



PUBLIC NOTICE

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CONSUMER AND GOVERNMENTAL AFFAIRS BUREAU SEEKS COMMENT ON TENTATIVE FINDINGS FOR THE 2018 TWENTY-FIRST CENTURY COMMUNICATIONS AND VIDEO ACCESSIBILITY ACT BIENNIAL REPORT

Pleading Cycle Established

CG Docket No. 10-213

Comments Due: August 23, 2018

I. INTRODUCTION AND BACKGROUND

1. This Public Notice seeks comment on tentative findings for the biennial report to Congress required by the Twenty-First Century Communications and Video Accessibility Act of 2010 (CVAA).¹ Congress directed the Commission to evaluate the CVAA's progress in a report to Congress every two years.² In accordance with this directive, the Commission submitted CVAA biennial reports in 2012, 2014, and 2016.³ The next CVAA biennial report is due October 8, 2018.

2. The 2018 CVAA Biennial Report will provide an assessment of industry compliance over the past two years with sections 255, 716, and 718 of the Communications Act of 1934, as amended (the Act), which collectively require telecommunications and advanced communications services (ACS) and equipment to be accessible to and usable by individuals with disabilities.⁴ The Report will also address accessibility barriers that still exist with respect to new communications technologies,⁵ and the effect of the accessibility-related recordkeeping and enforcement requirements under section 717 of the Act on the development and deployment of such new technologies.⁶ Finally, the Report will provide information

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) (technical corrections to the CVAA).

² See section 717(b)(1), as added by the CVAA, codified at 47 U.S.C. § 618(b)(1). These reports must be submitted to the Senate Committee on Commerce, Science, and Transportation and the House Committee on Energy and Commerce. *Id.*

³ 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 (CGB 2016) (2016 CVAA Biennial Report).

⁴ See 47 U.S.C. § 616(b)(1)(A); S. Rep. No. 111-386 at 9 (2010) (Senate Report); H.R. Rep. No. 111-563 at 27 (2010) (House Report); see also 47 U.S.C. §§ 255, 617, 619; 47 CFR Part 6, Part 7, Part 14.

⁵ 47 U.S.C. § 616(b)(1)(B).

⁶ 47 U.S.C. § 616(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
(continued....)

about the number, nature of and actions taken to resolve complaints alleging violations of sections 255, 716, and 718 for the period of January 1, 2016, through December 31, 2017, including the length of time that the 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.⁷

3. Section 717(b)(2) requires the Commission to seek public comment on its tentative findings on the above-mentioned issues prior to submission of each biennial report to Congress.⁸ To help inform the Commission's tentative findings, the Commission's Consumer and Governmental Affairs Bureau (CGB or Bureau) issued a public notice on April 5, 2018, inviting comments on a variety of matters concerning the level of accessibility and usability of covered products and services since the release of the *2016 CVAA Biennial Report*.⁹ The Bureau also sought comment on accessibility barriers with respect to new communication technologies that are both within and outside the scope of the Act, including communication services, hardware, software, applications, or plug-ins that have been deployed since the *2016 CVAA Biennial Report*.¹⁰ Finally, the Bureau sought comment on the impact, if any, that the accessibility recordkeeping requirements and enforcement measures have had on the development and deployment of new communications technologies.¹¹ Comments were received from the American Council of the Blind (ACB); Cisco Systems, Inc. (Cisco); CTIA; Teresa Meyers (Meyers); Rehabilitation Engineering Research Center for Wireless Inclusive Technologies (Wireless RERC); Telecommunications for the Deaf and Hard of Hearing, Inc. et al. (TDI et al.);¹² and the Telecommunications Industry Association (TIA). DeafBlind Citizens in Action (DBCA) submitted *ex parte* comments.¹³

4. We now seek comment on whether the tentative findings contained in the Attachment to this Public Notice accurately represent the current state of communications technologies accessibility. To the extent commenters believe the tentative findings do not provide an accurate representation, we seek

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these products and services with peripheral devices or specialized customer premises equipment (CPE) 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. 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 §§ 14.30-14.52. 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).

⁷ 47 U.S.C. § 618(b)(1)(C)-(F).

⁸ 47 U.S.C. § 618(b)(2).

⁹ *Consumer and Governmental Affairs Bureau Seeks Comment on the Accessibility of Communications Technologies for the 2016 Biennial Report Required by the Twenty-First Century Communications and Video Accessibility Act*, CG Docket No. 10-213, Public Notice, 2018 WL 1693062, DA 18-340 (CGB Apr. 5, 2018) (*2018 CVAA Assessment Public Notice*).

¹⁰ *Id.* at para. 13.

¹¹ *Id.* at para. 14.

¹² Comments by TDI et. al. were jointly filed by TDI; National Association of the Deaf; Deaf and Hard of Hearing Consumer Advocacy Network; Association of Late-Deafened Adults, Inc.; Hearing Loss Association of America; Cerebral Palsy and Deaf Organization; Deaf Seniors of America; National Association of State Agencies of the Deaf and Hard of Hearing, Inc.; Deaf/Hard of Hearing Technology RERC; Universal Interface & Information Technology and Access RERC; National Association of State Relay Administration; Telecommunications Equipment Distribution Program Association.

¹³ Letter from George Stern, Vice President, DBCA, to CGB, FCC, CG Docket No. 10-213 (filed July 2, 2018) (DBCA Letter).

comment on why they do not and how they should be revised to do so. We also seek comment on the extent to which the actions taken by industry, as described in the Attachment, have resulted in increased accessibility and, where relevant, the usability and compatibility of telecommunications services and equipment, ACS, and equipment used for ACS since delivery of the *2016 CVAA Biennial Report* to Congress. Do these products and services offer the same range of low-end and high-end features, functions, and prices that are available to the general public? What other kinds of information would help the Commission to conduct these assessments, as required by the CVAA, for the next biennial report to Congress, to be submitted by October 8, 2020? In order to facilitate review of all comments, we request that commenters identify the specific findings on which they are providing comment.

II. APPLICABLE STATUTORY PROVISIONS

5. The purpose of the CVAA, which amended the Act, is “to help ensure that individuals with disabilities are able to fully utilize communications services and equipment and better access video programming.”¹⁴ To achieve this objective, the CVAA added or amended the enforcement of the following accessibility-related provisions of the Act, compliance with which is discussed in the Attachment to this Public Notice.

6. *Section 255.* Section 255 requires providers of telecommunications service and manufacturers of telecommunications equipment or CPE to ensure that their services and equipment are accessible to and usable by individuals with disabilities, if readily achievable.¹⁵ 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.¹⁶ 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.¹⁷

7. *Section 716.* Section 716 requires providers of ACS and manufacturers of equipment used for ACS to ensure that their services and equipment are accessible to and usable by individuals with

¹⁴ Senate Report at 1 (2010); 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 disabilities often did not share in the benefits of this rapid technological advancement).

¹⁵ 47 U.S.C. § 255(b), (c); *see also* 47 CFR Part 6 and Part 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, 6449, para. 77 (1999) (*Section 255 Order*); *see also* 47 CFR Part 6. 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 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.

¹⁶ 47 U.S.C. § 255(d).

¹⁷ *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).

disabilities, unless doing so is not achievable (defined as “with reasonable effort or expense”).¹⁸ “Advanced communications services” include: (1) interconnected VoIP service; (2) non-interconnected VoIP service; (3) electronic messaging service; and (4) interoperable video conferencing service.¹⁹ In contrast to interconnected VoIP services, which enable people to make and receive calls to and from the public switched telephone network (PSTN), non-interconnected VoIP services include 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.²⁰ 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.²¹ Interoperable video conferencing services provide real-time video communications, including audio, to enable users to share information.²²

8. The accessibility requirements for section 716 may be satisfied by: (1) building accessibility into the service or equipment²³ 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.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 CPE commonly used by individuals with disabilities to achieve access, unless that is not achievable.²⁵

9. 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 CPE that is available to consumers at nominal cost and that individuals with disabilities can access.²⁷

III. PROCEDURAL MATTERS

10. *Ex Parte Rules.* The proceeding this Notice initiates shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules.²⁸ Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or

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

¹⁹ 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, 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.*

²⁰ *See* 47 U.S.C. § 153(25), 153(36); 47 CFR § 9.3.

²¹ 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 47 CFR §§ 1.1200 *et seq.*

arguments already reflected in the presenter's written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

11. *Filing Requirements.* Interested parties may file comments on or before the date indicated on the first page of this document.²⁹ Comments may be filed using the Commission's Electronic Comment Filing System (ECFS).³⁰ All comments should refer to **CG Docket No. 10-213**. Please title comments responsive to this Notice as "Public Notice Comments – 2018 CVAA Biennial Report Tentative Findings." Further, we strongly encourage parties to develop responses to this Notice that adhere to the organization and structure of this Notice.

- **Electronic Filers:** Comments may be filed electronically using the Internet by accessing ECFS: <https://www.fcc.gov/ecfs/>.
- **Paper Filers:** Parties who choose to file by paper must file an original and one copy of each filing.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th Street, SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

12. *People with Disabilities.* To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer and Governmental Affairs Bureau at 202-418-0530 (voice), 844-432-2275 (videophone), or 202-418-0432 (TTY). This Notice can also be downloaded in Word and Portable Document Format (PDF) at <https://www.fcc.gov/general/disability-rights-office-headlines>.

²⁹ 47 CFR §§ 1.415, 1.419.

³⁰ See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

13. *Additional Information.* For further information regarding this Notice, contact Rosaline Crawford, Disability Rights Office, Consumer and Governmental Affairs Bureau, at 202-418-2075 or by e-mail to Rosaline.Crawford@fcc.gov, or Darryl Cooper, Disability Rights Office, Consumer and Governmental Affairs Bureau, at 202-418-7131 or by e-mail to Darryl.Cooper@fcc.gov.

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ATTACHMENT

TENTATIVE FINDINGS FOR THE 2018 BIENNIAL REPORT TO CONGRESS
AS REQUIRED BY THE CVAA

I. COMPLIANCE WITH SECTIONS 255, 716, AND 718

1. Based on the comments filed in response to the *2018 CVAA Assessment Public Notice*, and as described further herein, we propose the following tentative findings with respect to compliance with obligations contained in sections 255, 716, and 718. Overall, we tentatively find that continued improvements in the accessibility and usability of many covered services and equipment have been made since the *2016 CVAA Biennial Report*, and that 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, we also tentatively find that some accessibility gaps persist.

A. Accessibility

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

2. We tentatively find that over the past two years, there have been continued improvements in the accessibility of telecommunications services and advanced communications services (ACS) and equipment.¹ We base this tentative finding on the following: (1) the emerging availability of enterprise interconnected VoIP telephones with built-in accessibility features for people who are blind or visually impaired; (2) improved access to the telecommunications and ACS features of smartphones and other devices for people with a wide range of disabilities; and (3) an increased percentage of hearing aid compatible (HAC) wireless handsets.

3. *Enterprise telephones.* Enterprise telephones in the workplace have presented significant accessibility challenges for individuals who are blind or visually impaired.² Cisco recently took a major step to remedy this deficiency by building accessibility for people who are blind or visually impaired into its Series 8800 enterprise VoIP telephone.³ To achieve this, Cisco reports that it worked with ACB and other members of the blind community to identify and make accessible telephone features that are needed by people who are blind or visually impaired in the workplace.⁴ The new product is a desktop wireline telephone that uses integrated text-to-speech software and tone indicators to make information displayed on its screen accessible.⁵ Specifically, according to Cisco, “the phone will announce digits when a user

¹ 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.

² Cisco Comments at 4 n. 12 (citing Anthony Stephens, *Breaking Barriers for Those Who Are Blind and Visually Impaired*, Cisco Blog Collaboration (Apr. 11, 2018) (posted by Negisa Taymourian), <https://blogs.cisco.com/collaboration/breaking-barriers-for-blind-and-visually-impaired>) (Breaking Barriers Blog)).

³ Cisco Comments at 2.

⁴ Cisco Comments at 4 (noting the high unemployment “among individuals with vision disabilities, who must overcome the ‘misconceptions of what a person with vision impairment is capable of doing’”) (quoting Breaking Barriers Blog); see also ACB Comments at 1 (noting the need for technology to be accessible so that “Americans who are blind and visually impaired [can] maintain a competitive edge in the workplace”).

⁵ Cisco Comments at 2 (stating that its Series 8800 desk phone is the first enterprise-grade desk phone that includes built-in text-to-speech functionality capable of “conveying vital information on the display through audible voice and tone indicators”); see also Angie Mistretta, *Cisco Collaborates on Phones with American Council of the Blind*, Cisco Blog Collaboration, <https://blogs.cisco.com/collaboration/ip-phones-accessible-to-theblind?utm> (Mar. 19, 2018).

dials a telephone number, read aloud information when users navigate settings, announce the caller ID for an incoming call, as well as provide voice announcements for other features.”⁶ Employers who already provide Cisco Series 8800 enterprise telephones to their employees can enable the accessibility features through a software update without buying new equipment.⁷

4. *Smartphones.* Information provided in the record suggests that a variety of smartphones are available to deliver accessible telecommunications and ACS features to a wide range of individuals with disabilities, including people who are blind or visually impaired, deaf-blind, deaf or hard of hearing, have physical, mobility or dexterity limitations, and cognitive disabilities.⁸ In addition to speech-to-text and text-to-speech capabilities,⁹ for example, CTIA reports that new smartphone functions could enable consumers to use phones with gestures, single touch, and eye movements,¹⁰ as well as features that improve screen readability, such as font and display size, color inversion, color correction, and magnification.¹¹ They further report that accessibility solutions for individuals with cognitive disabilities include simplified user interfaces, such as one-step functionality and biometric methods such as fingerprinting or eye scans, instead of passwords, to open and operate a device or an app on iPhone and Android devices.¹² CTIA also reports that wireless service providers offer a wide range of service plans designed to meet the specific needs of people with disabilities, including options for unlimited calling, text messaging, e-mail, and video calling, as well as “accessibility plans” for customers who do not use voice networks, but instead may want data-only plans that include text, e-mail, Internet access, and video calling.¹³ In addition, commenters highlight new technologies designed to make phones accessible to people who are hard of hearing, such as sound customization options and high definition (HD) voice.¹⁴

5. *HAC phones.* According to the record, the wireless industry continues to exceed the Commission’s minimum hearing aid compatibility requirements for wireless handsets.¹⁵ For example,

⁶ Cisco Comments at 2 n.5 (citing Amanda Davis, *Assistive Tech for the Blind Takes Center Stage at CSUN 2018*, The Institute – IEEE Blog (Mar. 30, 2018), <http://theinstitute.ieee.org/ieee-roundup/blogs/blog/assistive-tech-for-the-blind-takes-center-stage-at-csun-2018> (Assistive Tech)).

⁷ Cisco Comments at 2 n.7.

⁸ See, e.g., Wireless RERC Comments at 3 (noting that mobile applications can be downloaded for specific accessibility functions); ACB Comments at 2 (stating that “performance in text-to-speech and voice dictation have increased significantly”); CTIA Comments at 9-11, 13 (noting that Siri, Samsung’s Bixby, Microsoft’s Cortana, and Google Assistant “can all read and send text messages, make emergency calls through voice-activation, and perform numerous other tasks for the user through simple vocal prompts”).

⁹ CTIA Comments at 21 (noting that text-to-speech software provides accessibility to people with dexterity, mobility, and cognitive issues).

¹⁰ *Id.* at 22-23 (reporting that “Microsoft [has] developed a smartphone app that interprets eye signals and translates them into letters, allowing people with motor neuron disease, also known as Lou Gehrig’s disease or ALS, to communicate with others”).

¹¹ *Id.* at 9-11.

¹² CTIA Comments at 24; see also *id.* at 23 (noting the availability of larger tablets, simplified interfaces and phone screens, and clear buttons); *id.* at 25 (noting that the interface for managing phone settings can be changed to easy-mode).

¹³ CTIA Comments at 5, 8 (citing data-only plans offered by Verizon, AT&T, and Sprint.); 5-6 (citing data-only plans offered by T-Mobile, Appalachian Wireless, GCI, and Bluegrass Cellular).

¹⁴ See CTIA Comments at 18-19 (discussing sound balancing, mono audio that converts into stereo audio, and the ability to turn off sound and enable vibration patterns); TDI et al. Comments at 2-3.

¹⁵ CTIA Comments at 16.

TIA reports that its members already are exceeding the 85% benchmark that will go into effect in 2021.¹⁶ Additionally, the wireless industry and consumers have committed to forming a HAC Consensus Task Force to assess whether 100% HAC compliance is achievable.¹⁷

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

6. Notwithstanding the significant improvements in access to communications technologies enumerated above, based on the record, and disability-related complaints received by CGB, we tentatively find that gaps continue to exist with respect to (1) the availability of accessible mobile phones with low-end features, functions, and prices (collectively, non-smartphones), (2) the existence of accessible alerting features on video calls, and (3) the availability of accessible telecommunications and ACS devices for people who are deaf-blind. Each of these are discussed below. In addition, companies should remain aware that upgrades to their software may result in accessibility barriers if measures are not taken to test such upgrades for accessibility prior to deployment.¹⁸ To this end, companies interested in upgrading their products and services should take into consideration the needs of people with disabilities prior to making these changes, to ensure that such individuals do not lose access to features provided in those offerings.

7. *Accessibility of non-smartphones for people who are blind or visually impaired.* We tentatively find that little, if any, progress has been made since the *2016 CVAA Biennial Report* with respect to the accessibility of non-smartphones used for telecommunications services and ACS, particularly for people who are blind or visually impaired. Non-smartphones are used with wireless services and include (a) basic phones used primarily or exclusively for voice communications, and (b) feature phones used for voice communications and text messaging, with little or no computing capabilities.¹⁹ According to comments in the record, consumers sometimes prefer non-smartphones because they are less expensive or because they do not need the advanced features offered on smartphones.²⁰

8. ACB asserts that accessible feature phones are becoming harder to find, which may limit “essential accessibility to a group unable to secure or use smartphones.”²¹ For example, while the *2016*

¹⁶ TIA Comments at 5.

¹⁷ CTIA Comments at 18 (noting that CTIA and the wireless industry have initiated engagement with associations representing consumers with hearing loss to set up this task force); TDI et al. Comments at 5 (noting its intent to work with industry to achieve this goal); Letter from Competitive Carriers Association, CTIA, Hearing Loss Association of America, National Association of the Deaf, Telecommunications for the Deaf and Hard of Hearing, and Telecommunications Industry Association, to Marlene H. Dortch, FCC, WT Docket No. 15-285 (filed Jan. 11, 2018) (providing an update on the status of the HAC Consensus Task Force); *Improvements to Benchmarks and Related Requirements Governing Hearing Aid-Compatible Mobile Handsets*, Report and Order, 31 FCC Rcd 9336 (2016) (establishing benchmarks for service providers and manufacturers to achieve 66% and 85% HAC compliance over a multi-year period and establishing the HAC Consensus Task Force).

¹⁸ For example, in a complaint received during the period covered by this Report, CGB learned that the failure to include accessibility features that had been contained in earlier versions of software, when the company upgraded that software, eliminated access for certain individuals with disabilities. *See infra* Section III.A, para. 23. The covered entity resolved the accessibility problem by rewriting this software. *See id.*, para. 25; *see also* DBCA Letter at 1 (raising concerns about the failure to consider the needs of people who are deaf-blind in the re-design of products).

¹⁹ *2016 CVAA Biennial Report*, 31 FCC Rcd at 11073 para. 16.

²⁰ *See, e.g.*, Wireless RERC Comments at 3 (“Non-smartphones have fewer options, but in some cases may offer greater accessibility . . . [T]here tends to be a tradeoff in functionality. Consumers vary in their preferences for smart versus non-smartphones.”).

²¹ ACB Supplemental Comments filed on May 9, 2018, at 2 (ACB May 9 Comments).

CVAA *Biennial Report* noted that Odin’s mobile feature phones might offer an accessible solution,²² ACB reports that such phones are currently not in stock.²³ Referring to research published by the American Foundation for the Blind (AFB),²⁴ ACB further reports that AFB recently found only a few feature phones that are accessible to people who are blind or visually impaired, but that one phone was from 2011 and some phones were no longer being manufactured.²⁵ ACB adds that the lack of accessibility on these types of wireless devices is problematic because our population is aging and the prevalence of vision loss and blindness is on the rise among seniors who are more likely to face economic barriers, and may not be able to afford costly smartphones.²⁶

9. CTIA reports that many service providers offer “service plans specifically for consumers who connect through feature phone devices who may need low-cost, basic connectivity or who many not want or need the functionality of a smartphone device or a service option.”²⁷ Nonetheless, the record appears to demonstrate that, at present, the marketplace has no more than three non-smartphone devices that are accessible to people who are blind or visually impaired. Our tentative finding with respect to this gap in the accessibility of telecommunications and ACS equipment is further supported by consumer requests for dispute assistance (RDAs) that have been filed with CGB during the period covered by this Report,²⁸ some of which involved concerns about the lack of accessibility on feature phones distributed by wireless service providers participating in the Commission’s Lifeline program.

10. *Communications devices for people who are deaf-blind.* Noting that “the communication needs of people who are deafblind are varied and complex,” DBCA states that some people who are “profoundly deafblind” have no knowledge of Braille and communicate exclusively through tactile American Sign Language. These individuals, according to DBCA, lack a means of independently making and receiving calls on any communications device.²⁹ In particular, DBCA emphasizes that this accessibility gap affects the ability of this population to contact emergency services.³⁰

11. *Accessible alerting.* Hearing individuals generally are alerted to an incoming voice telephone call by the sound of ringtone. CTIA reports that wireless phones also provide flashing lights and vibration for the receipt of ACS (e.g., text messages) and notifications of missed phone calls for

²² 2016 CVAA *Biennial Report*, 31 FCC Rcd at 11074, para. 17.

²³ See ACB May 9 Comments at 1.

²⁴ ACB May 9 Comments at 1 (citing Jamie Pauls, *Cell Phone Accessibility: Easier-to-Use Cell Phone Options for People Who Are Blind*, AccessWorld, Vol. 18, No. 2 (Feb. 2017), <https://www.afb.org/afbpress/pubnew.asp?DocID=aw180206> (AccessWorld) (describing an accessible feature phone as an “easy-to-use phone – one that requires only a minimal data plan, has talking menus and readouts, and possibly a large font that makes the display easier to see”).

²⁵ See ACB May 9 Comments at 1-2 (citing AccessWorld). The accessible feature phones that AFB identified were the Samsung Gusto III, the AT&T Z223 prepaid goPhone, and the Kyocera Verve. See Access World. ACB also reports that it contacted the “carrier receiving the most accolades in the article, [and learned that] the phone most praised for accessibility is no longer available by the carrier.” ACB May 9 Comments at 2.

²⁶ Specifically, according to ACB, the Centers for Disease Control estimates that there will be a significant increase in the prevalence in blindness over the next 20 years, due to the aging of the population and an increase in health-related vision problems affecting communities of color. ACB May 9 Comments at 1.

²⁷ CTIA Comments at 4. Specifically, CTIA reports that AT&T, Cricket Wireless, and Verizon offer low-cost service plans for feature phones. *Id.* at 9.

²⁸ See *infra* Section III (explaining that, as a prerequisite to filing an informal complaint, a consumer must first file an RDA and work with CGB and the covered entity to resolve the consumer’s accessibility concern).

²⁹ DBCA Letter at 1.

³⁰ *Id.*

people who are deaf or hard of hearing.³¹ CTIA also reports that some wireless phones provide the ability to turn off all sound or create complex or customizable alerting options for people with disabilities.³² Nevertheless, TDI et al. notes that there is a need for accessible alerting for video calls that is not being met.³³ Specifically, they explain that video conferencing services, especially when provided on smartphones, often fail to include vibration or flashing lights that can provide people who are deaf and hard of hearing with notifications of incoming calls.³⁴

B. Section 718: Internet Browsers Built into Mobile Phones

12. We tentatively 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, CTIA states that Google TalkBack and Apple VoiceOver screen readers provide improved browsing experiences by enabling voice commands, description of visual content, clickable images, and features for people with low vision.³⁵ ACB agrees that text-to-speech engines and “[v]oice assistance platforms like Alexa, Siri, and OK-Google have transformed the way people who are blind communicate with both peers and smart devices, advancing accessibility in areas that were unthinkable only two years ago.”³⁶ ACB also expresses the view that the accessibility of Internet browsers built into mobile phones will continue to improve as operating systems, such as Android, are updated with improvements to their system settings for accessibility features.³⁷ These accessibility features, however, are generally available only in smartphones and other relatively high-end devices.³⁸

C. Usability

13. In addition to requiring accessibility, sections 255, 716 and 718 require that services and equipment, as applicable to each of these provisions, are “usable” to people with disabilities.³⁹ 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

³¹ CTIA Comments at 18 (noting that phones use flickering flash notifications to inform users of incoming calls or texts).

³² *Id.*

³³ TDI et al. Comments at 1.

³⁴ *Id.* TDI et al. also asserts that non-interconnected VoIP service provided in video games remains inaccessible to people who are deaf or hard of hearing. *Id.* at 11 (acknowledging the emergence of speech-to-text capabilities that enable players to read a text transcript of other players’ spoken words, but asserting the need for the incorporation of relay services in games to allow for full social interaction by deaf and hard of hearing gamers). However, we note that a Commission waiver of the ACS accessibility requirements, which will expire on December 31, 2018, is currently in effect for video game software. *See Entertainment Software Association; 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 and Equipment by People with Disabilities*, Order, 32 FCC Rcd 10448 (CGB 2018).

³⁵ CTIA Comments at 13 (noting that Android phones include features such as voice-command, or can describe visual content through audible communications, including messages, buttons, keys, and clickable links or images); *see also id.* at 11 (“Apple’s VoiceOver includes numerous features useful to people with vision impairments, such as a Braille keyboard, pronunciation editor, audio descriptions, display accommodations, font adjustments, magnifier, and a speak screen.”).

³⁶ ACB Comments at 2.

³⁷ *Id.*

³⁸ *See supra* paras. 4, 7-9; *see also* Wireless RERC Comments at 3.

³⁹ 47 U.S.C. §§ 255, 617, 619.

accessible feature information), customer support, and technical support.⁴⁰ We tentatively 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. As discussed below, this tentative finding is supported by reports that covered entities are offering an increasing number of ways for consumers to locate accessibility assistance—including through their websites, and expanding their accessibility training to their customer care representatives. Nevertheless, we also tentatively find that consumers are continuing to have difficulties finding information and customer care service that will help them find and select the specific device or service that is accessible to them.

14. CTIA reports that its members provide customers with information and manuals in accessible formats, along with accessibility information and support on their websites, and that they continue to improve accessibility training for customer service representatives who are employed online and in stores.⁴¹ However, TDI et al. and the Wireless RERC report that it remains challenging for customers with disabilities to find phones that they can use, including phones that are compatible with hearing aids, both online and in-stores, because retail stores often do not have information to help customers find devices that are accessible for them.⁴² Research conducted by the Wireless RERC also suggests that consumers sometimes experience difficulties in determining whether a phone has the features that they need.⁴³ The Wireless RERC also reports that people with disabilities are not always able to turn on, without help from other people, accessibility features on their phones.⁴⁴ Additionally, DBCA complains that “[u]ser guides and other documentation continue to be inaccessible to those who are deafblind,” and further reports the difficulty that deaf-blind customers have when trying to communicate their needs for mobile technology in person at retail establishments.⁴⁵

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

15. We tentatively find that covered entities continue to include people with disabilities in product and service design and development. This tentative finding is supported by reports that industry has engaged consumers in one-on-one meetings, conferences, demonstrations, and product demonstrations.⁴⁶ As noted above, for example, the record contains evidence that Cisco ensured the participation of ACB in the design and testing phases of Cisco's new accessible interconnected VoIP

⁴⁰ 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).

⁴¹ CTIA Comments at 5 (noting that Sprint has in-store resources for accessible devices), 44 (noting that wireless service providers and equipment manufacturers provide accessible formats for billing and user guides), 45 (reporting that AT&T, Verizon, T-Mobile, TracFone maintain websites and apps that explain the accessibility of their services and devices, that Apple, Samsung, HTC, and LG “each have dedicated websites explaining in text, pictures, and video the various functionalities available on their devices, including break-outs for functionalities that can meet the needs of specific user communities” and that “the wireless industry has made available myriad resources regarding the ways in which consumers can find and learn about HAC-rated handsets and the HAC rating”).

⁴² TDI et al. Comments at 5.

⁴³ Wireless RERC Comments at 11 (stating that its “researchers encountered difficulty in locating information about certain [accessibility] features” for certain phones).

⁴⁴ *Id.* (reporting that “phone setup and enabling accessibility features is not easily or independently done for some people with disabilities”); DBCA Letter at 1 (asserting that individuals who are deaf-blind need others to set up mobile devices for them).

⁴⁵ DBCA Letter at 1

⁴⁶ CTIA Comments at 42.

phone prior to its deployment to ensure it met the needs of people who are blind or visually impaired.⁴⁷ TIA similarly reports that the industry continues to collaborate with the disability community to develop and deploy new accessible products and services.⁴⁸ In addition, CTIA reports that, in order to solicit consumer feedback, Verizon held private real-time text (RTT) demonstrations for people who are deaf and hard of hearing to share information about Verizon's RTT interface with Apple and Android devices.⁴⁹ TDI et al., however, believes that industry should perform more community engagement by, for example, including consumers with disabilities on advisory committees and in focus groups.⁵⁰ DBCA also asserts that companies do not contemplate the needs of individuals who are deaf-blind when redesigning popular devices.⁵¹

II. ACCESSIBILITY BARRIERS TO NEW COMMUNICATIONS TECHNOLOGIES

16. Section 717(b)(1)(B) requires the Commission to provide an evaluation of the extent to which accessibility barriers still exist with respect to new communications technologies.⁵²

17. Commenters generally agree that continued development in, and the roll out of, technologies such as 5G, RTT, text-to-911, HD voice, and Bluetooth capabilities will improve the accessibility of communications.⁵³ At the same time, the Wireless RERC reports that the lack of uniformity in the design of services available through the Internet of Things can create new access barriers.⁵⁴ TDI et al. also raises concerns about the availability of relay services for web conferencing, the lack of interoperability for video conferencing, and the extent to which virtual and augmented reality technologies are accessible.⁵⁵ For these reasons, we tentatively 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.

⁴⁷ ACB Comments at 1; Cisco Comments at 3 (“Cisco and ACB have worked together for months to identify and address the cross-section of ‘pain points’ and most common use cases faced by individuals who are blind or have low vision with respect to enterprise collaboration technology”).

⁴⁸ TIA Comments at 4-5 (reporting its efforts to engage communities in policy-setting and product development processes).

⁴⁹ CTIA Comments at 41-42 (“This conversation led to [Sprint] partnerships with Humanware (a Braille device manufacturer) to ensure Sprint devices were accessible, and the National Federation of the Blind, to offer a free app that converts printed text into speech or Braille to assist customers who are blind or have low vision. Input from the accessibility community also resulted in Sprint working with CapTel to release a new telephone that is compatible with select Braille readers. Sprint also hosted a DeafBlind Town Hall in several cities across the country.”).

⁵⁰ TDI et al. Comments at 7 (also suggesting that companies conduct needs assessments, take input from customers at sales centers, and include the community in “beta testing, research and development”). TDI et al. acknowledges, however, that the video gaming industry has engaged people with disabilities in its efforts to make video gaming accessible. *Id.* at 11.

⁵¹ DBCA Letter at 1 (“In recent redesigns of popular mobile technology, ports and home buttons have been removed, creating a very difficult accessibility barrier for this population. The removal of ports precludes listening with optimized direct hearing devices and charging simultaneously.”).

⁵² 47 U.S.C. § 618(b)(1)(B). Our assessment of new communications technologies is not limited to telecommunications, ACS, or Internet browser technologies covered under sections 255, 716, and 718. *See 2016 CVA Biennial Report*, 31 FCC Rcd at 11084, para. 44 & n.165.

⁵³ *See* CTIA Comments at 3, 19 (5G will enable high speed, low latency video communications), 31 (stating that “low-latency 5G networks and technologies support a variety of enhanced capabilities in health care”); TDI et al. Comments at 5-6 (discussing the benefits of RTT, HD voice, and text-to-911); TIA Comments at 8 (addressing 5G benefits).

⁵⁴ Wireless RERC Comments at 12-16.

⁵⁵ TDI et al. Comments at 9-11.

III. COMPLAINTS RECEIVED PURSUANT TO SECTION 717

18. Sections 717(b)(1)(C)-(F) require the Commission to report the following information with respect to complaints received pursuant to section 717(a) that allege violations of sections 255, 716, or 718:

- 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, 2016 and December 31, 2017;
- the actions taken to resolve such complaints, including forfeiture penalties assessed;
- the length of time that was taken by the Commission to resolve each such complaint; and
- the number, status, nature, and outcome of any actions for mandamus and any appeals filed.⁵⁶

19. Pursuant to section 717(a), the Commission's rules governing the handling complaints filed under sections 255, 716, and 718 require that, before filing an informal complaint, a consumer must submit an RDA to the Commission's Disability Rights Office (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 before the consumer files an informal complaint.⁵⁷ If the parties involved in an RDA 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.⁵⁸

20. The Commission's complaint rules also specify that upon receipt, the Commission must forward an informal complaint to the service provider or equipment manufacturer named in or implicated by the complaint.⁵⁹ The service provider or manufacturer then must file with the Commission and serve an answer responsive to 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.⁶⁰ 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.⁶¹ 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.⁶²

⁵⁶ 47 U.S.C. § 618(b)(1)(C)-(F).

⁵⁷ 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.

⁵⁸ 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).

⁵⁹ 47 CFR § 14.35(a).

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

⁶¹ 47 U.S.C. § 618(a)(3)(B), (a)(4); see also 47 CFR § 14.37(a).

⁶² 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

(continued....)

21. Over the past several years, this RDA process has achieved the resolution of the vast majority of accessibility concerns raised by consumers through dialogue and negotiation with covered entities, thereby reducing the need for filing informal complaints against such entities, and consequent enforcement action.⁶³ In addition, this process has encouraged service providers and equipment manufacturers to comply with the accessibility rules.⁶⁴

A. Number and Nature of Complaints Received

22. From January 1, 2016, to December 31, 2017, consumers filed 24 RDAs alleging violations of section 255, 716, or 718.⁶⁵ Of these 24 RDAs, nine RDAs (37%) involved the accessibility and usability of equipment and 15 RDAs (63%) involved the accessibility and usability of services. Of the 24 RDAs filed during the period covered by this Report, 22 RDAs (92%) alleged violations of section 255, and two RDAs (8%) alleged violations of sections 716. One of the 22 RDAs that alleged violations of section 255 also alleged a violation of section 718. Nine of the 24 RDAs (33%) involved the accessibility and usability of Lifeline phones and services.

23. With respect to accessibility, in the RDAs filed, some consumers stated that certain services provided through web browsers and apps were not accessible to them because they incorporated electronic messaging and non-interconnected VoIP services that were not accessible. One consumer reported that his ACS app was rendered inaccessible when software upgrades removed ACS accessibility features previously provided by earlier software versions. As for devices, some consumers reported handsets that had poor sound quality and video screens, keyboards or dial pads that were hard to read or difficult to use for people with dexterity limitations or who were blind or visually impaired. Finally, several consumers reported that phones provided to them by Lifeline program service providers were not accessible to people who are blind, hard of hearing, or who have speech, mobility or dexterity limitations.

24. In other RDAs, consumers reported usability issues, complaining that service providers had failed to provide accessible ways to apply for service, purchase a phone, learn how to use their phones or services, report service or equipment problems, obtain general customer service, pay their bills or cancel service, or obtain directory assistance. Some consumers with sight, dexterity, or cognitive limitations reported that they did not have accessible ways to apply for service. A few consumers who are blind or visually impaired alleged that their carrier's directory information was inaccessible. Customer service that was provided only by direct voice communications with a customer service representative or voice interactive menus was reported to be inaccessible by some consumers with speech, hearing, or cognitive limitations. For example, a consumer with cognitive limitations required more time than allotted by a voice menu to process and provide a response and some individuals with hearing and speech limitations could not use voice activated menus at all and requested, as an alternative, to contact customer service through chat or email.

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Commission issues a final order with respect to that action. 47 U.S.C. § 618(a)(4); *see also* 47 CFR § 14.37(c).

⁶³ *See 2012 CVAA Biennial Report*, 27 FCC Rcd at 12224, para. 49, n.148.

⁶⁴ *See id.*, 29 FCC Rcd at 11942, para. 56.

⁶⁵ Although consumers submitted an additional 258 requests for assistance during this period, typically using the Commission's online complaint filing system, DRO determined that these requests did not allege violations of section 255, 716, or 718 or the Commission's rules implementing those sections. These requests, therefore, are not included in this Report. DRO handles requests for assistance that allege violations of other provisions by converting those requests into informal complaints for further DRO processing (if they are related to accessibility) or referring them to the FCC's Consumer Inquiries and Complaints Division (if they are unrelated to accessibility). DRO also handles requests for assistance that allege violations of statutes outside of the Commission's jurisdiction by sending these to the relevant federal agency (e.g., complaints alleging violations of the Americans with Disabilities Act are sent to the Department of Justice).

B. Actions Taken to Resolve Accessibility Complaints

25. In accordance with the RDA process, for each of the RDAs received, DRO contacted the consumer and the manufacturer or service provider to offer assistance in resolving the accessibility or usability problem. DRO was able to facilitate a resolution between the consumer and the manufacturer or service provider for 23 of 24 RDAs filed during the period covered by this Report. The final RDA was withdrawn by the consumer when he switched to another carrier. Entities responding to the RDAs resolved consumers' accessibility concerns by taking one or more of the following actions: rewriting apps or restoring accessibility features to previously accessible apps, redesigning devices, or providing phones with better sound, keyboards, dial pads, and screen sizes. Some respondents resolved usability RDAs by providing alternate ways to apply for devices or services and to answer customer service questions. These solutions ranged from providing customer service through chat or e-mail to contacting consumers directly.

26. No consumer chose to escalate his or her RDA 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 RDA 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, with the exception of the one RDA withdrawn by the consumer.

C. Time Used to Resolve Accessibility Complaints

27. Of the RDAs that were filed during the reporting period, the RDA process was completed within 30 days for three RDAs (12.5%), within 60 days for 10 RDAs (42%), within 90 days for two RDAs (8%), within 180 days for six RDAs (25%), and within one year for three RDAs (12.5%). No complaints, either informal or formal, were filed during the period covered by this Report.

D. Actions for Mandamus and Appeals Filed

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

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

29. 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.⁶⁶

30. We tentatively find that the accessibility recordkeeping and enforcement requirements have not hindered the development and deployment of new communications technologies. This finding is supported, in part, by the absence of any claim that the Commission's accessibility-related recordkeeping and enforcement rules have hindered the development of new communications of technologies. Additional support is provided by TIA's statement that the recordkeeping requirements are working.⁶⁷ Further support is provided by commenters who report on the continued development and deployment of emerging technologies, such as 5G, RTT, text-to-911, HD voice, and the Internet of Things.⁶⁸

⁶⁶ 47 U.S.C. § 618(b)(1)(G).

⁶⁷ TIA Comments at 7.

⁶⁸ See *supra* Section II.