

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
Implementation of Sections 716 and 717 of the) CG Docket No. 10-213
Communications Act of 1934, as Enacted by the)
Twenty-First Century Communications and Video)
Accessibility Act of 2010)
)
Consumer and Governmental Affairs Bureau Seeks)
Comment on the Accessibility of Communications)
Technologies for the 2022 Biennial Report Required)
by the Twenty-First Century Communications and)
Video Accessibility Act)

**CONSUMER TECHNOLOGY ASSOCIATION PUBLIC NOTICE COMMENTS –
ACCESSIBILITY OF COMMUNICATIONS TECHNOLOGIES**

Consumer Technology Association (CTA)^{®1} respectfully submits these comments on the Biennial Report Public Notice in the above-captioned proceeding.² Continuing innovation within the consumer technology sector is meeting the objectives of the Twenty-First Century Communications and Video Accessibility Act of 2010 (CVAA) and enabling CTA’s members to comply with both the statute and the Federal Communications Commission’s (“FCC’s” or “Commission’s”) rules.³ The Commission’s regulatory approach should continue to provide the consumer technology industry with the flexibility necessary to improve accessibility features in consumer products and adapt them to evolving consumer demands.

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 *Consumer and Governmental Affairs Bureau Seeks Comment on the Accessibility of Communications Technologies for the 2024 Biennial Report Required by the Twenty-First Century Communications and Video Accessibility Act*, Public Notice, DA 24-206 (CGB rel. Mar. 7, 2024) (“Public Notice”).

³ *Id.* ¶ 2 (noting that the FCC will report on the level of compliance with the CVAA’s communications accessibility obligations).

I. INTRODUCTION AND SUMMARY

Today, nearly fourteen years after the CVAA became law, the consumer technology industry has answered and will continue to answer its call. Modern consumer technologies, which include devices, services and applications (apps), help tear down accessibility barriers for people with disabilities by providing opportunities to access the most sophisticated technologies. Such advances should lead the Commission to conclude that, consistent with the 2022 Report to Congress, “[p]ositive developments regarding the accessibility of telecommunications and advanced communications services and equipment have continued over the past two years,”⁴ and that “a variety of new and enhanced features have been made available that make more devices and features accessible to a wider community of people with disabilities.”⁵

CTA has worked with its members, the Commission and advocacy groups to make important progress toward a more accessible world made possible, in large part, by consumer technology. CEO Gary Shapiro recently reiterated that consumer technology “can serve as an important bridge, connecting people with the tools they need to leave meaningful, engaged and connected lives.”⁶ The “tech world [is rising] to the challenge, offering assistive technologies that will benefit millions of Americans.”⁷

CTA has seen firsthand that the Commission’s flexible rules governing communications accessibility are working. The consumer technology industry is continuing to deliver innovative

⁴ Implementation of Sections 716 and 717 of the Communications Act of 1934, as Enacted by the Twenty-First Century Communications and Video Accessibility Act of 2010, Biennial Report to Congress as Required by the Twenty-First Century Communications and Video Accessibility Act of 2010, 37 FCC Rcd 11360, 11376 ¶ 45 (CGB 2022).

⁵ *Id.* ¶ 9.

⁶ 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>.

⁷ *Id.*

technologies that are accessible to individuals with a disability, when achievable. As demonstrated below, the Commission should report to Congress that industry continues to introduce more accessibility features to increase the accessibility and usability of products and services subject to Sections 255, 716 and 718 of the Communications Act.

II. THE CONSUMER TECHNOLOGY INDUSTRY IS MEETING THE GOALS OF SECTIONS 255, 716 AND 718 OF THE COMMUNICATIONS ACT

Sections 255, 716 and 718 of the Communications Act, as amended, generally require certain communications technologies to be accessible to and usable by people with disabilities, if readily achievable or if achievable, respectively.⁸ Devices, services and apps that provide accessible communications to consumers are popular and widespread.⁹ Industry is innovating with accessibility in mind, and that means including people with disabilities in the designing and testing process, which results in products that comply with the Commission’s accessible communications rules. CTA continues to be a leader in advancing accessible communications technologies through its active collaboration with industry and consumer groups.

As the leading U.S. trade association of the consumer electronics and information technologies industries, CTA has been deeply involved in the implementation of U.S. laws and regulations governing the accessibility of communications technology and services to people with disabilities, including the FCC’s successful efforts to implement the CVAA. Further, CTA convenes opportunities for its members to meet with and learn from organizations that represent

⁸ See generally 47 U.S.C. §§ 255, 617, 619.

⁹ For example, smartphones are ubiquitous in American households, and 37% of households plan to purchase a new smartphone in the next 12 months. Press Release, CTA, CTA Study: Smartphones Most-Owned Tech, 5G and Wireless Drive Adoption (May 31, 2023), <https://www.cta.tech/Resources/Newsroom/Media-Releases/2023/May/Smartphones-Most-Owned-Tech>.

people with disabilities.¹⁰ CTA also participates in several committees, meetings and conferences throughout the year to directly engage with members of the accessibility community. For example, CTA has served on the Commission’s Consumer Advisory Committee since 2004 and the Disability Advisory Committee since 2014. The mission of CTA’s affiliated foundation, launched in 2012, is to link people with disabilities as well as seniors with technologies that will enhance their lives. CTA takes an active part in advancing that mission.

A. Voluntary, Industry-Led Consensus Standards Are Increasing the Accessibility and Usability of Products and Services

CTA has a substantial, ongoing program to develop consensus standards that have increased the accessibility of communications technologies and our physical world. CTA’s extensive Technology and Standards program, which holds American National Standards Institute accreditation, includes more than 70 committees, subcommittees and working groups with roughly 1,100 participants. Without the need to comply with slow-to-change prescriptive technical mandates, voluntary, industry-driven standards are used throughout the consumer technology ecosystem to enable efficient production and interoperability. Standards also provide the flexibility needed to account for new innovations.

Hearing aids provide an example of how these efforts can make a huge difference for Americans’ communications. Consumers with hearing loss clearly benefit when they can use hearing devices, which is a key reason CTA has been such a strong proponent of over the counter

¹⁰ For example, at CES 2024, CTA convened a Hearing Roundtable that 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 also 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. *See* Health Fitness & Wellness, CTA, <https://www.cta.tech/Resources/Standards/Members/Current-Projects/R11-Health-Fitness-Wellness> (last visited May 6, 2024).

(OTC) hearing aids and other regulatory changes that lower barriers and stigma to using hearing devices.¹¹ Importantly, OTC hearing aids are leveraging industry advancements with Bluetooth technology. CTA and its members have supported Bluetooth coupling for hearing aids, which is a technology-neutral marketplace success story that has made hearing aids more accessible for more Americans. The Commission has never mandated that handsets be capable of allowing individuals with hearing loss to couple their hearing devices with their handsets via Bluetooth. Yet today, Bluetooth is a top-three feature for consumers who use hearing devices.¹² Bluetooth is a mainstream and growing technology that holds significant promise for consumers with hearing loss precisely because manufacturers have invested significant resources to allow consumers to effectively couple their phones with hearing devices to better compete in the marketplace and provide a better experience for their customers.

CTA anticipates that Bluetooth will be particularly useful for the millions of individuals who are already familiar with Bluetooth technology and who may be more likely to embrace hearing devices when they can be paired just like their earbuds or car with their phone. OTC hearing aids are already incorporating Bluetooth connectivity,¹³ and the new non-proprietary Bluetooth Hearing Aid Profile (HAP) holds significant potential for the future.

¹¹ See, e.g., Press Release, CTA, FDA Approves Over-the-Counter Hearing Aids, Draws on CTA Standards, Lowers Costs and Increases Accessibility for Consumers (Aug. 16, 2022), <https://www.cta.tech/Resources/Newsroom/Media-Releases/2022/August/OTC-Announcement> (quoting CTA CEO 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”); *Over-the-Counter Hearing Aids*, CTA, <https://www.cta.tech/Resources/Standards/Over-the-Counter-Hearing-Aids> (last visited May 6, 2024).

¹² Hearing Aid Compatibility Task Force Final Report and Recommendation, WT Docket No. 15-285, at 49 (filed Dec. 16, 2022).

¹³ The HAC Task Force found that consumers are already using and satisfied with proprietary forms of Bluetooth, such as ASHA and MFi, as well as the non-proprietary “Bluetooth Classic.” MFi and ASHA are technologies based on Bluetooth designed for use with the Apple and Android operating systems, respectively. *Id.* at 13-14.

These advancements demonstrate how a well-known and easy-to-use technology, like Bluetooth, can evolve and has the potential to assist even more individuals who use services and equipment covered by Sections 255, 716 and 718 of the Communications Act.

B. CES® Is an Important Link Between Industry and Advocacy Groups, While Showcasing Increasingly Accessible Technology

CES provides a meaningful forum that facilitates conversations between industry and advocacy groups. The CTA Foundation hosts an annual Accessibility Roundtable at CES that brings together CTA member companies and representatives of consumer groups for direct conversations and relationship building. For many years, the CTA Foundation has sponsored a group of Accessibility Leaders to attend CES and meet and tour the show.¹⁴ These leaders provide valuable feedback not only to CES participants focused on assistive technology, but on technology shown throughout the show floor. Attendees at CES 2024 were also invited to participate in a series of incredible accessibility panels happening throughout the show, including panels on “Driving Innovation Through Inclusive Design,” “The Future of Inclusive Design” and “Embracing Neurodivergent Employees in the Tech Industry.”¹⁵ Over the years, dozens of community leaders have met hundreds of tech industry leaders and startups, and these interactions have helped lead to the many accessibility-focused solutions featured at CES.

Innovators are using technology to improve accessibility in ways that go beyond the CVAA or that further promote accessibility on devices covered by the CVAA. CES allows CTA to highlight these innovations in accessible technologies as they evolve each year. For example, this past January, GyroGlove displayed a hand-stabilizing glove that uses gyroscopic force to

¹⁴ Steve Ewell, *CTA Foundation News*, CTA (Feb. 20, 2024), <https://bit.ly/FoundationNews2024>; Steve Ewell, *CTA Foundation News*, CTA (Dec. 12, 2023), <https://bit.ly/FoundationNews2023> (“CTA Foundation News Dec. 2023”).

¹⁵ CTA Foundation News Dec. 2023.

help minimize hand tremors. And, with the new Transcribe Glass, a small heads-up display that can attach to any frames to transcribe what it hears, consumers will soon be able to project real-time conversation text onto the tiny transparent display hovering above their eyes to better facilitate face-to-face conversations.¹⁶

The CTA Foundation’s Eureka Park Accessibility contest also returned to CES 2024. This year, eight finalists brought a burst of innovation, unveiling cutting-edge technologies aimed at enhancing health and accessibility across all ages.¹⁷ Among the innovations on display were the world’s first autonomous guidance robot, AI and autonomous systems, and a haptic device that conveys hard-to-describe details—like ball and player position—through spatial vibration and generative audio.¹⁸

CTA’s members remain dedicated to collaborating with people with disabilities to ensure that their products and services meet the specific needs of different groups—this includes releasing new products, updating existing products to add accessibility features, and expanding access to accessible interfaces and information formats.¹⁹ Stakeholder collaboration and industry support for accessible technology exemplify how industry continues to integrate people with disabilities into the critical beginning stages of technology design and testing.

¹⁶See *the conversation*, TranscribeGlass, <https://www.transcribeglass.com/#/> (last visited May 6, 2024).

¹⁷ *CTA Foundation Pitch Competition*, CTA, <https://www.cta.tech/Who-We-Are/CTA-Foundation/Pitch-Competition> (last visited May 6, 2024).

¹⁸ Stephen Ewell, *An Amazing Accessible CES 2024*, LinkedIn, <https://www.linkedin.com/pulse/amazing-accessible-ces-2024-stephen-ewell-vwlge> (Jan. 17, 2024).

¹⁹ For example, in 2022 and 2023, Amazon released new features for Alexa that allowed customers to interact with Alexa using touch instead of voice, it also released the first set top box to stream directly to hearing aids. See, e.g., News Release, Amazon, *Alexa accessibility features extend to Fire tablets* (Sept. 21, 2022), <https://www.aboutamazon.com/news/devices/alexa-accessibility-features-extend-to-fire-tablets>; Amrita Khalid, *Amazon’s Fire TV Cube is the first set top box to stream directly to hearing aids*, Engadget (Apr. 28, 2022), <https://www.engadget.com/fire-tv-cube-will-support-audio-streaming-for-starkey-hearing-aids-195453510.html>.

III. RULES BASED ON PERFORMANCE OBJECTIVES HAVE ENCOURAGED WIDESPREAD DEVELOPMENT AND DEPLOYMENT OF ACCESSIBLE COMMUNICATIONS TECHNOLOGIES

CTA and its members continuously support access to communications solutions for individuals with disabilities. The FCC’s diligent and flexible approach to implementing the CVAA has encouraged the innovative environment that allows CTA’s members to produce more accessibility technologies. Congress enacted the CVAA to guide the development of communications accessibility solutions into the 21st Century. CTA proudly participated in shaping the CVAA, which reflects Congress’s carefully balanced approach of promoting accessibility and technological innovation.²⁰ Such a balance is necessary to avoid stifling the next generation of accessibility innovators. The FCC, industry and consumer groups have collaborated to implement the CVAA’s mandates, and that proactive engagement has allowed stakeholders to fulfill the CVAA’s promise.

Adhering to Congress’s direction to eschew technical mandates has produced better outcomes for both consumers with disabilities and industry. Manufacturers apply the CVAA’s performance objectives to ever-evolving types of advanced communications services and devices, such as real-time text, which ensures important conversations continue occurring on next-generation communications networks. To the extent there are accessibility gaps, industry and stakeholders are working collaboratively to identify challenges and opportunities—and then addressing those challenges.²¹

²⁰ In the CVAA, Congress explicitly prohibits the Commission from adopting technical standards, except for safe harbor purposes, while allowing for industry flexibility. Twenty-First Century Communications and Video Accessibility Act of 2010, Pub. L. No. 111-260, 124 Stat. 2751, 2755-57 (2010) (as codified in various sections of Title 47 of the United States Code).

²¹ See, e.g., FCC’s Disability Advisory Committee, Recommendations of the Federal Communications Commission Disability Advisory Committee on Telecommunications Relay Service Use on Video Conferencing Platforms (adopted Feb. 24, 2022), <https://www.fcc.gov/file/22912/download>; FCC

New advancements in artificial intelligence (AI), augmented reality (AR), extended reality (XR), and virtual reality (VR) demonstrate why a flexible approach to the CVAA is important. Innovations in these areas are having and are expected to continue to have a dramatic effect on accessibility for people with disabilities. These innovations may be able to leverage covered devices, like smartphones, to unlock new means of communicating and accessing the world. Likewise, AI-powered automated speech recognition is creating new methods of input, interactions, and communications for individuals with standard, atypical and dysarthric speech.²²

Immersive technologies offer an opportunity for Americans to experience the world in a different way. For example, AR-enhanced hearing aids or AR-enhanced glasses can amplify sounds for those with hearing loss, or correct color blindness.²³ Robots that utilize AI to interpret speech, gestures, and verbal and nonverbal cues can be used to help children with autism improve social skills.²⁴ And, Generative AI can be used to create digital accessibility solutions that enable speech-to-text or image-to-speech conversion.²⁵ AR is leading to more opportunities for participation in athletics, improve navigation, and increase accessibility of shopping

Disability Advisory Committee on Direct Video Calling (adopted Sep. 7, 2023), <https://www.fcc.gov/ecfs/document/109131639123320/2>.

²² Voiceitt, <https://www.voiceitt.com/> (last visited May 6, 2024) (“Voiceitt has developed patented automatic speech recognition (ASR) for people with speech disabilities, aging voices, and accents. Our technology combines state-of-the-art machine learning techniques and Voiceitt’s unique, proprietary database of atypical speech patterns. Along with a customized training experience for users, our API is a secure, scalable, production-ready system for a uniquely accessible, intuitive voice experience.”).

²³ Gergana Mileva, *7 Benefits of AR and VR for People With Disability*, ARPost (Feb. 9, 2022), <https://arpost.co/2022/02/09/7-benefits-ar-vr-for-people-with-disability/>.

²⁴ Alina Tugend, *How Robots Can Assist Students With Disabilities*, New York Times (Mar. 29, 2022), <https://www.nytimes.com/2022/03/29/technology/ai-robots-students-disabilities.html>.

²⁵ Yonah Welker, *Generative AI holds great potential for those with disabilities – but it needs policy to shape it*, World Economic Forum (Nov. 3, 2023), <https://www.weforum.org/agenda/2023/11/generative-ai-holds-potential-disabilities/>.

experiences.²⁶ And AI can also make the web more accessible by automating the process of maintaining accessible websites.²⁷ The Commission should recognize that although these developments are not covered by the CVAA, tech innovators need flexibility to design new accessibility solutions that may leverage covered communications devices and that such innovation further enhances the goals of the CVAA.

IV. CONCLUSION

The Commission should report to Congress that the consumer technology industry is providing accessible communications technology to the public, consistent with the goals of Sections 255, 716 and 718. Industry innovations will continue to ensure that individuals with disabilities can readily access and utilize the wide array of connected consumer technologies.

Respectfully submitted,

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²⁶ Sarah Roberts, *Why Augmented Reality May Become Indispensable in Education*, Verbit <https://verbit.ai/augmented-reality-could-this-tech-become-indispensable-for-education-and-accessibility/> (last visited May 6, 2024); Cam Waller, *How AR Can Help Support the Independence of Persons with Disabilities*, Accessibility.com (Mar. 16, 2022); <https://www.accessibility.com/blog/how-ar-can-help-support-the-independence-of-persons-with-disabilities>.

²⁷ Dekel Skoop, *With AI, Web Accessibility Has Never Been More Accessible*, Forbes (Mar. 26, 2024), <https://www.forbes.com/sites/forbestechcouncil/2024/03/26/with-ai-web-accessibility-has-never-been-more-accessible/?sh=73337e8b4110>.