

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)	
)	
Achieving 100% Wireless Handset Model Hearing Aid Compatibility)	WT Docket No. 23-388
)	
Improvements to Benchmarks and Related Requirements Governing Hearing Aid- Compatible Mobile Handsets)	WT Docket No. 15-285 (terminated)

**COMMENTS OF
CONSUMER TECHNOLOGY ASSOCIATION**

Consumer Technology Association (CTA)^{®1} respectfully submits these comments in response to the Federal Communications Commission’s (“Commission’s” or “FCC’s”) Notice of Proposed Rulemaking on achieving 100% wireless handset model hearing aid compatibility (HAC).²

CTA is the leading consumer technology trade association and has a strong history supporting individuals that use hearing devices and/or have hearing loss. CTA’s members include hearing aid and wireless handset manufacturers as well as wireless service providers. CTA promotes the development and use of consensus technical standards. CTA also has an extensive market research department that provides valuable insights for industry and policymakers.

One of CTA’s most important and long-standing activities has been to convene opportunities for its members to meet with and learn from organizations that represent people

¹ As North America’s largest technology trade association, CTA[®] is the tech sector. Our members are the world’s leading innovators—from startups to global brands—helping support more than 18 million American jobs. CTA owns and produces CES[®]—the most powerful tech event in the world.

² *Achieving 100% Wireless Handset Model Hearing Aid Compatibility et al.*, Notice of Proposed Rulemaking, WT Docket No. 23-388, FCC 23-108 (rel. Dec. 14, 2023) (*NPRM*).

with disabilities.³ CTA and CTA’s member companies also participate in several committees, meetings and conferences throughout the year to directly engage with members of the disability community, including individuals who use hearing devices and/or have hearing loss.⁴ At CES 2024, the most powerful tech event in the world, accessibility featured prominently in both programming and products.⁵ The wireless handsets offered by CTA’s members exemplify the innovation in accessible communications that is occurring throughout the consumer technology marketplace, especially for consumers who are deaf or hard of hearing.⁶ In addition to leading the way with real-time text, the vast majority of wireless handsets offered in the U.S. comply with the Commission’s wireless HAC rules.⁷

CTA was a member of the multi-stakeholder HAC Task Force and urges the Commission to adopt the recommendations of the HAC Task Force. The HAC Task Force carefully studied issues leading to successful handset-hearing device compatibility and forged consensus among many types of stakeholders, including consumers and academics. The recommendations are supported by consumer and market research and pave the way for additional innovation in handset design and functionality.

³ For example, CTA’s associated CTA Foundation hosts an annual Accessibility Roundtable at CES that brings together CTA member companies and representatives of consumer groups for direct dialogue and relationship building. For many years, the CTA Foundation has also sponsored a group of Accessibility Leaders to attend and tour CES.

⁴ For instance, CTA has served on the FCC’s Disability Advisory Committee since it was chartered in 2014.

⁵ See, e.g., *CTA Foundation Highlights at CES 2024*, CTA, <https://cdn.cta.tech/cta/media/media/pdfs/cta-foundation-ces-flyer-12-22.pdf> (last visited Feb. 26, 2024).

⁶ *Id.*; Gary Shapiro, *Tech Innovation is Making the World More Accessible and Inclusive*, LinkedIn (Aug. 10, 2023), <https://www.linkedin.com/pulse/tech-innovation-making-world-more-accessible-gary-shapiro> (“Accessibility tech goes beyond the devices designed solely for people with disabilities. ... The smartphone, with and without attachments, has many options to enhance hearing and vision.”).

⁷ See, e.g., Hearing Aid Compatibility Task Force Final Report and Recommendation, WT Docket No. 15-285, at 7 (filed Dec. 16, 2022) (*Report*).

In addition, CTA urges the FCC to modernize the HAC labeling and disclosure requirements so that manufacturers may rely on digital labeling rather than costly and environmentally wasteful printed labels and paper inserts. Consumers are familiar with digital labeling technology, such as quick response (QR) codes, and online information is more consumer-friendly than printed regulatory information.

I. THE HAC TASK FORCE RECOMMENDATIONS PROVIDE A RESEARCH-BACKED PATH TO 100 PERCENT HAC THAT SUPPORTS CONSUMERS

CTA’s recent research and activities support the HAC Task Force’s recommendations, which incorporate valuable insights from consumer and hearing-health professional studies, market research and device testing. The FCC should adopt the HAC Task Force’s recommendations to help “the Commission ... achieve its long held goal of a 100% hearing aid compatibility benchmark for all handset models offered in the United States or imported for use in the United States.”⁸ The interlocking recommendations in the *Report* encourage innovation by setting forth a flexible definition for HAC while ensuring testing to objective standards for compliance with deployment benchmarks. For the first time, they also incorporate Bluetooth into deployment benchmarks. Bluetooth is a popular wireless connectivity technology that will lower the barrier for consumers to effectively couple their phones with hearing devices.

CTA co-chaired the HAC Task Force’s Working Group 2, which conducted two surveys to understand the behavior and experiences of: (1) consumers who use hearing devices; and (2) hearing health care professionals.⁹ The survey demonstrated that consumers are embracing innovative technologies. For example, nine-in-ten consumer respondents reported owning

⁸ *NPRM* ¶ 2.

⁹ Letter from Thomas Goode, General Counsel, Alliance for Telecommunications Industry Solutions, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 15-285, at 5 (Jan. 24, 2022).

smartphones (which typically come with some Bluetooth capability), and nearly two-thirds reported that their hearing device included direct Bluetooth audio streaming.¹⁰ Indeed, “[d]irect Bluetooth audio streaming was an important feature with a high rate of satisfaction for those consumers who reported having it.”¹¹ The HAC Task Force also examined trends in hearing device and wireless handset features, finding that most hearing aids are Bluetooth capable.¹²

As showcased recently at CES 2024, Bluetooth and over-the-counter (OTC) hearing aids show tremendous promise for helping consumers with hearing loss communicate more effectively.¹³ Indeed, recent Bluetooth standards that enhance audio quality and allow for multi-streaming also have tremendous promise for consumers with hearing loss, both when using their phone and trying to listen in facilities that may have (or, critically, have not) installed inductive loop systems.¹⁴ CES 2024 was home of the North American premiere of The Auracast™ Experience, a global series of immersive demonstrations to educate innovators and other stakeholders about this promising technology.¹⁵

¹⁰ *Report* at 47-48.

¹¹ *Id.* at 49.

¹² *See id.* at 41; Comments of the Hearing Industries Association, MD Docket No. 21-190, at 4 (filed Oct. 21, 2021) (observing that “approximately 80 percent of hearing aids now have some form of wireless connectivity and that percentage is rapidly increasing”). MFi and ASHA are technologies based on Bluetooth designed for use with the Apple and Android operating systems, respectively.

¹³ *See generally* Panel: OTC Hearing Aids – An Update, held at CES 2024 (Jan. 11, 2024), <https://live.ces.tech/detail/6344814957112/otc-hearing-aids-an-update>.

¹⁴ *See, e.g., Report* at 14; Mindy Dolan, *Qualcomm Gives Us an Overview of What We Can Expect From Bluetooth Audio in 2024*, Bluetooth Blog (Dec. 21, 2023), <https://www.bluetooth.com/blog/qualcomm-gives-us-an-overview-of-what-we-can-expect-from-bluetooth-audio-in-2024> (“Just two years ago, Bluetooth audio latency was at 200ms, and in 2023, we were able to deliver a solution optimized for gaming, utilizing our Snapdragon™ Sound Technology Suite and Bluetooth LE Audio to deliver a latency of less than 20ms.”).

¹⁵ Jason Marcel, *High Praise for Auracast Broadcast Audio After CES 2024*, Bluetooth Blog (Feb. 1, 2024), <https://www.bluetooth.com/blog/high-praise-for-auracast-broadcast-audio-after-ces-2024> (compiling articles on Auracast™ at CES 2024 and noting that one of the “surprising showstoppers at this year’s Las Vegas expo was the North American premiere of The Auracast™ Experience.”); Jason Marcel,

CTA championed the law that paved the way to the availability of OTC hearing devices in the United States and developed performance criteria for these devices found in ANSI/CTA-2051, Personal Sound Amplification Performance Criteria which were incorporated by reference in FDA regulations.¹⁶ CTA is excited for this new segment to help consumers with mild or moderate hearing loss.¹⁷ CTA is actively helping OTC manufacturers understand the marketplace and anticipates that the new OTC category will open up opportunities for innovation and greater accessibility to hearing technology.

At CES 2024, CTA convened a Hearing Roundtable which gathered members of the hearing ecosystem to discuss approaches to drive the adoption and distribution of hearing solutions and to reduce the stigma associated with “hearing loss” and hearing aids through enabling consumers to self-monitor their hearing health. CTA recently started a new project, CTA-2129, Standard Methodology for Consumer Broadcast Hearing Devices, with the goal of identifying use cases, elements and implementation of a standard methodology for consumer broadcast hearing devices to include broadcast distance.¹⁸ Some OTCs are currently incorporating Bluetooth connectivity and, if the trends identified by Working Group 2 continue,

The Best Bluetooth Experience at CES 2024, Bluetooth Blog (Jan. 9, 2024), <https://www.bluetooth.com/blog/the-best-bluetooth-experience-at-ces-you-didnt-know-about> (describing The Auracast™ Experience).

¹⁶ See *Personal Sound Amplification Performance Criteria (ANSI/CTA-2051)*, CTA (Jan. 2017), <https://shop.cta.tech/collections/standards/products/personal-sound-amplification-performance-criteria-ansi-cta-2051>; Food and Drug Administration, *Medical Devices; Ear, Nose, and Throat Devices; Establishing Over-the-Counter Hearing Aids*, Final Rule, 87 Fed. Reg. 50698, 50701 (Aug. 17, 2022).

¹⁷ See, e.g., Jim Fellingner, *FDA Approves Over-the-Counter Hearing Aids, Draws on CTA Standards, Lowers Costs and Increases Accessibility for Consumers*, CTA (Aug. 16, 2022), <https://www.cta.tech/Resources/Newsroom/Media-Releases/2022/August/OTC-Announcement> (quoting CTA CEO and President Gary Shapiro explaining that “[o]ver-the-counter hearing aids will benefit tens of millions of Americans, reducing the cost, social isolation and stigma experienced by many people with mild to moderate hearing loss”).

¹⁸ See CTA, *Health Fitness & Wellness*, <https://www.cta.tech/Resources/Standards/Members/Current-Projects/R11-Health-Fitness-Wellness> (last visited Feb. 26, 2024).

many individuals with hearing loss may choose to rely on Bluetooth connectivity when OTC products become more widely available.¹⁹

Looking ahead, CTA encourages the FCC to explore additional technology neutral methods to encourage HAC.²⁰ The marketplace is continually innovating to meet the needs of all consumers, including those with hearing loss.²¹ Popular, mainstream technologies—like Bluetooth—are more familiar to consumers and tend to cost less to incorporate into devices making them more attractive to manufacturers.²² At the same time, the consumer technology industry remains committed to meeting the needs of consumers with hearing loss who rely on legacy technologies and ensuring that all users can benefit from consumer technology.

II. CONSUMERS WILL BENEFIT FROM MODERN LABELING THAT WILL MORE EFFECTIVELY DISCLOSE INFORMATION WHILE REDUCING ENVIRONMENTAL WASTE

The transition to a 100% HAC benchmark requirement provides an opportunity for the Commission to reexamine its current HAC labeling and packaging requirements to encourage innovative labeling and disclosures and reduce environmental waste. Specifically, manufacturers

¹⁹ See, e.g., Karl Strom, *Best OTC Hearing Aids in 2024: Price and Sound Comparison*, Hearing Tracker, <https://www.hearingtracker.com/over-the-counter-hearing-aids> (updated Jan. 15, 2024) (reporting that six of the “top ten” OTCs have “Wireless Audio” but not reporting on the availability, if any, of a telecoil in any of the “top ten” OTCs); Jason Marcel, *New Audio Streaming Market Forecasts*, Bluetooth Blog (Apr. 7, 2023), <https://www.bluetooth.com/blog/new-audio-streaming-market-forecasts> (“ABI Research forecasts a 9.5x increase in annual shipments of Bluetooth enabled over-the-counter (OTC) hearing devices by 2027.”).

²⁰ *NPRM* ¶ 49 (asking about the effects on relying on market conditions on the availability of different HAC technologies).

²¹ As in past years, CTA awarded Innovation Awards to hearing aids and hearing technology at CES 2024. See Consumer Technology Association, CES 2024 Innovation Award Product, *Silk Charge&Go IX By WS Audiology*, <https://www.ces.tech/innovation-awards/honorees/2024/best-of/s/silk-charge-go-ix.aspx> (last visited Feb. 26, 2024); Consumer Technology Association, CES 2024 Innovation Award Product, *Starkey Genesis AI By Starkey*, <https://www.ces.tech/innovation-awards/honorees/2024/honorees/s/starkey-genesis-ai.aspx> (last visited Feb. 26, 2024).

²² *NPRM* ¶ 48 (“How can the Commission ensure that its hearing aid compatibility rules allow consumers to have access to reasonably priced hearing aid-compatible handset models?”).

and service providers should have as much flexibility as possible in affixing digital labeling to the packaging of products. They should no longer be required to provide physical labels or paper inserts beyond a QR code or URL on physical packaging that links to required HAC information.

Consumers are familiar with digital labeling, such as QR codes that now appear at the Kennedy Center to access performance programs, restaurants to access menus and even on the tags attached to single-use tea bags. Consumers understand that QR codes and URLs are invitations to learn more online. Online information, in turn, has significant advantages over printed and paper labeling and disclosures: the ability to update information so that it does not become outdated, the availability of additional information via hyperlinks, the ease by which consumers can research information (such as “conversational gain”) and the capability to apply accessibility settings to text (such as increasing font size and using a screen reader).²³

Allowing manufacturers to replace on- and in-box labeling and paper inserts with digital labeling is consistent with recent Commission and congressional actions that have reduced physical labeling and simplified consumer disclosures in similar settings.²⁴ These actions have also reduced the use of physical resources, such as paper and packaging, and they can better communicate complicated technical information to consumers.

CTA also suggests that the Commission simplify the HAC information disclosures, which currently require detailed technical information referencing codecs, conversational gains

²³ For longer URLs, use of URL shorteners should be allowed.

²⁴ Enhance Labeling, Accessing, and Branding of Electronic Licenses (E-LABEL) Act of 2014, Pub. L. No. 113-197, 128 Stat. 2055 (2014) (codified at 47 U.S.C. § 622); *Amendment of Parts 0, 1, 2, 15 and 18 of the Commission’s Rules regarding Authorization of Radiofrequency Equipment*, First Report and Order, 32 FCC Rcd 8746 (2017) (implementing electronic labeling for RF devices subject to the Commission’s equipment authorization rules); *Empowering Broadband Consumers Through Transparency*, Report and Order and Further Notice of Proposed Rulemaking, 37 FCC Rcd 13686 (2022) (*Broadband Consumer Label Order*).

and ANSI standards and provide values in MHz/GHz and dBm.²⁵ CTA respectfully observes that nearly all consumers will not understand this information and, therefore, these requirements represent burdens without real benefits. Recently, the Commission has taken a more practical and consumer-centered approach in adopting the Broadband Consumer Label rules.²⁶ The emphasis throughout the *Broadband Consumer Label Order* was on providing easy-to-understand information.²⁷ Importantly, the labels eschewed technical and lengthy disclosures.²⁸ The arguably most technical term on the broadband label is “typical latency”—a metric that the Commission adopted only after concluding that there were consumers who would find latency metric information “especially useful” when selecting a plan.²⁹ By contrast, the Commission decided *not* to include information about packet loss on the labels after observing that consumers have little understanding of what packet loss involves and the average consumer would get little benefit from the information.³⁰ Less complex labels in the HAC context also would more effectively convey information of interest to consumers.

²⁵ 47 C.F.R. § 20.19(f). *See also Amendment of the Commission’s Rules Governing Standards for Hearing Aid-Compatible Handsets*, Order, WT Docket No. 20-3, DA 23-914 ¶ 33 (WTB rel. Sept. 29, 2023) (requiring package inserts and user manuals “...to state which codecs and air interface combinations were used to pass testing for conversational gain and for the related distortion/noise and frequency response tests and which codecs and air interfaces were not tested”).

²⁶ *See generally Broadband Consumer Label Order*.

²⁷ *See, e.g., id.* ¶¶ 1, 13, 33, 141, 143 (focusing on providing readily understandable information on the labels).

²⁸ In contrast, Section 20.19(f)(2)(v), one of the eight separately enumerated insert/manual disclosures, requires the following disclosure: “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 C.F.R. § 20.19(f)(2)(v).

²⁹ *Broadband Consumer Label Order* ¶ 41.

³⁰ *See id.* ¶¶ 46, 63 (declining to require a reliability metric, in large part because commenters had not identified one that would be readily comprehensible for consumers).

III. CONCLUSION

CTA is proud to have been a member of the HAC Task Force and to have worked with advocates, academics, test labs, manufacturers, service providers and others to develop the HAC Task Force recommendations. The Commission should adopt the consensus recommendations as well as modernize HAC labeling and disclosure requirements.

Respectfully submitted,

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