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

BIENNIAL REPORT TO CONGRESS AS REQUIRED BY THE TWENTY-FIRST CENTURY COMMUNICATIONS AND VIDEO ACCESSIBILITY ACT OF 2010

Adopted: October 8, 2024 **Released: October 8, 2024**

By the Chief, Consumer and Governmental Affairs Bureau:

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I. INTRODUCTION AND SCOPE OF REPORT

1. We submit this Biennial Report (Report) to the Committee on Commerce, Science, and Transportation of the U.S. Senate and the Committee on Energy and Commerce of the U.S. House of Representatives, in accordance with the Twenty-First Century Communications and Video Accessibility

Act of 2010 (CVAA).[1] The Report assesses industry compliance over the past two years with sections 255, 716, and 718 of the Communications Act of 1934, as amended (the Act). These sections require telecommunications and advanced communications services and equipment, and Internet browsers built into mobile phones (collectively, covered products and services) to be accessible to and usable by individuals with disabilities.[2] The Report also addresses accessibility barriers to new communications technologies,[3] and the effect of the accessibility-related recordkeeping and enforcement requirements under section 717 on the development and deployment of such technologies.[4] Finally, the Report provides information about the number and nature of, and actions taken to resolve, complaints alleging violations of sections 255, 716, and 718 for the period of January 1, 2022, through December 31, 2023, including the length of time that the Federal Communications Commission (FCC or Commission) took to resolve such complaints, and the number, status, nature, and outcome of any actions for mandamus filed, and of any appeals filed, pertaining to such complaints.[5]

2. To prepare this Report's findings, the Commission's Consumer and Governmental Affairs Bureau (CGB or Bureau) released two public notices. On March 7, 2024, the Bureau issued a the *2024 CVAA Assessment Public Notice* inviting comment on the level of accessibility and usability of covered products and services, as well as the existence of accessibility barriers to new communications technologies since the release of the *2022 CVAA Biennial Report*.[6] The Bureau also sought comment on

[1] Pub. L. No. 111-260, 124 Stat. 2751 (2010) (as codified in various sections of 47 U.S.C.); Pub. L. No. 111-265, 124 Stat. 2795 (2010) (making technical corrections to the CVAA); *see also* 47 U.S.C. § 618(b).

[2] 47 U.S.C. § 618(b)(1)(A); *see also* 47 U.S.C. §§ 255, 617, 619; 47 CFR pts. 6, 7, 14.

[3] 47 U.S.C. § 618(b)(1)(B). For purposes of this Report, "new communications technologies" may be either within or outside the scope of telecommunications, advanced communication services, or Internet browser technologies covered under sections 255, 716, and 718 of the Act. *See, e.g.*, *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, 31 FCC Rcd 11065, 11084, para. 44 & n.165 (CGB 2016) (*2016 CVAA Biennial Report*). As technology evolves, Congress may wish to consider whether updates to the CVAA are needed to keep pace with these new methods of communication.

[4] 47 U.S.C. § 618(b)(1)(G). Section 717(a) requires covered entities to keep records of their efforts to implement sections 255, 716, and 718, including information about their efforts to consult with people with disabilities, descriptions of the accessibility features of their products and services, and information about the compatibility of these products and services with peripheral devices or specialized customer premises equipment commonly used by people with disabilities to achieve access. 47 U.S.C. § 618(a)(5)(A). Under the Commission's rules, covered entities must certify annually to the Commission that they have kept records in accordance with this requirement. *See* 47 U.S.C. § 618(a)(5)(B); 47 CFR § 14.31. The FCC reminds covered entities each year of these certification requirements. *See Accessibility Recordkeeping Compliance Certification and Contact Information Reporting Requirements*, Public Notice, DA 24-177 (CGB Feb. 26, 2024). Section 717(a) also contains procedures for complaints alleging violations of sections 255, 716, or 718. 47 U.S.C. § 618(a)(1)-(4); 47 CFR §§ 14.30-14.38. In response to an informal complaint, the manufacturer or service provider "must produce documents demonstrating its due diligence in exploring accessibility and achievability . . . throughout the design, development, testing, and deployment stages of a product or service." 47 CFR § 14.36(a).

[5] 47 U.S.C. § 618(b)(1)(C)-(F).

[6] *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*, CG Docket No. 10-213, Public Notice, DA 24-206 (CGB Mar. 7, 2024) (*2024 CVAA Assessment Public Notice*); *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 (2022) (*2022 CVAA Biennial Report*).

any impact that the accessibility recordkeeping requirements and enforcement measures may have had on the development and deployment of new communications technologies.[7] Comments were received from the Consumer Technology Association (CTA), CTIA, and the Accessibility Advocacy Organizations (AAO).[8] On July 16, 2024, the Bureau released the *2024 CVAA Tentative Findings Public Notice*.[9] AAO, CTIA, and the Wisconsin Department of Health Services, Office for the Promotion of Independent Living (Wisconsin OPIL) filed comments in response to this second notice.[10]

3. The Commission's Biennial Reports to Congress issued since enactment of the CVAA have marked the progress of access to advanced communications services and equipment, telecommunications services and equipment, and internet browsers built into mobile phones.[11] In this Biennial Report, we find that this progress has continued over the last two years. Companies launched new products with accessibility features built-in and introduced new accessibility interfaces. However, consumers identified products and services that were not accessible during this time period. In particular, commenters described concerns regarding access to emergency services for individuals who are deaf, deafblind, hard of hearing, or have speech disabilities, as well as current limitations surrounding the use of automatic speech recognition (ASR) technology by individuals with speech disabilities.

II. PROVISIONS OF THE CVAA COVERED BY THIS REPORT

4. The purpose of the CVAA is "to help ensure that individuals with disabilities are able to fully utilize communications services and equipment and better access video programming."[12] To that

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[7] *See 2024 CVAA Assessment Public Notice* at 5, para. 14.

[8] Comments by AAO were filed on behalf of TDIforAccess, Inc., Communication Service for the Deaf, National Association of the Deaf, Hearing Loss Association of America, and the Registry of Interpreters for the Deaf, Inc.

[9] *Consumer and Governmental Affairs Bureau Seeks Comment on Tentative Findings for the 2024 Twenty-First Century Communications and Video Accessibility Act Biennial Report*, CG Docket No. 10-213, Public Notice, DA 24-691 (CGB July 16, 2024) (*2024 CVAA Tentative Findings Public Notice*); *see also* 47 U.S.C. § 618(b)(2) (requiring the Commission to seek public comment on its tentative findings prior to submission of each biennial report to Congress).

[10] For clarity, we cite to comments submitted in response to this second Public Notice as "Tentative Findings Comments." Additionally, USTelecom – The Broadband Association (USTelecom) submitted an *ex parte* letter during the comment period. *See* Letter from Kathleen Slattery Thompson, Vice President, Policy & Advocacy, USTelecom – The Broadband Association, to Marlene Dortch, Secretary, FCC, CG Docket No. 10-213 (filed Aug. 30, 2024) (USTelecom Letter).

[11] *See, e.g.*, *2022 CVAA Biennial Report*; *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, 35 FCC Rcd 11227 (2020) (*2020 CVAA Biennial Report*); *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,* 33 FCC Rcd 9828, (CGB 2018) *(2018 CVAA Biennial Report); 2016 CVAA Biennial Report,* 31 FCC Rcd at 11084, para. 44 & n.165; *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, 29 FCC Rcd 11909, 11911-12, para. 3 (CGB 2014) (*2014 CVAA Biennial Report*); *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*, 27 FCC Rcd 12204, 12220-22, paras. 43, 45 (CGB 2012) (*2012 CVAA Biennial Report*).

[12] Senate Report at 1; House Report at 19 (both noting that the communications marketplace had undergone a "fundamental transformation" since Congress adopted section 255 in 1996 and that, in the past, people with

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end, the CVAA requires that the Commission report on industry compliance with the following accessibility-related provisions of the Act.[13]

5. *Section 255*. Section 255 requires providers of telecommunications services and manufacturers of telecommunications equipment or customer premises equipment (CPE) to ensure that their services and equipment are accessible to and usable by individuals with disabilities, if readily achievable.[14] When these requirements are not readily achievable, covered entities must ensure that their services and equipment are compatible with existing peripheral devices or specialized CPE commonly used by individuals with disabilities to achieve access, if readily achievable.[15] Pursuant to the Commission's rules, section 255's accessibility obligations extend as well to interconnected Voice over Internet Protocol (VoIP) service providers and equipment manufacturers.[16]

6. *Section 716*. Section 716 requires providers of advanced communications services (ACS) and manufacturers of equipment used for ACS to ensure that their services and equipment are accessible to and usable by individuals with disabilities, unless doing so is not achievable (defined as "with reasonable effort or expense").[17] "Advanced communications services" include: (1) interconnected VoIP service; (2) non-interconnected VoIP service; (3) electronic messaging service; and (4) interoperable video conferencing service.[18] In contrast to interconnected VoIP services, which enable people to make

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disabilities often did not share in the benefits of this rapid technological advancement).

[13] *See* 47 U.S.C. § 618(b)(1). *See also infra* Sections III-VI. Comments addressed to compliance with accessibility provisions that fall outside these specific CVAA provisions are not addressed in this Report.

[14] 47 U.S.C. § 255(b), (c); *Implementation of Sections 255 and 251(a)(2) of the Communications Act of 1934, as Enacted by the Telecommunications Act of 1996: Access to Telecommunications Service, Telecommunications Equipment and Customer Premises Equipment by Persons with Disabilities*, Report and Order and Further Notice of Inquiry, 16 FCC Rcd 6417, 6449, para. 77 (1999) (*Section 255 Order*). "Readily achievable" is defined as "easily accomplishable and able to be carried out without much difficulty or expense." 42 U.S.C. § 12181(9). The Act defines telecommunications equipment as "equipment, other than customer premises equipment, used by a carrier to provide telecommunications services, and includes software integral to such equipment (including upgrades)." 47 U.S.C. § 153(52). It defines "customer premises equipment" as "equipment employed on the premises of a person (other than a carrier) to originate, route or terminate telecommunications." 47 U.S.C. § 153(16). Equipment covered under section 255 includes, but is not limited to, telecommunications equipment and CPE, such as wireline, cordless, and wireless telephones, fax machines, and answering machines. The *Section 255 Order* adopted rules requiring that phone features such as telephone calls, call waiting, speed dialing, call forwarding, computer-provided directory assistance, call monitoring, caller identification, call tracing, and repeat dialing be accessible. *Section 255 Order*, 16 FCC Rcd at 6449 para. 77; 47 CFR Part 6. In addition, the rules implementing section 255 cover voicemail and interactive voice response systems (phone systems that provide callers with menus of choices). 47 CFR Part 7.

[15] 47 U.S.C. § 255(d).

[16] *See Implementation of Sections 255 and 251(a)(2) of the Communications Act of 1934, as Enacted by the Telecommunications Act of 1996: Access to Telecommunications Service, Telecommunications Equipment and Customer Premises Equipment by Persons with Disabilities; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order, 22 FCC Rcd 11275 (2007).

[17] 47 U.S.C. § 617(a)(1), (b)(1), (g); 47 CFR §§ 14.20(a)(1)-(2), 14.10(b).

[18] 47 U.S.C. § 153(1); *see also* 47 CFR § 14.10(c). Section 716 does not apply to services or equipment, including interconnected VoIP services and equipment, that were subject to section 255 on October 7, 2010. 47 U.S.C. § 617(f). Those services and equipment remain subject to the requirements of section 255. *Id.* In 2022, Congress amended the statutory definition of "advanced communications services" to encompass incarcerated people's communications services (IPCS), i.e., audio and video communications services that are provided to people who are incarcerated. *See* Martha Wright-Reed Just and Reasonable Communications Act of 2022, Pub. L. No. 117-338, 136 Stat. 6156; 47 U.S.C. §§ 152(b), 153(1)(E), 276(b)(1)(A), (d). The Commission recently aligned the Part 14
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and receive calls to and from the public switched telephone network (PSTN), non-interconnected VoIP includes services that enable real-time voice communications either to or from the PSTN (but not both) or which neither begin nor end on the PSTN.[19] Electronic messaging services include services such as e-mail, short message service (SMS) text messaging, and instant messaging, which enable real-time or near real-time text messages between individuals over communications networks.[20] Interoperable video conferencing services provide real-time video communications, including audio, to enable users to share information.[21]

7. The accessibility requirements for section 716 may be satisfied by: (1) building accessibility into the service or equipment[22] or (2) using third-party applications, peripheral devices, software, hardware, or CPE that is available to consumers at nominal cost and that individuals with disabilities can access.[23] When ensuring accessibility through either of those options is not achievable, covered entities must ensure that their services and equipment are compatible with existing peripheral devices or specialized CPE commonly used by individuals with disabilities to achieve access, unless that is not achievable.[24]

8. *Section 718*. Section 718 requires mobile phone service providers and manufacturers to make Internet browsers built into mobile phones accessible to and usable by people who are blind or have a visual impairment, unless doing so is not achievable.[25] This requirement may be satisfied with or without the use of third-party applications, peripheral devices, software, hardware, or CPE that is available to consumers at nominal cost and that individuals with disabilities can access.[26]

III. COMPLIANCE WITH SECTIONS 255, 716, AND 718

A. Accessibility

9. Based on the comments filed in response to the *2024 CVAA Assessment Public Notice* and the *2024 CVAA Tentative Findings Public Notice*, a review of the complaints filed, and as described further herein, we affirm our tentative findings with respect to compliance with obligations contained in sections 255, 716, and 718. During the two years since the Commission's last Biennial Report, we find that accessibility of telecommunications and advanced communications services and equipment continues to improve;[27] however, some accessibility gaps remain.[28] The Commission remains committed to

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definition of "advanced communications services" with the amended statutory definition, although this rule change is not yet effective. *See Incarcerated People's Communications Services; Implementation of the Martha Wright-Reed Act; Rates for Interstate Inmate Calling Services*, WC Docket Nos. 23-62 and 12-375, Report and Order, Order on Reconsideration, Clarification and Waiver, and Further Notice of Proposed Rulemaking, FCC 24-75, at 253-54, para. 483 (July 22, 2024).

[19] *See* 47 U.S.C. § 153(25), 153(36); 47 CFR § 9.3.

[20] 47 U.S.C. § 153(19).

[21] 47 U.S.C. § 153(27).

[22] 47 U.S.C. § 617(a)(2)(A), (b)(2)(A).

[23] 47 U.S.C. § 617(a)(2)(B), (b)(2)(B).

[24] 47 U.S.C. § 617(c).

[25] 47 U.S.C. § 619(a); 47 CFR § 14.61(a).

[26] 47 U.S.C. § 619(b); 47 CFR § 14.61(b).

[27] CTA states, for instance, that "[m]odern 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." CTA Comments at 2. *See also* CTIA Tentative Findings Comments at 2-3.

ensuring that relevant technologies are accessible to and useable by people with disabilities, and that people with disabilities are "able to fully utilize communications services and equipment and better access video programming."[29]

10. The comments show that, in the last two years, a wide 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.[30] CTIA describes "an ever-expanding suite of customizable accessibility features and apps that support a wide range of accessibility needs" for smartphone users.[31] For example, with AssistiveTouch on iOS, those with vision or mobility disabilities can use a joystick or other accessory to interact with the phone, and Android users can use Switch Access to interact with the device using a separate screen, camera, microphone, or the back of the device, instead of using the smartphone's built-in touchscreen.[32]

11. For people with hearing disabilities, technology continues to evolve, enhancing the accessibility of modern communications. For instance, CTIA comments that Live Captions on iOS provides system-level, automatic captioning of speech during phone calls, video calls, and other speech detected on a smartphone.[33] CTA also highlights that over-the-counter hearing aids, often incorporating Bluetooth connectivity, and other regulatory changes have lowered barriers and stigma to using hearing devices, and a new, non-proprietary Bluetooth standard, Bluetooth Hearing Access Profile, developed specifically for use with hearing aids "holds significant potential for the future."[34]

12. Beyond the smartphone, CTIA reports that feature phones today "offer a wide range of accessibility features to support people who benefit from more streamlined functionality or prefer on-phone tactile inputs."[35] For example, CTIA explains, feature phones may offer bigger buttons and displays, as well as hearing aid compatibility, and streamlined access to key settings and features.[36] Similarly, new features like Assistive Access on iOS or Samsung's Easy Mode allow smartphone users

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[28] AAO explains that, "[s]ince Congress enacted the CVAA, accessibility requirements for people with disabilities have not kept pace with changing technologies. As a result, these individuals do not have full access to many communication and video tools that are essential today. . . The COVID-19 pandemic exacerbated these accessibility gaps for individuals with disabilities, as online platforms and services became increasingly essential." AAO Comments at 1-2. *See also* AAO Tentative Findings Comments at 2 ("The Accessibility Advocacy Organizations agree that some accessibility gaps remain.").

[29] *See* S. Rep. No. 111-386, 111th Cong., at 1 (2010) (the Senate Committee on Commerce, Science, and Transportation Report on the CVAA).

[30] *See* CTIA Tentative Findings Comments at 2.

[31] CTIA Comments at 11.

[32] *See* CTIA Comments at 11.

[33] *See* CTIA Comments at 13. *See also 2022 CVAA Biennial Report*, 37 FCC Rcd at 11366, para. 13 (discussing Android's Live Caption feature, which similarly adds automatic captions to phone calls, video calls, and other speech detected on a smartphone).

[34] CTA Comments at 4-5.

[35] CTIA Comments at 17. "Feature phones are used with wireless services and include (1) phones used primarily or exclusively for voice communications and (2) phones used for voice communications and text messaging, with little or no computing capabilities." *See 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, 35 FCC Rcd 11227, 11234 para. 16 (2020) (*2020 CVAA Biennial Report*). *See also 2022 CVAA Biennial Report*, 37 FCC Rcd at 11365-66 n.41.

[36] *See* CTIA Comments at 17.

with cognitive disabilities to streamline and simplify their phone experience.[37]

13. AAO raises concerns about access to emergency services for individuals who are deaf, deafblind, hard of hearing, or have speech disabilities.[38] Specifically, AAO notes that traditional text telephones (TTYs) do not work reliably with Internet Protocol (IP)-based telephony, potentially hindering access to 911 during critical situations.[39] It proposes that the Commission should ensure that legacy TTY users are "educated about and have access to alternative communications solutions,"[40] and should "plan proactively . . . to replace TTYs on wireline networks with RTT – as well as to explore other IP- and digital-based solutions for these users."[41] USTelecom, however, asserts that "TTY works reliably over Internet Protocol-based (VoIP) systems."[42] While acknowledging "limitations inherent in TTY," USTelecom further emphasizes that TTY is compatible with both IP-based and traditional legacy networks, whereas Real-Time Text (RTT) technology requires that the entire call path flow through IP infrastructure, which may not be possible for many consumers "even if providers have fully upgraded their networks."[43]

14. Relatedly, the consumer advocates contend that "more wireless handsets should be equipped with GPS technology and native dialing interfaces for emergency calling" by individuals with disabilities.[44] By automatically transmitting a 911 caller's location to emergency responders, AAO states that native dialing not only enables access to emergency services for callers who may be unable to verbally communicate their location but "can also save precious time in an emergency instead of having to open a VRS app and dial 911 from there."[45]

15. Consumer advocates also highlight the importance of "one number solutions," particularly for individuals who are deaf, deafblind, hard of hearing, or have speech disabilities.[46] Many of those individuals, advocates explain, use multiple phone numbers, i.e., one number issued to a TRS user for TRS phone calls and another number for text messages. However, using multiple phone numbers often complicates daily tasks like confirming appointments or deliveries, or filling out forms. Thus, the consumer advocates argue, a one number solution is necessary to achieve communications equity. AAO alleges that multiple solutions are being developed using smartphones and specialized apps to provide one number functionality, and urges the Commission to support the development and implementation of these

[37] *See* CTIA Comments at 17-18.

[38] *See* AAO Comments at 3-5; AAO Tentative Findings Comments at 2-5.

[39] The Wisconsin OPIL agrees with AAO regarding TTY's reliability over IP-based networks. *See* Wisconsin OPIL Tentative Findings Comments at 1.

[40] AAO Comments at 3-4.

[41] AAO Comments at 4. The Commission has not set a sunset date for RTT-TTY backward compatibility purposes, and whether to mandate RTT on wireline networks. *See Transition from TTY to Real-Time Text Technology; Petition for Rulemaking to Update the Commission's Rules for Access to Support the Transition from TTY to Real-Time Text Technology, and Petition for Waiver of Rules Requiring Support of TTY Technology*, CG Docket No. 16-145 and GN Docket No. 15-178, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 13568 (2016). *See also* Wisconsin OPIL Tentative Findings Comments at 1.

[42] USTelecom Letter at 1.

[43] USTelecom Letter at 2.

[44] AAO Comments at 5.

[45] AAO Comments at 5.

[46] *See* AAO Comments at 6.

one number solutions.[47]

B. Usability

16. Sections 255, 716 and 718 also require that covered services and equipment are "usable" by people with disabilities.[48] A product or service is "usable" if companies provide people with disabilities with information on how to use services, such as documentation for the product or service, including instructions, product or service information (including accessible feature information), customer support, and technical support.[49] We find that, while usability continues to improve for some covered services and equipment, there is still room for improvement. Consumer advocates in particular argue that "[m]ore efforts should be taken to improve usability through captioned instructional videos, accessible online manuals, and customer service / accessibility help desks, including plain and simple language and iconography that will make these instructions easier for people with cognitive disabilities."[50]

17. CTIA asserts that wireless carriers and equipment manufacturers "have taken steps to promote the accessibility of information and documentation, including in user guides, bills, installation guides, and product support communications, as well as through training for customer service representatives and technical support personnel."[51] For example, CTIA explains, multiple wireless carriers offer support materials in braille or large print format, and one carrier provides customer service using video conferencing with American Sign Language support.[52] Another carrier is developing a setup tool designed to address common issues for people with disabilities; by presenting instructions and information audibly, with braille, and online via a QR code, users with disabilities may find it easier to activate their devices without assistance.[53] CTIA also notes that Apple's SignTime video service provides users access to a sign language interpreter when contacting Apple's support representatives, and other equipment manufacturers provide text and video guides explaining how to set up smartphones.[54]

18. Regarding web browsers built into mobile phones, CTIA notes continued accessibility improvements. Contributors from Apple, Mozilla, Igalia, Bocoup, Adobe, Hilton, Microsoft, Google, and individual web developers are collaborating on an interoperable accessibility testing project, Interop, in

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[47] *See* AAO Comments at 6.

[48] 47 U.S.C. §§ 255, 617, 619.

[49] *See* 47 CFR §§ 6.3(l), 7.3(l), 14.21(c); *see also* 47 CFR §§ 6.11, 7.11, 14.20(d), 14.60(b)(4).

[50] AAO Comments at 7. The Wisconsin OPIL similarly notes that "usability remain[s] inconsistent." Wisconsin OPIL Tentative Findings Comments at 1. *See also* AAO Tentative Findings Comments at 5.

[51] CTIA Comments at 27. *See* CTIA Tentative Findings Comments at 3.

[52] *See* CTIA Comments at 27 (citing AT&T, *Support options for people with disabilities*, https://www.att.com/support/article/wireless/KM1207497/ (last visited June 5, 2024); Verizon, *Visual Assistance*, https://www.verizon.com/about/accessibility/vision (last visited June 5, 2024); T-Mobile, *Accessible Wireless*, https://www.tmobileaccess.com/wireless (last visited June 5, 2024)). CTIA also reiterates that people with disabilities may learn about their wireless options from the Global Accessibility Reporting Initiative (GARI) database that CTIA maintains on its website – AccessWireless.org. *See* CTIA Comments at 22-23. However, as the Bureau noted in the *2022 CVAA Biennial Report*, consumer advocates have noted shortcomings with the GARI database. *See 2022 CVAA Biennial Report*, 37 FCC Rcd at 11368, para. 19 ("ACB contends . . . that the GARI tool does not identify which phones provide ACS in an accessible manner, and that some information is not updated comprehensively, like the list of smartwatches. ACB also states that some companies may not be reachable because they have not registered their contact information in the FCC's Recordkeeping Compliance Certification and Contact Information Registry (RCCCI).").

[53] *See* CTIA Comments at 14.

[54] *See* CTIA Comments at 27-28 (citing Apple, *How to contact Apple in American Sign Language (ASL) using SignTime*, https://support.apple.com/en-us/101572 (last visited June 5, 2024)).

all major browsers.[55] In 2023, Interop collaborators wrote over 1,300 new accessibility tests, and in 2024, the project aims to fix every issue uncovered by those tests in web browsers.[56]

C. Inclusion of People with Disabilities in Product and Service Design and Development

19. We find that covered entities have continued to include people with disabilities in product and service design and development, although there remains room for improvement. CTA and CTIA explain that industry has engaged consumers in product development and testing,[57] advisory groups,[58] conferences,[59] and product demonstrations.[60] However, AAO contends that including people with disabilities in product and service design and development processes "to an even greater extent is necessary and would further advance the delivery of equitable communications,"[61] and the Wisconsin OPIL likewise "strongly recommends . . . urg[ing] manufacturers and service providers to invest heavily in more inclusive design and user testing processes that involve people with disabilities at every stage of product development."[62]

IV. ACCESSIBILITY BARRIERS TO NEW COMMUNICATIONS TECHNOLOGIES

20. We find that accessibility barriers persist with respect to new communications technologies, although the Commission and other groups are actively working towards addressing those barriers. We discuss the extent of accessibility barriers to several of these technologies in turn.

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[55] *See* CTIA Comments at 28 (citing James Craig, *Accessibility Testing for WPT Interop 2024*, https://github.com/web-platform-tests/interop-accessibility (last visited June 5, 2024)).

[56] *See* Jen Simmons, *The web just gets better with Interop 2024*, https://webkit.org/blog/14955/the-web-just-gets-better-with-interop/ (Feb. 1, 2024) ("By including these new Accessibility tests in Interop 2024, the hope is to fix every issue in all browsers. We want it to be easier for developers to create accessible sites and make the web better for everyone, including people with disabilities.").

[57] *See* CTIA Comments at 25-26 (stating that "the wireless industry continues to collaborate with people with disabilities in furtherance of accessibility best practices and accessibility by design principles" and that "[m]anufacturers likewise remain committed to accessibility by design").

[58] CTIA, CTA, and their members participate in the FCC's Disability Advisory Committee (DAC) and Consumer Advisory Committee (CAC). *See* CTA Comments at 4; CTIA Comments at 23. CTIA states that its members maintain direct contact with the accessibility community through their design and development activities. CTIA Comments at 23-24. CTIA also notes that it and its members participated in the Hearing Aid Compatibility Task Force (HAC Task Force), which issued recommendations for achieving 100% hearing aid compatibility for wireless handsets in 2022. *See* CTIA Comments at 29 (citing Hearing Aid Compatibility Task Force Final Report and Recommendation, WT Docket No. 15-285 (filed Dec. 16, 2022), https://www.fcc.gov/ecfs/document/1216940802129/1).

[59] *See* CTA Comments at 6 (explaining that CTA's affiliated foundation sponsors a group of "Accessibility Leaders" to attend its annual CES trade show and "provide valuable feedback not only to CES participants focused on assistive technology, but on technology shown throughout the show floor"); CTIA Comments at 23 (describing CTIA's Accessibility Outreach Initiative Forum, which facilitates discussion among industry representatives, policymakers, and members of the accessibility community); CTIA Tentative Findings Comments at 4 (echoing CTIA's previous comments regarding engagement with the accessibility community).

[60] *See* CTA Comments at 6-7 (discussing how the CES trade show provides an opportunity for highlighting innovations in accessible technologies); CTIA Comments at 23 (noting that CTIA's Accessibility Outreach Initiative Forum includes a showcase of accessible innovations).

[61] AAO Tentative Findings Comments at 6.

[62] Wisconsin OPIL Tentative Findings Comments ta 1.

21. Interoperable video conferencing services (IVCS) have become a vital form of communications, particularly since the beginning of the COVID-19 pandemic.[63] The Commission thus affirmed in the *2023 IVCS Order* that IVCS are advanced communications services and, as of September 3, 2024, are covered by the FCC's Part 14 rules.[64] Although the accessibility of those services is the subject of an ongoing rulemaking proceeding,[65] parties responding to the *2024 CVAA Assessment Public Notice* also discuss the accessibility of IVCS in their comments. CTIA, for instance, states that multiple services and platforms have introduced additional accessibility features, like live captioning, translation, and transcription capabilities, and settings improving the visibility of sign language users in a video conference call.[66]

22. Still, consumer advocates depict an inconsistent landscape of accessibility functionality, presenting "major obstacles to full access to video conferencing platforms" over the past two years.[67] The advocates report that the quality of captioning varies among services relying on ASR technology; such captioning may be incomplete or delayed and may suffer from readability issues.[68] Moreover, the advocates say, some IVCS platforms lack "essential accessibility features"—for example, pinning or spotlighting capabilities, customizable screen layouts, automated captions and transcripts, visual descriptive services and intuitive interfaces for low-vision or blind users, accessible voice controls, and easy-to-use interfaces for users with cognitive disabilities.[69] On September 26, 2024, the Commission established IVCS-specific performance objectives specifically addressing some of these concerns and sought comment on establishing further objectives addressing others.[70]

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[63] *See 2022 CVAA Biennial Report*, 37 FCC Rcd at 11369, para. 21 ("The COVID-19 pandemic has highlighted the importance of accessible video conferencing services for people with disabilities."); *Access to Video Conferencing; 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*, CG Docket No. 23-161, Report and Order, Notice of Proposed Rulemaking, and Order, 38 FCC Rcd 6300, 6303, para. 6 (2023) (*2023 IVCS Order* or *Notice*, as appropriate) ("Since the March 2020 outbreak of the COVID-19 pandemic in the United States, video conferencing has grown from a niche product to a central pillar of our communications infrastructure.").

[64] *See 2023 IVCS Order*, 38 FCC Rcd at 6317-18 , para. 41 (requiring compliance with Part 14 one year from the effective date of the *IVCS Order*). *See also Consumer and Governmental Affairs Bureau Announces Compliance and Comment Dates for the Interoperable Video Conferencing Services Proceeding*, CG Docket Nos. 03-123, 10-213, and 23-161, Public Notice, 38 FCC Rcd 6778, 6778 (CGB 2023).

[65] *See generally 2023 IVCS Notice*.

[66] *See* CTIA Comments at 20-21 (citing Deb Landau, *Amazon's 8 most helpful accessibility features, including Reading Ruler and Dialogue Boost on Prime Video*, https://www.aboutamazon.com/news/devices/amazon-accessibility-features (last visited June 5, 2024); Qualcomm, Building Togetherness: Enabling Connections with AI Language Translation (Sep. 20, 2023), https://www.qualcomm.com/snapdragon/news/building-togetherness--enabling-connections-with-ai-language-tra; Amit Barave, *Breaking Down Barriers: Improving Accessibility for Virtual Meetings* (May 16, 2023), https://blog.webex.com/customer-stories/improving-accessibility-for-virtual-meetings/; Chris Sano, *Introducing Sign Language View for Teams Meetings* (Nov. 17, 2022), https://techcommunity.microsoft.com/t5/microsoft-teams-blog/introducing-sign-language-view-for-teams-meetings/ba-p/3671257; Apple, *How to contact Apple in American Sign Language (ASL) using SignTime*, https://support.apple.com/en-us/101572 (last visited June 5, 2024)).

[67] *See* AAO Comments at 5.

[68] *See* AAO Comments at 5.

[69] *See* AAO Comments at 5-6.

[70] *See Access to Video Conferencing Services et al.*, CG Docket No. 23-161 et al., Second Report and Order and Further Notice of Proposed Rulemaking, FCC 24-95 (rel. Sept. 27, 2024).

23. There may also be accessibility barriers with respect to ASR technology more generally. Intuitively, voice-activated user interfaces may improve devices' accessibility, but consumer advocates note that developers often train the ASR for those interfaces with a dataset that does not include audio from many users with speech disabilities.[71] CTA, on the other hand, emphasizes that artificial intelligence-powered ASR technology "is creating new methods of input, interactions, and communications for individuals with standard, atypical, and dysarthric speech."[72] These differing perspectives reflect that artificial intelligence-based technologies "can increase accessibility, but . . . can also create barriers for people with disabilities."[73]

V. COMPLAINTS RECEIVED PURSUANT TO SECTION 717

24. Under Section 717, a person may file a formal or informal complaint alleging a violation of section 255, 716, or 718.[74] Before a consumer may file an informal complaint, the consumer must first submit a request for dispute assistance (RDA) to the Commission's Disability Rights Office (DRO) for help in resolving the accessibility problem between the consumer and the covered entity.[75] If the consumer and the covered entity do not reach a settlement within 30 days after an RDA is filed, the parties may agree to extend the time for resolution in 30-day increments, or the consumer may then, pursuant to Section 717, file an informal complaint with the Enforcement Bureau.[76]

25. The Commission must forward the informal complaint to the named service provider or equipment manufacturer.[77] The service provider or manufacturer then must serve an answer responsive to

[71] *See* AAO Comments at 9; AAO Tentative Findings Comments at 6-7; Wisconsin OPIL Tentative Findings Comments at 1 (noting the importance of training ASR with a "diverse dataset that include[s] audio from users with various speech capabilities" and for mitigating delays in ASR-based captioning).

[72] *See* CTA Comments at 9. CTA cites Voiceitt as having developed a patented ASR technology that is targeted "for people with speech disabilities, aging voices, and accents." CTA Comments at 9 n.22 (citing Voiceitt, https://www.voiceitt.com/ (last visited June 5, 2024)).

[73] U.S. Access Board, *U.S. Access Board Holds Signing of Artificial Intelligence Memorandum of Understanding with Disability and Technology Partners*, https://www.access-board.gov/news/2024/05/15/u-s-access-board-holds-signing-of-artificial-intelligence-memorandum-of-understanding-with-disability-and-technology-partners/ (May 15, 2024) (U.S. Access Board MOU Press Release). *See also* Exec. Order No. 14110, 88 Fed. Reg. 75191, 75191, Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence (Oct. 30, 2023) ("[I]rresponsible use could exacerbate societal harms such as fraud, discrimination, bias, and disinformation; displace and disempower workers; stifle competition; and pose risks to national security. Harnessing AI for good and realizing its myriad benefits requires mitigating its substantial risks.").

[74] 47 USC § 618(a)(3)(A) ("Any person alleging a violation of section 255, 617, or 619 of this title by a manufacturer of equipment or provider of service subject to such sections may file a formal or informal complaint with the Commission."); *see also* 47 USC § 618(a)(3)(B) (requiring the Commission to investigate informal complaints and determine if a violation occurred).

[75] *See* 47 CFR §§ 14.32 (consumer dispute assistance), 14.34-14.37 (informal complaints), 14.38-14.52 (formal complaints); *see also New Procedures for Telecommunications and Advanced Communications Accessibility Complaints*, Public Notice, 28 FCC Rcd 15712 (CGB 2013). A consumer also may file a formal complaint with the Enforcement Bureau without first submitting an RDA or an informal complaint. 47 CFR §§ 14.38-14.52.

[76] 47 CFR § 14.32(e); *see also 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; Amendments to the Commission's Rules Implementing Sections 255 and 251(a)(2) of the Communications Act of 1934, as Enacted by the Telecommunications Act of 1996; and In the Matter of Accessible Mobile Phone Options for People who are Blind, Deaf-Blind, or Have Low Vision*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 14557, 14658, para. 237 (2011).

[77] 47 CFR § 14.35(a).

the complaint and any Commission inquiries and serve the complainant and the Commission with a non-confidential summary of that answer within 20 days of service of the complaint.[78] Within 180 days after receipt of the complaint, the Commission must conclude an investigation into the merits of the complaint and issue an order determining whether a violation has occurred.[79] It may, in such order, or in a subsequent order, direct the service provider to bring the service or, in the case of a manufacturer, the next generation of the equipment, into compliance with the requirements of section 255, 716, or 718 within a reasonable period of time and take other authorized and appropriate enforcement action.[80]

A. Number and Nature of Complaints Received

26. From January 1, 2022, to December 31, 2023, consumers filed 44 RDAs alleging violations of section 255, 716, or 718.[81] During this two-year period, DRO resolved 43 RDAs through facilitated dialogue and negotiation. One consumer exercised their right to file an informal complaint because the RDA was not resolved.

B. Discussion of RDAs

27. In their RDAs, some consumers stated that their devices and services were inaccessible. Other consumers claimed accessibility barriers to reaching customer service or that customer service was unable to help them locate accessible devices or to fix accessibility problems. These RDAs were brought by people with a wide range of disabilities. Some RDAs helped individuals with specific accessibility problems. Others required significant effort to resolve the dispute. These RDAs required companies to update communication software used by a variety of health care organizations, create new accessibility features, create new device interfaces, alter equipment, find and test new equipment to ensure compatibility with networks, and create disability-related training.

28. While most RDAs sought assistance regarding accessible mobile phones, each RDA involved a unique individual. For instance, some people who were blind had difficulties accessing their cellular home phone base station—a device that connects a home phone to the cellular network. Others had accessibility issues with smartwatches. Some people with various disabilities, such as autism, hand dexterity disabilities, and visual disabilities, sought communication devices with physical keyboards or tactile buttons. Some people who are deafblind stated that their braille displays continued to disconnect from their mobile phones and they could not independently reconnect them.

29. Some RDAs focused on services and specific features offered by carriers. Some people who are deaf or hard of hearing stated that they did not have access to visual voicemail. Others said their updated devices were missing a specific accessibility feature such as voice dialing, operator assistance, or talking caller ID. Some people sought assistance regarding accessible billing. Further, other people who are blind or visually impaired requested free access to directory assistance (411).

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[78] 47 CFR § 14.36(b)-(c). The complainant may then file a reply. 47 CFR § 14.36(d).

[79] 47 U.S.C. § 618(a)(3)(B), (a)(4); *see also* 47 CFR § 14.37(a).

[80] 47 U.S.C. § 618(a)(3)(B)(i); *see also* 47 CFR § 14.37(b). Any manufacturer or service provider that is the subject of such order has a reasonable opportunity to comment on the Commission's proposed remedial action before the Commission issues a final order with respect to that action. 47 U.S.C. § 618(a)(4); *see also* 47 CFR § 14.37(c).

[81] We note that, while consumers filed an additional 723 requests for dispute assistance during this period, DRO determined that these requests were not eligible for the RDA process because they did not allege violations of section 255, 716, or 718 of the Act. These requests are therefore not counted or discussed in this Report. DRO treats such complaints as informal complaints for further DRO processing (if they are related to accessibility) or refers them to the FCC's Consumer Inquiries and Complaints Division for processing (if they are unrelated to accessibility). For requests alleging violations of statutes outside of the Commission's jurisdiction, DRO refers these complaints to the relevant federal agencies (such as the Department of Justice for complaints alleging violations of the Americans with Disabilities Act).

30. Some RDA filers had challenges with customer service. A significant portion of filers could not accessibly authenticate themselves to carriers because the SMS authentication code could not be accessibly retrieved during a phone call or because of a long latency period in retrieving the number. Others, who are deaf or hard of hearing, were not able to start service or change their plan because they were calling via telecommunications relay service which was rejected by the involved customer service. Innovative ways to return devices without physically visiting the store premises helped support the needs of an individual with a mental health disability. Some people who are blind stated that they were not able to independently activate their phones because the SIM card numbers were not provided in an accessible format, or the SIM card accessibility features could not be independently activated. Some persons with physical disabilities were not able to insert their SIM cards.

31. Some RDAs were unrelated to mobile phone carriers. For example, some people with disabilities encountered barriers in accessing communication and other aspects of video games and social media platforms. Other people who are blind were unable to access healthcare patient portal communication features because they were not accessible via screen readers. An inaccessible CAPTCHA barred access to advanced settings for email accounts for another person with a disability.

C. Actions Taken to Resolve RDAs

32. Through collaboration between the DRO, consumers, and service providers, nearly all RDAs were successfully resolved. Manufacturers and service providers implemented various accessibility improvements in response to consumer concerns. These improvements addressed a range of needs, including enhanced features for users with visual impairments, the development of specialized communication tools for users with specific disabilities, increased customer service accessibility for individuals with various needs, and accessibility updates to websites and mobile applications.

D. Actions Taken to Resolve Informal Complaints

33. One RDA did not reach a resolution. In that RDA, a consumer who is blind alleged that his mobile phone provider, Assurance Wireless, failed to provide accessible and usable wireless service, including an accessible device, reliable service activation and provisioning, and customer service trained to address accessibility issues. After the consumer was unable to reach a resolution with the company on these allegations, the consumer filed an informal complaint with the Commission's Enforcement Bureau (EB).

E. Time Used to Resolve RDAs and the Informal Complaints

34. Of the RDAs that were filed during the reporting period, twelve (27%) were completed within thirty days, nine (20%) were completed between thirty-one and sixty days, eleven (25%) were completed within sixty-one and ninety days, seven (16%) were completed within ninety-one and one hundred and eighty days, and four (9%) were completed after one hundred and eighty days. One informal complaint was filed. In that instance, the order was issued within the one hundred and eighty-day statutory time-period.[82]

F. Actions for Mandamus and Appeals Filed

35. There were no actions for mandamus or appeals filed with respect to complaints during the period covered by this Report.

[82] 47 USC § 618(a)(3)(B). *See Assurance Wireless, USA L.P. and T-Mobile USA, Inc.; Informal Complaint Regarding Access to Telecommunications and Advanced Communications Services*, File No. EB-TCD-24-00036031, Modified Order, DA 24-633 (EB July 8, 2024).

VI. EFFECT OF SECTION 717'S RECORDKEEPING AND ENFORCEMENT REQUIREMENTS ON THE DEVELOPMENT AND DEPLOYMENT OF NEW COMMUNICATIONS TECHNOLOGIES

36. Section 717(b)(1)(G) requires the Commission to provide an assessment of the effect of the requirements of section 717 on the development and deployment of new communications technologies.[83] No commenters surfaced this issue as a concern. We find that there has been no effect on the development and deployment of new communications technologies.

VII. CONCLUSION

37. Positive developments regarding the accessibility of telecommunications and advanced communications services and equipment have continued over the past two years. This report also recounts developments in new communications platforms. As we continue to monitor accessibility developments and gaps, Congress may wish to examine whether the CVAA should evolve to keep pace with technological developments. Based on commenters' input and the resolution of complaints, we recognize the importance of active stakeholder engagement, and are encouraged by the stakeholders' continued collaboration to ensure accessibility for millions of Americans with disabilities.

FEDERAL COMMUNICATIONS COMMISSION

Alejandro Roark, Chief
Consumer and Governmental Affairs Bureau

[83] 47 U.S.C. § 618(b)(1)(G).

APPENDIX

List of Commenters

(CG Docket No. 10-213)

The complete record in this proceeding is available in the Commission's Electronic Comment Filing System located at https://www.fcc.gov/ecfs/.

Assessment Commenters

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, CG Docket No. 10-213, Public Notice, DA 24-206 (CGB Mar. 7, 2024) (*2024 CVAA Assessment Public Notice*).

Abbreviation	Commenter
AAO	TDIforAccess, Inc., Communication Service for the Deaf, National Association of the Deaf, Hearing Loss Association of America, and the Registry of Interpreters for the Deaf, Inc. (together, the Accessibility Advocacy Organizations)
CTA	Consumer Technology Association
CTIA	CTIA

Tentative Findings Commenters

Consumer and Governmental Affairs Bureau Seeks Comment on Tentative Findings for the 2024 Twenty-First Century Communications and Video Accessibility Act Biennial Report, CG Docket No. 10-213, Public Notice, DA 24-691 (CGB July 16, 2024) (*2024 CVAA Tentative Findings Public Notice*).

Abbreviation	Commenter
AAO	TDIforAccess, Inc., Communication Service for the Deaf, National Association of the Deaf, Hearing Loss Association of America, and the Registry of Interpreters for the Deaf, Inc. (together, the Accessibility Advocacy Organizations)
CTIA	CTIA
Wisconsin OPIL	Wisconsin Department of Health Services, Office for the Promotion of Independent Living