

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

In the Matter of
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. 10-213

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

Adopted: October 6, 2020

Released: October 7, 2020

By the Chief, Consumer and Governmental Affairs Bureau:

TABLE OF CONTENTS

I. INTRODUCTION AND SCOPE OF REPORT 1
II. PROVISIONS OF THE CVAA COVERED BY THIS REPORT 4
III. COMPLIANCE WITH SECTIONS 255, 716, AND 718 9
A. Accessibility..... 10
1. Sections 255 and 716: Telecommunications and Advanced
Communications Services and Equipment—Accessibility Improvements..... 10
2. Sections 255 and 716: Telecommunications and Advanced
Communications Services and Equipment—Accessibility Gaps 15
3. Section 718: Internet Browsers Built into Mobile Phones..... 19
B. Usability..... 20
C. Inclusion of People with Disabilities in Product and Service Design and
Development..... 22
IV. ACCESSIBILITY BARRIERS TO NEW COMMUNICATIONS TECHNOLOGIES 24
V. COMPLAINTS RECEIVED PURSUANT TO SECTION 717 25
VI. EFFECT OF SECTION 717’S RECORDKEEPING AND ENFORCEMENT
REQUIREMENTS ON THE DEVELOPMENT AND DEPLOYMENT OF NEW
COMMUNICATIONS TECHNOLOGIES 34
VII. CONCLUSION..... 35

APPENDIX A: List of Commenters

APPENDIX B: Commission Actions to Implement the CVAA Since 2018

APPENDIX C: Commission Outreach and Education

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, 2018, through December 31, 2019, 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 2, 2020, the Bureau issued the *2020 CVAA Assessment Public Notice* inviting comments concerning 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 *2018 CVAA Biennial Report*.⁶ The Bureau also sought comment on any impact that the accessibility recordkeeping requirements and enforcement measures may have had on the development and deployment of new communications technologies.⁷ The American Council of the Blind (ACB); Consumer Technology Association (CTA); CTIA – The Wireless Association (CTIA); Rehabilitation Engineering Research Center (RERC) for Wireless Inclusive Technologies (Wireless RERC); and Telecommunications for the Deaf and Hard of Hearing, Inc. et al.

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*).

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, 35 FCC Rcd 943 (CGB 2020). 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 2020 Biennial Report Required by the Twenty-First Century Communications and Video Accessibility Act*, CG Docket No. 10-213, Public Notice, 35 FCC Rcd 1862 (CGB 2020) (*2020 CVAA Assessment Public Notice*).

⁷ *Id.* at para. 14.

(TDI et al.)⁸ filed comments. On July 21, 2020, the Bureau released the *2020 CVAA Tentative Findings Public Notice*.⁹ TDI et al. and the Wireless RERC filed comments in response to this second notice.

3. Innovations over the decade since Congress passed the CVAA have led to significantly improved access to covered products and services. The Commission's Biennial Reports to Congress issued since enactment of the CVAA have marked this progress, specifically with respect to access to advanced communications services and equipment, telecommunications services and equipment, and internet browsers built into mobile phones.¹⁰ In this Biennial Report, we find that over the last two years, the record demonstrates significant additional improvements in these areas. We base this finding on the following: (1) smartphones continue to innovate and incorporate features that enable improved access to telecommunications and advanced communications services; (2) speech-to-text and text-to-speech technology, voice assistants, and screen readers continue to advance; and (3) newer devices such as smart speakers and enhanced compatibility between assistive technologies and advanced communications equipment enable more people with disabilities to communicate. Nonetheless, the record also indicates that accessibility gaps continue to exist with respect to (1) the availability of accessible mobile phones with low-end features, functions, and prices for people who are blind and (2) certain apps that provide telecommunications and advanced communications services that are not readable by screen readers. Further, we find no record evidence that the enforcement and recordkeeping obligations of Section 717 of the CVAA have impeded the development or deployment of new communications technologies.

II. PROVISIONS OF THE CVAA COVERED BY THIS REPORT

4. Congress requires our Report to focus on three specific provisions of the CVAA: sections 255, 716 and 718.¹¹

5. *Section 255*. Section 255 requires providers of telecommunications service and manufacturers of telecommunications equipment or customer premises equipment to ensure that such

⁸ Comments by TDI et. al. were jointly filed by Telecommunications for the Deaf and Hard of Hearing, Inc., National Association of the Deaf, Deaf and Hard of Hearing Consumer Advocacy Network, Hearing Loss Association of America, Cerebral Palsy and Deaf Organization, American Association of the DeafBlind, Deaf/Hard of Hearing Technology-RERC, Universal Interface & Information Technology Access-RERC.

⁹ *Consumer and Governmental Affairs Bureau Seeks Comment on Tentative Findings for the 2020 Twenty-First Century Communications and Video Accessibility Act Biennial Report*, CG Docket No. 10-213, Public Notice, DA 20-768 (CGB Jul. 21, 2020) (*2020 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). For clarity, we cite to comments submitted in response to this second Public Notice as "Tentative Findings Comments."

¹⁰ See, e.g., *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*, 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*).

¹¹ Comments addressed to compliance with accessibility provisions that fall outside the provisions are not addressed in this Report.

services and equipment are accessible¹² to and usable¹³ 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 consumer premises equipment 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 and equipment 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 includes (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 and receive calls to and from the public switched telephone network,¹⁹ non-interconnected VoIP services include services that enable real-time voice communications that may not interconnect with the public switched telephone network.²⁰

¹² To be accessible for purposes of this provision, individuals with varying abilities must be able to locate, identify, and operate the input, control, and mechanical functions of a product or service, and be able to access the output or display of all information necessary to operate and use the product or service. *See* 47 CFR § 14.21(b).

¹³ The term usable for purposes of this provision means that individuals with disabilities have access to the full functionality and documentation for the product, including instructions, product information (including accessible feature information), documentation and technical support functionally equivalent to that provided to individuals without disabilities. *See* 47 CFR § 14.21(c).

¹⁴ 47 U.S.C. § 255(b)-(c); *see also* 47 CFR pts. 6, 7. "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 Commission's section 255 rules cover, among other things, telephone calls, call waiting, speed dialing, call forwarding, computer-provided directory assistance, call monitoring, caller identification, call tracing, and repeat dialing. *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*, Report and Order and Further Notice of Inquiry, 16 FCC Rcd 6417, 6448-49, para. 77 (1999); *see also* 47 CFR pt. 6. Equipment covered under section 255 includes, but is not limited to, telecommunications equipment and consumer premises equipment, such as wireline, cordless, and wireless telephones, fax machines, and answering machines. 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). In addition, the rules implementing section 255 cover voice mail and interactive voice response systems (phone systems that provide callers with menus of choices). 47 CFR Part 7; *see also* FCC, Telecommunications Access for People with Disabilities (Nov. 5, 2015), <http://www.fcc.gov/guides/disabled-persons-telecommunications-access-section-255>.

¹⁵ 47 U.S.C. § 255(d).

¹⁶ *See IP-Enabled Services; 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; Use of N11 Codes and Other Abbreviated Dialing Arrangements*, 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 of the Act does not apply to services or equipment, including interconnected VoIP services and equipment, which 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.*

¹⁹ *See* 47 U.S.C. § 153(25) (referencing 47 CFR § 9.3).

²⁰ *See* 47 U.S.C. § 153(36).

Electronic messaging services include services such as e-mail, short message service text messaging, and instant messaging, which enable real-time or near real-time text messages between individuals over communications networks.²¹ Interoperable video conferencing services provide real-time video communications, including audio, to enable users to share information.²²

7. The accessibility requirements for section 716 may be satisfied by either: (1) building accessibility into the service or equipment;²³ or (2) using third-party applications, peripheral devices, software, hardware, or consumer premises equipment that is available to consumers at nominal cost and that individuals with disabilities can access.²⁴ 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 consumer premises equipment commonly used by individuals with disabilities to achieve access, unless that is not achievable.²⁵

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.²⁶ This requirement may be satisfied with or without the use of third-party applications, peripheral devices, software, hardware, or consumer premises equipment that is available to consumers at nominal cost and that individuals with disabilities can access.²⁷

III. COMPLIANCE WITH SECTIONS 255, 716, AND 718

9. Based on the comments filed in response to the *2020 CVAA Assessment Public Notice* and the *2020 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. Overall, significant improvements in the accessibility and usability of covered products and services have been made since the *2018 CVAA Biennial Report*, and there has been a continued effort by the affected industries to include people with disabilities in the design and development of their products and services. Nevertheless, as discussed below, there remain instances of complaints regarding alleged noncompliance, and accessibility gaps persist.

A. Accessibility

1. Sections 255 and 716: Telecommunications and Advanced Communications Services and Equipment—Accessibility Improvements

10. We find significant improvements in the accessibility of telecommunications and advanced communications services and equipment over the past two years.²⁸ We base this finding on the following: (1) smartphones continue to innovate and incorporate technologies and features that enable improved access to telecommunications and advanced communications services; (2) speech-to-text and text-to-speech technology, voice assistants, and screen readers continue to advance; and (3) newer devices

²¹ See 47 U.S.C. § 153(19).

²² 47 U.S.C. § 153(27).

²³ 47 U.S.C. § 617(a)(2)(A), (b)(2)(A).

²⁴ 47 U.S.C. § 617(a)(2)(B), (b)(2)(B).

²⁵ 47 U.S.C. § 617(c).

²⁶ 47 U.S.C. § 619(a); 47 CFR § 14.61(a).

²⁷ 47 U.S.C. § 619(b); 47 CFR § 14.61(b).

²⁸ Although we addressed compliance with sections 255 and 716 separately in prior biennial reports, given the increasing overlap in the availability of telecommunications and advanced communications services, features, and functions in devices that are covered by both of these sections, here we address these together.

such as smart speakers and enhanced compatibility between assistive technologies and advanced communications equipment enable more people with disabilities to communicate.

11. *Smartphones.* Smartphones have been a driving force in enhancing access to telecommunications and advanced communications over the past decade. Smartphones provide telephone, text messaging, email, and web browsing to people with disabilities, including people who are blind or visually impaired, deafblind, deaf or hard of hearing, who have physical, mobility or dexterity limitations, and cognitive disabilities.²⁹ The native features of smartphones incorporate access to these services for people with disabilities. ACB and CTIA agree that speech-to-text and text-to-speech capabilities and voice assistants have provided the greatest accessibility innovations of smartphones in recent years.³⁰ Due to improved accuracy and expanded capabilities, ACB states that voice assistants provide better accessibility to people with visual impairments and mobility disabilities.³¹ The Wireless RERC notes that Google, through Project Euphonia, is attempting to make speech recognition systems accessible to people with atypical speech patterns.³² Smartphones also provide accessible options by enhancing contrast, highlighting button shapes, and inverting colors.³³ Features that improve accessibility include HD Audio, software support for text messaging apps such as real-time text,³⁴ and user-friendly screen interfaces for people with mobility and cognitive disabilities.³⁵ Notwithstanding these enhanced

²⁹ ACB Comments at 1 (“We believe the CVAA has largely increased the availability of accessible wireless devices and communications options for people with disabilities.”); CTIA Comments at 15 n. 46 (citing Salimah LaForce, Dara Bright, and Andrew Garcia, Mobile Phone Accessibility Review, Wireless RERC at 6 (Jan. 2019), http://www.wirelessrerc.gatech.edu/sites/default/files/publications/analysis_of_accessibility_features_on_mobile_phones_final_0.docx); Wireless RERC Tentative Findings Comments at 2-4 (noting that its study included people who have “vision, hearing, cognitive, and mobility disabilities” and stating that the accessibility and usability of devices have “steadily increased,” but that “some gaps remain”).

³⁰ ACB Comments at 1 (“The greatest innovations since the past Biennial Report to Congress have come with the improved accuracy and expanded capabilities of voice assistants. These voice assistants, such as Apple Siri, Amazon Alexa, and Alphabet’s Okay Google, allow a user to control their device, search the Internet and complete numerous skills through voice commands.”); CTIA Comments at 2 (“Accessibility in 2020 can often be accomplished within the mobile device itself, through built-in features such as voice commands”); CTIA Comments at 12 (“[T]oday’s wireless devices leverage rapid improvement in speech recognition technology, real-time audio descriptions, and enhanced video calling platforms.”); Wireless RERC Tentative Findings Comments at 17 (noting that voice technology helps people with cognitive disabilities send texts and emails).

³¹ See ACB Comments at 1 (“Once configured properly, these voice assistants are vital tools that provide non-visual and non-physical control of smartphones as well as other smart devices.”); CTIA Comments at 12 n.30 (noting the benefits to people with mobility disabilities).

³² Wireless RERC Comments at 9 (noting that the inability of smart speakers “to understand atypical speech patterns presents an accessibility barrier Google’s Project Euphonia seeks to bridge the accessibility gap of speech recognition systems to be more inclusive of non-standard speakers by performing speech-to-text transcription that improves ASR for people who have significantly slurred speech.”).

³³ CTIA Comments at 12 n.30 (citing See AbilityNet, Button Shapes (Feb. 2018), <https://mcmw.abilitynet.org.uk/button-shapes-iphone-ipad-ipod-touch>) (noting that some iPhones offer an accessibility feature called “Button Shapes,” which “re-creates the outlines found around tappable interface elements in previous versions of iOS, which can help increase accuracy particularly for consumers with mobility disabilities or eye-hand coordination difficulty”).

³⁴ TDI et al. notes how accessible text messaging services enable users to text to 911. See TDI et al. Comments at 3 (noting that these services address a “critical accessibility” need).

³⁵ CTIA Comments at 6, 9, 19. *But see* TDI et al. Comments at 5 (stating that people with “mobility disabilities, including a physical limitation, find that most telecommunications devices, such as smartphones, do not meet their needs particularly in terms size”); TDI et al. Tentative Findings Comments at 5 (stating that “persons with mobility disabilities need larger devices than other consumers”).

features and functions, some commenters note improvements are needed to provide accessible alerting for incoming calls for some people with disabilities.³⁶

12. *Apps.* Native and third-party apps provide additional accessibility resources for wireless services and devices.³⁷ CTIA notes that the Apple's App Store has "an entire section devoted to 'Apps for Accessibility,' which include whole categories of apps for Voice Control, Vision, Hearing, Speech, Learning and Literacy, Physical and Motor, Accessible Home, Accessible Games, and even ASL Stickers."³⁸ Apps also can help people with disabilities live independently by offering various options for, among other things, food delivery and accessible transportation.³⁹

13. *Other Smart Technologies and Assistive Technologies.* Successful technologies that developed on smartphones, such as native screen readers and speech-to-text and text-to-speech tools, are being replicated in other advanced communications services and equipment.⁴⁰ More recently deployed devices, such as smart speakers, smart watches, and smart eyeglasses, often include voice assistants.⁴¹ The Wireless RERC notes that while smart speakers can enable blind users to act independently,⁴² some smart home devices still require blind users to rely on sighted assistance,⁴³ and voice controls would improve access to features and functions for some people with disabilities.⁴⁴ Wireless RERC also suggests that users may need more education on features and functions that can be activated through voice control.⁴⁵

14. In addition to their native accessibility features, telecommunications and advanced communications services devices are now capable of pairing with more peripheral devices, such as braille readers and braille notetakers, by utilizing standardized connection methods such as Bluetooth.⁴⁶

³⁶ TDI et al. Comments at 9 n.17. *But see* CTIA Comments at 11 n.27.

³⁷ CTIA Comments at 9.

³⁸ *Id.*

³⁹ CITA Comments at 10.

⁴⁰ ACB Comments at 1 ("The growth of the Internet of Things (IoT) market continues to offer boundless potential and accessibility challenges for disabled consumers."); *see id.* at 1 ("Native screen readers for smartphones are becoming increasingly dynamic and offer a seamless experience for consumers."); Wireless RERC Comments at 6-8 (noting that its survey included questions on smart speakers, tablets, smart watches, and smart eyeglasses); CTIA Comments at 11.

⁴¹ ACB Comments at 1 (noting that "voice assistants are vital tools that provide non-visual and non-physical control of smartphones as well as other smart devices"); Wireless RERC Comments at 5-8.

⁴² Wireless RERC Comments at 8 ("In 2019, Amazon revealed a new feature, Show and Tell, on the 'Alexa' device that would allow customers who are blind or have low vision to have home goods identified."); Wireless RERC Comments at 2 (noting that the Wireless RERC's mission is "to integrate established wireless technologies with emerging wirelessly connected devices and services for a transformative future where individuals with disabilities achieve independence, improved quality of life, and enhanced community participation").

⁴³ ACB Comments at 1-2 (noting that "these products lack built-in out-of-the-box accessibility native to their own hardware"); Wireless RERC Comments at 8-9 ("Participants [from four focus groups] who are blind or have low vision particularly pointed out their need for sighted assistance in the initial set-up of these smart home devices.").

⁴⁴ Wireless RERC Tentative Findings Comments at 23 ("[T]he degree of control or customizability was a factor in voice control. For devices such as the Philips Hue, Nest, and Ecobee, the smartphone app provided more options for user settings. By contrast, voice control, which was deemed important for this group, did not provide as many options.").

⁴⁵ Wireless RERC Tentative Findings Comments at 23 ("[V]oice input devices may be capable of more than users believe is the case, suggesting the need for improved or more expanded help/guidance functions.").

⁴⁶ ACB Comments at 1 ("[I]t is becoming more common for smartphones to connect to peripheral assistive technology devices such as a braille display or braille note taker. For example, a subscriber of Apple TV Plus now

(continued...)

Advanced technologies such as biometric authentication also appear to make devices more accessible by people with cognitive, physical, or other disabilities.⁴⁷

2. Sections 255 and 716: Telecommunications and Advanced Communications Services and Equipment—Accessibility Gaps

15. Notwithstanding the significant improvements in access to communications technologies enumerated above, based on the record and disability-related complaints received by the Bureau, we find that gaps continue to exist with respect to (1) the availability of accessible mobile phones with low-end features, functions, and prices (feature phones) for people who are blind and (2) certain apps that provide telecommunications and advanced communications services that were not readable by screen readers.⁴⁸

16. *Feature Phones.* 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.⁴⁹ The record does not identify a feature phone that is accessible to people who are blind.

17. In 2016, ACB and CTIA agreed that there were a few feature phones that provided accessibility features for people who are blind.⁵⁰ They took note of accessible feature phones that made “audible everything that appears on the screen, buttons that are pressed, caller identification, and battery status.”⁵¹ These feature phones also included built-in screen readers and voice-activated calling features.⁵² In this year’s record, CTIA states that wireless providers offer 62 models of feature phones.⁵³ Noting the Commission’s finding in the *2018 CVAA Biennial Report* on the accessibility of feature phones to people who are blind or visually impaired, CTIA states that the wireless industry continues to close identified gaps in accessibility.⁵⁴ Although progress has been made in offering various models of feature phones

(Continued from previous page)

has the choice of video content with 9 languages of audio description, 40 languages of closed captioning, and a Deaf blind consumer may read the closed captions in braille on a Bluetooth connected braille display.”); CTIA Comments at 2 (noting that accessibility can be accomplished through “assistive technologies through standardized interfaces, such as Bluetooth, or through millions of apps that enable people with disabilities to customize wireless services and devices to meet their unique needs”); Wireless RERC Tentative Findings Comments at 6 (noting the benefits of assistive technology connections, the Wireless RERC states that the “continued incorporation of features that enable device-to-device connectivity will not only support people with disabilities’ use of external assistive technologies but is supportive of their use of Internet of Things (IoT) devices and services that advance independent living and social inclusion”).

⁴⁷ Wireless RERC Tentative Findings Comments at 9-11, 13-16 (noting that biometric login has experienced greater inclusion in devices broadly, but specifically limits dependency on memory and mobility/dexterity when unlocking a device).

⁴⁸ In Requests for Dispute Assistance filed with the Commission’s Disability Rights Office (DRO), discussed in more detail below, consumers reported that certain covered devices and services were not accessible to people who are blind and have visual impairments, are deaf, hard of hearing, autistic, or have mobility disabilities.

⁴⁹ See *2016 CVAA Biennial Report*, 31 FCC Rcd at 11073, para. 16. The words “feature phones” and “non-smartphones” are used interchangeably in this section.

⁵⁰ *2016 CVAA Biennial Report*, 31 FCC Rcd at 11074, para. 17.

⁵¹ *Id.*

⁵² *Id.*

⁵³ CTIA notes that these feature phones benefit senior citizens and people with cognitive or mobility disabilities. CTIA Comments at 15-16; Wireless RERC Comments at 1-2 (noting that it collected data on accessibility features for people with “vision, hearing, cognitive, and mobility disabilities”). These phones contain features such as large, tactile, and easy-to-use keypads, high-contrast LCD displays, hearing-aid-compatibility (HAC), real-time text support, and HD voice. CTIA Comments at 16.

⁵⁴ CTIA Comments at 15.

with features accessible to users such as senior citizens and people with certain disabilities, including individuals with low vision, it appears that feature phones that are accessible to blind users (and that were mentioned in the 2016 Biennial Report) are no longer available.⁵⁵ As a result, blind users appear to be no longer able to use all the functions on these types of phones, such as caller ID and other text-based functions that appear on a feature phone's screen.⁵⁶

18. *Apps and Software Upgrades.* Based on Requests for Dispute Assistance⁵⁷ filed over the past two years, as discussed in more detail in Section III below, we found instances where telecommunications, email, and text messaging services provided over apps and websites were not accessible to screen readers.⁵⁸ In a few Requests for Dispute Assistance, screen readers were unable to read the inaccessible websites of telecommunications services providers where customers pay their bills and adjust their voicemail settings through customer portals.⁵⁹ We also note that accessibility options that existed in previous versions have been lost due to updates to some operating systems and some telecommunications and advanced communications apps.⁶⁰

3. Section 718: Internet Browsers Built into Mobile Phones

19. We find that the accessibility of Internet browsers built into mobile phones has continued to improve due to the incorporation of better screen readers, improvements in speech-to-text engines, and new accessibility features built into the operating systems of the phones. For example, ACB states that “manufacturers have continued the seamless integration of screen readers into Internet browsers. Internet browsers, such as Apple Safari and Google Chrome, offer a robust web experience when navigating with Apple VoiceOver and Google Talk Back.”⁶¹ While internet browsers built into mobile phones generally provide accessibility, some Requests for Dispute Assistance demonstrated that people who use screen

⁵⁵ Wireless RERC notes that generally accessibility and usability have improved for “people with vision disabilities” in wireless phones. Wireless RERC Tentative Findings Comments at 9. These features include biometric login, built-in text-to-speech, full access screen reader, voice input, braille access, adjust font, procure TTS, contrast adjustment, FM radio, physical # keypad, physical QWERTY keyboard, screen magnifier, accessibility menu, digital assistant, color contrast, color inversion, dark theme, and grayscale. *Id.*

⁵⁶ By contrast, CTIA states that there are accessibility features for people who are blind “included in nearly every device, at nearly every price point” for smartphone models. CTIA Comments at 16 n.49 (noting that “Apple’s latest models like the iPhone 11 Pro and iPhone XS Max, as well as their more affordable models like the iPhone 7 and iPhone 8, all support real-time text, TTY, voice control, handsfree settings, enhanced contrast, inverted colors, and automatic screen readers.”); *see id.* (noting that “Samsung’s latest models like the Galaxy Note10+ and the Galaxy S10+, as well as their more affordable models like the Galaxy A20 and Galaxy A10e, all support the same features and more”). SafeLink Wireless offers an android smartphone to low-income individuals who are blind. CTIA Comments at 1 n.50.

⁵⁷ Prior to filing an informal complaint, Commission rules require a consumer to submit a Request for Dispute Assistance to DRO for help in resolving the consumer’s accessibility problem with a covered entity, and to give the covered entity an opportunity to resolve the dispute. *See* 47 CFR § 14.32 (consumer dispute assistance). In Section III below, we discuss the number and content of Requests for Dispute Assistance that were filed over the past two years.

⁵⁸ *See* Section III below.

⁵⁹ *See* Section III below.

⁶⁰ ACB Comments at 2 (citing to ACB’s comments for the 2018 CVAA Biennial Report to Congress, “Even for developers who have a solid track record of producing accessible content, OS updates and other variable factors can result in broken applications resulting in failure to participate equally on mobile applications and across mobile platforms.”); Wireless RERC Tentative Findings Comments at 22 (“The Wireless RERC agrees with the tentative findings regarding system updates negatively impacting the users’ configuration of accessibility features on smartphones and apps.”).

⁶¹ ACB Comments at 1.

readers were unable to access websites that provide telecommunications and advanced communications services.⁶² ACB notes that not all websites are created in a way that allows an accessible Internet browser to access third-party content.⁶³ The Wireless RERC also reports that a relatively small number of people with disabilities are not able to use their telecommunications and advanced communications devices without help from other people.⁶⁴

B. Usability

20. In addition to requiring accessibility, sections 255, 716 and 718 require that services and equipment, as applicable to each of these provisions, are “usable” by people with disabilities.⁶⁵ A product or service is “usable” if it provides individuals with disabilities with the full functionality and documentation for the product or service, including instructions, product or service information (including accessible feature information), customer support, and technical support.⁶⁶ We find that over the past two years, there have been continued improvements in the usability of services and equipment that are subject to sections 255, 716, and 718. Covered entities are offering an increasing number of ways for consumers to locate accessibility assistance—including through their websites and expanding their accessibility training for their customer care representatives. Nevertheless, we also find that some consumers continue to face difficulties finding accessible information and customer care services.

21. For example, CTIA reports that its members provide trained customer support as well as accessibility information on their websites to help consumers locate products and services that meet their needs.⁶⁷ CTIA also offers an online database called AccessWireless.org to provide information about accessible mobile products and services for people with hearing, vision, mobility and manipulation, speech, and cognitive disabilities, as well as for seniors and veterans.⁶⁸ However, Wireless RERC and TDI state that covered entities sometimes do not provide an accessible way to locate relevant information about the accessible features of a phone.⁶⁹ The Wireless RERC recommends training for in-store

⁶² See Section III below (discussing telecommunications websites that provide telephone customer portals).

⁶³ ACB Comments at 2 (citing to ACB’s comments for the *2018 CVAA Biennial Report* to Congress, “Key concerns over accessibility under Section 718 are with independent content providers, who continue to fail to script their content in a manner that adheres to international standards set forth in WCAG 2.0. Mobile applications cover every scope of creativity, productivity, and social networking ventures. Communications technologies frequently thrive within this space.”).

⁶⁴ Wireless RERC Comments at 6 (reporting that “a majority of users of both basic cell phones and smartphones indicated that their devices were easy to use. [However,] [r]egarding basic cell phones . . . 8% indicated they could not use them without help. Regarding smartphones . . . one user (0.3%) indicated not being able to use it without help.”).

⁶⁵ 47 U.S.C. §§ 255, 617, 619.

⁶⁶ 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).

⁶⁷ CTIA Comments at 23 (noting that “U.S. Cellular has a webpage on accessibility and hearing aid compatibility”); *id.* at 24 (noting that T-Mobile’s accessibility resource center “provides resources to guide consumers to the products and services that meet a variety of communication needs”; AT&T’s accessibility webpage “describes resources, products, and services, including portals dedicated to tools for vision, hearing and speech, cognitive needs, mobility, and aging support”; and, Verizon’s accessibility resource center, “includes information on services and features for auditory support, visual assistance, mobility tools, accessible content, and more.”).

⁶⁸ CTIA Comments at 22 (stating that “CTIA developed the industry-leading resource for accessibility—AccessWireless.org”).

⁶⁹ TDI et al. Comments at 6 (“[D]eaf and hard of hearing people continue to struggle to find wireless phones that meet their accessibility needs.”); see TDI et al. Tentative Findings Comments at 4-5 (noting that finding a device that is HAC will be a “challenge” until 100% of mobile phone offerings are hearing-aid compatible). Wireless RERC Comments at 3 (stating that another “limitation [for Lifeline phones]. . . is that for many of the [accessibility] features, information about whether these were included in a given phone could not be found using the three

(continued....)

employees.⁷⁰ In one Request for Dispute Assistance described below, one consumer reported that he was unable to obtain accessible technical support for a phone that he had purchased.⁷¹

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

22. We find that covered entities continue to include people with disabilities in product and service design and development. This finding is supported by reports that industry has engaged consumers in product development,⁷² conferences,⁷³ one-on-one meetings,⁷⁴ and product demonstrations.⁷⁵

23. Industry commenters report extensive collaboration between industry and people with disabilities on federal advisory committees and groups such as the Consumer Advisory Committee, and the Disability Advisory Committee.⁷⁶ Consumer organizations and industry further report their collaboration to promote accessible products and services,⁷⁷ hearing aid compatibility,⁷⁸ accessible

(Continued from previous page) _____

consumer-facing sources. Thus, we cannot conclusively state that the features are or are not present.”); Wireless RERC Comments at 3 (noting that the “difficulty in locating information about specific features is in itself an important result, as consumers with disabilities may experience a similar problem when comparing and purchasing phone models. While people without disabilities can compare phone models based on preferences alone, people with disabilities may have functional limitations [in comparing phone models] that necessitate certain accessibility features for the phone to be usable by them (e.g., video calling capabilities, HAC, screen reader, AT connection).”).

⁷⁰ Wireless RERC Comments at 26 (“To address barriers experienced by customers with disabilities during point of sale transactions, we recommend (1) disability awareness/etiquette and information about accessibility features should be a standard part of sales associate training, and (2) providing a stable method for customers with disabilities to obtain in-store support (e.g., video remote interpreting service).”).

⁷¹ See Section III below.

⁷² CTIA Comments at 21-23 (noting examples that Samsung One UI 2 smartphone “considered accessibility to be the most important element in the development process”); “Apple’s Human Interface Guidelines include three best practices for inclusive design: design with accessibility in mind, support personalization, and audit and testing for accessibility”; “TracFone has established consultative relationships with disability organizations to obtain ongoing feedback”; and, AT&T, Verizon, and T-Mobile all have guides, design systems, and development processes focusing on the needs of people with disabilities).

⁷³ CTIA Comments at 24 (conferences include CSUN Center for Disabilities; 2020 Disability Policy Seminar; and 2020 Global Accessibility Awareness Day); CTA Comments at 4-6.

⁷⁴ CTA Comments at 5-6 (“CTA Foundation has also sponsored a group of Accessibility Leaders to attend CES and meet and tour the show. These leaders learn from and provide valuable feedback not only to CES participants focused on assistive technology, but on technology shown throughout the show floor.”).

⁷⁵ CTA Comments at 5 (reporting “CTA honors innovation in accessible technologies each year at CES. In 2020, winners showcased exciting advancements in making live conversations, computer coding, computer interfaces, and transportation more accessible to individuals with limited hearing, vision, and dexterity, respectively.”).

⁷⁶ CTA Comments at 4; CTIA Comments at 33-34. Another example of industry-consumer collaboration is the North American Numbering Council’s Interoperable Video Calling Working Group (IVC WG). This industry-consumer group is working to facilitate the provision of interoperable telephone number-based video calling, allowing service providers to voluntarily offer, to any customer, the capability to make or receive a video call between 10-digit numbers. See *FCC Announces Membership of the North American Numbering Council Interoperable Video Calling Working Group and the Nationwide Number Portability Working Group’s Technical Subcommittee*, Public Notice, 33 FCC Rcd 8901 (WCB 2018).

⁷⁷ CTIA Comments at 26 (“AT&T maintains a dedicated team of accessibility experts to inspire innovative accessibility solutions and to train employees on how to achieve accessibility in AT&T’s digital footprint with design, architecture, and quality assurance; U.S. Cellular has partnered with Horizons for the Blind to translate written materials into Braille and to produce large print material for the low vision; T-Mobile interacts with customers with accessibility needs in many ways, including through its Accessibility Council, to proactively identify

(continued....)

gaming,⁷⁹ and real-time text.⁸⁰ TDI et al., however, believes that not all industry members engage with the disability community, and that those that do sometimes fail to engage marginalized communities, such as members of the deafblind community.⁸¹

IV. ACCESSIBILITY BARRIERS TO NEW COMMUNICATIONS TECHNOLOGIES

24. Section 717(b)(1)(B) requires the Commission to evaluate the extent to which accessibility barriers still exist with respect to new communications technologies.⁸² We find that, although new communications and other technologies hold the promise of improving the quality of life for consumers with disabilities, some accessibility concerns about these new technologies remain. Commenters generally agree that emerging communication technologies such as 5G, real-time text, text-to-911,⁸³ the Internet of Things, and Bluetooth capabilities will improve the accessibility of communications,⁸⁴ but TDI et al. states that video games as well as virtual and augmented reality services are not accessible to people who are deaf or hard of hearing.⁸⁵ Commenters agree that new video calling

(Continued from previous page) _____

ways to improve its Accessibility Webpage; [and,] Verizon founded initiatives Teach Access and The Disability Collection to ensure the next generation of creators and technologists are designing accessible products and services and that people with disabilities are represented.”); *see also* Wireless RERC Tentative Findings Comments at 25 (encouraging mobile phone manufacturers “to continue to incorporate users with disabilities into all stages of the design process so that accessibility, and consequential usability”).

⁷⁸ TDI et al. Comments at 5 (noting that “Consumer Groups look forward to collaborating with wireless carriers, original equipment manufacturers and hearing aid manufacturers toward hearing aid compatibility with all wireless devices”); CTIA Comments at 31 (reporting that, “[i]n the last year, CTIA has been working with the Hearing Loss Association of America, the National Association of the Deaf, Telecommunications for the Deaf and Hard of Hearing, Inc. and the other Joint Consensus Proposal Signatories to move this process forward. The Task Force put out a public Request for Information seeking applicants for administration of the Task Force, reviewed responses, and selected the Alliance for Telecommunications Industry Solutions (“ATIS”) to serve as the Administrator of the Task Force.”); TDI et al. Comments at 5 (“TDI, HCAA, and NAD are members of the Joint HAC Task Force with ATIS, which held its inaugural meeting on February 11, 2020.”).

⁷⁹ TDI et al. Comments at 9 (stating that “[we] appreciate the gaming industry’s continued outreach to certain of the Consumer Groups and others representing persons with disabilities and look forward to continued outreach”).

⁸⁰ CTIA Comments at 32-33 (nothing that a “key part of the industry’s efforts to move RTT forward has been its collaboration with the disability community through the Commission’s Disability Advisory Committee (DAC)”).

⁸¹ TDI et al. Comments at 6 (stating that “there remains a wide swath of such companies that fail to include any participation by our community. Even if they do include some members of our community, they fail to include certain populations, such as those who are DeafBlind or have additional disabilities, that have very specific needs or requirements.”).

⁸² 47 U.S.C. § 618(b)(1)(B).

⁸³ *See* TDI et al. Tentative Findings Comments at 2-3 (stating concerns about consistent deployment and availability of text-to-911, including real-time text-to-911).

⁸⁴ *See* CTA Comments at 8 (stating that the CVAA will “guide 5G accessibility for people with disabilities.”); CTA Comments at 4 (“[T]he newest Bluetooth standard includes several advances, such as support for hearing aids, and will be incorporated into many consumer technology devices with corresponding labeling.”); CTIA Comments at 3, 5, 14, 35-38 (deployment of next-generation 5G networks will transform the manner in which people with disabilities communicate including high speed, low latency data-intensive uses such as telehealth services, wayfinding, augmented and virtual reality, education services, job seeking and training, and IoT deployment). *But see* TDI et al. Tentative Findings Comments at 3-4 (stating that the costs of unlimited data, data caps, and throttling policies impede access to broadband and “bandwidth-sensitive applications”).

⁸⁵ TDI et al. Comments at 8-9 (stating that these services are not accessible).

and conferencing services have become enormously important in all aspects of life,⁸⁶ but some commenters express accessibility concerns.⁸⁷ One commenter states that some video calling and conferencing services have accessibility features that reduce barriers to remote learning, telehealth, and telework.⁸⁸ However, TDI et al. points out that updates to these services can exclude people with disabilities.⁸⁹ Commenters agree that collaboration between stakeholders can help address any accessibility gaps of new communications technology.⁹⁰

V. COMPLAINTS RECEIVED PURSUANT TO SECTION 717

25. For this report, section 717(b)(1)(C)-(F) requires the Commission to report the following information with respect to any complaints filed: (1) the number and nature of complaints received during the two years that are the subject of the Commission's Report, i.e., between January 1, 2018 and December 31, 2019; (2) the actions taken to resolve such complaints, including forfeiture penalties assessed; (3) the length of time that was taken by the Commission to resolve each such complaint; and (4) the number, status, nature, and outcome of any actions for mandamus and any appeals filed.⁹¹

⁸⁶ ACB Comments at 2; CTIA Comments at 33 (stating that "CTIA and its members recognize that video conferencing apps are beneficial to members of the accessibility community, and thus have been participating in efforts to facilitate the provision of interoperable video conferencing services."); CTIA Comments at 40 ("Apple FaceTime calling and Google Duo are among the many platforms that have made connecting with friends, family, coworkers, and colleagues more seamless than ever before, with high-quality video and fast frame rates that make these services ideal for communicating with American Sign Language."); TDI et al. Comments at 10 ("Video conferencing services have become an invaluable tool for consumers and businesses to communicate with friends, family, colleagues and customers in a virtually in-person manner.").

⁸⁷ ACB Comments at 2 (stating that interoperable video conferencing must be made accessible); TDI et al. Comments at 10 ("While many deaf and hard of hearing people also enjoy video conferencing services, these services, as explained in our prior comments, are not completely accessible and usable by deaf and hard of hearing people."); TDI et al. Comments at 11 (noting that "many video conferencing tools were not designed with deaf or hard of hearing persons in mind. This situation has become critical with the wholesale shift from face-to-face instruction to online instruction."); TDI et al. Tentative Findings Comments at 7 (noting various concerns including lack of relay service availability, lack of interoperability, and problematic features that are not sign language friendly such as the handraising tool, audio-based spotlighting, and screenshare).

⁸⁸ CTIA Comments at 14 n.42 ("For example, the ZOOM platform connects up to 100 participants via HD video and audio to deliver clear communications even over low-bandwidth connections, and offers closed captioning, automatic transcripts, keyboard accessibility, and screen reader support. *See, e.g.,* ZOOM, <https://zoom.us/accessibility> (last visited Mar. 27, 2020). Likewise, online meeting platform BlueJeans' accessibility features enable consumers with disabilities such as visual and hearing loss to attend and participate in conference calls from any computer or mobile device, based on the Web Content Accessibility Guidelines 2.0 and the CVAA requirements. *See* BlueJeans, <https://www.bluejeans.com/accessible-online-video-conferencing-features> (last visited Mar. 27, 2020).").

⁸⁹ TDI et al. Comments at 10 ("Zoom, one of the most popular videoconferencing tools for sign language and hearing users alike, removed ten-digit number access from the lowest-tier plans, thereby barring relay service access. As a result, many individuals that use relay services miss out on the many social and work-related meetings that have become overwhelmingly popular in the mainstream during this time of physical distancing.").

⁹⁰ TDI et al. Comments at 7 (stating that "greater involvement of the deaf and hard of hearing community would provide valuable guidance to companies in developing products that meet the accessibility compliance requirements of the CVAA."); CTIA Comments at 33-34 ("CTIA and its members recognize that video conferencing apps are beneficial to members of the accessibility community, and thus have been participating in efforts to facilitate the provision of interoperable video conferencing services."); CTIA Comments at 35 ("CTIA and its members work with the disability community every day to try to solve new issues as they arise and to ensure that their latest products and services meet the needs of persons with different abilities."); CTA Comments at 1-2.

⁹¹ 47 U.S.C. § 618(b)(1)(C)-(F).

26. Pursuant to section 717(a), the Commission established rules governing the filing of formal⁹² and informal⁹³ complaints that allege a violation of section 255, 716, or 718.⁹⁴ Prior to filing an informal complaint, Commission rules require a consumer to submit a Request for Dispute Assistance to the Disability Rights Office for help in resolving the consumer's accessibility problem with a covered entity, and to give the covered entity an opportunity to resolve the dispute.⁹⁵ If the parties involved in a Request for Dispute Assistance do not reach a settlement within 30 days after filing it with the Commission, the parties may agree to extend the time for resolution in 30-day increments, or the requester may file an informal complaint with the Enforcement Bureau.⁹⁶

27. Over the past several years, this Request for Dispute Assistance process resolved all consumer accessibility concerns through dialogue and negotiation with covered entities. As a result, no consumer has filed an informal complaint against such entities, and consequently there was no enforcement action.⁹⁷ In addition, this process has encouraged service providers and equipment manufacturers to comply with the accessibility rules.⁹⁸

28. *Number and Nature of Complaints Received.* From January 1, 2018, to December 31, 2019, no complaints, either informal or formal, were filed. Consumers filed twenty-four Requests for Dispute Assistance alleging violations of section 255, 716, or 718.⁹⁹ Of the twenty-four requests, six requests (25%) involved the accessibility and usability of equipment, and 18 requests (75%) involved the

⁹² Formal complaints are generally resolved on a written record consisting of a complaint, answer, reply, and joint statement of stipulated facts, disputed facts and key legal issues, along with all associated evidence in the record. See 47 CFR § 1.720 et seq. (setting forth the requirements for formal complaints); see also 47 CFR § 14.38 (stating that "(f)ormal complaint proceedings alleging a violation of 47 U.S.C. 255, 617, or 619, or parts 6, 7, or 14 of this chapter, shall be governed by the formal complaint rules in subpart E of part 1, § 1.7201"). Since section 717's inception, the Commission has not received a formal complaint alleging a violation of section 255, 716, or 718.

⁹³ 47 U.S.C. § 618(a)(3)(B) ("The Commission shall investigate the allegations in an informal complaint and, within 180 days after the date on which such complaint was filed with the Commission, issue an order concluding the investigation, unless such complaint is resolved before such time. The order shall include a determination whether any violation occurred."); see also 47 CFR § 14.37(b).

⁹⁴ 47 U.S.C. § 618(a); 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. 231 (2011) (*Advanced Communications Services Report and Order*).

⁹⁵ See 47 CFR § 14.32 (consumer dispute assistance). A consumer may file a formal complaint with the Enforcement Bureau without first submitting a Request for Dispute Assistance or an informal complaint. 47 CFR § 14.38.

⁹⁶ 47 CFR §§ 14.32(e); 14.34(a) ("An informal complaint alleging a violation of section 255, 716 or 718 of the Act or parts 6, 7, or 14 of this chapter may be transmitted to the Enforcement Bureau by any reasonable means."); see also *Advanced Communications Services Report and Order*, 26 FCC Rcd at 14658, para. 237.

⁹⁷ *2012 CVAA Biennial Report*, 27 FCC Rcd at 12224, para. 49 n.148.

⁹⁸ See *id.*, 29 FCC Rcd at 11942, para. 56.

⁹⁹ We note that while consumers filed an additional 349 requests for dispute assistance during this period, DRO determined that these requests were not eligible for the Request for Dispute Assistance 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 provides these complaints to the relevant federal agencies (such as the Department of Justice for complaints alleging violations of the Americans with Disabilities Act).

accessibility and usability of services. Of the twenty-four requests filed during the period covered by this Report, twenty (83%) alleged violations of section 255, and five (21%) alleged violations of section 716. Two of the twenty Requests for Dispute Assistance that alleged violations of section 255 also alleged a violation of section 718. Seven of the twenty-four Requests for Dispute Assistance (29%) involved the accessibility and usability of Lifeline phones and services. We provide examples of these requests below.

29. With respect to accessibility, one consumer stated that a service provider did not provide her with accessible assistance because the provider's staff instructed her to bring her own American Sign Language interpreter to the provider's store. Two consumers stated that they were unable to make telephone calls or to send text messages through telecommunications and advanced communications services providers' apps because the apps were not readable by screen readers. Likewise, three consumers were unable to pay their bills and configure their voicemail settings online because their telecommunications and advanced communications services providers' websites were not accessible to screen readers. One consumer reported that her text messaging app was rendered inaccessible when software upgrades removed advanced communications services accessibility features previously provided by earlier software versions. Another consumer stated that operating system upgrades turned off her phone's accessibility features and she was required to restore them. One consumer alleged that advanced communications services features, such as text chat built into online video games, were inaccessible to consumers who are blind. As for devices, some consumers reported that certain handset keyboards, dial pads, and screens were inaccessible to people who were blind or visually impaired. Finally, consumers who are blind, hard of hearing, or autistic reported that certain Lifeline service providers did not provide them with accessible phones. With respect to usability, one consumer stated that he was unable to obtain accessible technical support to help him learn how to use his phone. Other consumers complained that service providers had failed to provide accessible ways to apply for a service, purchase a phone, obtain general customer service, pay their bills, or obtain directory assistance.

30. *Actions Taken to Resolve Accessibility Complaints.* For each Request for Dispute Assistance, DRO offered assistance to the consumer and the manufacturer or service provider and facilitated a resolution for all Requests for Dispute Assistance filed during the period covered by this Report. Entities responding to these requests resolved consumers' accessibility concerns by taking one or more of the following actions: rewriting apps and webpages, restoring accessibility features that were deleted by software updates, redesigning devices, or providing phones with better sound, keyboards, dial pads, and screen sizes. Some respondents resolved usability requests by improving accessible customer service and by providing accessible, alternative ways to purchase devices or services. These alternative solutions ranged from providing customer service to consumers directly through accessible chat, e-mail, or phone. After facilitated conversations, two consumers concluded that no action was necessary by the covered entities.

31. As a result, no consumer chose to escalate a Request for Dispute Assistance to an informal complaint for investigation by the Enforcement Bureau. Furthermore, the Commission did not assess any forfeiture penalties for accessibility-related violations during the period covered by this Report. Based on this experience, it appears that the Request for Dispute Assistance process was effective in achieving the successful and cooperative resolution of all alleged violations of sections 255, 716, and 718 that were brought to the attention of DRO during the period covered by this Report.

32. *Time Used to Resolve Accessibility Complaints.* Of the Requests for Dispute Assistance that were filed during the reporting period, nine (38%) were completed in 30 days, five (21%) were completed within 60 days, two (8%) were completed within 90 days, seven (29%) were completed within 180 days, and one (4%) was completed within less than one year.

33. *Actions for Mandamus and Appeals Filed.* There were no actions for mandamus or appeals filed with respect to complaints during the period covered by this Report.

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

34. 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. We received no comments indicating that these requirements have hindered the development and deployment of new communications technologies.

VII. CONCLUSION

35. The ten years since enactment of the CVAA have seen significant advancements in the accessibility of telecommunications and advanced communications services and equipment. These positive developments have continued over the past two years. We will continue to monitor accessibility developments and are encouraged by the stakeholders' continued collaboration to ensure accessibility for millions of Americans with disabilities.

FEDERAL COMMUNICATIONS COMMISSION

Patrick Webre
Chief
Consumer and Governmental Affairs Bureau

APPENDIX A

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 2018 Biennial Report Required by the Twenty-First Century Communications and Video Accessibility Act, CG Docket No. 10-213, Public Notice, 35 FCC Rcd 1862 (CGB 2020), (2020 CVAA Assessment Public Notice).

<u>Abbreviation</u>	<u>Commenter</u>
ACB	American Council of the Blind
CTA	Consumer Technology Association
CTIA	CTIA - The Wireless Association
Wireless RERC	Rehabilitation Engineering Research Center for Wireless Inclusive Technologies
TDI et al.	Comments by TDI et. al. were jointly filed by Telecommunications for the Deaf and Hard of Hearing, Inc., National Association of the Deaf, Deaf and Hard of Hearing Consumer Advocacy Network, Hearing Loss Association of America, Cerebral Palsy and Deaf Organization, American Association of the DeafBlind, Deaf/Hard of Hearing Technology-RERC, Universal Interface & Information Technology Access-RERC.

Tentative Findings Commenters

Consumer and Governmental Affairs Bureau Seeks Comment on Tentative Findings for the 2020 Twenty-First Century Communications and Video Accessibility Act Biennial Report, CG Docket No. 10-213, Public Notice, DA 20-768 (CGB July 21, 2020), (2020 CVAA Tentative Findings Public Notice).

<u>Abbreviation</u>	<u>Commenter</u>
TDI et al.	Comments by TDI et. al. were jointly filed by Telecommunications for the Deaf and Hard of Hearing, Inc., National Association of the Deaf, Deaf and Hard of Hearing Consumer Advocacy Network, Hearing Loss Association of America, Cerebral Palsy and Deaf Organization, American Association of the DeafBlind, Deaf/Hard of Hearing Technology-RERC, Universal Interface & Information Technology Access-RERC.
Wireless RERC	Rehabilitation Engineering Research Center for Wireless Inclusive Technologies

APPENDIX B

Commission Actions to Implement the CVAA
Since October 8, 2018¹⁰⁰**Section 102. Hearing Aid Compatibility**

Notice of New Docket and Filing Procedures for Requesting Waiver of Wireline Telephone Volume Control Reset Rules, CG Docket No. 18-307, Public Notice, 33 FCC Rcd 11598 (CGB 2018), available at <https://docs.fcc.gov/public/attachments/DA-18-1196A1.pdf>.

FCC Grants ClearCaptions, LLC Request for Waiver of Volume Control Reset Rules for ClearCaptions Blue Telephone Devices, with Conditions, CG Docket No. 18-307, Order, 33 FCC Rcd 11602 (CGB 2018), available at <https://docs.fcc.gov/public/attachments/DA-18-1197A1.pdf>.

Requests for Waiver of the Hearing Aid Compatibility Volume Control Reset Rules; Ultratec, Inc., CG Docket No. 18-307, Order, 33 FCC Rcd 11736 (CGB 2018), available at <https://docs.fcc.gov/public/attachments/DA-18-1236A1.pdf>.

Request for Waiver of the Hearing Aid Compatibility Volume Control Reset Rules; CaptionCall, LLC, CG Docket No. 18-307, Order, 34 FCC Rcd 8174 (CGB 2019), available at <https://docs.fcc.gov/public/attachments/DA-19-932A1.pdf>.

Requests for Waiver of the Hearing Aid Compatibility Volume Control Reset Rules; Clarity Products, LLC, CG Docket No. 18-307, Order, 34 FCC Rcd 11979 (CGB 2019), available at <https://docs.fcc.gov/public/attachments/DA-19-1252A1.pdf>.

Section 103. Relay Services

Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, CG Docket No. 03-123, Report and Order and Further Notice of Proposed Rulemaking, 34 FCC Rcd 8483 (2019), available at <https://docs.fcc.gov/public/attachments/FCC-19-90A1.pdf>.

Section 104. Access to Advanced Communications Services and Equipment

Coalition of E-Reader Manufacturers' Petition for Class Waiver of Sections 716 and 717 of the Communications Act and Part 14 of the Commission's Rules Requiring Access to Advanced Communications Services (ACS) and Equipment by People with Disabilities, CG Docket No. 10-213, Order, 34 FCC Rcd 255 (CGB 2019), available at <https://docs.fcc.gov/public/attachments/DA-19-54A1.pdf>.

Accessibility Recordkeeping Compliance Certification and Contact Information Reporting Requirements, Public Notice, DA 19-156, 34 FCC Rcd 1110 (CGB 2019), available at <https://docs.fcc.gov/public/attachments/DA-19-156A1.pdf>.

¹⁰⁰ This list of Commission actions since October 8, 2018, to implement the CVAA excludes public notices announcing scheduled meetings, upcoming events, pleading cycles and other administrative or non-substantive matters. Additionally, it excludes references to sections of the CVAA on which the Commission did not take substantive action over the past two years.

Accessibility Recordkeeping Compliance Certification and Contact Information Reporting Requirements, Public Notice, DA 20-151, 35 FCC Rcd 943 (CGB 2020), available at <https://docs.fcc.gov/public/attachments/DA-20-151A1.pdf>.

Section 105. National Deaf-Blind Equipment Distribution Program

FCC Invites Applications for Certification to Participate in the National Deaf-Blind Equipment Distribution Program for Kentucky and Illinois, CG Docket No. 10-210, Public Notice, 34 FCC Rcd 4785 (CGB 2019), available at <https://docs.fcc.gov/public/attachments/DA-19-543A1.pdf>.

2019-2020 Allocations for the National Deaf-Blind Equipment Distribution Program, CG Docket No. 10-210, Public Notice, 34 FCC Rcd 4834 (CGB 2019), available at <https://docs.fcc.gov/public/attachments/DA-19-557A1.pdf>.

FCC Announces Entity Certified to Participate in the National Deaf-Blind Equipment Distribution Program for Kentucky, CG Docket No. 10-210, Public Notice, 34 FCC Rcd 6435 (CGB 2019), available at <https://docs.fcc.gov/public/attachments/DA-19-728A1.pdf>.

FCC Announces Entity Certified to Participate in the National Deaf-Blind Equipment Distribution Program for Illinois, CG Docket No. 10-210, Public Notice, 34 FCC Rcd 7259 (CGB 2019), available at <https://docs.fcc.gov/public/attachments/DA-19-806A1.pdf>.

2020-2021 Allocations for the National Deaf-Blind Equipment Distribution Program, CG Docket No. 10-210, Public Notice, 35 FCC Rcd 5314 (CGB 2020), available at <https://docs.fcc.gov/public/attachments/DA-20-527A1.pdf>.

Section 202. Video Description and Closed Captioning

Video Description

Media Bureau Grants In Part USA Network's Request for Waiver of Video Description Rules, MB Docket No. 11-43, Memorandum Opinion and Order, 34 FCC Rcd 9335 (MB 2019), available at <https://docs.fcc.gov/public/attachments/DA-19-1019A1.pdf>.

Second Report to Congress on Video Description and Implementation of the 21st Century Communications and Video Accessibility Act of 2010, MB Docket No. 11-43, Report, 34 FCC Rcd 9350 (MB 2019), available at <https://docs.fcc.gov/public/attachments/DA-19-1023A1.pdf>.

Video Description: Implementation of the Twenty-First Century Communications and Video Accessibility Act of 2010, MB Docket No. 11-43, Notice of Proposed Rulemaking, 35 FCC Rcd 4293 (MB 2020), available at <https://docs.fcc.gov/public/attachments/FCC-20-55A1.pdf>.

Accessible Emergency Information

Reminder Regarding Obligations to Make Televised Emergency Information Accessible to Viewers with Disabilities, MB Docket No. 12-107, Public Notice, 34 FCC Rcd 7842 (CGB 2019), available at <https://docs.fcc.gov/public/attachments/DA-19-855A1.docx>.

Reminder Regarding Obligations to Make Televised Emergency Information Accessible to Viewers with

Disabilities, MB Docket No. 12-107, Public Notice, DA 20-855 (CGB 2020), available at <https://docs.fcc.gov/public/attachments/DA-20-855A1.docx>.

Section 205. Access to Video Programming Guides and Menus Provided on Navigation Devices

Media Bureau Reminds Covered Mid-Sized and Smaller MVPDs of December 20, 2018 Accessible User Interfaces Deadline, MB Docket No. 12-108, Public Notice, 33 FCC Rcd 11061 (MB 2018), available at <https://docs.fcc.gov/public/attachments/DA-18-1132A1.pdf>.

Media Bureau Grants American Cable Association's Petition for Waiver of Accessible User Interfaces Requirements, MB Docket No. 12-108, Memorandum Opinion and Order, 33 FCC Rcd 11049 (MB 2018), available at <https://docs.fcc.gov/public/attachments/DA-18-1130A1.pdf>.

APPENDIX C

Commission Outreach and Education

FCC staff made presentations or disseminated information about the CVAA, the Accessibility Clearinghouse,¹⁰¹ and consumer rights and remedies available under sections 255, 716, and 718 of the Communications Act at the following conferences and events from October 8, 2018 through October 7, 2020. These events were attended by individuals with disabilities, industry representatives, government officials, and other stakeholders.

Date(s)	Group Name (Type of Event)	Location
October 8, 2018	Interagency-Wide Accessibility Forum	Washington, DC
October 17, 2018	Disability Employment Awareness Month	Washington, DC
October 17, 2018	American Association of People with Disabilities Mentoring Day	Washington, DC
October 18, 2018	Government Contact Center Council Monthly Meeting Presentation	Washington, DC
October 21, 2018	NATOA Webinar	Washington, DC
October 23-28, 2018	Association of Late Deafened Adults Annual Conference	Overland Park, KS
November 5, 2018	Native Nations Communications Task Force	Washington, DC
November 6, 2018	IRS Partner Disability Seminar	Washington, DC
February 25, 2019	American Council of the Blind, Legislative Summit	Alexandria, VA
March 12-15, 2019	CSUN Assistive Technology Conference	Anaheim, CA
March 27-28, 2019	NTID ASL Lecturer Series and Center on Accessible Technology	Rochester, NY
April 8-9, 2019	TRS Advisory Council	Washington, DC

¹⁰¹ Pursuant to section 717(d) of the Act, the Commission established a clearinghouse of information on the availability of accessible products and services and accessibility solutions required under sections 255, 716, and 718. 47 U.S.C. § 618(d).

April 10, 2019	Disability Advisory Committee	Washington, DC
April 23, 2019	International Hearing Society	Washington, DC
May 10, 2019	Enhanced ENT Forum	Washington, DC
June 15, 2019	Stakeholder Partnerships, Education & Communication Awareness Day	Havre De Grace, MD
June 17-18, 2019	NENA 2019 Conference	Orlando, FL
June 17-19, 2019	Hearing Loss Association of America Convention	Rochester, NY
June 18, 2019	Chairman's AAA Awards	Arlington, VA
June 25, 2019	US Dept of Education Cognitive Disabilities Presentation	Washington, DC
July 7-11, 2019	Registry of Interpreters for the Deaf Annual Conference	Providence, RI
July 8-10, 2019	American Council of the Blind Annual Conference	Rochester, NY
July 31-August 3, 2019	National Deaf Black Advocates Conference	Oakland, CA
August 14, 2019	National Association of State Agencies of Deaf and Hard of Hearing	Washington, DC
August 15-17, 2019	TDI Annual Conference	Washington, DC
August 21, 2019	Webinar for International Hearing Society (IHS) on certification of IP CTS users	Washington, DC
September 4-7, 2019	Deaf Senior Citizens of America Conference	Seattle, WA
September 11-13, 2019	National Association of State Relay Administration (NASRA)	Phoenix, AZ
September 14-16, 2019	TRS Advisory Council	Phoenix, AZ
September 16-17, 2019	Telephone Equipment Distribution Association	Phoenix, AZ

September 18, 2019	North Carolina Disability Awareness Day	Raleigh, NC
September 20, 2019	Deaf in Government	Washington, DC
September 24, 2019	Disability Advisory Committee	Washington, DC
October 8, 2019	Maryland State Legislative Day	Annapolis, MD
October 9, 2019	GSA/HUD Hosted Interagency-Wide Accessibility	Washington, DC
October 16, 2019	Disability Mentoring Day	Washington, DC
October 21, 2019	NATOA Webinar	Washington, DC
October 23-28, 2019	Association of Late Deafened Adults Annual Conference	Overland Park, KS
November 21, 2019	Family Online Safety Institute Annual Conference	Washington, DC
December 11, 2019	Consumer Advisory Committee	Washington, DC
January 27-31, 2020	FCC Rural Tour	Arizona and New Mexico
January 31, 2020	Rural Tour: Disability Focus	Albuquerque, NM
February 24, 2020	American Council of the Blind, Legislative Summit	Alexandria, VA
February 26, 2020	Disability Advisory Committee	Washington, DC
March 3, 2020	Gallaudet Career Day	Washington, DC
April 3, 2020	TRS Advisory Council	Washington, DC
May 5, 2020	Deaf in Government Webinar on Accessible Emergency Communications	Washington, DC
June 20, 2020	Body of European Regulators for Electronic Communications - Organization for Economic Co-operation and Development Workshop on Quality of Service	Washington, DC

July 7, 2020	American Council on the Blind Annual Conference	Washington, DC
July 14, 2020	Federal Partners Call	Washington, DC
July 28, 2020	Examining TRS: Milestones and Consumer Impact (ADA30)	Washington, DC
August 5, 2020	ADA Cleveland ADA30 Celebration: Title IV of the ADA	Washington, DC
August 26, 2020	Hearing Loss Association of America Webinar	Washington, DC
September 14, 2020	TRS Advisory Council	Washington, DC
September 25, 2020	Consumer Advisory Committee	Washington, DC
September 22, 2020	National Disability Forum, SSA	Washington, DC
September 29, 2020	Streaming West Online Conference	Washington, DC
October 1, 2020	CommLaw Group Disability Panel	Washington, DC
October 7, 2020	Interagency Accessibility Forum	Washington, DC