

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Improvements to Benchmarks and Related Requirements Governing Hearing Aid-Compatible Mobile Handsets	)	WT Docket No. 15-285
	)	
Amendment of the Commission’s Rules Governing Standards for Hearing Aid-Compatible Handsets	)	WT Docket No. 20-3
	)	

**REPLY COMMENTS OF THE  
HEARING AID COMPATIBILITY TASK FORCE**

**I. INTRODUCTION.**

The Hearing Aid Compatibility (“HAC”) Task Force respectfully responds to the Public Notice seeking comment on the *HAC Task Force Final Report and Recommendation* (“Report”).<sup>1</sup> Last year, representatives of the hearing loss community, manufacturers of hearing devices and wireless handsets, and wireless service providers jointly submitted the consensus Report to the Federal Communications Commission (“Commission” or “FCC”). The Report recommends a path to 100% HAC, consistent with the goals of the Commission.<sup>2</sup> The recommendations reflect agreement among consumer and industry advocates alike and were informed by consumer survey data, assessments of available and emerging technologies, marketplace realities, and the impact of a new standard for determining whether wireless handsets are “HAC.” Three initial comments were filed in response to the Public Notice, and

---

<sup>1</sup> *Wireless Telecommunications Bureau Requests Comment on the Hearing Aid Compatibility Task Force’s Final Report and Recommendation*, Public Notice, DA 23-251 (WTB rel. Mar. 23, 2023) (“Public Notice”); *see also* Hearing Aid Compatibility Task Force Final Report and Recommendation, WT Docket No. 15-285 (filed Dec. 16, 2022) (“Report”).

<sup>2</sup> Public Notice ¶ 6 (seeking comment on whether the recommendations further the Commission’s goal of attaining 100% HAC).

they all support adoption of the HAC Task Force’s final recommendations.<sup>3</sup>

Supported by the unanimous support in the record, the HAC Task Force requests that the Commission adopt the HAC Task Force’s final recommendations. The HAC Task Force also requests that the Commission grant its requested waiver so that covered entities may introduce new wireless handsets as “HAC” that incorporate superior HAC features such as interference evaluated over a wider range of frequencies, better telecoil capability, and tested volume control capabilities.<sup>4</sup>

## **II. THE HAC TASK FORCE RECOMMENDATIONS, BUILT ON CONSENSUS, WILL LEAD TO 100% HAC FOR WIRELESS HANDSETS.**

The HAC Task Force requests that the Commission adopt its recommendations to move forward towards 100% HAC deployment benchmarks for wireless handsets, as described in the Report. Moreover, the initial comments in this proceeding show unanimous support for adopting the recommendations.

The HAC Task Force worked for years to build consensus among stakeholders, including representatives of individuals with hearing loss, the hearing aid industry, and the wireless industry, and were proud to present a path toward 100% HAC to the Commission. The Report was adopted by the full HAC Task Force as a consensus document, without a minority report.<sup>5</sup>

---

<sup>3</sup> See generally Comments of Bluetooth Special Interest Group, Inc., WT Docket No. 15-285 (filed Apr. 24, 2023) (“Bluetooth SIG Comments”); Comments of Consumer Technology Association, WT Docket No. 15-285 (filed Apr. 24, 2023) (“CTA Comments”); Comments of Samsung Electronics America, WT Docket Nos. 15-285 & 20-3 (filed Apr. 24, 2023) (“Samsung Comments”).

<sup>4</sup> Petition of ATIS on Behalf of the Covered Entities of the Hearing Aid Compatibility Task Force for Limited, Interim Waiver, WT Docket Nos. 15-285 & 20-3 (filed Dec. 16, 2022) (“Waiver Request”).

<sup>5</sup> See Press Release, ATIS, *ATIS Hearing Aid Compatibility Task Force Recommends a Path to 100% Compatibility for Wireless Handsets* (Dec. 16, 2022), <https://www.atis.org/press-releases/at-is-hearing-aid-compatibility-task-force-recommends-a-path-to-100-compatibility-for-wireless-handsets/>; Letter from Lise Hamlin, Director of Public Policy, Hearing Loss Association of America, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 20-3 (filed Apr. 18, 2023) (“HLAA Ex Parte”); CTA Comments at 1; Samsung Comments at 1-2.

All HAC Task Force participants support the goal of 100% HAC deployment and worked to agree to a consensus path to 100% HAC.<sup>6</sup> All HAC Task Force participants had the opportunity to engage in, and contribute to, the HAC Task Force working groups that undertook these work streams. The HAC Task Force based its Report on extensive research into available and emerging technology, real-world consumer use of hearing devices and wireless handsets, and device testing to determine whether 100% HAC was achievable, and if so, how to get there. As discussed below, the HAC Task Force considered how to define “HAC” and how to incorporate current and alternate HAC technologies into the definition and benchmarks to reflect the results of its research and study, while moving toward 100% HAC, as the Commission’s *2016 Consensus Order* directed.<sup>7</sup> The Commission’s commitment to 100% HAC and Congress’s directive to the Commission in Section 710 of the Communications Act of 1934, as amended, (the “Act”) also guided the HAC Task Force’s work.<sup>8</sup>

The HAC Task Force recommendations work together to forge a path to 100% HAC. The HAC Task Force recommends a revised conceptual definition for HAC that continues to rely on technical standards incorporated into the Commission’s rules, including the ANSI standards subject to the revisions requested in the Waiver Request.<sup>9</sup> And the deployment benchmarks

---

<sup>6</sup> See, e.g., Letter from James Reid, Senior Vice President, Government Affairs, Telecommunications Industry Association et al., to Marlene H. Dortch, Secretary, FCC, WT Docket Nos. 07-250 & 10-254 (filed Nov. 12, 2015) (presenting the Commission with the Joint Consensus Proposal and urging the FCC to pursue a 100% HAC, subject to a determination that it is achievable); Letter from Thomas Goode, General Counsel, ATIS, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 15-285 (filed Jan. 29, 2021) (calendar year 2020 discretionary update from the HAC Task Force).

<sup>7</sup> *Improvements to Benchmarks and Related Requirements Governing Hearing Aid-Compatible Mobile Handsets*, Report and Order, 31 FCC Rcd 9336 ¶¶ 42-50 (2016) (identifying issues for consensus) (“*2016 Consensus Order*”).

<sup>8</sup> Public Notice ¶ 6; 47 U.S.C. § 610(a) (requiring the Commission to establish regulations “to ensure reasonable access to telephone service by persons with impaired hearing”); see also 47 U.S.C. § 610(b)(2)(B)(iii) (allowing the FCC to narrow the public mobile services phone exemption if “technologically feasible”).

<sup>9</sup> See Report at 16, 19 at Table 2: Proposed HAC Waiver and Ultimate Rules; Waiver Request.

include device testing to demonstrate compatibility with legacy technologies as well as innovative technologies, like Bluetooth, with a gradual transition toward emerging technologies.<sup>10</sup> As a result, the recommendations will provide for both flexibility and certainty.<sup>11</sup>

Likewise, in response to HAC Task Force-conducted testing, the HAC Task Force recommended that the Commission permit an alternative testing methodology for handset volume control capabilities while a short-term waiver is in effect. The HAC Task Force further recommended incorporating into the Commission’s rules an adjusted volume control testing method. Work is already underway to revise the volume control testing standard to develop the adjusted volume control testing method.<sup>12</sup>

Throughout the development of the Report, the HAC Task Force strived to promote HAC by finding a path toward 100% HAC, while also reflecting changes in consumer preferences, technologies, and the marketplace. The recommendations are the result of careful consideration and compromise to aim to achieve these goals.<sup>13</sup>

### **III. THE HAC TASK FORCE DEVELOPED ITS RECOMMENDATIONS TO EMBRACE INNOVATION AND FUTURE TRENDS WHILE ENSURING NO CONSUMER IS “LEFT BEHIND.”**

The HAC Task Force’s recommendations will “ensure equal opportunity for all to create, participate, and communicate—with none left behind[.]”<sup>14</sup> The HAC Task Force met over many

---

<sup>10</sup> Report at 22-26 (providing Model Rule language, including continued reliance on incorporated technical standards).

<sup>11</sup> See Public Notice ¶ 7 (seeking comment on the definition of HAC and how the proposed definition would allow the Commission to determine HAC with “certainty”).

<sup>12</sup> See Letter from Thomas Goode, General Counsel, ATIS, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 20-3, at 3 (Apr. 5, 2023) (“HAC Task Force Ex Parte”).

<sup>13</sup> See, e.g., HLAA Ex Parte at 1; CTA Comments at 3; Samsung Comments at 2.

<sup>14</sup> Public Notice ¶ 6.

months to gather and analyze data and, ultimately, to create recommendations that were grounded in the consumer experience and current marketplace realities so that they would be effective for consumers with hearing loss.<sup>15</sup> The HAC Task Force participants also sought to ensure that the Report would be informed by the latest information on available and emerging technologies, both in terms of wireless handsets and hearing aid devices.

Altogether, the results of the HAC Task Force's work indicate that Bluetooth should be incorporated into the benchmarks and compliance. To do so, the HAC Task Force recommends that the Commission retain requirements for providers to continue to offer handsets that provide telecoil coupling compatibility to ensure a smooth transition for consumers that rely on it, while gradually moving toward requiring handsets to provide the Bluetooth functionality.

The HAC Task Force was committed to ensuring that any recommendations reflected consumer experiences, so it conducted a comprehensive survey of consumers with hearing loss and their use of wireless phones.<sup>16</sup> To gather data on consumer usage and preferences, the HAC Task Force hired a professional pollster, Northstar Hub, to conduct an online survey of 800 individuals with varying degrees of hearing loss who reported using wireless phones with their hearing devices. The survey was informed by past surveys of hearing aid users, allowing for some comparisons over time. The survey gathered first-hand accounts of how consumers in the real-world use their hearing devices in conjunction with wireless handsets. In addition, the HAC Task Force conducted a survey of audiologists and hearing instrument specialists to collect certain data about today's hearing health care professionals, including information about professional/patient interactions to better understand potential influences over consumer

---

<sup>15</sup> See *id.* ¶ 18 (seeking comment on how the data the HAC Task Force reported supports the recommendations in the Report).

<sup>16</sup> See *generally* Report at 42-69 (Working Group 2 Report).

preferences and purchasing decisions. The professional survey sought to delve into professional observations and information exchanges with consumers and use that information to better understand how these may help drive and direct consumer choices in handsets.

In particular, the data showed that consumers are embracing new technologies like Bluetooth. The current trend in the marketplace towards increased Bluetooth pairing will likely increase as newer Bluetooth technology emerges that expands the possible use cases to include broadcast audio.

The HAC Task Force is hopeful that Bluetooth Hearing Access Profile (“HAP”) and Bluetooth LE Audio—both adopted last summer as non-proprietary, interoperable wireless standards—will further enhance Bluetooth coupling between hearing aids and wireless handsets by providing high quality audio at lower power.<sup>17</sup> The Bluetooth Special Interest Group reports promising developments about the availability and use of Bluetooth for hearing aid coupling:

Bluetooth is already used as the primary coupling method for hearing aids with smartphones in both Apple platform devices and Android platform devices. Close to 10 million Bluetooth hearing aids and Over The Counter (OTC) Bluetooth hearing aids are expected to ship in 2023.<sup>18</sup>

Among other enhancements to Bluetooth, Bluetooth Audio Sharing has the potential to make places of public accommodation like conference centers and airports more accessible to individuals with hearing loss.<sup>19</sup> Audio sharing can be accomplished via Bluetooth and has unlimited audio endpoints. In other words, Bluetooth Audio Sharing is poised to offer

---

<sup>17</sup> See Report at 20; *2022 Bluetooth Market Update*, Bluetooth (2022), <https://www.bluetooth.com/2022-market-update/> (“Bluetooth 2022 Market Update”); Public Notice ¶ 13 (seeking comment on whether the non-proprietary Bluetooth standard is final).

<sup>18</sup> Bluetooth SIG Comments at 2.

<sup>19</sup> See *id.* at 3; CTA Comments at 2.

functionalities that could complement or substitute those offered by loops and other assistive listening systems today.

Importantly, Bluetooth is an increasingly popular, mainstream audio technology with 1.4 billion audio streaming device shipments just in 2022.<sup>20</sup> Accordingly, it is likely that individuals are already familiar with Bluetooth and its pairing process. These consumers will be able to leverage these known processes to easily and effectively pair their hearing aids with their wireless handsets.

While reflecting the clear consumer and technology trends toward Bluetooth, the HAC Task Force also made sure that its recommendations will continue to meet the needs of those individuals that currently rely on telecoil pairing with their wireless device. The HAC Task Force recommended that a benchmark for 100% wireless coupling retain the requirement that at least 85% of wireless handsets include telecoil capabilities that meet the enhanced 2019 ANSI Standard for telecoil pairing and at least 15% of wireless handsets include wireless Bluetooth coupling capabilities.<sup>21</sup> In addition, any handset that does not include Bluetooth must have telecoil capabilities, and vice versa. This approach will ensure a wide range of wireless handsets incorporating telecoil technology continue to be available in the marketplace for those consumers who rely on telecoil pairing for the foreseeable future, while increasing reliance on a promising alternative technology, to reflect the consumer and technology trends discussed above. The Commission should also continue to require handsets to meet the RF emissions requirements.<sup>22</sup>

---

<sup>20</sup> See Bluetooth 2022 Market Update.

<sup>21</sup> Report at 19.

<sup>22</sup> *Id* at 20.

The HAC Task Force also made targeted recommendations regarding the Commission’s Accessibility Clearinghouse and waiver process, in response to requests from the Commission.<sup>23</sup> With respect to the Accessibility Clearinghouse, the HAC Task Force recommended that service providers be able to rely on information in the Global Accessibility Reporting Initiative (“GARI”) database, which is linked on the Commission’s webpage.<sup>24</sup> The Commission maintains the Accessibility Clearinghouse to provide information about accessible telecommunications and advanced communications products and services to the public.<sup>25</sup> Allowing service providers to rely on GARI for HAC information will provide a user-friendly experience for service providers to receive timely information, compared to the FCC Form 655 reports and the Equipment Authorization System, which include highly technical data. The information in these disparate places on the Commission website, however, provides alternative locations for double-checking the accuracy of the information in GARI.<sup>26</sup>

The HAC Task Force reiterates its recommendation for a 90-day shot-clock for petitions seeking a waiver of the HAC requirements pursuant to Section 710(b)(3) of the Act.<sup>27</sup> A 90-day shot-clock balances various equities such as providing an opportunity to comment, burden on Commission staff, and business certainty. A shot-clock can avoid unintended harm that could be caused by firms seeking to develop or deploy new technologies and handsets having to wait an indefinite amount of time for the Commission to reach finality on Section 710(b)(3) waiver

---

<sup>23</sup> *2016 Consensus Order* ¶¶ 49-50.

<sup>24</sup> Report at 26-28.

<sup>25</sup> 47 U.S.C. § 618(d).

<sup>26</sup> Public Notice ¶ 15 (seeking comment on the accuracy of GARI).

<sup>27</sup> *See* Report at 30-31; Section 47 U.S.C. § 610(b)(3) (expressly permitting the Commission to entertain petitions to waive the HAC requirements if stringent, enumerated requirements are met).



requests. A shot-clock would also prove helpful in avoiding the need to seek interim relief in advance of a compliance deadline.

#### **IV. CORRECTING THE VOLUME CONTROL TESTING FRAMEWORK IS AN IMPORTANT ASPECT OF THE PATH TOWARDS 100% HAC.**

Ultimately, the Commission should grant the recommended waiver submitted by ATIS on behalf of the HAC Task Force covered entities.<sup>28</sup> Doing so will allow consumers to have the information they need to identify the devices that meet their needs, require more stringent testing of handsets than currently required, and permit time for stakeholders to develop and present an updated testing approach to the Commission.<sup>29</sup>

In the Report, the full HAC Task Force recommended that the Commission waive, review, and update the ANSI 2019 volume control testing measures to address issues the HAC Task Force found.<sup>30</sup> This data revealed that one aspect of the test methodology for evaluating distortion may produce results that do not accurately reflect handset behavior for this performance characteristic. This issue necessitates an interim waiver before the 2019 ANSI Standard compliance date goes into effect because the requirements for every performance characteristic must be met for phones to be rated as HAC.<sup>31</sup> Otherwise, handsets with demonstrably better capabilities for people with hearing loss will not be HAC-rated, and consumers will lose out. And, it will not be possible to meet the 100% HAC benchmark.

---

<sup>28</sup> See Report at ii.

<sup>29</sup> The HAC Task Force appreciates the FCC's short-term, interim relief granted on April 14, 2023 to extend the transition to the 2019 ANSI Standard by six months. *Amendment of the Commission's Rules Governing Standards for Hearing Aid-Compatible Handsets*, Order, DA 23-327 (WTB rel. Apr. 14, 2023).

<sup>30</sup> See Report at 21-22.

<sup>31</sup> See *id.* at 69-90 (Working Group 3 Report).

To ensure that the revision process can occur while consumers benefit from other aspects of the updated 2019 ANSI Standard, the HAC Task Force agreed to support a waiver that incorporated clear conditions to test to the 2019 ANSI Standard for RF emissions and telecoil coupling as well as a modified volume testing standard. As a result, granting the waiver would be a win-win-win: it will enable new wireless handsets to achieve a HAC-rating so consumers would have the information they need to find the right handsets for them; it will allow alternate, consensus testing for volume control to take place while the waiver is in effect, and it will better reflect modern wireless handset technologies after testing identified flaws in the incorporated volume control testing standard. Granting the waiver will provide needed assurance of certain volume control capabilities along with assurance that handsets have met the enhanced RF interference reduction and telecoil coupling tests of the 2019 ANSI Standard. Longer-term, the Commission will have a better volume-control standard. Industry and other stakeholders are members of the TIA Volume Control Task Group under the TR-41 standards committee, which is working to revise the volume control standard for wireless handsets.<sup>32</sup> TIA plans to provide regular updates to the Commission on its progress.

## **V. CONCLUSION.**

For the foregoing reasons, the Commission should adopt the recommendations of the HAC Task Force as articulated in the Report. The recommendations create a path to 100% HAC deployment that will benefit consumers.

---

<sup>32</sup> HAC Task Force Ex Parte at 3.

Respectfully submitted,

*/s/ Thomas Goode*

Thomas Goode

General Counsel

ATIS, on behalf of the HAC Task Force

May 8, 2023