 CFR § 20.19(b)(1).

<sup>5</sup> Accredited Standards Committee C63<sup>®</sup> - Electromagnetic Compatibility, *American National Standard Methods of Measurement of Compatibility Between Wireless Communications Devices and Hearing Aids*, ANSI C63.19-2019 (2019 ANSI Standard). The standard is available for inspection at the Federal Communications Commission, 45 L Street NE, Reference Information Center, Room 1.150, Washington, DC 20554, (202) 418-0270. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email [fedreg.legal@nara.gov](mailto:fedreg.legal@nara.gov) or go to <http://www.archives.gov/federal-register/cfr/ibr-locations.html>. The standard is also available for purchase from IEEE Operations Center, 445 Hoes Lane, Piscataway, NJ 08854-4141, by calling (732) 981-0060, or going to <https://standards.ieee.org/>.

<sup>6</sup> 47 CFR § 20.19(c)-(d). Hearing aids operating in acoustic coupling mode receive sounds 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. To use a wireless handset with a hearing aid or cochlear implant in acoustic coupling mode, radiofrequency interference and other electromagnetic interference from the handset must be controlled. Hearing aids operating in inductive coupling mode turn off their microphone to avoid amplifying unwanted ambient noise, instead using a telecoil (T-Coil) to receive only audio signal-based magnetic fields generated by inductive coupling-capable telephones. The hearing aid converts these fields back to sound or to a signal appropriate for cochlear implant users.

<sup>7</sup> "Air interface" refers to the technology that ensures compatibility between mobile radio service equipment, such as handsets, and a service provider's base stations. *Amendment of the Commission's Rules Governing Hearing Aid-Compatible Mobile Handsets*, WT Docket No. 07-250, Third Report and Order, 27 FCC Rcd 3732, 3733, para. 3 & n.2 (WTB/OET 2012) (*WTB/OET Report and Order*). Examples of air interfaces include GSM, CDMA, LTE, and Wi-Fi. See generally 2019 ANSI Standard at 21-23.

<sup>8</sup> 47 CFR § 20.19(c)(1)(i)(C)-(D), (d)(1)(ii)(D)-(E).

compatible, with that minimum increasing to 85% on April 4, 2022.<sup>9</sup> These requirements for manufacturers and service providers are subject to a *de minimis* exception.<sup>10</sup> The Commission has stated that it will decide by 2024 whether to require that 100% of handsets be hearing aid-compatible.<sup>11</sup>

4. The Commission’s rules also include a volume control requirement, adopted in October, 2017, which is designed to accommodate all people with hearing loss, including those who do not use hearing aids.<sup>12</sup> Under the current rules, beginning on March 1, 2021, manufacturers must ensure that all wireless handset models newly submitted for hearing aid compatibility certification are “equipped with volume control that produces sound levels suitable for persons with hearing loss (including persons with and without hearing aids).”<sup>13</sup>

5. The Commission’s hearing aid compatibility rules currently incorporate a 2011 version of ANSI’s hearing aid compatibility standard (2011 ANSI Standard) to determine if a handset is hearing aid-compatible.<sup>14</sup> The 2011 ANSI Standard specifies testing procedures for determining the ratings of digital wireless handsets that operate over frequencies in the 698 MHz to 6 GHz bands.<sup>15</sup> This standard is used to evaluate compatibility between wireless handsets and hearing aids that use acoustic or inductive coupling, including cochlear implants.<sup>16</sup> Notably, the 2011 ANSI Standard does not include testing procedures for determining compliance with the Commission’s volume control requirement.

6. In September 2019, the Accredited Standards Committee C63®–Electromagnetic Compatibility<sup>17</sup> (ANSI Committee) asked the Commission to incorporate the 2019 ANSI Standard into the Commission’s wireless hearing aid compatibility rules.<sup>18</sup> The 2019 ANSI Standard makes several

---

<sup>9</sup> 47 CFR § 20.19(c)(2)(iii), (d)(2)(iii). For wireless carriers that do not offer service nationwide, 66% of handsets were required to be hearing aid-compatible by April 3, 2020, with the minimum increasing to 85% by April 3, 2023. 47 CFR § 20.19(c)(3)(iii)-(iv), (d)(3)(iii)-(iv).

<sup>10</sup> The *de minimis* exception applies to manufacturers and service providers that offer five or fewer handset models in an air interface and reduces their obligations with respect to the hearing aid compatibility requirements. 47 CFR § 20.19(e).

<sup>11</sup> *Improvements to Benchmarks and Related Requirements Governing Hearing Aid Compatible Mobile Handsets*, WT Docket No. 15-285, Report and Order, 31 FCC Rcd 9336, 9349, para. 34 (2016) (*Revised Benchmark Order*). The term “hearing aid-compatibility” refers to the requirements related to acoustic and inductive coupling and to the requirements related to volume control capability.

<sup>12</sup> *Amendment of the Commission’s Rules Governing Hearing Aid-Compatible Mobile Handsets*, WT Docket No. 07-250, Report and Order and Order on Reconsideration, 32 FCC Rcd 9063, 9081, para. 35 (2017) (*Volume Control Order*).

<sup>13</sup> 47 CFR § 20.19(b)(1). The Commission set this compliance deadline to provide manufacturers a transition period for finalizing and codifying the technical parameters of a volume control standard. *Volume Control Order*, 32 FCC Rcd at 9080-81, paras. 34-35.

<sup>14</sup> 47 CFR § 20.19(b)(1), (b)(2).

<sup>15</sup> 47 CFR § 20.19(a)(1)(i).

<sup>16</sup> Since users of cochlear implants generally will be affected by our rule changes to the same extent as users of hearing aids, references hereinafter to “hearing aids” or “hearing aid users” also refer to “cochlear implants” or “users of cochlear implants.” See *Volume Control Order*, 32 FCC Rcd at 9064, para. 2 & n.3. A cochlear implant converts signals from the handset into electrical signals that are sent to the cochlea, which stimulate the cochlear nerve, causing it to send signals to the brain that are interpreted as sound. *Id.*

<sup>17</sup> Accredited Standards Committee C63®–Electromagnetic Compatibility is the accredited standards development organization whose working group, C63.19, is responsible for developing and maintaining ANSI C63.19-the wireless hearing aid compatibility standard. ANSI, Introduction to ANSI, [https://www.ansi.org/about\\_ansi/introduction/introduction.aspx?menuid=1](https://www.ansi.org/about_ansi/introduction/introduction.aspx?menuid=1) (last visited Dec. 11, 2020).

significant revisions in the processes for determining the compatibility between wireless handsets and hearing aids. Specifically, the 2019 ANSI Standard requires that handsets meet volume control specifications in order to be considered hearing aid-compatible under that standard.<sup>19</sup> In addition, the 2019 ANSI Standard addresses additional technologies and devices operating in a wider frequency range of 614 MHz to 6 GHz, which now includes the 614-698 MHz band made available for wireless use by the repackaging of television broadcast operations.<sup>20</sup> Further, the 2019 ANSI Standard replaces the present numerical M/T rating system with a set of requirements and thresholds that determines compatibility.<sup>21</sup> The 2019 ANSI Standard also reduces the testing burden on handset manufacturers by allowing them to perform certain simple tests first to determine compatibility with acoustic coupling (which may eliminate the need to perform more time-consuming tests);<sup>22</sup> the new standard also reduces the testing burden on hearing aid manufacturers by conforming testing protocols for hearing aids with international standards.<sup>23</sup> The ANSI Committee asserts that, as a result of these changes, the new standard will improve the

(Continued from previous page) \_\_\_\_\_

<sup>18</sup> See Report and Petition of American National Standards Institute Accredited Standards Committee C63®, CG Docket No. 13-46, WT Docket Nos. 07-250 and 10-254, at 1 (filed Sept. 23, 2019), <https://ecfsapi.fcc.gov/file/10923530915563/ANSI%20C63%20Petition%20to%20FCC%20-%20190923.pdf> (ANSI Report and Petition).

<sup>19</sup> ANSI Report and Petition at 3-10. The ANSI Committee states that “[a]dding volume control requirements was an important addition to the standard.” *Id.* at 5. The 2019 ANSI Standard incorporates by reference a wireless volume control standard, ANSI/TIA-5050:2018, developed by another ANSI committee. *Id.* at 5-6; see ANSI/TIA-5050:2018, *Telecommunications – Communications Products – Receive Volume Control Requirements for Wireless (Mobile) Devices* (approved Jan. 17, 2018) (ANSI/TIA Volume Control Standard). The volume control standard is available for purchase from Telecommunications Industry Association, 1320 North Courthouse Road, Suite 200, Arlington, VA 22201, by calling (703) 907-7700, or by visiting [https://global.ihs.com/csf\\_home.cfm?&csf=TIA](https://global.ihs.com/csf_home.cfm?&csf=TIA). In order to pass the volume control requirement, a handset must meet a two-part test. The first part of the requirement tests for conversational gain with a hearing aid, and the second part of the requirement tests for conversational gain without a hearing aid. To pass the first part of the requirement, a handset must have at least 6 dB of conversational gain with a hearing aid, and to pass the second part of the requirement, a handset must have at least 18 dB of conversational gain without a hearing aid. *Id.*, Section 5.1.1 at 7.

<sup>20</sup> ANSI Report and Petition at 6 & n.7. As ANSI explains, “[t]he working group found that VoIP, VoLTE, TVWS devices and cellular at 600 MHz, 3.5 GHz and 5.0 GHz all needed consideration. Modifications were made to support the application of the standard to these emerging technologies.” *Id.* at 6. The changes address the “[g]rowing importance of VoIP and VoLTE for telephony services” and “[c]over new technologies, particularly at TVWS devices and cellular at 600 MHz, 3.5 GHz and 5.0 GHz, which may include extending the lower boundary of the frequency range covered.” *Id.* at 6 & n.7. The 2019 ANSI Standard also covers voice operations over newer technologies, such as 5G New Radio (NR), within the aforementioned frequency range.

<sup>21</sup> The 2011 ANSI Standard rates hearing aid compatibility based on a scale of M1 to M4 for acoustic coupling, where M3 is passing, and on a scale of T1 to T4 for inductive coupling, where T3 is passing. 47 CFR § 20.19(b)(1)(2); see generally Accredited Standards Committee C63® – Electromagnetic Compatibility, *American National Standard Methods of Measurement of Compatibility Between Wireless Communications Devices and Hearing Aids*, ANSI C63.19-2011 (May 27, 2011) (2011 ANSI Standard). The 2019 ANSI Standard no longer uses this dual rating system and applies a single set of requirements to test for hearing aid compatibility.

<sup>22</sup> As a first step in testing a handset’s compatibility with acoustic coupling, the 2019 ANSI Standard allows manufacturers to measure the peak conducted power, which is also required for other FCC certifications. If the handset does not qualify with this test, then the evaluation moves to the more time-consuming tests. ANSI Report and Petition at 8-9. See also 2019 ANSI Standard at 26 (stating, “[i]n practice, it is often found that [the first test] is sufficient to qualify most or all operating modes for [radiofrequency] emissions, without further testing”).

<sup>23</sup> The 2019 ANSI Standard is harmonized with the IEC 60118-13 standard (Electroacoustics - Hearing aids - Part 13: Electromagnetic compatibility (EMC)). ANSI Report and Petition at 5.

experience of hearing aid users, including those who use cochlear implants, while at the same time reducing testing burdens.<sup>24</sup>

7. In January 2020, the Commission released a Notice of Proposed Rulemaking (*Notice*) proposing to adopt the 2019 ANSI Standard as the exclusive testing standard for determining the compatibility of wireless handsets and a two-year transition from the current 2011 ANSI Standard.<sup>25</sup> The *Notice* also sought comment on whether to continue to maintain the exemption from hearing aid compatibility requirements for those wireless handsets operating with frequencies above 6 GHz. In addition, the Commission proposed to extend the current deadline for implementing volume control requirements so that it aligns with the date that the 2019 ANSI Standard becomes the exclusive testing standard for hearing aid compatibility.<sup>26</sup> The *Notice* also sought comment on updating the rules to make changes related to implementing the 2019 ANSI Standard, particularly with respect to labeling and disclosure and to remove unnecessary or superseded rule provisions.<sup>27</sup> The *Notice* generally sought comment on whether these proposals would improve the experience of hearing aid users as well as reduce regulatory burdens for handset manufacturers and service providers.<sup>28</sup>

### III. DISCUSSION

8. In this *Report and Order*, we incorporate the 2019 ANSI Standard into our rules and make it the exclusive testing standard for determining hearing aid compatibility after a two-year transition. In addition, we extend the current volume control deadline so that it coincides with the start of the exclusive use of the 2019 ANSI Standard. Further, we make corresponding implementation changes to our rules, and we refine our hearing aid compatibility labeling requirements. Finally, we remove past transition dates and benchmarks and make other technical changes to the rules.

#### A. Codification of the 2019 ANSI Standard

9. As proposed in the *Notice*, we adopt the 2019 ANSI Standard and the ANSI/TIA Volume Control Standard and incorporate the new standards into our hearing aid compatibility rules by reference as the exclusive technical standards for evaluating the hearing aid compatibility of wireless handsets and volume control after a two-year transition from the 2011 ANSI Standard.<sup>29</sup> The Commission has long recognized that its hearing aid compatibility rules should evolve as revisions to the ANSI standards are developed over time.<sup>30</sup> The Commission has encouraged the ANSI Committee to work with relevant stakeholders to review hearing aid compatibility issues periodically and to determine whether improvements to the standard are warranted.<sup>31</sup> We appreciate the work the ANSI Committee has undertaken with respect to developing the 2019 ANSI Standard, and we incorporate the new standard into our rules by concluding, pursuant to section 710 of the Communications Act, that compliance is necessary

<sup>24</sup> ANSI Report and Petition at 3-4 & n.3.

<sup>25</sup> *Amendment of the Commission's Rules Governing Standards for Hearing Aid-Compatible Handsets*, WT Docket No. 20-3, Notice of Proposed Rulemaking, 35 FCC Rcd 794, 797, para. 7 (2020) (*2020 ANSI Standard Notice*).

<sup>26</sup> *2020 ANSI Standard Notice*, 35 FCC Rcd at 799, para. 15.

<sup>27</sup> *2020 ANSI Standard Notice*, 35 FCC Rcd at 797-98, 801-05 paras. 6, 10, 20-32.

<sup>28</sup> *2020 ANSI Standard Notice*, 35 FCC Rcd at 798, para. 10. A list of comments and replies can be found in Appendix A.

<sup>29</sup> *2020 ANSI Standard Notice*, 35 FCC Rcd at 797, para. 7. The 2019 ANSI Standard states that for a handset to be in compliance with this standard it must also be in compliance with the ANSI/TIA Volume Control Standard. 2019 ANSI Standard at 53.

<sup>30</sup> See, e.g., *Section 68.4(a) of the Commission's Rules Governing Hearing Aid-Compatible Telephones*, WT Docket No. 01-309, Report and Order, 18 FCC Rcd 16753, 16799, paras. 62-63 (2003), modified by erratum, 18 FCC Rcd 18047 (2003) (*2003 Hearing Aid Compatibility Report and Order*).

<sup>31</sup> See, e.g., *WTB/OET Report and Order*, 27 FCC Rcd at 3733, para. 2.

to ensure reasonable access to telephone service by persons with impaired hearing.<sup>32</sup>

10. The new standard improves the measurement of potential hearing aid interference and, as a result, improves the listening experience for those who use hearing aids. Further, for the first time, the standard incorporates a volume control requirement that will provide significant benefits to persons with hearing loss, whether or not they use hearing aids.<sup>33</sup> In addition, the new standard covers new technologies and devices and expands the covered frequency range from the current frequency range of 698 MHz to 6 GHz to a new frequency range from 614 MHz to 6 GHz. This expanded frequency range means that handsets operating in the frequencies assigned in the Commission's Broadcast Incentive Auction<sup>34</sup> can also be certified as hearing aid-compatible over those frequencies. The new standard also eliminates the current numerical M/T rating system, which hearing aid users found to be confusing, and replaces it with a more consumer-friendly system.<sup>35</sup> Under the new standard, a handset is certified as hearing aid-compatible without an assigned rating. Further, the new standard reduces testing burdens for wireless handset manufacturers by allowing certain simple tests be done first to determine compatibility with acoustic coupling, while maintaining an exemption from radiofrequency testing for low power air interfaces.<sup>36</sup> Finally, the new standard also harmonizes with other international hearing aid standards, which helps reduce regulatory burdens for hearing aid manufacturers.<sup>37</sup> Based on these enhancements to the ANSI standard, we find that incorporating the 2019 ANSI Standard into our rules is in the public interest.

11. We note that commenters broadly support incorporation of the new standard into our rules.<sup>38</sup> Consumer organizations strongly support implementation of the 2019 ANSI Standard.<sup>39</sup> Industry organizations report that the new standard will encourage competition and advance the public interest<sup>40</sup> and applaud the Commission for ensuring the availability of wireless handsets that will meet the needs of

---

<sup>32</sup> 47 U.S.C. § 610(a) (“The Commission shall establish such regulations as are necessary to ensure reasonable access to telephone service by persons with impaired hearing.”).

<sup>33</sup> ANSI Report and Petition at 5-6.

<sup>34</sup> *Incentive Auction Closing and Channel Reassignment Public Notice et al.*, AU Docket No. 14-252, Public Notice, 32 FCC Rcd 2786 (2017).

<sup>35</sup> Under this new system, a handset certified as hearing aid-compatible is considered to operate at the equivalent of the M3/T3 levels or better even though the new standard does not use the category rating system. The ANSI committee eliminated the category rating system because hearing aid users found it to be confusing. ANSI Report and Petition at 4-5.

<sup>36</sup> ANSI Report and Petition at 8-9.

<sup>37</sup> ANSI Report and Petition at 5.

<sup>38</sup> See, e.g., CTA Comments at 3; CTIA Comments at 4; HIA Comments at 1; HLAA Comments at 1; HLAA Reply at 1-2; Lintz Comments at 4; Samsung Comments at 3.

<sup>39</sup> HLAA Comments at 6; HLAA Reply at 5 (supporting the 2019 ANSI Standard). HLAA is an advocacy group for Americans who are deaf, hard of hearing, or late-deafened. HLAA filed joint comments and reply comments along with these other consumer organizations: National Association of the Deaf, Telecommunications for the Deaf and Hard of Hearing, Inc., and the Rehabilitation Engineering Research Center on Technology for the Deaf and Hard of Hearing, Gallaudet University (collectively referred to as HLAA).

<sup>40</sup> CTA Comments at 3 (“[I]ndustry-led, open, and voluntary global standards for communications and information technologies enable cost-effective introduction of new technologies while helping drive competition because the standards can move at the speed of innovation, rather than at the speed of regulation.”); CTIA Comments at 3 (“Adoption of the 2019 ANSI HAC standard for evaluating wireless handset HAC will advance the public interest by updating the Commission’s rules consistent with advances in technology, including new devices and operations over additional frequency bands.”).

individuals with hearing loss.<sup>41</sup> Industry commenters agree that adopting the new standard will simplify testing and reporting requirements, which will benefit both consumers and manufacturers.<sup>42</sup>

12. Schmid and Partner Engineering AG (Schmid), a manufacturer of hearing aid compatibility testing equipment, raises technical concerns about certain testing requirements for measuring compatibility with acoustic and inductive coupling under the new standard.<sup>43</sup> Specifically, regarding testing of acoustic coupling, Schmid argues that the 2019 ANSI Standard should not permit the use of D-Dot probes for measuring radiofrequency emissions because such probes will lead to inconsistent results, as compared to the use of isotropic probes manufactured by Schmid.<sup>44</sup> With regard to the testing of inductive coupling, Schmid argues that the desired and ambient (noise) undesired T-Coil magnetic field limits set forth in the 2019 ANSI Standard, which Schmid alleges are more restrictive than the limits set forth in the 2011 ANSI Standard, could lead to unclear testing results and increased testing burden and costs.<sup>45</sup>

13. As an initial matter, we note that both areas of concern were discussed and addressed in the ANSI comment resolution process to the satisfaction of the ANSI Committee, and, thereafter, the committee voted to adopt the new standard.<sup>46</sup> The 2019 ANSI Standard, as with ANSI standards generally, was developed through a voluntary, consensus-driven approach and is broadly supported by both industry and consumer groups.

14. Regarding Schmid's specific concern that allowing D-Dot probes to test acoustic coupling can create inconsistent results,<sup>47</sup> we agree with commenters that any such uncertainty does not make the use of D-Dot probes unsuitable for testing.<sup>48</sup> All measurements are subject to a certain degree of uncertainty, and labs can factor such uncertainties into their calculations to assess the overall reliability of test results.<sup>49</sup> PCTEST explains that some risks associated with using D-Dot probes were mitigated

---

<sup>41</sup> Samsung Comments at 1, 3, 9 (applauding the Commission for ensuring the availability of wireless handsets that will meet the needs of individuals with hearing loss and urging the Commission to incorporate the new standard into the Commission's rules).

<sup>42</sup> HIA Comments at 1 ("HIA supports the proposal to update to the 2019 ANSI C63.19 standard. The updates simplify testing and reporting and will benefit both manufacturers and consumers."); *see also* CTIA Comments at 3 (stating that adopting the Commission's proposals in the NPRM, including incorporating the 2019 ANSI HAC standard into its hearing aid compatibility rules, will streamline and simplify hearing aid compatibility testing and labeling requirements while reducing testing burdens).

<sup>43</sup> Schmid Comments at 3-8.

<sup>44</sup> Schmid Comments at 3-7. The 2011 ANSI Standard only allowed for the use of isotropic dipole-based probes for measuring acoustic coupling, while the 2019 ANSI Standard allows for use of both isotropic dipole-based probes and D-Dot probes.

<sup>45</sup> Schmid Comments at 3, 7-8. T-Coil magnetic field (also known as the audio-band magnetic signal) measurements are used to assess the magnetic interference potential of a handset when inductively coupled with a hearing aid.

<sup>46</sup> Julstrom Reply at 3. Stephen Julstrom is a consultant to the Deaf/Hard of Hearing Technology Rehabilitation Engineering Research Center and vice-chair of the ANSI Committee.

<sup>47</sup> Schmid Comments at 3-7.

<sup>48</sup> *See, e.g.*, PCTEST Reply at 2-3; Julstrom Reply at 4.

<sup>49</sup> An uncertainty budget is used to account for this deviation and is specific to the test equipment used. Julstrom Reply at 6. As the 2019 ANSI Standard explains, "the overall uncertainty" in testing "is calculated in part by identifying uncertainties in the instrumentation chain used in performing each of the measurements." 2019 ANSI Standard at 54. Each component of testing is also "evaluated as to its individual uncertainty." *Id.* Accordingly, labs can review the uncertainty budgets to determine any impact the use of the D-Dot probe has on the overall uncertainty of the testing. As PCTEST explains, "[i]f the larger uncertainties are unsuitable for the lab's use, then

(continued...)

through revisions to the standard.<sup>50</sup> Moreover, the use of D-Dot probes for testing of acoustic coupling provides certain benefits relative to the use of isotropic probes; in particular, the D-Dot probe is less expensive and more widely available.<sup>51</sup> Further, we note that the use of D-Dot probes for testing of acoustic coupling is optional under the 2019 ANSI standard, which means that labs can use isotropic probes if they encounter an issue with D-Dot probes.<sup>52</sup> Accordingly, we disagree with Schmid that the D-Dot probe is unacceptable or that use of isotropic probes should necessarily be preferred.<sup>53</sup>

15. Regarding Schmid's concern about the standard's T-Coil magnetic field limits for testing of inductive coupling,<sup>54</sup> we agree with commenters that the standard's T-Coil requirements are technically sound as a result of years of study and collaboration.<sup>55</sup> As PCTEST explains, testing during the development of the standard established that the standard's limits are both feasible for manufacturers and tolerable for hearing aid users.<sup>56</sup> Given that the record demonstrates careful consideration of these limits during the ANSI process, we see no reason for concern with adopting these limits, as part of the 2019 ANSI Standard, into our rules.

16. Finally, with respect to Schmid's concerns about unclear test results and testing burdens and costs,<sup>57</sup> we note that the new standard was developed over a period of years, subject to five rounds of review, and approved and published by the ANSI Committee in August 2019.<sup>58</sup> The ANSI Committee considers the new standard "a significant advancement" over prior versions and notes that a "continuing goal [is] to keep the testing burden as low as possible and still meet the needs of the standard and, more importantly, of hearing aid wearers."<sup>59</sup> Julstrom adds that "the requirements laid out in this revision are the result of years of study and collaboration and have been thoroughly vetted."<sup>60</sup> No other commenter raises concerns about unclear test results or increased burdens and costs. Given this proceeding's record and the years of study and collaboration that went into developing the new standard, we reject Schmid's concerns. We also note that, if testing labs request clarification of testing procedures, the Commission's

(Continued from previous page) \_\_\_\_\_

use of other equipment is available and necessary, but there is a benefit for test laboratories to have additional test equipment options." PCTEST Reply at 3.

<sup>50</sup> PCTEST Reply at 3 (explaining, for example, that evaluation over a measurement area in the 2019 ANSI Standard as opposed to over a measurement point in the 2011 ANSI Standard can serve to decrease the effect of using a D-Dot probe and that other benefits and drawbacks of using a D-Dot probe are noted in the 2019 ANSI Standard).

<sup>51</sup> Julstrom Reply at 4.

<sup>52</sup> Julstrom Reply at 4 (explaining that "[i]f, while allowing for the higher uncertainty budget implied by the use of the D-Dot probe, unambiguous device qualification is not possible, standard lab practice would encourage reversion to test equipment exhibiting lower uncertainty"). As Julstrom notes, nothing in the standard prevents or discourages use of the isotropic probe. *Id.*

<sup>53</sup> Schmid Comments at 3-4.

<sup>54</sup> Schmid Comments at 3, 7.

<sup>55</sup> Julstrom Reply at 4-5; PCTEST Reply at 3-5.

<sup>56</sup> PCTEST Reply at 3-5. PCTEST indicates that Schmid's concerns that the limits are more restrictive than previous standards appear to be "unfounded." PCTEST Reply at 4. PCTEST explains, for example, that the limit in the 2019 ANSI Standard is consistent with the limit in the 2011 ANSI standard for handsets rated as T3, which makes the requirement in the new standard reasonable. PCTEST Reply at 5. Julstrom asserts that Schmid's comments "reveal some misunderstandings" about the T-Coil mode of operation. Julstrom Reply at 5.

<sup>57</sup> Schmid Comments at 3.

<sup>58</sup> ANSI Report and Petition at 2-3, 8-9.

<sup>59</sup> ANSI Report and Petition at 8.

<sup>60</sup> Julstrom Reply at 3-4, 5.

Office of Engineering and Technology (OET) can provide guidance through the issuance of Knowledge Database (KDB) publications.<sup>61</sup>

17. *Frequencies Above 6 GHz.* Recognizing that the 2019 ANSI Standard, like the 2011 ANSI Standard, does not address frequencies above 6 GHz, the *Notice* sought comment on whether hearing aid compatibility testing was needed in higher frequencies.<sup>62</sup> Higher millimeter wave frequencies were not commonly used in mobile handsets at the time that the 2019 ANSI Standard was being developed. However, the *Notice* sought comment on whether to continue to exempt handsets operating in frequencies above 6 GHz from the statutory hearing aid compatibility requirements.<sup>63</sup> Based on the record, we decline to lift the exemption that currently excludes frequencies above 6 GHz from hearing aid compatibility requirements.<sup>64</sup>

18. Section 710 of the Communications Act of 1934, as amended, exempts “telephones used with public mobile services” from the hearing aid compatibility requirements, but it directs the Commission to assess periodically the “appropriateness of continuing in effect” the exemption and to revoke or otherwise limit the exemption if certain factors are met.<sup>65</sup> The Commission must revoke or limit the exemption if it determines that: (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.<sup>66</sup> In conjunction with adopting the Commission’s initial requirements for hearing aid compatibility for wireless handsets, the Commission revoked the statutory exemption as to wireless handsets operating below 6 GHz; the Commission has not addressed the exemption with respect to handsets operating on frequencies above 6 GHz.<sup>67</sup>

19. In the past, the Commission generally has relied on an ANSI technical standard to demonstrate technological feasibility.<sup>68</sup> These standards are developed by interested parties—which may include handset manufacturers, service providers, consumer groups, testing bodies, and others—working together to reach a consensus standard that the ANSI Committee presents to the Commission for

---

<sup>61</sup> OET publishes equipment authorization procedures and measurement guidance in the form of FCC Public Notices and KDB publications. This staff guidance is intended to help the public follow the Commission’s requirements. See Federal Communications Commission, *Office of Engineering and Technology Laboratory Division Knowledge Database (KDB)*, <https://apps.fcc.gov/oetcf/kdb/index.cfm> (last visited Dec. 11, 2020).

<sup>62</sup> *2020 ANSI Standard Notice*, 35 FCC Rcd at 798, para. 11.

<sup>63</sup> *2020 ANSI Standard Notice*, 35 FCC Rcd at 798, para. 11; 47 U.S.C. § 610(b)(2)(A)-(B). The *Notice* fulfilled the statutory requirement of Section 610 of the Communications Act that requires the Commission to periodically assess the appropriateness of continuing in effect the exemptions for telephones and other customer premises equipment described in 47 U.S.C. § 610(b)(2)(A).

<sup>64</sup> 47 U.S.C. § 610(b)(2)(A)-(B); Hearing Aid Compatibility Act of 1988, Pub. L. No. 100-394, 102 Stat. 976 (codified as amended at 47 U.S.C. § 610).

<sup>65</sup> 47 U.S.C. § 610(b)(2)(B). The statute defines “telephone used with public mobile services” as “telephones and other customer premises equipment used in whole or in part with air-to-ground radiotelephone services, cellular radio telecommunications services, offshore radio, rural radio service, public land mobile telephone service, or other common carrier radio communication services covered by title 47 of the Code of Federal Regulations, or any functionally equivalent unlicensed wireless services.” *Id.* § 610(b)(4)(B).

<sup>66</sup> 47 U.S.C. § 610(b)(2)(B).

<sup>67</sup> 47 CFR § 20.19(a)(1)(i).

<sup>68</sup> See 47 U.S.C. § 610(b)(2)(B)(iii); *2003 ANSI Report and Order*, 18 FCC Rcd at 16769, para. 39 (“Fundamental to deciding to modify the exemption on grounds of technological feasibility is the requirement that there be an established technical standard.”).

incorporation into our rules.<sup>69</sup> The Commission has never developed its own technical standard for testing for hearing aid compatibility or modified an existing technical standard. Absent an applicable technical standard that reflects a broad-based agreement as to its utility, soundness, and practicality for implementation, we decline to conclude that compliance with hearing aid compatibility standards for frequencies above 6 GHz is technically feasible or that lifting the statutory exemption is in the public interest. Rather, the Commission requests that the ANSI Committee work with all relevant stakeholders to develop a new standard that addresses hearing aid compatibility in frequencies above 6 GHz.

20. Most commenters addressing this issue agree that the Commission should continue to exempt handset operations in frequencies above 6 GHz from hearing aid compatibility requirements until the ANSI Committee develops a new standard.<sup>70</sup> For example, Samsung maintains that the Commission should defer to the ANSI Committee and only should consider lifting the exemption after ANSI issues a revised standard covering frequencies above 6 GHz.<sup>71</sup> Schmid, however, recommends that the Commission include frequencies above 6 GHz for devices incorporating 5G New Radio FR2 technology to evaluate hearing aid compatibility.<sup>72</sup> Schmid does not explain how the Commission should do so in the absence of a standard that covers such frequencies but states that it is willing to provide the Commission with more information on how it believes these evaluations could be performed.<sup>73</sup> Rather than developing a Commission-derived technical standard for frequencies above 6 GHz, we will continue with our well-established policy of allowing all relevant parties to work through the ANSI process to develop a consensus-driven standard that we may consider for purposes of incorporating into our rules and potentially lifting the current statutory exemption.

21. *Certification of Handsets with Non-Covered Operations.* As proposed in the *Notice*, we will maintain section 20.19(b)(3)(i) of the Commission's rules, which provides that a handset model is considered hearing aid-compatible if it is certified as hearing aid-compatible under an applicable technical standard for all covered air interfaces and frequency bands even though the handset may also allow operations on air interfaces and frequency bands not covered by that technical standard.<sup>74</sup> CTIA supports this approach.<sup>75</sup> Further, consistent with past practice, if a handset model certified as hearing aid-compatible under an outdated standard is later submitted for a Class II permissive change, as defined by the Commission's rules, after the end of the transition period that handset model would have to be updated and recertified under the 2019 ANSI Standard.<sup>76</sup>

## B. Transition Period

---

<sup>69</sup> 2019 ANSI Standard at 6-7 (listing ANSI Committee participants).

<sup>70</sup> CTA Comments at 3-4; Samsung Comment at 3. No consumer organizations commented on this issue.

<sup>71</sup> Samsung Comments at 7.

<sup>72</sup> Schmid Comments at 8. The frequency bands for 5G wireless technology are classified into FR1 and FR2 frequency ranges. FR1 (4.1 GHz to 7.125 GHz) band of frequencies are used for carrying most of the traditional cellular mobile communications traffic, while the FR2 (24.25 GHz to 52.6 GHz) band of frequencies are focused on short-range, high data rate capabilities. IEEE, *Analysis of 5G Wireless Systems in FR1 and FR2 Frequency Bands*, <https://ieeexplore.ieee.org/document/9074973> (last visited Dec. 11, 2020).

<sup>73</sup> Schmid Comments at 8.

<sup>74</sup> *2020 ANSI Standard Notice*, 35 FCC Rcd at 797-98, para. 9; 47 CFR § 20.19(b)(3)(i). For example, with respect to the 2019 ANSI Standard, we will consider a handset model hearing aid-compatible if it is certified under this standard even though the handset may offer operations on air interfaces and frequency bands not covered by the standard.

<sup>75</sup> CTIA Comments at 5 (“[T]he Commission should continue to consider a handset to be [hearing aid-compatible] as long as it satisfies the testing standard for frequencies covered by the testing standard, even if it operates in frequency ranges not addressed by the applicable standard.”).

<sup>76</sup> 47 CFR § 20.19(b)(1); 47 CFR § 2.1043(b) (defining permissive change).

22. *Two-Year Transition Period.* We adopt the proposal in the *Notice* to make the 2019 ANSI Standard the exclusive testing standard after a two-year transition period.<sup>77</sup> The two-year phase-in period for this new standard will begin on the effective date of the final rule. After this two-year transition period expires, handset manufacturers and service providers may only use the 2019 ANSI Standard to certify new handset models as hearing aid-compatible. The Commission previously has relied on a two-year transition period when transitioning to new technical standards.<sup>78</sup> We find that using a two-year transition period again is in the public interest. A two-year transition period appropriately balances the design, engineering, and marketing requirements of manufacturers and service providers with the needs of consumers with hearing loss.<sup>79</sup>

23. During the two-year transition period, handset manufacturers and service providers may use either the 2011 or the 2019 ANSI Standard when certifying new handset models. This approach is consistent with past practice, and it takes into consideration the typical handset industry product development cycle.<sup>80</sup> There already may be new handset models in the design phase that contemplate certification under the 2011 ANSI Standard rather than the 2019 ANSI Standard. CTIA, PCTEST, and Samsung support a two-year transition period for manufacturers before requiring the exclusive use of the new testing standard.<sup>81</sup> Further, as Samsung and PCTEST state, a two-year transition period will allow sufficient time for test labs and manufacturers to make the upgrades necessary to comply with the new standard.<sup>82</sup>

24. We disagree with CTIA's suggestion that service providers should be given an additional year to transition to the new testing standard.<sup>83</sup> While CTIA supports a two-year transition period for manufacturers, it argues that service providers need additional time to conduct trials and otherwise to test on their networks those handsets certified under the new standard.<sup>84</sup> CTIA claims that these trials can only begin after manufacturers design and test devices to the new standard; therefore, it requests that the Commission allow service providers an additional 12-month transition period beyond what the Commission is adopting for device manufacturers.<sup>85</sup> In support of its position, CTIA draws an analogy to when the Commission imposes new deployment benchmarks on handset manufacturers and service providers that require them to increase the number of hearing aid-compatible handset models that they offer for sale.<sup>86</sup> CTIA, however, does not cite any Commission precedent for granting service providers additional time to meet a new ANSI standard.

---

<sup>77</sup> *2020 ANSI Standard Notice*, 35 FCC Rcd at 798-99, paras. 12.

<sup>78</sup> *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, 3440, para. 83 (2008) (*Hearing Aid Compatibility First Report and Order*); *WTB/OET Report and Order*, 27 FCC Rcd at 3741, para. 22; *Volume Control Order*, 32 FCC Rcd at 9068-69, paras 12-13.

<sup>79</sup> *Volume Control Order*, 32 FCC Rcd at 9080-81, para. 34 & n.137.

<sup>80</sup> *Amendment of the Commission's Rules Governing Hearing Aid-Compatible Mobile Handsets*, WT Docket Nos. 15-285 and 07-250, Fourth Report and Order and Notice of Proposed Rulemaking, 30 FCC Rcd 13845, 13871, para. 50 (2015) (*Hearing Aid Compatibility Fourth Report and Order*).

<sup>81</sup> CTIA Comments at 9-10; PCTEST Reply at 2; Samsung Comments at 5.

<sup>82</sup> Samsung Comments at 5; PCTEST Reply at 2. No consumer organizations commented on the Commission's proposed two-year transition period.

<sup>83</sup> CTIA Comments at 9-10.

<sup>84</sup> CTIA Comments at 9-10.

<sup>85</sup> CTIA Comments at 9-10.

<sup>86</sup> CTIA Comments at 9-10. In the case of new deployment benchmarks, the Commission usually allows service providers more time than handset manufacturers to meet the new deployment benchmarks in order to allow handset manufacturers to make more hearing aid-compatible handset models available to service providers to incorporate

(continued....)

25. Contrary to the situation in which the Commission imposes new handset deployment benchmarks, we are not requiring service providers to offer a certain number of handsets certified under the new ANSI standard and, therefore, there is no need to extend the service provider transition period. Even though after the two-year transition new handset models must be certified as hearing aid-compatible using the new ANSI standard, service providers can continue offering handsets certified under older ANSI standards to meet deployment benchmarks until they are ready to offer handset models certified under the new standard.<sup>87</sup> Further, delaying the service provider transition period by an additional year would delay consumers' receipt of the benefits of the new testing standard, including the much-needed benefits of the new wireless volume control standard.<sup>88</sup> Accordingly, we find that providing an additional year for service providers to transition to the 2019 ANSI Standard is unnecessary and would not benefit consumers.

26. *Exclusive Use of a Standard.* Consistent with the Commission's long-established certification practice, manufacturers will continue to be required to test a new handset model exclusively under either the 2011 ANSI Standard or the 2019 ANSI Standard during the transition period.<sup>89</sup> Once the transition period ends, new handset models can only be certified using the 2019 ANSI Standard; these models must meet all aspects of the standard, including the volume control requirements, over all covered frequency bands to be considered hearing aid-compatible.<sup>90</sup>

27. *100% Finding.* We also find that adopting a two-year transition period does not require us at this time to adjust the future timeframe for the Commission to determine whether to require 100% of covered handsets to be hearing aid-compatible.<sup>91</sup> In November 2015, interested parties agreed to form an independent task force or consensus group to provide for a process to move away from the current fractional benchmark regime, with the ultimate goal of 100% compatibility—subject to the Commission's assessment of whether such 100% compatibility is achievable.<sup>92</sup> The task force's final report is presently

(Continued from previous page) \_\_\_\_\_  
into their handset portfolios. See *Revised Benchmark Order*, 31 FCC Rcd at 9343, para. 20 (extending new deployment benchmarks of 66% and 85% for Tier I service providers by six months and 18 months for non-Tier I service providers).

<sup>87</sup> See CTIA Comments at 8 (requesting the Commission to confirm that in-inventory hearing aid-compatible handsets may continue to be sold after the transition date).

<sup>88</sup> As discussed below, we are aligning the deadline for the new volume control standard with the end of the two-year transition period.

<sup>89</sup> 47 CFR § 2.947(b); *Wireless Telecommunications Bureau and Office of Engineering and Technology Clarify Use of Revised Wireless Phone Hearing Aid Compatibility Standard*, Public Notice, 21 FCC Rcd 6384, 6385 (WTB/OET 2006) (“Applicants for certification may rely on only one version of the ANSI C63.19 standard, 2001, 2005 or 2006, and must identify which version they are using for compatibility testing and for rating wireless phones, consistent with 47 C.F.R. § 2.947(b).”); *Hearing Aid Compatibility First Report and Order*, 23 FCC Rcd at 3439, para. 82 (“[A] party can use either the 2006 or 2007 standard for new certifications through 2009, but must use a single version for all certification tests and criteria for both the M and T ratings with respect to a given device.”); *WTB/OET Report and Order*, 27 FCC Rcd at 3736, para. 11 (“Consistent with existing rules that do not permit a handset model to be certified partly under one version of the ANSI Standard and partly under another, manufacturers must test each new handset model either exclusively under the 2007 ANSI Standard or exclusively under the 2011 ANSI Standard . . .”).

<sup>90</sup> See 47 CFR § 20.19(b) (general rule that a handset must meet hearing aid compatibility technical standards for all of its operations in order to be considered hearing aid-compatible for any of its operations).

<sup>91</sup> See *2020 ANSI Standard Notice*, 32 FCC Rcd at 799, para. 14.

<sup>92</sup> *Revised Benchmarks Order*, 31 FCC Rcd at 9340-41, paras. 11-14. See also Letter from Thomas Goode, General Counsel, Alliance for Telecommunications Industry Solutions, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 15-258 at 2-3 (filed Feb. 6, 2020) (reporting that the Hearing Aid Compatibility Task Force has held organizational meetings, will conduct research and technical analysis in 2020, and will meet throughout 2021 to

(continued....)

due by December 31, 2022,<sup>93</sup> and the Commission has stated its intent to make a final determination on whether 100% compatibility is achievable by no later than 2024.<sup>94</sup> In the *Notice*, we sought comment on what effect the proposed transition period could have on the 2024 timeframe for the Commission to consider whether to require 100% of covered handsets to be hearing aid-compatible.<sup>95</sup>

28. HIA argues that adoption of the new testing standard should not be used to justify extending the pending 2024 finding.<sup>96</sup> But CTIA and Samsung assert that it is too soon in the transition to assess whether the new standard will affect the Commission's ability to decide by 2024 whether 100% compatibility is achievable.<sup>97</sup> CTIA further contends that the Commission should not make this determination before receiving the task force's recommendation.<sup>98</sup> HLAA, while not taking a position with respect to extending the date for the pending 100% finding, states that it "strongly believe[s] that one-hundred percent [hearing aid compatibility] offerings should continue to be the goal."<sup>99</sup> We agree that 100% compatibility is the goal. We will continue to monitor the transition to the new ANSI standard. In the meantime, we decline to adjust the 2024 timeframe.

### C. Extension of Volume Control Requirement

29. As proposed in the *Notice*, we extend the March 1, 2021 deadline in the Commission's volume control rule to align with the start date for exclusive use of the 2019 ANSI Standard.<sup>100</sup> We find that, given the close proximity of the current volume control deadline, the extension will provide manufacturers additional time to make the handset model design changes needed to meet the volume control requirements.<sup>101</sup> The 2019 ANSI Standard is the first wireless testing standard to implement a volume control requirement, and the record shows that the pending March 1, 2021 deadline does not allow manufacturers sufficient time to implement the volume control requirement that is part of the new ANSI standard. CTIA and Samsung support aligning the volume control deadline with the exclusive use deadline for the new standard.<sup>102</sup> The Commission did not receive comments objecting to this approach.

30. Accordingly, beginning on the date that the 2019 ANSI Standard becomes the exclusive testing standard, all wireless handset models submitted for hearing aid compatibility certification must meet the 2019 ANSI Standard's volume control requirement (as well as the other parts of this standard) in order to be certified as hearing aid-compatible. Handsets submitted for certification under the 2019 ANSI Standard during the two-year transition period similarly must meet the volume control requirement and all

(Continued from previous page) \_\_\_\_\_

develop a consensus-based recommendation as to the achievability of 100% hearing aid-compatible for wireless handsets).

<sup>93</sup> *Revised Benchmark Order*, 31 FCC Rcd at 9352-53, para. 41.

<sup>94</sup> *Revised Benchmark Order*, 31 FCC Rcd at 9349, 9352-53, paras. 34, 41.

<sup>95</sup> *2020 ANSI Standard Notice*, 35 FCC Rcd at 799, para. 14.

<sup>96</sup> HIA Comments at 1.

<sup>97</sup> CTIA Comments at 19-20; Samsung Comments at 4; *see also* HLAA Comments at 5; HLAA Reply at 5.

<sup>98</sup> CTIA Comments at 20.

<sup>99</sup> HLAA Reply at 5.

<sup>100</sup> *2020 ANSI Standard Notice*, 35 FCC Rcd at 799, para. 15. The Commission's current volume control rule provides that by March 1, 2021 wireless handsets must be "equipped with volume control that produces sound levels suitable for persons with hearing loss (including persons with and without hearing aids). 47 CFR § 20.19(b)(1).

<sup>101</sup> We find good cause to suspend the March 1, 2021, volume control deadline immediately upon adoption of this *Report and Order*. We take this action to ensure handset manufacturers will not need to comply with this deadline in the event that the rule change's publication in the Federal Register does not occur soon enough in time for the amendment to become effective before the March 1, 2021 deadline.

<sup>102</sup> CTIA Comments at 10; Samsung Comments at 7-8.

other requirements of that standard. We note, however, that handsets submitted for certification under the 2011 ANSI standard during the transition period will not need to provide volume control capability.

#### **D. Meeting Deployment Benchmarks**

31. Consistent with past Commission practice, we adopt the Commission's proposal to allow manufacturers and service providers to meet deployment benchmark requirements by counting handset models certified under the 2019 ANSI Standard or earlier versions of the standard (i.e., the 2007 and 2011 versions of the standard) as long as these models are still being offered for sale.<sup>103</sup> If the handset model at issue is still being offered for sale and has been certified as hearing aid-compatible under an applicable ANSI standard, then handset manufacturers and service providers can count that handset for deployment purposes. Our decision is consistent with the Commission's standard practice when transitioning to a new or revised technical standard.<sup>104</sup> CTIA, PCTEST, and Samsung support this approach, and no commenter opposed this proposal.<sup>105</sup>

32. As more and more handset models become certified under the 2019 ANSI Standard, we expect that handset manufacturers and service providers will replace handset models in their portfolios certified under older versions of the ANSI standard with models certified under the new standard. Handset manufacturers and service providers are required to ensure that 66% of the handset models they offer are hearing aid-compatible,<sup>106</sup> and we anticipate that handsets meeting the 2019 ANSI Standard will be readily available by the end of the transition period.<sup>107</sup> Further, we agree with commenters that re-testing existing handset models for certification under the 2019 ANSI Standard could be burdensome and redundant.<sup>108</sup> In addition, if the Commission were to deviate from the precedent of grandfathering existing handset models for benchmark purposes, some handset manufacturers and service providers might be pressed to meet the new deployment benchmarks. We decline to jeopardize compliance with the existing and upcoming deployment benchmarks, which also might deter the offering of older hearing aid-compatible handset models to consumers, particularly in the absence of record evidence from consumers advocating that we act in a different manner. For these reasons, we find it in the public interest to allow handset manufacturers and service providers to meet deployment benchmarks using all handset models certified as hearing aid-compatible as long as these handsets are still offered for sale.

#### **E. Labeling Requirements**

33. Consistent with the Congressional directive to ensure that consumers have sufficient information to make informed purchasing decisions when selecting hearing aid-compatible handsets,<sup>109</sup>

---

<sup>103</sup> 2020 ANSI Standard Notice, 35 FCC Rcd at 800-01, paras. 18-19.

<sup>104</sup> 47 CFR § 20.19(b)(1). In order to be certified as hearing aid-compatible under the 2011 ANSI Standard, the handset must be rated M3 or higher and T3 or higher for any given air interface. With respect to the 2019 ANSI Standard, for the handset to be certified as hearing aid-compatible over a covered air interface, the handset must meet the requirements for both acoustic and inductive coupling modes for that air interface, including the volume control requirements. ANSI Report and Petition at 6-7. These compliance requirements are intended to be equivalent to the M3 and T3 levels, with some adjustments. *Id.* at 5-6.

<sup>105</sup> CTIA Comments at 8; PCTEST Reply at 2; Samsung Comments at 5-6.

<sup>106</sup> 47 CFR § 20.19(c)(1)(i)(C), (c)(2)(iii), (c)(3)(iii), (d)(1)(ii)(D), (d)(2)(iii), (d)(3)(iii).

<sup>107</sup> See *Revised Benchmark Order*, 31 FCC Rcd at 9346, para. 27 & n.61 (noting that the typical wireless handset product cycle is two years); *Hearing Aid Compatibility Fourth Report and Order*, 30 FCC Rcd at 13871, para. 50 (same).

<sup>108</sup> Samsung Comments at 5-6; see also PCTEST Reply at 2 (handsets should be grandfathered rather than retested under the new technical standard).

<sup>109</sup> The Communications Act provides that the Commission "shall establish . . . requirements for the labeling of packaging materials . . . to provide adequate information to consumers on the compatibility between telephones and hearing aids." 47 U.S.C. § 610(d); see also *Volume Control Order*, 35 FCC Rcd at 9081, para. 37.

and in light of our adoption of the 2019 ANSI Standard and establishment of a transition period, we revise the labeling and disclosure requirements in our rule to make them more informative, consumer-friendly, and less burdensome. Specifically, we revise the organization of section 20.19(f) of our rules to include a part that addresses package labeling requirements and a part that addresses requirements for package inserts and user manuals.<sup>110</sup> Each part includes requirements for the placement and content of information related to the hearing aid compatibility or volume control capability of wireless handsets, relevant to handsets certified under the 2019 ANSI Standard or an earlier version of the ANSI standard. These requirements generally are consistent with the proposals in the *Notice*, except that we modify our volume control labeling proposal to require that the conversational gain of the handset both with and without a hearing aid be placed on the handset's package label.<sup>111</sup> Further, we elaborate on the explanations that must be included in a hearing aid-compatible handset's package insert or user manual.

34. Our current labeling rule is composed of four parts that address what information has to be included on a hearing aid-compatible handset's package label and what other information must be provided to consumers in other formats.<sup>112</sup> The *Notice* proposed to reorganize the current labeling rule into three parts rather than four parts.<sup>113</sup> After reviewing the record, we determine that organizing the rule into two parts is more in keeping with our goal of streamlining the rule and making it easier to follow. We find that this reorganization and the revisions to our labeling rule are in the public interest and consistent with our Congressional directive to ensure that consumers have sufficient information to make informed purchasing decisions when selecting hearing aid-compatible handsets. The revisions allow consumers to easily compare the different functions of hearing aid-compatible handsets when purchasing a new handset, and they allow handset manufacturers and service providers flexibility in designing their own package labels and conveying supplemental information. Commenters uniformly support the Commission's proposal to streamline and modernize the labeling rule and to make labels, package inserts, and user manuals more informative, consumer-friendly, and less burdensome.<sup>114</sup> We address each of these requirements in turn below.

35. *Package Label.* Consistent with the *Notice*, we modify section 20.19(f)(1)(i) and (ii) to require a hearing aid-compatible handset's package label to expressly state that the handset is hearing aid-compatible and to quantify the handset's volume control capability if the handset is certified using the 2019 ANSI Standard.<sup>115</sup> These requirements ensure that the most pertinent consumer information is

---

<sup>110</sup> 47 CFR § 20.19(f).

<sup>111</sup> 2020 *ANSI Standard Notice*, 35 FCC Rcd at 801-03, paras. 20-24.

<sup>112</sup> 47 CFR § 20.19(f). The first part requires manufacturers and service providers to ensure that a label on the exterior packaging of a wireless handset indicates the M- and T-rating of the handset model under the 2011 ANSI Standard or earlier versions of the standard. 47 CFR § 20.19(f)(1)(i). The second part requires manufacturers and service providers to display information on the handset's volume control capabilities. 47 CFR § 20.19(f)(1)(ii); see also *Volume Control Order*, 32 FCC Rcd at 9081-83, paras. 37-40. The third part sets forth a mandatory disclosure for handsets that are certified as hearing aid-compatible for some, but not all, of their frequency bands and air interfaces. 47 CFR § 20.19(f)(2)(i)-(iii). The fourth part imposes disclosure requirements relating to handsets that allow users to reduce the maximum power for GSM operation in the 1900 MHz band. 47 CFR § 20.19(f)(3). The power down exception was eliminated when the Commission adopted the 2011 ANSI Standard as the exclusive testing standard. *Volume Control Order*, 32 FCC Rcd at 9085-86, paras. 47-49.

<sup>113</sup> 2020 *ANSI Standard Notice*, 35 FCC Rcd at 802, para. 22. The *Notice* proposed that the first part would set forth the basic labeling requirements regarding compliance with hearing aid compatibility standards, including those for the package label, package insert, and user manual. The second part would address the mandatory disclosure when a handset model is certified as hearing aid-compatible for some, but not all of its air interfaces. The third part would address volume control labeling requirements.

<sup>114</sup> CTA Comments at 3, 4; CTIA Comments at 12; HLAA Comments at 2; HLAA Reply at 2; Samsung Comments at 8.

<sup>115</sup> 2020 *ANSI Standard Notice*, 35 FCC Rcd at 802, para. 22.

placed on the handset's package label.<sup>116</sup> Consumers will be able to quickly ascertain whether a handset is hearing aid-compatible and to identify the handset's volume control capabilities if it is certified using the 2019 ANSI Standard. Consumers who are interested in more detailed information about a handset's capabilities will be able to find this additional information in the user manual or package insert.

36. Section 20.19(f)(1)(i) of our current rule requires handset manufacturers and service providers to ensure that the package label for hearing aid-compatible handsets identifies the handset as hearing aid-compatible by displaying the handset's ANSI rating.<sup>117</sup> Our revised rule maintains the requirement that handset manufacturers and service providers identify hearing aid-compatible handsets by requiring the package label to state that the handset is hearing aid-compatible.<sup>118</sup> As proposed in the *Notice*, we move the required disclosure of the ANSI rating from the package label to the package insert or user manual.<sup>119</sup> We make this change in recognition of the fact that the 2019 ANSI Standard does not use the numerical M/T rating system of older standards. Under the new standard, a handset is assessed as either hearing aid-compatible or not without receiving a numerical rating. Accordingly, the numerical ratings will become less relevant to consumers after the transition period.<sup>120</sup> Further, consumers may not realize that a handset labeled as hearing aid-compatible but without a rating has actually been certified under a more recent testing standard that may provide a better listening experience than a handset with an M/T rating. The ANSI Committee eliminated the numerical M/T rating system to make purchasing a hearing aid-compatible handset more consumer friendly.<sup>121</sup> Finally, handset manufacturers and service providers will be phasing-out handsets that have M/T ratings.<sup>122</sup> We did not receive any comments objecting to this approach. For these reasons, we find it is in the public interest to move the rating labeling requirement from the package label to the package insert or user manual.<sup>123</sup>

37. Consistent with the Commission's proposal in the *Notice*, we also require a handset's package label to include the handset's volume control capabilities when the handset has been certified

---

<sup>116</sup> CTA Comments at 4; HLAA Comments at 3; Samsung Comments at 8.

<sup>117</sup> 47 CFR § 20.19(f)(1)(i). We decline to adopt one commenter's request to change the term "hearing aid-compatible" to "telecoil" or "T-Coil" in our rule. Lintz Comments at 2-3 (arguing that the term "hearing aid-compatible" could exclude cochlear implants because the designation could imply that "hearing aid-compatible" handsets work with all hearing aids when the handsets may only work with a partnered Bluetooth hearing aid, proprietary technology, or a telecoil). Such a change is unnecessary and may cause further confusion by specifying a single technology. Our use of "hearing aids" or "hearing aid users" refers to "cochlear implants" or "users of cochlear implants."

<sup>118</sup> HLAA Comments at 3 (asserting that a label should state that a handset is hearing aid-compatible).

<sup>119</sup> 2020 *ANSI Standard Notice*, 35 FCC Rcd at 802, para. 22.

<sup>120</sup> See CTA Comments at 4 ("Because handsets will simply be deemed to be in compliance with the standard (or not) rather than assigned one of several alphanumeric ratings, as in the 2011 standard, consumers will not receive materially important information from an explanation of the rating system, an identification of the standard year, and similarly technical information."); CTIA Comments at 15 ("The Commission should also decline to require disclosure of more granular rating information."); Samsung Comments at 8 ("Indeed, the Commission can benefit consumers by permitting more flexibility and ensuring that the information accompanying a device actually conveys meaningful information about different performance characteristics to consumers.").

<sup>121</sup> ANSI Report and Petition at 4 ("[T]he category system, originally believed to be of help to hearing aid users, has been found to be more a source of confusion. The original intention has not been how things worked out. The categories have proven more confusing than helpful to hearing aid users.").

<sup>122</sup> CTIA Comments at 12 (stating that the pass/fail regime will be easier for consumers to understand and associate labeling should be clear).

<sup>123</sup> Consistent with our current rule, we will continue to require that the ANSI rating that is included in the package insert or user manual be the lowest rating the handset achieves if it has different ratings over its air interfaces or frequency bands. 47 CFR § 20.19(f)(1)(i).

using the 2019 ANSI Standard.<sup>124</sup> Because the 2019 ANSI Standard articulates details that are not reflected in the Commission's current volume control label requirement adopted in 2017, certain commenters have asked for clarification of the current volume control label requirement.<sup>125</sup> Specifically, section 20.19(f)(1)(ii) states that, if a "handset has been certified as compliant with a technical standard that specifies acceptable numerical metrics or qualitative ratings for handset volume control, the labeling shall include the relevant volume control metrics or ratings."<sup>126</sup> Samsung asks the Commission to clarify that a handset is compliant with the volume control label requirement if the label states that it "provides over 6 dB of conversational gain."<sup>127</sup> PCTEST states that, although it understands the benefits of Samsung's proposal, it would be better for consumers if the Commission required package labels to list the actual amount of conversational gain.<sup>128</sup>

38. We modify our existing volume control label rule by removing the language regarding metrics and qualitative rating and replacing it with actual conversational gain testing results.<sup>129</sup> The volume control standard that we incorporate into our rules today tests for volume control using a conversational gain standard that must be met both with and without hearing aids. Accordingly, we require handset manufacturers and service providers to include on a hearing aid-compatible handset's package label the handset's actual conversational gain both with and without hearing aids if the handset is certified using the 2019 ANSI Standard. Consistent with section 20.19(f)(1)(ii), in cases where the actual conversational gain with a hearing aid differs depending on the air interfaces or frequency band being used, the package label should include the lowest actual conversational gain with a hearing aid.<sup>130</sup> Having the actual conversational gain both with and without hearing aids on the package label will benefit consumers who use hearing aids and those who do not use hearing aids but have hearing loss.

39. *Package Inserts and User Manuals.* Consistent with the Commission's labeling proposal, we require handset manufacturers and service providers to include the following information in package inserts or user manuals for hearing aid-compatible handsets: (1) that the handset is hearing aid-compatible; (2) the ANSI standard used to determine the hearing aid compatibility of the handset model's air interfaces and frequency bands; (3) if using the 2011 ANSI Standard or an earlier version of the standard, the lowest hearing aid compatibility rating assigned to any of the covered air interfaces or frequency bands; (4) the air interfaces or frequency bands on handsets that are not certified to be hearing aid-compatible, if applicable, or have been determined to be hearing aid-compatible under special testing circumstances; and (5) if a handset model was not certified as hearing aid-compatible over all of its air interfaces or frequency bands, a prescribed disclosure notifying consumers of this fact and that they should test the handset thoroughly and in different locations. In addition, consistent with the Commission's current labeling rule, package inserts and user manuals for hearing aid-compatible handsets must include an explanation of the ANSI rating system as well as an explanation of a handset's volume control capabilities.<sup>131</sup> Further, if an air interface has been determined to be hearing aid-compatible under special testing circumstances, the package insert or user manual must disclose this

---

<sup>124</sup> 47 CFR § 20.19(f)(1)(ii); *2020 ANSI Standard Notice*, 35 FCC Rcd at 802, para. 22.

<sup>125</sup> *Volume Control Order*, 32 FCC Rcd at 9081, para. 35; see Samsung Comments at 9; PCTEST Reply at 2; see also Letter from Lise Hamlin, Director of Public Policy, HLAA, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 20-3 (filed Mar. 5, 2020) (asking for clarification).

<sup>126</sup> 47 CFR § 20.19(f)(1)(ii).

<sup>127</sup> Samsung Comments at 9.

<sup>128</sup> PCTEST Reply at 2.

<sup>129</sup> 47 CFR § 20.19(f)(1)(ii).

<sup>130</sup> See 47 CFR § 20.19(f)(1)(ii).

<sup>131</sup> 47 CFR § 20.19(f)(1)(i), (f)(1)(ii).

information to consumers and explain how this affects the use and operation of the handset.<sup>132</sup>

40. Further, consistent with the Commission's proposal, we require package inserts and user manuals to disclose if a handset model has been certified as hearing aid-compatible over some of its air interfaces or frequency bands but not over all of its air interfaces or frequency bands; in such circumstances, we require that the prescribed disclosure language currently in our rule continues to be used.<sup>133</sup> Also, consistent with the Commission's proposal, we require that package inserts and user manuals disclose if a handset has been certified as hearing aid-compatible under special testing circumstances. Our current rule does not prescribe specific disclosure language relating to special testing circumstances and the Commission did not propose any specific language in the *Notice* to be used in these circumstances.<sup>134</sup> In the case of one specific instance, however, our current rule does require that special testing circumstance be disclosed to consumers and that the disclosure explain the impact of these special testing circumstances on the use of the handset.<sup>135</sup> While our current rule gives handset manufacturers and service providers the discretion to provide the above disclosures to consumers through clear and effective means such as the use of call-out cards or other media, revisions to packaging materials, or supplying of information on websites, we now require that manufacturers and service providers include this information in package inserts or user manuals.

41. We disagree with comments suggesting that we should relax the above disclosure requirements and allow handset manufacturers and service providers leeway to modify the prescribed disclosure language related to handsets that are not hearing aid-compatible over all of their air interfaces and frequency bands and to determine when and how this language is included.<sup>136</sup> The prescribed disclosure language currently in our rule has been a part of our hearing aid compatibility labeling rule since 2010 and has worked well to ensure that consumers receive valuable information.<sup>137</sup> It allows consumers to educate themselves about the functions and capabilities of hearing aid-compatible handsets and to compare handset models. Further, it protects consumers by using uniform language that is consistent among manufacturers and service providers, and it guarantees notice to consumers to test the handset thoroughly before purchasing it.<sup>138</sup> We also find that it is in the public interest for handset

---

<sup>132</sup> See 47 CFR § 20.19(f)(3) (setting forth disclosure requirements for handsets that allow the user to reduce the maximum power for GSM operation in the 1900 MHz band).

<sup>133</sup> 2020 *ANSI Standard Notice*, 32 FCC Rcd at 802, para. 22. The prescribed disclosure language that is currently in our rule provides: "This phone has been tested and certified 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." 47 CFR § 20.19(f)(2)(i).

<sup>134</sup> 2020 *ANSI Standard Notice*, 32 FCC Rcd at 802, para. 22.

<sup>135</sup> See 47 CFR § 20.19(f)(3). Section 20.19(f)(3) requires manufacturers and service providers to disclose to consumers that GSM handsets that operate in the 1900 MHz band require the handset to be put into a special mode in order to be hearing aid-compatible and that this special mode may result in a reduction in coverage.

<sup>136</sup> CTA Comments at 4-5; CTIA Comments at 15-16; Samsung Comments at 8-9.

<sup>137</sup> 47 CFR § 20.19(f)(2)(i); *Amendment of the Commission's Rules Governing Hearing Aid-Compatible Mobile Handsets*, WT Docket No. 07-250, Policy Statement and Second Report and Order and Further Notice of Proposed Rulemaking, 25 FCC Rcd 11167, 11179-80, para. 32 (2010).

<sup>138</sup> For instance, this requirement would benefit consumers who are interested in a hearing aid-compatible handset that includes non-certified air interfaces operating in frequencies above 6 GHz. In this example, handset manufacturers and service providers must include the required disclosure language in order to make sure that consumers are aware that some of the handset's operations are not certified as hearing aid-compatible under an applicable ANSI standard.

manufacturers and service providers to inform consumers when a handset model has been certified as hearing aid-compatible under special testing circumstances and what impact these special testing circumstances have on the use of the handset.

42. We find that the information that we are requiring to be included in package inserts and user manuals is not too granular, as some commenters argue, and that this information serves a useful purpose. CTIA and Samsung urge the Commission to give manufacturers and service providers more flexibility in the methods used to convey information on a handset's hearing aid compatibility and volume control capabilities, including providing this information online rather than in the packaging insert or user manual.<sup>139</sup> We agree with HLAA, however, that consumers may not necessarily visit service provider websites before going to a service provider's store and purchasing a hearing aid-compatible handset.<sup>140</sup> Therefore, we require that package inserts and user manuals be provided with hearing aid compatible handsets that include the information outlined above and that this information not just be provided online. By requiring the above information to be included in package inserts and user manuals, we ensure that consumers have access to this material.<sup>141</sup>

43. Our current rule requires that package inserts and user manuals provide an explanation of the ANSI and volume control rating systems.<sup>142</sup> We find it in the public interest to continue these requirements. Further, we agree with HLAA that package inserts and user manuals should explain the old ANSI rating system and the transition to the new system.<sup>143</sup> Given the transition from the M/T rating system, we find that this information will be helpful to consumers as they educate themselves on the differences between hearing aid-compatible handsets. Likewise, an explanation of a handset's volume control capabilities will also be helpful to consumers as they make purchasing decisions.

44. Finally, we decline to adopt call-out card requirements that would require handset manufacturers and service providers to post certain information about their hearing aid-compatible handsets on display in their stores. HLAA asserts that our labeling requirement should require the use of call-out cards at the point of sale indicating whether a handset is hearing aid-compatible.<sup>144</sup> CTIA urges the Commission not to impose additional labeling requirements on manufacturers and service providers, including the imposition of in-store printed material requirements.<sup>145</sup> Our current labeling rule does not *require* the use of call-out cards, and the Commission did not propose to require the use of call-out cards. We decline to further increase the labeling burden on manufacturers and service providers.

## F. Service Provider In-Store Testing Requirement

45. The *Notice* sought comment on whether we should retain section 20.19(d)(4)(i), which requires service providers to make handsets available to consumers for in-store testing.<sup>146</sup> Specifically, this section provides that “[e]ach service provider must make available for consumers to test, in each

---

<sup>139</sup> CTIA Comments at 14-15; Samsung Comments at 8-9; *see also* HLAA Reply at 3.

<sup>140</sup> HLAA Reply at 3.

<sup>141</sup> Handset manufacturers and service providers are also free to provide this information on their publicly accessible websites, and we believe that doing so will benefit consumers by giving them another way to locate information about hearing aid-compatible handsets.

<sup>142</sup> Section 20.19(f)(1)(i) provides that “[a]n explanation of the ANSI . . . rating system must . . . be included in the device's user's manual or as an insert in the packaging material for the handset.” 47 CFR § 20.19(f)(1)(i). Further, section 20.19(f)(1)(ii) provides that “[a]n explanation of [the] volume control . . . rating shall be included in the device's user manual or as an insert in the packaging material for the handset.” 47 CFR § 20.19(f)(1)(ii).

<sup>143</sup> HLAA Comments at 2-4; HLAA Reply at 2-3.

<sup>144</sup> HLAA Comments at 4; HLAA Reply at 3.

<sup>145</sup> CTIA Comments at 14.

<sup>146</sup> 2020 *ANSI Standard Notice*, 35 FCC Rcd at 803, para. 26.

retail store owned or operated by the provider, all of its handset models that [it offers that are hearing aid-compatible].”<sup>147</sup> HIA and HLAA urge the Commission to maintain this requirement and we did not receive any comments objecting to the Commission maintaining this requirement.<sup>148</sup> We agree with HIA and HLAA that it is in the public interest to maintain the service provider in-store testing requirement. Live in-store testing permits consumers to undertake a preliminary, but important, evaluation of the volume and interference levels of a given handset and minimizes the “hassle” associated with returning the handset at a later time.<sup>149</sup> Further, this requirement is consistent with our mandatory disclosure language that encourages consumers to test handsets before making a purchase.<sup>150</sup> Finally, preserving this requirement may allow consumers to avoid a restocking fee.<sup>151</sup> We find that keeping the service provider in-store testing requirement in place ensures that those with hearing loss have a meaningful opportunity and sufficient time to identify and become comfortable with a handset before purchasing it.

### G. Other Rule Changes and Removing Outdated Rules

46. *Diverse Handset Offerings.* We adopt the Commission’s proposal to eliminate the “refresh” and “differing levels of functionality” requirements set forth in section 20.19(c)(1)(ii), (c)(4)(ii), and (d)(4)(ii), which require handset manufacturers and service providers to update their selection of hearing aid-compatible handsets periodically.<sup>152</sup> Under the “differing levels of functionality” and “refresh” rules, manufacturers and service providers must offer hearing aid-compatible handsets that contain the same range of features and functions contained in handsets offered to hearing people. This rule was adopted to ensure that people with hearing loss have similar choices in types of handsets as consumers without hearing loss. The Commission’s current benchmark deployment rules, however, render these rules unnecessary, and we eliminate these requirements from our rules, including the requirement that service providers make available on their websites information about the “differing levels of functionality” of each handset they offer.<sup>153</sup> The Commission’s current deployment benchmarks require 66% of handsets to be hearing aid-compatible and, in the near future, will require 85% of all handsets to be hearing aid-compatible.<sup>154</sup> Our deployment benchmarks ensure that consumers with hearing loss have robust choices in hearing aid-compatible handsets. CTIA and Samsung agree that these requirements are no longer necessary given the large number of hearing aid-compatible handsets on the market.<sup>155</sup>

47. HLAA warns that eliminating these requirements could reduce the incentives for manufacturers and service providers to offer new hearing aid-compatible handsets; it asserts that these requirements should stay in place until service providers are required to offer 100% hearing aid-

---

<sup>147</sup> 47 CFR § 20.19(d)(4)(i).

<sup>148</sup> HIA Comments at 2; HLAA Comments at 2-3; HLAA Reply at 4-5.

<sup>149</sup> HLAA Comments at 2-3 (explaining how in-store testing helps consumers find the best handset for their hearing device and reduces returns due to incompatibility).

<sup>150</sup> 47 CFR § 20.19(f)(2)(i).

<sup>151</sup> HLAA Reply at 4-5.

<sup>152</sup> 2020 ANSI Standard Notice, 35 FCC Rcd at 803-04, para. 26. To ensure that handsets available to consumers with hearing loss include the newest and most advanced technologies, manufacturers must periodically “refresh” their selection by replacing older hearing aid-compatible handsets with newer compatible handsets each year, and service providers must offer a range of hearing aid-compatible handsets with “differing levels of functionality.” 47 CFR § 20.19(c)(1)(ii), (c)(4)(ii), (d)(4)(ii).

<sup>153</sup> 47 CFR § 20.19(h)(1).

<sup>154</sup> 47 CFR § 20.19(c)(1)(i)(C)-(D), (c)(2)(iii), (c)(3)(iii)-(iv), (d)(1)(ii)(D)-(E), (d)(2)(iii), (d)(3)(iii)-(iv).

<sup>155</sup> CTIA Comments at 17-18; Samsung Comments at 7-8.

compatible handsets.<sup>156</sup> We find, however, that our deployment benchmarks will ensure that manufacturers and service providers continue to have incentives to offer hearing aid-compatible handsets. The Commission adopted the “refresh” and “differing levels of functionality” requirements at a time when its deployment benchmarks were much lower.<sup>157</sup> At that time, there was a need to ensure handset manufacturers and service providers met their deployment benchmarks using a diverse mixture of handsets rather than relying exclusively on entry level or top-of-the line offerings.<sup>158</sup> The Commission’s current deployment benchmarks have eliminated this concern. In fact, handset manufacturer compliance reports show that more than 89% of the new handset models manufacturers offered between August 1, 2019 and June 30, 2020 are hearing-aid compatible.<sup>159</sup> Some manufacturers, such as Samsung, ensure that all of their handsets are hearing aid-compatible.<sup>160</sup> Given these facts, we eliminate the “refresh” and “differing levels of functionality” requirements in section 20.19(c)(1)(ii), (c)(4)(ii), and (d)(4)(ii) because they no longer serve their intended purpose.

48. *Certification and Reporting Dates.* We adopt the Commission’s proposal to revise the date by which service providers must file certifications of compliance with the Commission’s hearing aid compatibility provisions and the date that manufacturers must file compliance reports pursuant to section 20.19(i)(1).<sup>161</sup> Presently, service providers must file a short form certifying that they are in compliance with the Commission’s hearing aid compatibility provisions by January 15 each year, and handset manufacturers must file a longer form showing compliance with these provisions by July 15 each year.<sup>162</sup> The filing window for the certifications and reports opens 30 days prior to the filing deadline.<sup>163</sup> The Commission uses these certifications and reports as the primary method of ensuring that handset manufacturers and service providers are complying with the Commission’s hearing aid compatibility rules.

49. Section 20.19(i)(1) requires that each certification and report must be up-to-date as of the last day of the calendar month preceding the due date of each certification or report.<sup>164</sup> To ensure that service providers’ certifications and handset manufacturers’ reports meet this requirement, we move the service provider certification due date from January 15 to January 31 each year and the handset

---

<sup>156</sup> HLAA Comments at 4-5.

<sup>157</sup> See *Hearing Aid Compatibility First Report and Order*, 23 FCC Rcd at 3415-24, 3425-27, paras. 26-46, 47-52. At the time the “refresh” and “differing levels of functionality” requirements were adopted, handset manufacturers were required to meet an M3 rating or higher for one-third of their non-*de minimis* portfolio models and a rating of T3 or higher for at least two handset models or 20% of their handset models which ever was greater. *Id.* at 3418-20, paras. 35-36. Tier I carriers were required to meet an M3 rating or higher for the lesser of 50% of their handset models or 8 handset models and a rating of T3 or higher for the lesser of three handset models or one third of their handset models. *Id.*

<sup>158</sup> CTIA Comments at 17.

<sup>159</sup> See Federal Communications Commission, *List of All Handsets Offered by Manufacturers*, <https://www.fcc.gov/wireless/systems-utilities/universal-licensing-system/hearing-aid-compatibility-status-reporting-1> (last visited Dec. 11, 2020). Based on recent hearing aid compatibility status reports filed by device manufacturers, 64 out of 69 (more than 92%) of new handset models offered between August 1, 2018 and June 30, 2019 were hearing-aid compatible. *Id.*

<sup>160</sup> Samsung Comments at 1-2.

<sup>161</sup> 2020 *ANSI Standard Notice*, 35 FCC Rcd at 804, para. 27.

<sup>162</sup> 47 CFR § 20.19(i)(1).

<sup>163</sup> See *FCC Enforcement Advisory, Hearing Aid Compatibility For Wireless Telephones, Wireless Service Providers Advised to Timely File Hearing Aid Compatibility Status Reports and Ensure Accurate and Complete Reporting*, Public Notice, 29 FCC Rcd 57 (EB 2014) (“The window for service providers to file their Hearing Aid Compatibility Status Reports on FCC Form 655 opened on December 16, 2013, and closes on January 15, 2014”).

<sup>164</sup> 47 CFR § 20.19(i)(1).

manufacturer report due date from July 15 to July 31 each year.<sup>165</sup> These revised filing deadlines mean that the filing window for service providers will open the first business day in January and the filing window for manufacturers will open the first business day in July. This change will ensure that the certifications and reports are up-to-date as of the last day of the calendar month preceding the due date of each report and certification.<sup>166</sup> This change also takes into consideration the national holidays at the beginning of January and July. CTIA and Samsung support these changes, and no commenter opposed these revisions.<sup>167</sup>

50. *Removal of Outdated Rules.* We adopt the Commission’s proposal to remove from the hearing aid compatibility rules past transition dates and outdated benchmarks, and to correct clerical errors in the rules.<sup>168</sup> These modifications to the hearing aid compatibility provisions will simplify the rules and make them easier to read and understand. CTIA and Samsung support these changes and no commenter opposed these revisions.<sup>169</sup>

51. *Section 68.300.* We also adopt the Commission’s proposal to make a technical correction to section 68.300 of the Commission’s rules that addresses hearing aid-compatible labeling requirements for wireline telephones. This correction restores a definition that was erroneously deleted from prior versions of the rule.<sup>170</sup> No one filed comments on this proposed correction. When the Commission amended part 68 of the rules in 2000 to remove various provisions pertaining to registration of terminal equipment connected to the public switched telephone network, it appears that a definition of the term “permanently affixed,” which is relevant to the labeling requirement, was inadvertently deleted.<sup>171</sup> To address this technical error, we amend section 68.300(b) to include the same definition currently provided in section 68.502(a), to read as follows:

“Permanently affixed” means that the label is etched, engraved, stamped, silkscreened, indelibly printed, or otherwise permanently marked on a permanently attached part of the equipment or on a nameplate of metal, plastic, or other material fastened to the equipment by welding, riveting, or a permanent adhesive. The label must be designed to last the expected lifetime of the equipment in the environment in which the equipment may be operated and must not be readily detachable.<sup>172</sup>

52. We also delete from section 68.300 the stated compliance date of April 1, 1997, given the length of time that has passed since that date and given that no one commented on this proposed

---

<sup>165</sup> If January 31 or July 31 fall on a weekend, the due date for the certification or report will be the first business day immediately following the weekend. See 47 CFR § 1.4(j).

<sup>166</sup> In addition to moving the compliance filing dates, we also change the compliance filing requirement for manufacturers to read that they “shall submit Form 655 reports on compliance with the requirements of this section . . . .” Currently, this requirement reads that they “shall submit [Form 655] reports on *efforts toward* compliance with the requirements of this section . . . .” 47 CFR § 20.19(i)(1) (emphasis added). This change matches the language used for service providers and the “efforts toward” compliance language is unnecessary in that “reports on compliance” necessarily includes “efforts toward compliance.”

<sup>167</sup> CTIA Comments at 11; Samsung Comments at 7.

<sup>168</sup> 2020 ANSI Standard Notice, 35 FCC Rcd at 804, para. 28. We are removing outdated provisions from section 20.19(a), (b), (c), (d), (f), (h), (i), and (l). See 47 CFR § 20.19(a), (b), (c), (d), (f), (h), (i), (l).

<sup>169</sup> CTIA Comments at 11; Samsung Comments at 7.

<sup>170</sup> 47 CFR § 68.300. See 2020 ANSI Standard Notice, 35 FCC Rcd at 804, para. 29.

<sup>171</sup> See 2020 ANSI Standard Notice, 35 FCC Rcd at 804, para. 29 & n.61 (citing 2000 Biennial Review of Part 68 of the Commission’s Rules and Regulations, CC Docket No. 99-216, Report and Order, 15 FCC Rcd 24944, 25010, Appx. B (2000) (deleting the previous paragraph (b) of section 68.300 and re-designating paragraph (c) as current paragraph (b))).

<sup>172</sup> 47 CFR § 68.502(a)(1).

deletion.<sup>173</sup>

#### IV. PROCEDURAL MATTERS

53. *Regulatory Flexibility Act.* The Regulatory Flexibility Act of 1980, as amended (RFA),<sup>174</sup> requires that an agency prepare a regulatory flexibility analysis for notice and comment rulemakings, unless the agency certifies that “the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities.”<sup>175</sup> Accordingly, the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) concerning the possible impact of the rule changes contained in this *Report and Order*.<sup>176</sup> The FRFA is set forth in Appendix C.

54. *Paperwork Reduction Act.* The requirements in revised section 20.19(f), (h)(1), and (i) constitute new or modified collections subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. They 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 new information collection requirements contained in this proceeding. This document will be submitted to OMB for review under section 3507(d) of the PRA. In addition, we note that, pursuant to the Small Business Paperwork Relief Act of 2002, we previously sought, but did not receive, specific comment on how the Commission might further reduce the information collection burden for small business concerns with fewer than 25 employees. We describe impacts that might affect small businesses, which includes more businesses with fewer than 25 employees, in the FRFA in Appendix C.

55. *Congressional Review Act.* The Commission has determined, and the Administrator of the Office of Information and Regulatory Affairs, Office of Management and Budget, concurs, that this rule is “non-major” under the Congressional Review Act, 5 U.S.C. § 804(2). The Commission will include a copy of this *Report and Order* in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act, *see* 5 U.S.C. § 801(a)(1)(A).

56. *Incorporation by Reference.* The Office of Federal Register (OFR) regulations require that agencies must discuss in the preamble to the Federal Register summary of a final rule the ways that the materials incorporated by reference are reasonably available to interested parties and that interested parties can obtain the materials.<sup>177</sup> In addition, OFR regulations require that the preamble to the Federal Register summary of a final rule summarize the material incorporated by reference.<sup>178</sup> In accordance with OFR’s requirements, the Commission will include this information in its Federal Register summary of the final rule and in its submission to OFR to incorporate by reference the 2019 ANSI Standard and the ANSI/TIA Volume Control Standard.

57. *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](mailto:fcc504@fcc.gov) or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (TTY).

#### V. ORDERING CLAUSES

58. Accordingly, IT IS ORDERED, pursuant to sections 4(i), 303(r), and 710 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(r), 610, this *Report and Order* IS

---

<sup>173</sup> 47 CFR § 68.300(b). *See* 2020 ANSI Standard Notice, 35 FCC Rcd at 805, para. 32.

<sup>174</sup> *See* 5 U.S.C. §§ 601-612. The RFA 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).

<sup>175</sup> 5 U.S.C. § 605(b).

<sup>176</sup> *See* 5 U.S.C. § 603(a).

<sup>177</sup> 1 CFR § 51.5(b)(2).

<sup>178</sup> 1 CFR § 51.5(b)(3).

HEREBY ADOPTED.

59. IT IS FURTHER ORDERED that the March 1, 2021 deadline included within section 20.19(b)(1) and (f)(1)(ii) is SUSPENDED, effective upon adoption of this *Report and Order*.

60. IT IS FURTHER ORDERED that the revisions to Part 20 of the Commission's rules, 47 CFR Part 20, as set forth in Appendix B ARE ADOPTED, effective thirty days from the date of publication in the Federal Register, except that the amendments to section 20.19(f), (h)(1), and (i) will become effective following approval by the Office of Management and Budget. Section 20.19, paragraphs (f), (h)(1), and (i) contain new or modified information collection requirements that require review by the Office of Management and Budget under the PRA. The Commission will publish a document in the *Federal Register* announcing the effective date of the revisions to section 20.19(f), (h)(1), and (i), following approval by the Office of Management and Budget.

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

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch  
Secretary

**APPENDIX A****Parties Filing Comments****Comments**

Consumer Technology Association (CTA)

CTIA—The Wireless Association (CTIA)

Hearing Industries Association (HIA)

Hearing Loss Association of America, the National Association of the Deaf, and Telecommunications for the Deaf and Hard of Hearing, Inc., and the Rehabilitation Engineering Research Center on Technology for the Deaf and Hard of Hearing, Gallaudet University (collectively, HLAA)

Janice Schacter Lintz (Lintz)

Samsung Electronics America, Inc. (Samsung)

Schmid and Partner Engineering AG (Schmid)

**Reply Comments**

HLAA

Stephen Julstrom of Julstrom Consulting and Development LLC (Julstrom)

PCTEST Engineering Laboratory, LLC (PCTEST)

**APPENDIX B****Final Rules**

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR parts 2, 20, and 68 as follows:

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

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

**Authority:** [[To be inserted.]]

2. Amend § 2.1033 by revising paragraph (d) to read as follows:

**§ 2.1033 Application for certification.**

\* \* \* \* \*

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

\* \* \* \* \*

**PART 20 -- COMMERCIAL MOBILE RADIO SERVICES**

3. The authority citation for part 20 is revised to read as follows:

**Authority:** 47 U.S.C. 151, 152(a) 154(i), 155, 157, 160, 201, 214, 222, 251(e), 301, 302, 303, 303(b), 303(r), 307, 307(a), 309, 309(j)(3), 316, 316(a), 332, 610, 615, 615a, 615b, 615c, unless otherwise noted.

4. Amend § 20.19 by revising paragraphs (a), (b), (c), (d), (e), (g), (h)(2)-(h)(5), (j), (k) and (l) to read as follows and by removing and reserving paragraph (f)(1)(ii):

**§ 20.19 Hearing aid-compatible mobile handsets.**

(a) *Definitions.* For purposes of this section:

*2007 ANSI standard* refers to the technical standard for hearing aid compatibility applicable to frequencies between 800 MHz and 3 GHz as set forth in the standards document “American National Standard Methods of Measurement of Compatibility Between Wireless Communication Devices and Hearing Aids,” ANSI C63.19-2007 (2007 ANSI standard).

*2011 ANSI standard* refers to the technical standard for hearing aid compatibility applicable to frequencies between 698 MHz and 6 GHz as set forth in the standards document “American National Standard Methods of Measurement of Compatibility Between Wireless Communication Devices and Hearing Aids,” ANSI C63.19-2011 (2011 ANSI standard).

*2019 ANSI standard* refers to the technical standard for hearing aid compatibility applicable to frequencies between 614 MHz and 6 GHz as set forth in the standards document “American National Standard Methods of Measurement of Compatibility Between Wireless Communication Devices and Hearing Aids,” ANSI C63.19-2019 (2019 ANSI standard).

*ANSI standard* refers to the 2007, 2011, and 2019 ANSI standards as a group.

*Any version of the ANSI standard previous to the 2019 ANSI standard* refers to the 2007 and 2011 ANSI standards.

*Digital mobile service* refers to a terrestrial mobile service that enables two-way real-time voice communications among members of the public or a substantial portion of the public, including both interconnected and non-interconnected VoIP services, to the extent that such service is provided over frequencies specified in the 2007 ANSI standard, 2011 ANSI standard or the 2019 ANSI standard.

*Handset* refers to a device used in delivery of digital mobile service in the United States that contains a built-in speaker and is typically held to the ear in any of its ordinary uses.

*Manufacturer* refers to a manufacturer of handsets that are used in delivery of digital mobile service, as defined in this section, in the United States.

*Model* refers to a wireless handset device that a manufacturer has designated as a distinct device model, consistent with its own marketing practices. However, if a manufacturer assigns different model device designations solely to distinguish units sold to different carriers, or to signify other distinctions that do not relate to either form, features, or capabilities, such designations shall not count as distinct models for purposes of this section.

*Service provider* refers to a provider of digital mobile service, as defined in this section, in the United States.

*Tier I carrier* refers to a CMRS provider that offers such service nationwide.

*Volume Control Requirements* refers to the technical standard established by the document entitled ANSI/TIA-5050-2018, Telecommunications – Communications Products – Receive Volume Control Requirements for Wireless (Mobile) Devices (approved Jan. 17, 2018).

(b) *Hearing aid compatibility; technical standards.* (1) *Handset compatibility on or after [INSERT DATE TWO YEARS AFTER EFFECTIVE DATE].* In order to satisfy a manufacturer or service provider's obligations under paragraphs (c) and (d) of this section, a handset submitted for equipment certification or for a permissive change relating to hearing aid compatibility on or after [INSERT DATE TWO YEARS AFTER EFFECTIVE DATE] must meet the 2019 ANSI standard.

(2) *Handset compatibility before [INSERT DATE TWO YEARS AFTER EFFECTIVE DATE].* In order to satisfy a manufacturer or service provider's obligations under paragraphs (c) and (d) of this section, a handset submitted for equipment certification or for a permissive change relating to hearing aid compatibility before [INSERT DATE TWO YEARS AFTER EFFECTIVE DATE] must meet either:

(i) At a minimum, the M3 and T3 ratings associated with the 2011 ANSI standard; or

(ii) The 2019 ANSI standard.

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

(i) Beginning on [INSERT DATE TWO YEARS AFTER EFFECTIVE DATE], a handset is hearing aid-compatible if it meets the 2019 ANSI standard for all frequency bands that are specified in the ANSI standard and all air interfaces over which it operates on those frequency bands, and the handset has been

certified as compliant with the test requirements for the 2019 ANSI standard pursuant to § 2.1033(d) of this chapter.

(ii) Before *[INSERT DATE TWO YEARS AFTER EFFECTIVE DATE]*, a handset that uses only the frequencies specified in the 2011 ANSI standard is hearing aid-compatible with regard to radio frequency interference and inductive coupling if it meets the 2011 ANSI standard 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 2011 ANSI standard pursuant to § 2.1033(d) of this chapter. Before *[INSERT DATE TWO YEARS AFTER EFFECTIVE DATE]*, a handset that incorporates operations outside the frequencies specified in the 2011 ANSI standard is hearing aid-compatible if the handset otherwise satisfies the requirements of this paragraph (b).

(4) All factual questions of whether a handset meets the technical standard(s) of this paragraph shall be referred for resolution to the Chief, Office of Engineering and Technology, Federal Communications Commission, 45 L Street NE, Washington, DC 20554.

(5) A handset certified under any version of the ANSI standard previous to the 2019 ANSI standard remains hearing aid-compatible for purposes of this section.

(c) *Phase-in of hearing aid-compatibility requirements.* The following applies to each manufacturer and service provider that offers handsets used to deliver the services specified in paragraph (a) of this section and that does not fall within the *de minimis* exception set forth in paragraph (e) of this section.

(1) *Manufacturers—Number of hearing aid-compatible handset models offered.* For each digital air interface for which it offers handsets in the United States or imported for use in the United States, each manufacturer must offer hearing aid compatible handsets as follows:

(i) Beginning October 3, 2018, at least sixty-six (66) percent of those handset models (rounded down to the nearest whole number) must be hearing aid-compatible under paragraph (b) of this section.

(ii) Beginning October 4, 2021, at least eighty-five (85) percent of those handset models (rounded down to the nearest whole number) must be hearing aid-compatible under paragraph (b) of this section.

(2) *Tier I carriers—Number of hearing aid-compatible handsets models offered.* For each digital air interface for which it offers handsets to customers, each Tier I carrier must:

(i) Beginning April 3, 2019, ensure that at least sixty-six (66) percent of the handset models it offers are hearing aid-compatible under paragraph (b) of this section, calculated based on the total number of unique handset models the carrier offers nationwide.

(ii) Beginning April 4, 2022, ensure that at least eighty-five (85) percent of the handset models it offers are hearing aid-compatible under paragraph (b) of this section, calculated based on the total number of unique handset models the carrier offers nationwide.

(3) *Service providers other than Tier I carriers—Number of hearing aid-compatible handsets models offered.* For each digital air interface for which it offers handsets to customers, each service provider other than a Tier I carrier must:

(i) Beginning April 3, 2020, ensure that at least sixty-six (66) percent of the handset models it offers are hearing aid-compatible under paragraph (b) of this section, calculated based on the total number of unique handset models the carrier offers.

(ii) Beginning April 3, 2023, ensure that at least eighty-five (85) percent of the handset models it offers are hearing aid-compatible under paragraph (b) of this section, calculated based on the total number of unique handset models the carrier offers.

(4) *In-store testing.* All service providers must make available for consumers to test, in each retail store owned or operated by the service provider, all of its handset models that are hearing aid-compatible under paragraph (b) of this section.

(d) [Reserved]

(e) *De minimis exception.* (1)(i) Manufacturers or service providers that offer two or fewer handsets in an air interface in the United States are exempt from the requirements of this section in connection with that air interface, except with regard to the reporting and certification requirements in paragraph (i) of this section. Service providers that obtain handsets only from manufacturers that offer two or fewer handset models in an air interface in the United States are likewise exempt from the requirements of this section other than paragraph (i) of this section in connection with that air interface.

(ii) Notwithstanding paragraph (e)(1)(i) of this section, 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 handsets in that air interface in the United States must offer at least one handset model that is hearing aid-compatible under paragraph (b) of this section in that air interface. Service providers that obtain handsets only from manufacturers that offer one or two 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 that is hearing aid-compatible under paragraph (b) 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.

(2) Manufacturers or service providers that offer three handset models in an air interface must offer at least one handset model that is hearing aid-compatible under paragraph (b) of this section in that air interface. Service providers that obtain handsets only from manufacturers that offer three handset models in an air interface in the United States are required to offer at least one handset model in that air interface that is hearing aid-compatible under paragraph (b) of this section.

(3) Manufacturers that offer four or five handset models in an air interface must offer at least two handset models that are hearing aid-compatible under paragraph (b) of this section in that air interface. Tier I carriers who offer four handset models in an air interface must offer at least two handsets that are hearing aid-compatible under paragraph (b) of this section in that air interface and Tier I carriers who offer five handset models in an air interface must offer at least three handsets that are hearing aid-compatible under paragraph (b) of this section in that air interface. Service providers, other than Tier I carriers, who offer four handset models in an air interface must offer at least two handset models that are hearing aid-compatible under paragraph (b) of this section in that air interface and service providers, other than Tier I carriers, who offer five handset models in an air interface must offer at least three handsets that are hearing aid-compatible under paragraph (b) of this section in that air interface.

(f) *Labeling and disclosure requirements*

\*\*\*\*\*

(f)(1)(ii) [Reserved]

\*\*\*\*\*

(g) *Model designation requirements.* Where a manufacturer has made physical changes to a handset that results in a change in the hearing aid compatibility rating under the 2011 ANSI standard or an earlier version of the standard, the altered handset must be given a model designation distinct from that of the handset prior to its alteration.

(h) *Website and record retention requirements.* (1) \*\*\*

(2) Service providers must maintain on their website either:

(i) A link to a third-party website as designated by the Commission or Wireless Telecommunications Bureau with information regarding hearing aid-compatible and non-hearing aid-compatible handset models; or

(ii) A clearly marked list of hearing aid-compatible handset models that are no longer offered if the calendar month/year that model was last offered is within 24 months of the current calendar month/year along with the information listed in paragraph (h)(1) of this section for each hearing aid-compatible handset.

(3) If the Wireless Telecommunications Bureau determines that the third-party website has been eliminated or is not updated in a timely manner, it may select another website or require service providers to comply with paragraph (h)(2)(ii) of this section.

(4) The information on the website must be updated within 30 days of any relevant changes, and any website pages containing information so updated must indicate the day on which the update occurred.

(5) Service providers must maintain internal records including the ratings, if applicable, of all hearing aid-compatible and non-hearing aid-compatible models no longer offered (if the calendar month/year that model was last offered is within 24 months of the current calendar month/year); for models no longer offered (if the calendar month/year that model was last offered is within 24 months of the current calendar month/year), the calendar months and years each hearing aid-compatible and non-hearing aid-compatible model was first and last offered; and the marketing model name/number(s) and FCC ID number of each hearing aid-compatible and non-hearing aid-compatible model no longer offered (if the calendar month/year that model was last offered is within 24 months of the current calendar month/year).

\*\*\*\*\*

(j) *Enforcement.* Enforcement of this section is hereby delegated to those states that adopt this section and provide for enforcement. The procedures followed by a state to enforce this section shall provide a 30-day period after a complaint is filed, during which time state personnel shall attempt to resolve a dispute on an informal basis. If a state has not adopted or incorporated this section, or failed to act within six (6) months from the filing of a complaint with the state public utility commission, the Commission will accept such complaints. A written notification to the complainant that the state believes action is unwarranted is not a failure to act. The procedures set forth in part 68, subpart E of this chapter are to be followed.

(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 to issue, consistent with any applicable requirements of 5 U.S.C. 553, 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)(ii) of this section shall become effective no less than two years after the release of such order.

(2) 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 if required by statute or otherwise in the public interest, to issue an order amending this section to the extent necessary to approve any version of the technical standards for radio frequency interference, inductive coupling, or volume control adopted subsequently to the 2007 ANSI standard for use in determining whether a wireless handset meets the appropriate rating over frequency bands and air interfaces for which technical standards have previously been adopted either by the Commission or pursuant to paragraph (k)(1) of this section. This delegation is limited to the approval of changes to the technical standards that do not raise major compliance issues. Further, by such approvals, the Chiefs may only permit, and not require, the use of such subsequent versions of the technical standards to establish hearing aid compatibility.

(l) *Incorporated by reference.* The standards required in this section are incorporated by reference into this section with the approval of the Director of the Federal Register under 5 U.S.C. § 552(a) and 1 CFR part 51. All approved material is available for inspection at the Federal Communications Commission (FCC), 45 L Street NE, Reference Information Center, Room 1.150, Washington, DC 20554, (202) 418-0270, and is available from the source indicated in this paragraph (l). It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email [fedreg.legal@nara.gov](mailto:fedreg.legal@nara.gov) or go to <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

(1) IEEE Standards Association (IEEE-SA), 445 Hoes Lane, Piscataway, NJ 08854-4141, (732) 981-0060, email to [stds-info@ieee.org](mailto:stds-info@ieee.org), and <http://standards.ieee.org/>.

(i) ANSI C63.19-2007, American National Standard Methods of Measurement of Compatibility Between Wireless Communication Devices and Hearing Aids, June 8, 2007 (2007 ANSI standard).

(ii) ANSI C63.19-2011, American National Standard Methods of Measurement of Compatibility Between Wireless Communication Devices and Hearing Aids, May 27, 2011 (2011 ANSI standard).

(iii) ANSI C63.19-2019, American National Standard Methods of Measurement of Compatibility Between Wireless Communication Devices and Hearing Aids, August 19, 2019 (2019 ANSI standard).

(2) ANSI/TIA Standards, Telecommunications Industry Association, 1320 North Courthouse Road, Suite 200, Arlington, VA 22201, (703) 907-7700, email to [global@ihts.com](mailto:global@ihts.com), and [https://global.ihts.com/csf\\_home.cfm?&csf=TIA](https://global.ihts.com/csf_home.cfm?&csf=TIA).

(i) ANSI/TIA Volume Control Standard ANSI/TIA-5050-2018, Telecommunications – Communications Products – Receive Volume Control Requirements for Wireless (Mobile) Devices (approved Jan. 17, 2018).

(ii) [Reserved]

5. Delayed indefinitely, amend section 20.19 by revising paragraphs (f), (h)(1), and (i) to read as

follows:

**§ 20.19 [revised]**

(f) *Labeling and disclosure requirements for hearing aid-compatible handsets.* (1) *Package label.* For all handset models certified to be hearing aid-compatible, manufacturers and service providers shall ensure that the handset's package label states that the handset is hearing aid-compatible and the handset's actual conversational gain with and without a hearing aid if certified using a technical standard with volume control requirements. The actual conversational gain displayed for use with a hearing aid shall be the lowest rating assigned to the handset for any covered air interface or frequency band.

(2) *Package insert or handset manual.* For all handset models certified to be hearing aid-compatible, manufacturers and service providers shall disclose to consumers through the use of a package insert or in the handset's user manual:

(i) That the handset is hearing aid-compatible;

(ii) The ANSI standard used to determine the hearing aid compatibility of the handset model's air interfaces and frequency bands;

(iii) If using the 2011 ANSI standard or an earlier version of the standard, the lowest hearing aid compatibility rating assigned to any of the covered air interfaces or frequency bands;

(iv) The air interfaces or frequency bands on the handset that are not certified to be hearing aid-compatible, if applicable, or have been determined to be hearing aid-compatible under special testing circumstances;

(v) Any handset model certified to be hearing aid-compatible for some but not all of the air interfaces or frequency bands covered by the model must include the following disclosure language:

This phone has been tested and certified 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.

(vi) An explanation of the ANSI rating system, which includes an explanation that the 2019 ANSI standard does not use the rating system that older versions of the standard used;

(vii) An explanation of a handset model's volume control capabilities, including its conversational gain both with and without hearing aids, if the handset is certified using a technical standard that includes volume control requirements; and

(viii) An explanation of special testing circumstances, if a handset model has air interfaces that have been certified as hearing aid-compatible under such circumstances, and how these circumstances affect the use and operation of the handset.

\*\*\*\*\*

(h) *Website and record retention requirement.* (1) Each manufacturer and service provider that operates a publicly-accessible website must make available on its website a list of all hearing aid-compatible models currently offered, the ANSI standard used to evaluate hearing aid compatibility, the ratings of those models under the relevant ANSI standard, if applicable, and an explanation of the rating system. Each service provider must also include on its website: A list of all non-hearing aid-compatible models currently offered, as well as a link to the current FCC web page containing information about the wireless hearing aid compatibility rules and service providers' obligations. Each service provider must also include the marketing model name/number(s) and FCC ID number of each hearing aid-compatible and non-hearing aid-compatible model currently offered.

\*\*\*\*\*

(i) *Reporting requirements.* (1) *Reporting and certification dates.* Service providers shall submit Form 855 certifications on their compliance with the requirements of this section by January 31 of each year. Manufacturers shall submit Form 655 reports on their compliance with the requirements of this section by July 31 of each year. Information in each certification and report must be up-to-date as of the last day of the calendar month preceding the due date of each certification and report.

(2) *Content of service provider certifications.* Certifications filed by service providers must include:

(i) The name of the signing executive and contact information;

(ii) The company(ies) covered by the certification;

(iii) The FCC Registration Number (FRN);

(iv) If the service provider is subject to paragraph (h) of this section, the website address of the page(s) containing the required information regarding handset models;

(v) The percentage of handsets offered that are hearing aid-compatible (providers will derive this percentage by determining the number of hearing aid-compatible handsets offered across all air interfaces during the year divided by the total number of handsets offered during the year); and

(vi) The following language:

I am a knowledgeable executive [of company x] regarding compliance with the Federal Communications Commission's wireless hearing aid compatibility requirements at a wireless service provider covered by those requirements.

I certify that the provider was [(in full compliance/not in full compliance)] [choose one] at all times during the applicable time period with the Commission's wireless hearing aid compatibility deployment benchmarks and all other relevant wireless hearing aid compatibility requirements.

The company represents and warrants, and I certify by this declaration under penalty of perjury pursuant to 47 CFR 1.16 that the above certification is consistent with 47 CFR 1.17, which requires truthful and accurate statements to the Commission. The company also acknowledges that false statements and misrepresentations to the Commission are punishable under Title 18 of the U.S. Code and may subject it to enforcement action pursuant to Sections 501 and 503 of the Act.

(vii) If the company selected that it was not in full compliance, an explanation of which wireless hearing aid compatibility requirements it was not in compliance with, when the non-compliance began and (if applicable) ended with respect to each requirement.

(3) *Content of manufacturer reports.* Reports filed by manufacturers must include:

(i) Handset models tested, since the most recent report, for compliance with the applicable hearing aid compatibility technical ratings, if applicable;

(ii) Compliant handset models offered to service providers since the most recent report, identifying each model by marketing model name/number(s) and FCC ID number;

(iii) For each compliant model, the air interface(s) and frequency band(s) over which it operates, the hearing aid compatibility ratings for each frequency band and air interface under the ANSI standard (if applicable), the ANSI standard version used, and the months in which the model was available to service providers since the most recent report;

(iv) Non-compliant models offered to service providers since the most recent report, identifying each model by marketing model name/number(s) and FCC ID number;

(v) For each non-compliant model, the air interface(s) over which it operates and the months in which the model was available to service providers since the most recent report;

(vi) Total numbers of compliant and non-compliant models offered to service providers for each air interface as of the time of the report;

(vii) Any instance, as of the date of the report or since the most recent report, in which multiple compliant or non-compliant devices were marketed under separate model name/numbers but constitute a single model for purposes of the hearing aid compatibility rules, identifying each device by marketing model name/number and FCC ID number;

(viii) Status of product labeling;

(ix) Outreach efforts; and

(x) If the manufacturer maintains a public Web site, the Web site address of the page(s) containing the information regarding hearing aid-compatible handset models required by paragraph (h) of this section.

(4) *Format.* The Wireless Telecommunications Bureau is delegated authority to approve or prescribe forms, formats, and methods for submission of the reports and certifications in addition to or instead of those required by this section. Any format that the Bureau may approve or prescribe shall be made available on the Bureau's website.

## **Part 68 - CONNECTION OF TERMINAL EQUIPMENT TO THE TELEPHONE NETWORK**

6. The authority citation for part 68 continues to read as follows:

**Authority:** [[To be inserted.]]

### **SUBPART D – Conditions for Terminal Equipment Approval**

7. The authority citation for part 68, Subpart D is revised to read as follows:

**Authority:** 47 U.S.C. 154, 155, 303, 610.

8. Amend § 68.300 by revising paragraph (b) to read as follows:

**§ 68.300 Labeling requirements.**

\* \* \* \* \*

(b) All registered telephones, including cordless telephones, as defined in §15.3(j) of this chapter, manufactured in the United States (other than for export) or imported for use in the United States, that are hearing aid compatible, as defined in § 68.316, shall have the letters “HAC” permanently affixed thereto. “Permanently affixed” means that the label is etched, engraved, stamped, silkscreened, indelibly printed, or otherwise permanently marked on a permanently attached part of the equipment or on a nameplate of metal, plastic, or other material fastened to the equipment by welding, riveting, or a permanent adhesive. The label must be designed to last the expected lifetime of the equipment in the environment in which the equipment may be operated and must not be readily detachable. Telephones used with public mobile services or private radio services, and secure telephones, as defined by § 68.3, are exempt from this requirement.

## APPENDIX C

## Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),<sup>1</sup> an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *2020 ANSI Standard Notice* released in January 2020.<sup>2</sup> The Commission sought written public comment on the proposals in the *2020 ANSI Standard Notice*, including comments on the IRFA. The Commission did not receive comments specifically directed as a response to the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.<sup>3</sup>

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

2. The Commission's hearing aid compatibility rules ensure that the millions of Americans with hearing loss have access to the same types of technologically advanced telephone handsets as those without hearing loss. Both manufacturers and service providers are required to make available handsets that meet specified technical criteria for hearing aid compatibility. The Commission's rules define whether a wireless handset is hearing aid-compatible by reference to a 2011 standards document from the American National Standards Institute (ANSI). In 2019, ANSI's Accredited Standards Committee C63® (ANSI Committee) adopted new technical specifications for hearing aid compatibility, and we incorporate the new 2019 ANSI Standard into our rules.

3. In the *Report and Order*, the Commission incorporates the 2019 ANSI Standard as the exclusive technical standard for evaluating the hearing aid compatibility of wireless handsets. In addition to including a volume control standard as part of the new standard, the 2019 ANSI Standard requires testing that will improve a hearing aid user's experience, including those who use cochlear implants. The new standard addresses new technologies and devices operating in the frequency range of 614 MHz to 6 GHz, harmonizes testing methodologies with international standards, and uses a simple set of requirements and thresholds rather than the M/T rating system used by the 2011 ANSI Standard to determine hearing aid compatibility. The Commission anticipates that using the 2019 ANSI Standard to determine whether a handset is hearing aid-compatible for purposes of the Commission's rules will serve the public interest by establishing standards for new devices and operations over additional frequency bands. New testing methodologies in the 2019 ANSI Standard should also improve the measurement of potential hearing aid interference. The new standard no longer uses the M/T category system, achieves harmonization with other hearing aid standards, and changes several testing procedures meant to improve the consumer experience and reduce testing burdens.

4. The *Report and Order* adopts a two-year transition period for manufacturers and service providers before requiring the exclusive use of the new standard and aligns the volume control implementation deadline with the end of this two-year transition. The *Report and Order* allows manufacturers and service providers to continue to meet deployment benchmarks with any handset certified as hearing aid-compatible, regardless of the ANSI standard that was used for certification purposes. Consistent with the hearing aid-compatibility rule that was in effect prior to adoption of the *Report and Order*, the new rules: (i) require that a handset's package label indicate that the phone is hearing aid compatibility compliant and must provide the handset's amplification capability if the handset is certified using the 2019 ANSI Standard, including actual conversational gain both with and without hearing aids if the handset is certified using the 2019 ANSI Standard and the handset's volume control

---

<sup>1</sup> See 5 U.S.C. § 603. The RFA, 5 U.S.C. §§ 601–612, was amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

<sup>2</sup> *Amendment of the Commission's Rules Governing Standards for Hearing Aid-Compatible Handsets*, WT Docket No. 20-3, Notice of Proposed Rulemaking, 35 FCC Rcd 794, 817, Appx. B (2020) (*2020 ANSI Standard Notice*).

<sup>3</sup> See 5 U.S.C. § 604.

capabilities when the handset has been certified using the 2019 ANSI Standard; (ii) require that the user manual or package insert display the handset's ANSI rating and include information explaining the change in the hearing aid-compatibility rating system under the new standard; and (iii) include a prescribed disclosure when a handset meets hearing aid compatibility standards on some of its air interfaces, but not on all of its air interfaces. The *Report and Order* also maintains the in-store testing requirement applicable to service providers so that those with hearing loss have an opportunity to become comfortable with a handset before purchasing it.

5. Finally, the *Report and Order* streamlines the wireless hearing aid compatibility rules by eliminating unnecessary and outdated provisions. For example, the *Report and Order* simplifies the labeling rules to remove the “refresh” and “differing levels of functionality” requirements and to delete references to implementation dates and benchmarks that have passed. Eliminating these references will simplify the rules and make them easier to read and understand. The *Report and Order* also aligns the definition of “permanently affixed” to ensure that hearing aid compatibility labeling requirements are consistent for both PSTN telephones and telephonic customer premises equipment used for advanced communications services. Additionally, the *Report and Order* moves the compliance filing deadlines from January 15 to January 31 for service providers and from July 15 to July 31 for manufacturers.

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

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

**C. Response to Comments by the Chief Counsel for Advocacy of the Small Business Administration**

7. Pursuant to the Small Business Jobs Act of 2010, which amended the RFA, the Commission is required to respond to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration (SBA) and to provide a detailed statement of any change made to the proposed rules as a result of those comments.<sup>4</sup>

8. The Chief Counsel did not file comments in response to the proposed rules in this proceeding.

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

9. 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 rules adopted herein.<sup>5</sup> The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”<sup>6</sup> In addition, the term “small business” has the same meaning as the term “small-business concern” under the Small Business Act.<sup>7</sup> A “small-business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.<sup>8</sup>

---

<sup>4</sup> 5 U.S.C. § 604(a)(3).

<sup>5</sup> 5 U.S.C. § 604(a)(4).

<sup>6</sup> 5 U.S.C. § 601(6).

<sup>7</sup> 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.”

<sup>8</sup> 15 U.S.C. § 632.

10. *Small Businesses, Small Organizations, Small Governmental Jurisdictions.* Our actions, over time, may affect small entities that are not easily categorized at present. We therefore describe here, at the outset, three broad groups of small entities that could be directly affected herein.<sup>9</sup> First, while there are industry specific size standards for small businesses that are used in the regulatory flexibility analysis, according to data from the SBA's Office of Advocacy, in general a small business is an independent business having fewer than 500 employees.<sup>10</sup> These types of small businesses represent 99.9% of all businesses in the United States which translates to 30.7 million businesses.<sup>11</sup>

11. Next, the type of small entity described as a "small organization" is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field."<sup>12</sup> The Internal Revenue Service (IRS) uses a revenue benchmark of \$50,000 or less to delineate its annual electronic filing requirements for small exempt organizations.<sup>13</sup> Nationwide, for tax year 2018, there were approximately 571,709 small exempt organizations in the U.S. reporting revenues of \$50,000 or less according to the registration and tax data for exempt organizations available from the IRS.<sup>14</sup>

12. Finally, the small entity described as a "small governmental jurisdiction" is defined generally as "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand."<sup>15</sup> U.S. Census Bureau data from the 2017 Census of Governments<sup>16</sup> indicate that there were 90,075 local governmental jurisdictions consisting of general purpose governments and special purpose governments in the United States.<sup>17</sup> Of this number there were 36,931 general purpose governments (county<sup>18</sup>, municipal and town or township<sup>19</sup>) with populations of

---

<sup>9</sup> See 5 U.S.C. § 601(3)-(6).

<sup>10</sup> See SBA, Office of Advocacy, "What's New With Small Business?", <https://cdn.advocacy.sba.gov/wp-content/uploads/2019/09/23172859/Whats-New-With-Small-Business-2019.pdf> (Sept 2019).

<sup>11</sup> *Id.*

<sup>12</sup> 5 U.S.C. § 601(4).

<sup>13</sup> The IRS benchmark is similar to the population of less than 50,000 benchmark in 5 U.S.C § 601(5) that is used to define a small governmental jurisdiction. Therefore, the IRS benchmark has been used to estimate the number small organizations in this small entity description. See Annual Electronic Filing Requirement for Small Exempt Organizations — Form 990-N (e-Postcard), "Who must file",

<https://www.irs.gov/charities-non-profits/annual-electronic-filing-requirement-for-small-exempt-organizations-form-990-n-e-postcard>. We note that the IRS data does not provide information on whether a small exempt organization is independently owned and operated or dominant in its field.

<sup>14</sup> See Exempt Organizations Business Master File Extract (EO BMF), "CSV Files by Region," <https://www.irs.gov/charities-non-profits/exempt-organizations-business-master-file-extract-EO-BMF>. The IRS Exempt Organization Business Master File (EO BMF) Extract provides information on all registered tax-exempt/non-profit organizations. The data utilized for purposes of this description was extracted from the IRS EO BMF data for Region 1-Northeast Area (76,886), Region 2-Mid-Atlantic and Great Lakes Areas (221,121), and Region 3-Gulf Coast and Pacific Coast Areas (273,702) which includes the continental U.S., Alaska, and Hawaii. This data does not include information for Puerto Rico.

<sup>15</sup> 5 U.S.C. § 601(5).

<sup>16</sup> See 13 U.S.C. § 161. The Census of Governments survey is conducted every five (5) years compiling data for years ending with "2" and "7". See also Census of Governments, <https://www.census.gov/programs-surveys/cog/about.html>.

<sup>17</sup> See U.S. Census Bureau, 2017 Census of Governments – Organization Table 2. Local Governments by Type and State: 2017 [CG1700ORG02]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. Local governmental jurisdictions are made up of general purpose governments (county, municipal and town or township) and special purpose governments (special districts and independent school districts). See also Table 2. CG1700ORG02 Table Notes\_Local Governments by Type and State\_2017.

less than 50,000 and 12,040 special purpose governments - independent school districts<sup>20</sup> with enrollment populations of less than 50,000.<sup>21</sup> Accordingly, based on the 2017 U.S. Census of Governments data, we estimate that at least 48,971 entities fall into the category of “small governmental jurisdictions.”<sup>22</sup>

13. *Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing.* This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment.<sup>23</sup> Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, radio and television studio and broadcasting equipment.<sup>24</sup> The Small Business Administration has established a size standard for this industry of 1,250 employees or less.<sup>25</sup> U.S. Census Bureau data for 2012 show that 841 establishments operated in this industry in that year.<sup>26</sup> Of that number, 828 establishments operated with fewer than 1,000 employees, 7 establishments operated with between 1,000 and 2,499 employees and 6 establishments operated with 2,500 or more employees.<sup>27</sup> Based on this data, we conclude that a majority of manufacturers in this industry is small.

(Continued from previous page)

<sup>18</sup> See *id.* at Table 5. County Governments by Population-Size Group and State: 2017 [CG1700ORG05]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 2,105 county governments with populations less than 50,000. This category does not include subcounty (municipal and township) governments.

<sup>19</sup> See *id.* at Table 6. Subcounty General-Purpose Governments by Population-Size Group and State: 2017 [CG1700ORG06]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 18,729 municipal and 16,097 town and township governments with populations less than 50,000.

<sup>20</sup> See *id.* at Table 10. Elementary and Secondary School Systems by Enrollment-Size Group and State: 2017 [CG1700ORG10]. <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 12,040 independent school districts with enrollment populations less than 50,000. See also Table 4. Special-Purpose Local Governments by State Census Years 1942 to 2017 [CG1700ORG04], CG1700ORG04 Table Notes\_Special Purpose Local Governments by State\_Census Years 1942 to 2017.

<sup>21</sup> While the special purpose governments category also includes local special district governments, the 2017 Census of Governments data does not provide data aggregated based on population size for the special purpose governments category. Therefore, only data from independent school districts is included in the special purpose governments category.

<sup>22</sup> This total is derived from the sum of the number of general purpose governments (county, municipal and town or township) with populations of less than 50,000 (36,931) and the number of special purpose governments - independent school districts with enrollment populations of less than 50,000 (12,040), from the 2017 Census of Governments - Organizations Tables 5, 6, and 10.

<sup>23</sup> See U.S. Census Bureau, *2017 NAICS Definition*, “334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing,” <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=334220&search=2017>.

<sup>24</sup> *Id.*

<sup>25</sup> See 13 CFR § 121.201, NAICS Code 334220.

<sup>26</sup> See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1231SG2, *Manufacturing: Summary Series: General Summary: Industry Statistics for Subsectors and Industries by Employment Size: 2012*, NAICS Code 334220, <https://data.census.gov/cedsci/table?text=EC1231SG2&n=334220&tid=ECNSIZE2012.EC1231SG2&hidePreview=false>.

<sup>27</sup> *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

14. *Part 15 Handset Manufacturers.* The Commission has not developed a definition of small entities applicable to unlicensed communications handset manufacturers. The SBA category of Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing is the closest NAICS code category for Part 15 Handset Manufacturers. The Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing industry is comprised of establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment.<sup>28</sup> 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.<sup>29</sup> The SBA has developed a small business size standard for Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing, as firms having 750 or fewer employees.<sup>30</sup> U.S. Census Bureau data for 2012 show that 841 establishments operated in this industry in that year.<sup>31</sup> Of that number, 828 establishments operated with fewer than 1,000 employees, 7 establishments operated with between 1,000 and 2,499 employees and 6 establishments operated with 2,500 or more employees.<sup>32</sup> Thus, under this size standard, the majority of firms can be considered small.

15. *Wireless Telecommunications Carriers (except Satellite).* This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular phone services, paging services, wireless Internet access, and wireless video services.<sup>33</sup> The appropriate size standard under SBA rules is that a business is small if it has 1,500 or fewer employees.<sup>34</sup> For this industry, U.S. Census Bureau data for 2012 show that there were 967 firms that operated for the entire year.<sup>35</sup> Of this total, 955 firms had employment of 999 or fewer employees and 12 had employment of 1000 employees or more.<sup>36</sup> Thus under this category and the associated size standard, the Commission estimates that the majority of Wireless Telecommunications Carriers (except Satellite) are small entities.

---

<sup>28</sup> See U.S. Census Bureau, *2017 NAICS Definition, "334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing,"* <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=334220&search=2017>.

<sup>29</sup> *Id.*

<sup>30</sup> See 13 CFR § 121.201, NAICS Code 334220.

<sup>31</sup> See U.S. Census Bureau, *2012 Economic Census of the United States, Table ID: EC1231SG2, Manufacturing: Summary Series: General Summary: Industry Statistics for Subsectors and Industries by Employment Size: 2012, NAICS Code 334220,* <https://data.census.gov/cedsci/table?text=EC1231SG2&n=334220&tid=ECNSIZE2012.EC1231SG2&hidePreview=false>.

<sup>32</sup> *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

<sup>33</sup> See U.S. Census Bureau, *2017 NAICS Definition, "517312 Wireless Telecommunications Carriers (except Satellite),"* <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=517312&search=2017+NAICS+Search&search=2017>.

<sup>34</sup> See 13 CFR § 121.201, NAICS Code 517312 (previously 517210).

<sup>35</sup> See U.S. Census Bureau, *2012 Economic Census of the United States, Table ID: EC1251SSSZ5, Information: Subject Series: Estab and Firm Size: Employment Size of Firms for the U.S.: 2012, NAICS Code 517210,* <https://data.census.gov/cedsci/table?text=EC1251SSSZ5&n=517210&tid=ECNSIZE2012.EC1251SSSZ5&hidePreview=false&vintage=2012>.

<sup>36</sup> *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

16. The Commission's own data—available in its Universal Licensing System—indicate that, as of August 31, 2018, there are 265 Cellular licensees that will be affected by our actions today.<sup>37</sup> The Commission does not know how many of these licensees are small, as the Commission does not collect that information for these types of entities. Similarly, according to Commission data, 413 carriers reported that they were engaged in the provision of wireless telephony, including cellular service, Personal Communications Service (PCS), and Specialized Mobile Radio (SMR) Telephony services.<sup>38</sup> Of these, an estimated 261 have 1,500 or fewer employees and 152 have more than 1,500 employees.<sup>39</sup> Thus, using available data, we estimate that the majority of wireless firms can be considered small.

17. *Wireless Resellers.* The SBA has not developed a small business size standard specifically for Wireless Resellers. The SBA category of Telecommunications Resellers is the closest NAICS code category for wireless resellers. The Telecommunications Resellers industry comprises establishments engaged in purchasing access and network capacity from owners and operators of telecommunications networks and reselling wired and wireless telecommunications services (except satellite) to businesses and households. Establishments in this industry resell telecommunications; they do not operate transmission facilities and infrastructure. Mobile virtual network operators (MVNOs) are included in this industry.<sup>40</sup> Under the SBA's size standard, such a business is small if it has 1,500 or fewer employees.<sup>41</sup> U.S. Census Bureau data for 2012 show that 1,341 firms provided resale services during that year.<sup>42</sup> Of that number, all operated with fewer than 1,000 employees.<sup>43</sup> Thus, under this category and the associated small business size standard, the majority of these resellers can be considered small entities.

#### **E. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities**

18. The rule changes adopted in the *Report and Order* may impose some new reporting, recordkeeping, or other compliance requirements on some small entities. The *Report and Order* adopts the 2019 ANSI Standard as the exclusive technical standard for evaluating if a wireless handset is hearing aid-compatible under the Commission's rules. The new standard reduces the testing burden, uses a simple set of limits rather than the M/T category system for handsets as well as hearing aids, achieves harmonization with other hearing aid standards, and makes some additional test procedure-related changes to improve the consumer experience.

19. The *Report and Order* replaces the 2011 ANSI Standard with the 2019 ANSI Standard after a two-year transition period. During the transition period, handset models meeting either the 2011

---

<sup>37</sup> See Federal Communications Commission, *Universal Licensing System*, <http://wireless.fcc.gov/uls>. For the purposes of this FRFA, consistent with Commission practice for wireless services, the Commission estimates the number of licensees based on the number of unique FCC Registration Numbers.

<sup>38</sup> See Federal Communications Commission, Wireline Competition Bureau, Industry Analysis and Technology Division, Trends in Telephone Service at Table 5.3 (Sept. 2010) (*Trends in Telephone Service*), [https://apps.fcc.gov/edocs\\_public/attachmatch/DOC-301823A1.pdf](https://apps.fcc.gov/edocs_public/attachmatch/DOC-301823A1.pdf).

<sup>39</sup> See *id.*

<sup>40</sup> See U.S. Census Bureau, 2017 NAICS Definition, "517911 Telecommunications Resellers", <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=517911&search=2017+NAICS+Search&search=2017>.

<sup>41</sup> See 13 CFR § 121.201, NAICS Code 517911.

<sup>42</sup> See U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1251SSSZ5, *Information: Subject Series: Estab and Firm Size: Employment Size of Firms for the U.S.: 2012*, NAICS Code 517911, [https://data.census.gov/cedsci/table?text=EC1251SSSZ5&n=517911&tid=ECNSIZE2012\\_EC1251SSSZ5&hidePreview=false](https://data.census.gov/cedsci/table?text=EC1251SSSZ5&n=517911&tid=ECNSIZE2012_EC1251SSSZ5&hidePreview=false).

<sup>43</sup> *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

ANSI Standard or 2019 ANSI Standard will continue to be certified as hearing aid-compatible by handset manufacturers and service providers under the Commission's rules. Certifications issued before and within the transition period, including certifications under the 2011 ANSI Standard and any earlier versions of ANSI C63.19, will remain hearing aid-compatible. As a result, manufacturers will not need to retest or recertify existing handset models as hearing aid-compatible. The *Report and Order* also harmonizes the deadline for exclusive use of the new standard with the March 1, 2021 volume control deadline required by the Commission's current rules.

20. The adoption of the 2019 ANSI Standard for wireless handsets and elimination of the currently applicable standard after a transition period will alter the compliance obligations of wireless handset manufacturers and service providers that are small entities, as well as all other wireless handset manufacturers and service providers, by requiring them to use a different method for testing and evaluating wireless handset compliance, including with a new volume control requirement.

21. The 2019 ANSI Standard applies to wireless handsets in a wider frequency range—from 614 MHz to 6 GHz—as compared to the 2011 ANSI Standard's frequency range of 698 MHz to 6 GHz. The *Report and Order* states that a handset operating only in the ranges specified in the standard would need to satisfy the standard for all frequency bands and air interfaces over which it operates. Because the hearing aid compatibility rules (e.g., labeling and certification) apply to handsets certified under the new standard using the new frequency range (except as specified in the *de minimis* exception), small entities that did not previously have to comply with the requirements may be subject to new obligations.

22. Before adoption of the *Report and Order*, subject to a *de minimis* exception, handset manufacturers and service providers were required to offer a minimum number of hearing aid-compatible handsets for each covered air interface over which its models operate. Depending on the type and size of an entity and the point in time, manufacturers and providers must ensure that either 66% or 85% of their handset models are hearing aid-compatible.<sup>44</sup> Under the rules adopted by the *Report and Order*, manufacturers and service providers may meet their requirement to offer minimum numbers of hearing aid-compatible handsets with handsets certified under *either* the 2019 or 2011 ANSI Standards, or an earlier standard. Consequently, small entities will not have to recertify existing handsets and incur additional compliance costs.

23. The *Report and Order* simplifies the current labeling requirements so that consumers will have the information that they need in order to easily understand and evaluate the hearing aid compatibility of a particular handset. Handset manufacturers and service providers are able to design their own package labels and provide supplemental information in a way that best meets their needs. For hearing aid-compatible handsets, the handset's package label must state that the handset is hearing aid-compatible and must provide the handset's amplification capability if the handset is certified using the 2019 ANSI Standard. The *Report and Order* also requires handset manufacturers and service providers to include in package inserts or user manuals more detailed information about the hearing aid compatibility of the handset, including information about the ANSI standard used, an explanation of the ANSI rating system, and an explanation of a handset's volume control amplification capabilities.

24. The *Report and Order* maintains the current in-store testing obligation applicable to service providers so that those with hearing loss have an opportunity to become comfortable with a handset before purchasing it.

25. The *Report and Order* also revises section 20.19(c) to delete the "refresh" and "differing levels of functionality" requirements, which require manufacturers to refresh the hearing aid-compatible handset models they offer each year and require service providers to offer a range of hearing aid-compatible handset models with differing levels of functionality, respectively. The Commission's current deployment benchmarks require 66% of handsets to be hearing aid-compatible and, in the near future, will require 85% of all handsets to be hearing aid-compatible.<sup>45</sup> Our deployment benchmarks ensure that

---

<sup>44</sup> 47 CFR § 20.19(c)-(d).

consumers have robust choices among hearing aid-compatible handsets and confirm that our decision to eliminate the “refresh” and “differing levels of functionality” requirements will not adversely affect consumers. Removing unnecessary provisions such as these could streamline compliance requirements, which could reduce the cost of compliance for small entities.

26. The date that service providers must file certifications of compliance with the Commission’s hearing aid compatibility provisions and the date that manufacturers must file compliance reports is also revised in the *Report and Order*. Prior to adoption of the *Report and Order*, service provider certifications were due January 15 each year and manufacturer reports were due July 15 each year. The *Report and Order* moves these dates to January 31 and July 31, respectively, to ensure that service provider certifications and manufacturer reports are up-to-date as of the last day of the calendar month preceding the due date of each report and certification.

27. Small entities may be required to hire attorneys, engineers, consultants, or other professionals to comply with the rule changes adopted in the *Report and Order*. The Commission does not believe, however, that the costs and/or administrative burdens associated with any of the rule changes will unduly burden small entities because the adopted 2019 ANSI Standard for evaluating the hearing aid compatibility of wireless handsets was developed in collaboration with the industry through a voluntary, consensus-driven approach and is broadly supported by the industry, and expanding the frequency bands covered by the standard and replacing the current rating system will reduce regulatory burdens for handset manufacturers and service providers. While the Commission cannot quantify the cost of compliance with the rule changes and compliance obligations adopted in the *Report and Order*, in the *2020 ANSI Standard Notice* we requested cost and benefit analyses from the parties in the proceeding to help the Commission identify and evaluate compliance costs and burdens for small entities that may result from the proposed rules and the matters on which we requested comments. The Commission did not receive any comments, cost data or analyses on the impact of the rules and other matters on small entities.

#### **F. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered**

28. The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in developing its approach, which may include the following four alternatives (among others): “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.”<sup>46</sup>

29. The Commission’s adoption of a two-year transition period during which manufacturers and service providers may comply with either the existing 2011 ANSI Standard or the 2019 ANSI Standard will minimize some economic impact for small entities since they will not have to immediately comply with the revised standard in the short term. We sought comment on this issue and determined that this transition period is a reasonable timeframe to allow implementation of the new standard. The Commission anticipates that our actions unifying the transition dates for implementing volume control with the other elements of the 2019 ANSI Standard will create efficiencies and cost savings that will benefit small entity manufacturers by allowing them to develop and test handsets meeting all components of the 2019 ANSI Standard during the same production cycle, as opposed to having an earlier deadline for the volume control element of the 2019 ANSI Standard.

30. To limit any potential burdens for small entities regarding the impact of the rule changes on previously manufactured wireless handsets, the *Report and Order* allows handsets that have already

(Continued from previous page)

<sup>45</sup> 47 CFR § 20.19(c)(1)(i)(C)-(D), (c)(2)(iii), (c)(3)(iii)-(iv), (d)(1)(ii)(D)-(E), (d)(2)(iii), (d)(3)(iii)-(iv).

<sup>46</sup> 5 U.S.C. § 604(a)(6).

been certified under previous versions of the standard, as well as handsets certified under the previous standard within the transition period, to be compliant with the hearing aid compatibility rules following adoption of the 2019 ANSI Standard. This grandfathering approach should minimize the burdens associated with implementing the new standard for small entities because they will not have to recertify previously approved handsets.

31. The *Report and Order* streamlines and simplifies the hearing aid compatibility obligations for manufacturers and service providers. The Commission expects that simplifying the rules, such as the labeling and disclosure rules, will ease compliance burdens for small entities. In particular, by allowing manufacturers and service providers to choose how to meet the standard of clear and effective means such as through the use of packaging labels, user manuals and instructions, call-out cards, or other appropriate media, rather than mandating a particular method of compliance, small entities can select the approach they deem the most cost effective. Likewise, the *Report and Order* eliminates the “refresh” and “differing levels of functionality” requirements for manufacturers and service providers to refresh and offer a range of hearing aid-compatible handset models that include a mix of new and existing models, which should also ease compliance costs and burdens for small entities.

32. The hearing aid compatibility rules that were in place prior to adoption of the *Report and Order* limited the number of models that must comply with the certification requirements, especially for smaller carriers and manufacturers through the *de minimis* exceptions in the rules. The final rules in the *Report and Order* are subject to those same limits and *de minimis* exceptions to the new certification requirements. These limits should mitigate the costs and burdens of meeting the 2019 ANSI Standard for small entities.

33. Regarding the alternatives the Commission considered in adopting the final rules, we note that we declined to modify the 2019 ANSI Standard as requested by Schmid and Partner Engineering AG (Schmid).<sup>47</sup> The record indicated that the Schmid requests were already considered and mitigated in 2019 ANSI standards we adopted. We also declined to lift the statutory exemption that currently excludes frequencies above 6 GHz from hearing aid compatibility requirements, choosing instead to allow the ANSI Committee, in coordination with relevant industry participants, to develop a consensus-driven standard for these frequencies that we can incorporate into our rules when the new standard is available. In addition, we declined to add a call-out card requirement to our labeling requirement as suggested by the Hearing Loss Association of America (HLAA).<sup>48</sup> The addition of such a requirement would have mandated the use of call-out cards at the point of sale indicating whether a handset is hearing aid-compatible which would have increased the economic costs of compliance with our labeling requirements for small entities and other handset manufacturers and service providers, and we declined to do so.

34. In the *Report and Order* the Commission sought to balance the potential economic impact and burdens that small entity manufacturers and service providers might face in light of the new 2019 ANSI Standard with the need to ensure that Americans with hearing loss can access a wide array of handsets with emerging technologies in the same manner as those without hearing loss. We believe our actions in the *Report and Order* accomplish this objective.

### **G. Report to Congress**

35. The Commission will send a copy of the *Report and Order*, including this FRFA, in a report to Congress pursuant to the Congressional Review Act.<sup>49</sup> In addition, the Commission will send a copy of the *Report and Order*, including this FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of the *Report and Order* and FRFA (or summaries thereof) will also be published in the Federal Register.<sup>50</sup>

---

<sup>47</sup> Schmid Comments at 3-8.

<sup>48</sup> HLAA Comments at 4; HLAA Reply at 3.

<sup>49</sup> See 5 U.S.C. § 801(a)(1)(A).

(Continued from previous page)

---

<sup>50</sup> See 5 U.S.C. § 604(b).

**STATEMENT OF  
ACTING CHAIRWOMAN JESSICA ROSENWORCEL**

Re: *Amendment of the Commission's Rules Governing Standards for Hearing Aid-Compatible Handsets*, WT Docket No. 20-3

Accessibility means the equal opportunity to create, participate, and communicate—and promoting accessible technology is a duty this agency has under the law.

With this decision, we improve accessibility by updating our wireless hearing aid compatibility rules to ensure that people with hearing loss have access to the newest devices built with the latest technical developments and standards. This represents another step forward toward our goal of making 100 percent of wireless handsets hearing-aid compatible.

This action is especially important right now with the deployment of 5G underway. It is imperative that this new service is built for all. But at present the technical standards for hearing aid compatibility do not cover frequencies above 6 GHz, which are airwaves that we expect to play a key role in our 5G future. So, in this decision, we encourage the ANSI C63 Committee to work with stakeholders to develop a new standard that addresses hearing aid compatibility in frequencies above 6 GHz in order to ensure that the next generation of wireless technology does not leave anyone behind.