PUBLIC NOTICE

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CONSUMER AND GOVERNMENTAL AFFAIRS BUREAU SEEKS COMMENT ON ITS TENTATIVE FINDINGS ABOUT THE ACCESSIBILITY OF COMMUNICATIONS TECHNOLOGIES FOR THE 2014 BIENNIAL REPORT UNDER THE TWENTY-FIRST CENTURY COMMUNICATIONS AND VIDEO ACCESSIBILITY ACT

Pleading Cycle Established

CG Docket No. 10-213

Comment Date: September 11, 2014

I. Introduction

1. This Public Notice (Notice) seeks comment on tentative findings for the 2014 Biennial Report (*Report*) to Congress on the Twenty-First Century Communications and Video Accessibility Act of 2010 (CVAA). Public comment will assist the Commission in assessing the following: (1) the level of compliance with the CVAA's mandates requiring telecommunications and advanced communications services and equipment to be accessible to and usable by individuals with disabilities; (2) the effect of related recordkeeping and enforcement obligations; and (3) the extent to which accessibility barriers still exist with respect to new communications technologies. The Consumer and Governmental Affairs Bureau (CGB) of the Federal Communications Commission (FCC or Commission) will submit the final *Report* to Congress by October 8, 2014.

2. The purpose of the CVAA,[1] which amended the Communications Act of 1934 (Act), is "to help ensure that individuals with disabilities are able to fully utilize communications services and equipment and better access video programming."[2] In enacting the CVAA, Congress concluded that people with disabilities often have not shared in the benefits of this rapid technological advancement.[3] Congress directed the Commission to evaluate the CVAA's progress in addressing this inequity in a report to Congress every two years.[4] The Commission delivered the first biennial report to Congress on October 5, 2012 (*2012 CVAA Biennial Report*).[5]

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

[2] S. Rep. No. 111-386 at 1 (Senate Report); H.R. Rep. No. 111-563 at 19 (House Report) (2010) (noting that the communications marketplace had undergone a "fundamental transformation" since Congress adopted Section 255 of the Act in 1996. *See* 47 U.S.C. § 255 (requiring access to telecommunications services and equipment).

[3] Senate Report at 1-2; House Report at 19.

[4] *See* Section 717(b)(1) of the Act, as added by the CVAA, codified at 47 U.S.C. § 618(b)(1). Biennial reports must be submitted to the Committee on Commerce, Science, and Transportation of the Senate, and the Committee on Energy and Commerce of the House of Representatives. *Id. See also* Senate Report at 9; House Report at 27 (the report should "assess[] the level of compliance with the requirements of [the

3. Following passage of the CVAA on October 8, 2010, the Commission immediately began implementing this landmark legislation. In its *2012 CVAA Biennial Report* to Congress, the Commission reported that it had met every one of the CVAA's rigorous rulemaking deadlines, having already released five reports and orders adopting rules to implement various provisions of the CVAA.[6] Since the submission of the *2012 CVAA Biennial Report*, the Commission has continued to work with consumer, industry, and government stakeholders to ensure effective and timely implementation of the CVAA. As a result, the Commission has since released five additional reports and orders to implement the CVAA,[7] in compliance with all CVAA deadlines, where feasible.[8] Resources throughout the Commission's bureaus

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CVAA], as well as other matters related to the effectiveness of the Commission's complaint resolution process").

[5] *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*, CG Docket No. 10-213, *Biennial Report to Congress as Required by the Twenty-First Century Communications and Video Accessibility Act of 2010*, DA 12-1602, 27 FCC Rcd 12204 (CGB 2012) (*2012 CVAA Biennial Report*), available at https://apps.fcc.gov/edocs_public/attachmatch/DA-12-1602A1.pdf.

[6] *2012 CVAA Biennial Report,* 27 FCC Rcd at 12205-6, ¶ 2.

[7] Since the submission of the *2012 CVAA Biennial Report*, the Commission has released the following reports and orders adopting implementing regulations:

Accessible Emergency Information, and Apparatus Requirements for Emergency Information and Video Description: Implementation of the Twenty-First Century Communications and Video Accessibility Act of 2010, MB Docket Nos. 11-43 and 12-107, Report and Order and Further Notice of Proposed Rulemaking, FCC 13-45, 28 FCC Rcd 4871 (2013), available at https://apps.fcc.gov/edocs_public/attachmatch/FCC-13-45A1.pdf) **(**adopting rules requiring that emergency information provided in video programming be made accessible to individuals who are blind or visually impaired and that certain apparatus be capable of delivering video description and emergency information).

Implementation of Section 718 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, WT Docket No. 96-198, CG Docket No. 10-145, Report and Order, FCC 13-57, 28 FCC Rcd 5957 (2013), available at https://apps.fcc.gov/edocs_public/attachmatch/FCC-13-57A1.pdf (implementing Section 718 and part of Section 716 of the Act to ensure that people with disabilities have access to emerging and innovative advanced communications technologies).

Accessibility of User Interfaces, and Video Programming Guides and Menus, MB Docket Nos. 12-108 and 12-107, Report and Order and Further Notice of Proposed Rulemaking, FCC 13-138, 28 FCC Rcd 17330 (2013), available at https://apps.fcc.gov/edocs_public/attachmatch/FCC-13-138A1.pdf (adopting rules requiring accessibility of user interfaces and video programming guides and menus).

Closed Captioning of Internet Protocol-Delivered Video Programming; Implementation of the Twenty-First Century Communications and Video Accessibility Act of 2010; Closed Captioning of Internet Protocol-Delivered Video Clips, MB Docket No. 11-154, Second Order on Reconsideration and Second Further Notice of Proposed Rulemaking, FCC 14-97, 29 FCC Rcd ___ (rel. Jul. 14, 2014), available at https://apps.fcc.gov/edocs_public/attachmatch/FCC-14-97A1.pdf (extending Internet protocol closed captioning requirements to certain excerpts of video programming that has been shown on television with closed captioning).

Facilitating the Deployment of Text-to-911 and Other Next Generation 911 Applications; Framework for Next Generation 911 Deployment, PS Docket Nos. 11-153 and 10-255, Second Report and Order and Third Further Notice of Proposed Rulemaking, FCC 14-118, 29 FCC Rcd ___ (rel. Aug. 13, 2014), available at https://apps.fcc.gov/edocs_public/attachmatch/FCC-14-118A1.pdf (requiring providers of interconnected text messaging applications to be capable of supporting text-to-911 service by December 31, 2014, and thereafter to implement text-to-911 by June 30, 2015 or within six months from the date of a Public Safety Answering Point (PSAP) request, whichever is later, for that PSAP).

[8] The CVAA required the Commission to prescribe regulations to implement Sections 204 and 205 of the CVAA by October 9, 2013, a deadline that occurred during a shutdown of the Federal government due to a lapse in appropriations, when the Commission could not conduct normal business operations. *See* Pub. L. No. 111-260, §§

and offices have contributed to this comprehensive effort, reflecting the Commission's ongoing commitment to ensuring communications access for millions of Americans with disabilities.

II. Background and Scope of the *Report*

4. The *Report* that will be submitted to Congress must include the following elements:

(A) An assessment of the level of compliance with Sections 255 (accessibility of telecommunications services and equipment), 716 (accessibility of advanced communications services and equipment), and 718 (accessibility of Internet browsers built into mobile phones).
(B) An evaluation of the extent to which any accessibility barriers still exist with respect to new communications technologies.
(C) The number and nature of complaints received pursuant to Section 717(a) (recordkeeping and enforcement obligations of service providers and equipment manufacturers that are subject to Sections 255, 716, and 718).
(D) A description of the actions taken to resolve such complaints, including forfeiture penalties assessed.
(E) The length of time that was taken by the Commission to resolve each such complaint.
(F) The number, status, nature, and outcome of any actions for mandamus filed and of any appeals filed.
(G) An assessment of the effect of the recordkeeping and enforcement requirements of Section 717 on the development and deployment of new communications technologies.[9]

5. *Section 255*. Section 255 of the Act requires providers of telecommunications service and manufacturers of telecommunications equipment or customer premises equipment (CPE) to ensure that such services and equipment are accessible to and usable by individuals with disabilities, if readily achievable.[10] 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.[11] 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.[12] 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.[13] In addition, the rules implementing Section 255 cover voice mail and interactive voice

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204(b), 205(b). The Commission adopted a report and order with final rules to implement these sections within two weeks after the government re-opened.

[9] *See* 47 U.S.C. § 618(b)(1).

[10] 47 U.S.C. §§ 255(b), (c). *See also* 47 C.F.R. 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).

[11] 47 U.S.C. § 255(d).

[12] *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, FCC 99-181, 16 FCC Rcd 6417, 6449, ¶ 77 (1999) (*Section 255 Order*). *See also* 47 C.F.R. Part 6.

[13] 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).

response systems (phone systems that provide callers with menus of choices).[14] In 2007, the Commission adopted rules extending Section 255's accessibility obligations to interconnected voice over Internet protocol (VoIP) service providers and interconnected VoIP equipment manufacturers.[15]

6. *Sections 716 and 717*. Section 716 of the Act requires providers of advanced communications services and manufacturers of equipment used for advanced communications services 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").[16] "Advanced communications services" include: (1) interconnected VoIP service; (2) non-interconnected VoIP service; (3) electronic messaging service; and (4) interoperable video conferencing service.[17] 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 at all.[18] 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.[19] Interoperable video conferencing services provide real-time video communications, including audio, to enable users to share information.[20]

7. The accessibility requirements for section 716 may be satisfied by: (1) building accessibility into the service or equipment;[21] 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.[22] 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.[23]

8. On October 7, 2011, the Commission released a report and order adopting rules to implement Sections 716 and 717 of the Act.[24] These rules directed covered manufacturers and service

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[14] 47 C.F.R. Part 7. *See also* FCC Section 255 Consumer Guide available at http://www.fcc.gov/guides/disabled-persons-telecommunications-access-section-255.

[15] *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, FCC 07-110, 22 FCC Rcd 11275 (2007) (*Section 255 VoIP Order*), available at https://apps.fcc.gov/edocs_public/attachmatch/FCC-07-110A1.pdf.

[16] 47 U.S.C. §§ 617(a)(1), (b)(1), (g).

[17] 47 U.S.C. § 153(1). *See also* 47 C.F.R. § 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.*

[18] *See* 47 U.S.C. §§ 153(25), 153(36); 47 C.F.R. § 9.3.

[19] 47 U.S.C. § 153(19).

[20] 47 U.S.C. § 153(27).

[21] 47 U.S.C. §§ 617(a)(2)(A), (b)(2)(A).

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

[23] 47 U.S.C. §§ 617(c).

[24] *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; 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*

providers to begin taking accessibility into account in the design of their products and services as of January 30, 2012.[25] Since January 30, 2013, these entities also have had to comply with Section 717's recordkeeping requirements pertaining to the accessibility of their products and services.[26] Beginning October 8, 2013, covered entities have had to fully implement Section 716 by making the products and services they introduce in the marketplace (or that are substantially upgraded) accessible to and usable by individuals with disabilities, or compatible with assistive technology, unless not achievable, in accordance with the Commission's rules.[27] Finally, the associated complaint procedures established pursuant to Section 717 of the Act became available to consumers on October 8, 2013.[28]

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.[29] 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.[30] On April 26, 2013, the Commission adopted rules implementing Section 718, which have required mobile phones with built-in Internet browsers manufactured on or after October 8, 2013, to comply with the Commission's accessibility requirements.[31]

10. *Scope of the Report.* The evaluation of compliance with Sections 255, 716, and 718 of the Act in this *Report* is, of necessity, circumscribed by the time periods during which each of the rules described above were in effect. For this *Report*, the Commission provides an assessment of industry compliance with the accessibility requirements of Section 255 since the submission of the *2012 CVAA Biennial Report* and compliance with Sections 716 and 718 with respect to covered equipment and services that have been introduced into the marketplace or substantially upgraded on or after October 8, 2013.[32] This *Report* also addresses accessibility barriers that still exist with respect to new communications technologies. Finally, this *Report* considers the effect of the accessibility-related recordkeeping and enforcement requirements under Section 717 of the Act on the development and deployment of new communications technologies since these requirements became effective.

11. Pursuant to Section 255 of the Act, since 1999 and 2007, respectively, the Commission has had in place complaint procedures to ensure that telecommunications and interconnected VoIP

People who are Blind, Deaf-Blind, or Have Low Vision, CG Docket Nos. 10-213 and 10-145, WT Docket No. 96-198, Report and Order and Further Notice of Proposed Rulemaking, FCC 11-151, 26 FCC Rcd 14557 (2011) (*ACS Report and Order* and *ACS FNPRM*). The rules adopted in the *ACS Report and Order* are codified in 47 C.F.R. Part 14.

[25] *ACS Report and Order*, 26 FCC Rcd at 14602, ¶ 108. The rules became effective 30 days after their publication in the Federal Register on December 30, 2011. *Id.*, 26 FCC Rcd at 14696, ¶ 328. *See also* 76 Fed. Reg. 82240 (Dec. 30, 2011).

[26] Specifically, covered entities must 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 CPE commonly used by people with disabilities to achieve access. 47 U.S.C. § 618(a)(5)(A).

[27] *ACS Report and Order*, 26 FCC Rcd at 14602-3, ¶ 110.

[28] 47 C.F.R. §§ 14.30(c), 14.32-14.37.

[29] 47 U.S.C. § 619(a).

[30] 47 U.S.C. § 619(b).

[31] CVAA, § 104(b); 47 C.F.R. §§ 14.60-61.

[32] 47 U.S.C. §§ 255, 617, 619; 47 C.F.R. Part 6, Part 7, Part 14.

services and equipment are accessible to and usable by individuals with disabilities.[33] Pursuant to Section 717 of the Act, the Commission established new procedures for complaints alleging violations of Sections 255, 716, or 718 of the Act.[34] The new complaint procedures became effective October 8, 2013.[35] As a result, for this *Report*, CGB will provide information about complaints alleging violations of Section 255 filed under the prior procedures for the period of January 1, 2012, through October 7, 2013, and about complaints alleging violations of Sections 255, 716, and 718 filed under the new procedures for the period of October 8, 2013, through December 31, 2013.[36]

III. Comment Sought on Tentative Findings

12. Section 717(b)(2) of the Act requires the Commission to seek public comment on its tentative findings prior to submission of each biennial report to Congress.[37] To help inform the Commission's tentative findings, the Commission issued a public notice on June 17, 2014, inviting comments related to the development of this *Report*.[38]

13. We now seek comment on whether the Commission's tentative findings contained in the Attachment to this 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 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, usability and compatibility, of telecommunications and advanced communications services and equipment since delivery of the *2012 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, 2016? In order to facilitate review of all comments, we request that commenters identify the specific findings on which they are providing comment.

IV. Procedural Matters

14. *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.[39] 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

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[33] 47 U.S.C. § 255; 47 C.F.R. Part 6 and Part 7. *See also Section 255 Order*, 16 FCC Rcd at 6466-6487, ¶¶ 109-166; *Section 255 VoIP Order*, 22 FCC Rcd at 11289, ¶ 25.

[34] 47 C.F.R. §§ 14.32-14.37.

[35] 47 C.F.R. § 14.30(c).

[36] 47 U.S.C. § 618(b)(2). As noted in the *2012 CVAA Biennial Report*, we believe it is most appropriate for these periodic reports to review complaints for the time period 1/1/20XX - 12/31/20XX+1. We generally find that this approach allows the Commission adequate time to solicit public comment on the issues that it must address in such reports, consistent with Section 717(b)(2), and best achieves the CVAA's objectives. *See 2012 CVAA Biennial Report*, 26 FCC Rcd at 12212, ¶ 16. Limiting the review in this *Report* to complaints received as of December 31, 2013, allowed the Commission to compile the relevant information and to seek comment on our tentative findings.

[37] 47 U.S.C. § 618(b)(2).

[38] *Consumer and Governmental Affairs Bureau Seeks Comment on the Accessibility of Communications Technologies for the 2014 Biennial Report Required by the Twenty-First Century Communications and Video Accessibility Act*, CG Docket No. 10-213, Public Notice, DA 14-828, 29 FCC Rcd __ (CGB rel. Jun. 17, 2014) (*2014 CVAA Assessment PN*) available at https://apps.fcc.gov/edocs_public/attachmatch/DA-14-828A1.pdf.

[39] 47 C.F.R. §§ 1.1200 *et seq.*

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 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).[40] 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).[41] Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

15. *Filing Requirements.* Interested parties may file comments on or before the date indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS).[42] All comments should refer to **CG Docket No. 10-213**. Please title comments responsive to this Notice as "PN Comments – CVAA Report Tentative Findings." Further, we strongly encourage parties to develop responses to this Notice that adhere to the organization and structure of the questions in this Notice.

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: http://fjallfoss.fcc.gov/ecfs2/.

- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

    - 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 9300 East Hampton Drive, Capitol Heights, MD 20743.

    - U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

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[40] 47 C.F.R. § 1.1206(b).

[41] 47 C.F.R. § 1.49(f).

[42] *See Electronic Filing of Documents in Rulemaking Proceedings*, 63 Fed. Reg. 24121 (1998).

16. *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 & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (TTY). Individuals with disabilities may request assistance from the Disability Rights Office to file comments in the Commission's Electronic Comment Filing System by sending an e-mail to dro@fcc.gov.

17. *Additional Information.* For further information about this Public Notice, please contact Rosaline Crawford at 202-418-2075 or by e-mail to Rosaline.Crawford@fcc.gov, Disability Rights Office, Consumer & Governmental Affairs Bureau, Federal Communications Commission.

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ATTACHMENT

TENTATIVE FINDINGS FOR
2014 BIENNIAL REPORT TO CONGRESS
AS REQUIRED BY THE
TWENTY-FIRST CENTURY COMMUNICATIONS
AND VIDEO ACCESSIBILITY ACT OF 2010 (CVAA)

I. Compliance with Sections 255, 716, and 718

1. Section 717(b)(1)(A) of the Act requires the Commission to provide an assessment of the level of compliance with Sections 255, 716, and 718 of the Act in this *Report*.[1] To achieve this, in the *2014 CVAA Assessment PN*, the Commission sought comment on the following matters with respect to products and services made available to the public since the release of the *2012 CVAA Biennial Report* on October 5, 2012:

- The level of compliance with the Commission's accessibility rules predating the CVAA, requiring telecommunications and interconnected VoIP services and equipment to be accessible to people with disabilities;
- The extent to which obligations under Section 716 have impacted the accessibility of advanced communications services (*e.g.,* non-interconnected VoIP and electronic messaging services) and the devices used to access these services;
- The extent to which obligations under Section 718 have impacted the accessibility of Internet browsers built into mobile phones for individuals who are blind or visually impaired;
- Information related to the efforts of manufacturers and service providers to consult with individuals with disabilities in their market research, product design, testing, pilot demonstrations, and product trials;
- The extent to which service providers and equipment manufacturers have complied with their obligations to ensure access by people with disabilities to information and documentation related to their products and services;
- The extent to which covered entities that have direct contact with the public have conducted training of their personnel on the accessibility of their products and services; and
- Any other issues relevant to assessing the level of compliance with Sections 255, 716, and 718.[2]

A. Comments Received

2. *Accessibility.* In response to the *2014 CVAA Assessment PN*, the Commission received comments from a wide range of stakeholders about the accessibility of telecommunications and advanced communications services, as well as the equipment used for these services. Consumer Groups representing individuals who are deaf or hard of hearing generally acknowledge "improvement in accessibility under Section 255," but add their belief that they "have a long way to go before deaf and hard of hearing customers can easily and affordably purchase accessible phones."[3] Additionally, while

[1] 47 U.S.C. § 618(b)(1)(A).

[2] *2014 CVAA Assessment PN,* 29 FCC Rcd at ___, ¶¶ 7- 11.

[3] Comments of the National Association of the Deaf; Telecommunications for the Deaf and Hard of Hearing, Inc.; Deaf and Hard of Hearing Consumer Advocacy Network; Association of Late-Deafened Adults, Inc.; Hearing Loss

Consumer Groups express enthusiasm about some new smartphone features, such as Apple's iPhone that connects directly with some brands of hearing aids, they raise concerns that "those types of proprietary solutions offer limited and expensive options that do not suit everyone's needs."[4] Consumer Groups also raise concerns about accessing captioned telephone services (CTS)[5] over wireless systems and ask the Commission to resolve such problems prior to transitioning consumers away from the wireline infrastructure.[6] Consumer Groups do, however, emphasize their support for high definition (HD) voice-enabled phones and better noise-cancelling technology, noting that "more natural sounding calls go a long way in making it possible . . . to make calls with or without assistive technology."[7]

3. Consumer Groups also reiterate concerns they expressed in 2012 regarding the lack of interoperable video conferencing services. Specifically, they report that mainstream video conferencing services remain incompatible with TRS, making employment-related video conference calls inaccessible to deaf and hard of hearing individuals.[8] They explain further that off-the-shelf video conferencing systems are not interoperable among themselves or with videophones available through video relay service (VRS) providers.[9] Consumer Groups also recommend enhancing video conferencing systems so that, under poor network conditions, a deaf or hard of hearing person can optimize picture quality, or

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Association of America; California Coalition of Agencies Serving the Deaf and Hard of Hearing; Cerebral Palsy and Deaf Organization; and Telecommunication-RERC (Technology Access Program at Gallaudet University and Trace Center at the University of Wisconsin-Madison) (collectively referred to herein as Consumer Groups) at 3.

[4] Consumer Groups Comments at 2. Consumer Groups point to a new feature for Apple's iPhone, which offers a direct connection to some brands of hearing aids, and the fact that some hearing aid compatible handsets work better with some hearing aid brands than with others, as examples of the problems inherent in this type of proprietary solution. *Id*.

[5] CTS is a type of telecommunications relay service (TRS) that permits people who can speak, but who have a hearing loss and have difficulty hearing over the telephone, to speak directly to another party on a telephone call and to use a "captioned telephone" or computer software to simultaneously listen to the other party and read captions of what that party is saying. Generally, TRS enables an individual who is deaf, hard of hearing, deaf-blind, or who has a speech disability to engage in communication by wire or radio with one or more individuals in a manner that is functionally equivalent to the ability of a hearing individual who does not have a speech disability to communicate using voice communication services by wire or radio. 47 U.S.C. § 225(a)(3). For more information about TRS, see the FCC consumer guide available at http://www.fcc.gov/guides/telecommunications-relay-service-trs.

[6] Consumer Groups Comments at 9. In particular, Consumer Groups note that CTS often cannot operate without a wireline infrastructure, and that service personnel do not appear to be trained in strategies that permit CTS to function on a purely wireless infrastructure. *Id.* In comments submitted in response to the Commission's proceeding on the Open Internet, Consumer Groups allege that "standalone analog and IP captioned telephones do not work reliably on telephone services that are provided via wireless base stations." *See* Comments of Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI), National Association of the Deaf (NAD), Hearing Loss Association of America (HLAA), Deaf and Hard of Hearing Consumer Advocacy Network (DHHCAN), Rehabilitation Engineering Research Center on Telecommunications Access (RERC-TA), Clayton H. Lewis, *Protecting and Promoting the Open Internet*, GN Docket No. 14-28 (Jul. 18, 2014) at 12, available at http://apps.fcc.gov/ecfs/document/view?id=7521707584.

[7] Consumer Groups Comments at 3.

[8] *Id.* at 4-5. *See also 2012 CVAA Biennial Report*, 27 FCC Rcd at 12206, ¶ 29.

[9] Consumer Groups Comments at 4-5. Issues related to the interoperability of video conferencing services and equipment are the subject of a pending Commission proceeding. *See ACS FNPRM*, 26 FCC Rcd at 14684-87, ¶¶ 301-305. VRS is defined in the Commission's rules as "a telecommunications relay service that allows people with hearing or speech disabilities who use sign language to communicate with voice telephone users through video equipment. The video link allows the [communication assistant] to view and interpret the party's signed conversation and relay the conversation back and forth with a voice caller." 47 C.F.R. § 64.601(a)(40).

frames-per-second, over audio quality.[10] Consumer Groups further note the need for accessible alerting systems, such as flashing lights or vibration, for advanced communications services, to prevent consumers from missing incoming video calls or other messages.[11] In addition, Consumer Groups allege a general lack of access to advanced communications service components in video games and gaming systems.[12] In particular, they cite the inability of deaf and hard of hearing participants to communicate in multi-player gaming systems.[13]

4. The American Council of the Blind (ACB) similarly acknowledges that some mobile device platforms have made strides in accessibility, but notes that accessibility gaps continue to exist for individuals who are blind or visually impaired. For example, ACB acknowledges that the Samsung Galaxy S5 on the Android platform is more accessible than its predecessors, but insists that earlier versions of these devices, which are still available on the market, as well as other devices on the Android operating system, remain inaccessible.[14] ACB also notes that Microsoft's Windows Phone, while now offering a built-in screen reader, lacks "many features which would enable it to be usable on a daily basis" for people who are blind or visually impaired; in this regard, they emphasize the need for accessibility to "span the entire device."[15] On a positive note, ACB applauds certain advances for individuals who are blind, such as accessible communication applications that provide two-way, push-to-talk, walkie-talkie voice communication, thereby simulating instant messaging in an accessible format for the blind user.[16] In addition, ACB notes, in general, that "[w]eb accessibility has improved over the last few years."[17]

5. The American Association of the Deaf-Blind (AADB) states that "the majority of smartphones, tablets and other similar devices are not accessible to the Deaf-Blind."[18] AADB notes that, when using tablets to connect to the Internet or make calls, there is no alert to notify users when the call is

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[10] Consumer Groups Comments at 6.

[11] *Id*.

[12] *Id*. Consumer Groups raised this issue as well in 2012. *See 2012 CVAA Biennial Report*, 27 FCC Rcd at 12221-22, ¶¶ 44-45 (advocating for inclusion of relay services to make online gaming voice communication accessible to deaf and hard of hearing gamers). Note, however, that the Commission granted class waivers of the advanced communications services accessibility rules until October 8, 2015, for gaming consoles, services and software. *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; Petitions for Class Waivers 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 Disabilitie*s, CG Docket 10-213, Order, DA 12-1645, 27 FCC Rcd 12970, 12982-92, ¶¶ 23-41 (CGB 2012) (*ACS Waiver Order*), available at https://apps.fcc.gov/edocs_public/attachmatch/DA-12-1645A1.pdf.

[13] Consumer Groups Comments at 6.

[14] ACB Comments at 2. ACB advocates for all devices to be accessible, not just a select few. *Id.* ACB reports that it believes that the relationship between the carrier and the original equipment manufacturer (OEM) "is often the reason why accessibility is either obscured or broken on various handsets," and suggests that accessibility can be achieved through "greater communication of expectations from the carrier to the OEM." *Id*.

[15] *Id*.

[16] ACB points to HeyTell and Zello as examples of these types of applications. *Id*.

[17] *Id.* at 3.

[18] Comments of the American Association of the Deaf-Blind (AADB Comments) at 2.

received.[19] Further, AADB reports that "most mobile phones and tablets have limited accessibility features or none at all for screen readers using Braille."[20] Even when a device is accessible, AADB claims that "the software and apps made for these devices are not always accessible," either because they are only accessible visually or only accessible audibly.[21] For example, according to AADB, "[i]nstant messaging (IM) on mobile phones is not accessible to screen readers."[22] A further concern is that, when there are upgrades or updates to a mobile device's core software or apps, it sometimes causes the device or app to become less accessible or totally inaccessible for the user who is deaf-blind.[23] For example, AADB notes that sometimes such updates cause the equipment or software to stop working with the assistive technology, such as a Braille display or screen reader, that is used by people who are deaf-blind.[24] This is particularly frustrating, they say, because an update cannot be rolled back, so the product becomes completely useless until fixes are available, "which again require sighted assistance and significant time delays."[25]

6. In addition to the above feedback received from disability organizations, 29 individuals – all of whom are either blind or have low-vision, or work with this community – submitted comments in response to the *2014 CVAA Assessment PN.* Many of these commenters emphasize the progress that has been made over the past several years on the accessibility of mobile devices, particularly the Apple iPhone, for people with vision loss.[26] Two individuals spoke favorably of the iPhone's compliance with Section 718 of the Act, requiring Internet browsers built into mobile phones to be accessible to individuals who are blind or visually impaired.[27] However, while commenters generally express appreciation for the iPhone's accessibility, some offer suggestions for areas in which accessibility on these devices can be improved.[28] In addition, several commenters express concerns that wireless phones

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[19] AADB Comments at 5. ACB agrees and notes that individuals who are deaf-blind are unable to receive notifications that they have received a text or notification on a device, without constantly checking the device itself. *Id.* at 1.

[20] *Id.* at 5. AADB also notes that it can be quite challenging to connect assistive technology, such as Braille displays and notetakers, through Bluetooth to mobile devices. *Id.* at 4.

[21] *Id.* at 2.

[22] *Id.* at 5.

[23] *Id.* at 3.

[24] *Id.*

[25] *Id.* AADB suggests that its members would benefit from requirements mandating mobile phones to be fully accessible to deaf-blind individuals. *Id.* at 4. Sections 255 and 716 do, in fact, require the telecommunications and advanced communications services functions on mobile phones to be accessible to all persons with disabilities, though flexibility is provided in the manner in which this can be achieved, as noted above. *See* Notice at ¶¶ 6-8, *supra*. Similarly, Section 718 requires Internet browsers built into mobile phones to be accessible to individuals who are blind or visually impaired, also as noted above. *See* Notice at ¶ 9, *supra*

[26] *See, e.g.,* Comments of Fred M. Scott; Comments of Jake Joehl; Comments of Tristen and Turlock Breitenfeldt; Comments of Jeanette Schmoyer; Comments of Karen Palau; Comments of Anne Jarry; Comments of Sandy Spalletta.

[27] *See* Comments of Ronald Flormata at 2 ("Needless to say, I can easily use my iPhone to . . . browse the web. . .."); Comments of Katie Frederick ("When it comes to accessing the Internet/web, I find this process straightforward when using any of my technologies," which include an Apple iPhone.).

[28] *See, e.g.,* Comments of Al Posner (allow user to set a default magnification level); Comments of Russ Zochowski (provide ability to use Siri to add or edit contacts or delete messages); Comments of Sandy Spalletta (provide ability to locate answer button, phone and keyboard buttons); Comments of Kevin Lee (offer ability to decrease speed of Siri voice).

available to low-income consumers made available by providers who participate in the Commission's Lifeline program are not very accessible,[29] and that some providers still offer no accessible phones at all.[30]

7. For the most part, industry stakeholders submitted comments that emphasize their significant efforts to incorporate access into their products and services, along with the consequent results of such efforts. For example, CTIA – the Wireless Association (CTIA) points to wireless providers' wide range of devices with "low-end and high-end features, functions, and prices that include accessible features for people with disabilities."[31] It stresses that wireless equipment manufacturers are continuing to improve smartphone accessibility features and create solutions to meet the needs of "people with varying abilities."[32] CTIA identifies several feature phones that provide accessibility solutions, particularly for users who are blind or visually impaired.[33] CTIA goes on to explain that the move to a platform-based approach by manufacturers is enabling accessibility features to be more consistently available, because accessibility features in the operating system can be used by low- and high-end devices, and new features can be distributed through software updates.[34] For example, CTIA discusses features offered on smartphone platforms for users who are blind or have low vision,[35] who are deaf or

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[29] As discussed below, *see* Attachment at ¶ 39, *infra*, approximately 15% of all informal complaints and RDAs received during the reporting period involved complaints about inaccessible wireless handsets received in conjunction with subscriptions for telephone services under the Commission's Lifeline program. Since 1985, the Lifeline program, which is supported by the Universal Service Fund, has provided a discount on phone service for qualifying low-income consumers to ensure that all Americans have the opportunity and security that telephone service brings. In 2005, Lifeline discounts were made available to qualifying low-income consumers on pre-paid wireless service plans, in addition to traditional landline service. *See* "Lifeline Program for Low-Income Consumers" at http://www.fcc.gov/lifeline (last viewed on Aug. 7, 2014).

[30] *See, e.g.,* Comments of Andrea Roth ("Assurance Wireless phones that are provided for low-income individuals, are not very accessible. It would be better if they at least had voice-dialing capability."); Comments of Percy Chavez (telephones from prepaid wireless provider "are not accessible at all"). A number of the commenters noted concerns that are outside the Commission's jurisdiction. For example, some commenters expressed concern regarding the inaccessibility of websites (*see, e.g.,* Comments of Al Posner; Comments of Larry McMillan; Comments of Kevin Lee; Comments of Ronald Kaplan); inaccessibility of software applications (*see, e.g.,* Comments of Rhonda Staats; Comments of Karen Palau); and, generally, the overutilization of touch screen and touch pad input devices on household appliances and other devices (*see, e.g.,* Comments of Al Posner; Comments of Ron Kolesar).

[31] CTIA Comments at 8.

[32] *Id.* at 9.

[33] *Id.* at 15-17. CTIA mentions Pantech's Breeze flip phones that utilize universal design principles, and Sprint's Kyocera Kona, Verve, and Duraplus phones that offer a variety of accessibility features. *Id.* at 15-16. In addition, CTIA notes that new offerings that focus specifically on the delivery of wireless services to people with disabilities, such as GreatCall, which specializes in products and services designed for seniors, as well as Odin Mobile and Project RAY, which market services and offer accessible phones to individuals who are blind or visually impaired. *Id.* at 16-17.

[34] *Id.* at 9-10.

[35] *Id.* at 10-12. CTIA cites, as examples, Apple's VoiceOver screen reader and platform support for more than 40 refreshable Braille displays; Google's Android operating system with a built-in TalkBack screen reader that also offers Explore by Touch (audible output activated by touching the screen) and BrailleBack (to help make supported refreshable Braille displays via Bluetooth); Blackberry 10's operating system that includes screen reader software, BlackBerry Magnify, and voice control; Microsoft's Windows Phone 8.1 that offers the Narrator screen reader and hands-free operation by voice control. *Id.* at 10-11. CTIA also reports that manufacturers, such as Nokia, include built-in accessibility features in their products, including voice controls, adjustable fonts, text-to-speech, Nuance Talks, screen readers, and message readers. *Id.* at 11. CTIA also mentions HTC's adjustable font sizes for e-mail

hard of hearing,[36] who have dexterity impairments,[37] and who have cognitive disabilities.[38] In addition, CTIA mentions personal assistant programs that facilitate mobile device operations for people of varying abilities.[39]

8. CTIA also describes the development of services by providers and applications by third parties that can enhance accessibility.[40] It notes that service providers' mobile accessibility applications and services provide a variety of means to ensure that consumers can find and use innovative accessibility solutions.[41] It also cites manufacturers' increased willingness to provide resources to enable third-party application developers to ensure compatibility with built-in accessibility features.[42] Finally, CTIA notes that third-party developers have taken the initiative to release imaginative applications to enhance accessibility for people with disabilities.[43]

9. Both CTIA and the Telecommunications Industry Association (TIA) describe the efforts of some of their member companies to make text-to-911 available.[44] TIA goes on to opine that the CVAA has resulted and will continue to result in increased accessibility across information and communications technology products and services, though it might be difficult to quantify at this time.[45] TIA further believes that the software platform approach for inclusion of accessibility features leverages the principle of universal design, allowing new features to be added to existing equipment, to provide a more seamless user experience, and greatly simplify upgrades.[46] With respect to the state of accessibility

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and webpages; Samsung's Galaxy 5's Dark Screen option; LG G2's built-in screen magnifier; and Motorola Moto X's combined screen reader with a Braille display. *Id.* at 11-12. Additional accessibility features for individuals who are blind or visually impaired are offered by service providers, such as Sprint's "Accessible Now" voice guidance software to help set up and activate its LG F3, Flex, and G2 phones. *Id.* at 12.

[36] *Id.* at 12-13. CTIA reports that, in addition to hearing aid compatibility and volume control, many wireless devices include visual and vibrating alerts for calls, texts, e-mails, and other notifications. *Id.* at 12. In addition, smartphones with front-facing cameras enable video communication by American Sign Language users. *Id.* at 13. According to CTIA, Motorola devices offer CrystalTalk (a noise-masking algorithm); and Blackberry devices offer a Natural Sound feature (to hear nuances and variations in tone). *Id.* at 13.

[37] *Id.* at 13-14. For example, CTIA mentions "dexterity features, such as 'no slip' coatings, external stylus support, external keyboard support, predictive text (auto-correct), voice commands, and Bluetooth connectivity." *Id.* at 13. According to CTIA, HTC offers smartphones with haptic feedback; Apple offers AssistiveTouch to suit an individual's physical needs and to support third-party assistive technology, such as Bluetooth-enabled switch hardware; and Google's Android offers Touch and Hold Delay and TalkBack speech features. *Id.* at 13-14.

[38] *Id.* at 14. Features that are useful for individuals with cognitive disabilities include photo contact lists, voice dialing and operations, and options to eliminate screen time-outs. *Id.* CTIA mentions that Pantech's Breeze phones have simplified display options and Samsung offers an "easy" mode on its Android-based smartphones. *Id.*

[39] *Id.* at 14. For example, CTIA points to Apple's Siri program that responds to voice commands and Microsoft's Windows Phone Cortana application that can be accessed by voice or by text. *Id.* at 14-15.

[40] *Id.* at 18-24.

[41] *Id.* at 18-20.

[42] *Id.* at 20-21, 23-24.

[43] *Id.* at 21-23. In its comments, CTIA mentions applications that improve the accessibility of mobile devices, as well as applications that assist with productivity, such as apps that identify currency, colors, and images. *Id.*

[44] *Id.* at 24-25 (pointing to efforts by AT&T, Sprint, T-Mobile, and Verizon Wireless to carry text-to-911 transmissions); TIA Comments at 8-9 (noting its work with standards groups to enable text-to-911).

[45] TIA Comments at 4.

[46] *Id.* at 5-6.

for "non-mobile" services, TIA urges the Commission to act on TIA's 2012 petition for a rulemaking to reference the TIA conversational gain standard in the Commission's Part 68 rules that set hearing aid compatibility volume control requirements.[47] TIA also describes its efforts to work on hearing aid compatibility standards for the wireless space.[48]

10. The Consumer Electronics Association (CEA) reports that it has been assisting its members to comply with the new accessibility rules through alerts, webinars, and compliance manuals.[49] CEA states that its members are engaging in "strong efforts to comply" with the CVAA, including determining which equipment is subject to the advanced communications services accessibility rules, ensuring that their units and teams understand the rules, consulting people with disabilities on accessibility solutions, modifying internal processes to perform the tasks needed for compliance, and keeping compliant record systems.[50] Finally, CEA notes with approval the Commission's advanced communications services accessibility rules, which it says, recognize the need to balance accessibility and preserve innovation.[51]

11. Microsoft, Inc. (Microsoft) states that innovation in accessibility solutions has been enhanced by the Commission's avoidance of overly prescriptive regulations, and by a reasonable compliance deadline schedule that has provided industry time to research break-through solutions.[52] Microsoft points to developments it has advanced, such as hands-free interaction modes, eye-tracking technology, and narration of visual environments, as examples of these types of innovations.[53] Microsoft states that it faces unique challenges, in that its portfolio of devices and services spans such a wide range of accessibility issues, and runs on multiple combinations of platforms, browsers, apps, and services, but that it is able to meet these accessibility challenges through a significant company-wide emphasis on accessibility.[54] With respect to advanced communications services, Microsoft reports that it has been able to provide consumers with disabilities a choice of using built-in or third-party accessibility solutions.[55] For example, consumers with visual impairments can choose to use Narrator, a built-in screen reader, or Window-Eyes, a third-party screen reader that Microsoft makes available at no charge.[56] Microsoft

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[47] *Id.* at 7-8. *See also* Telecommunications Industry Association, Access to Telecommunications Equipment and Services by Persons with Disabilities, RM-11682, Petition for Rulemaking (filed Oct. 25, 2012) (TIA Petition).

[48] TIA Comments at 8.

[49] Comments of the Consumer Electronics Association (CEA Comments) at 4.

[50] CEA Comments at 5. CEA describes implementation of the accessibility requirements as "resource intensive and time-consuming." *Id.* at 4-5. Asserting, without more, that "smaller entities have encountered challenges in achieving compliance," CEA recommends an exemption for small entities, "which will facilitate the entry and continued participation of small entrepreneurial businesses in providing innovative [advanced communications services and] equipment." *Id.* at 5.

[51] *Id.* at 3. CEA also expresses appreciation for the Commission's grant of limited waivers. *See ACS Waiver Order,* 27 FCC Rcd 12970 (granting class waivers of advanced communications services accessibility rules until October 8, 2015, for Internet protocol-enabled television sets, Internet-enabled digital video players, cable set-top boxes, and gaming consoles, services and software). *See also* TIA Comments at 9-10 (expressing appreciation for the Commission's careful consideration of past waiver requests relating to the advanced communications services accessibility requirements).

[52] Comments of Microsoft, Inc. (Microsoft Comments) at 1.

[53] Microsoft Comments at 2-3.

[54] *Id.* at 5-7.

[55] *Id.* at 4.

[56] *Id.*

applauds the Commission's efforts to foster industry innovation and flexibility, encourages the Commission to continue its Chairman's Awards for the Advancement of Accessibility and its Accessibility & Innovation Initiative Speaker Series, and urges the Commission to continue to focus on outcomes and encourage innovation, relying on technology standards only as a safe harbor "where compliance with the standard will be evidence of complying with the CVAA regulations, while still allowing other methods of achieving the regulatory goals."[57]

12. *Inclusion of people with disabilities in product and service design and development.*[58] The *2014 CVAA Assessment PN* sought comment on the extent to which covered entities have included people with disabilities in their efforts to conduct market research, product design, testing, pilot demonstrations, and product trials.[59] In response, Consumer Groups allege that "re-engineering happens too often without thought to [the] accessibility needs of people who are deaf or hard of hearing."[60] As an example, they point to reports that Apple is considering elimination of the headphone jack on future models, a feature that enables a connection for neckloops or other accessibility coupling devices that are used to enhance an individual's ability to hear, as illustrative of this problem.[61] AADB similarly raises concerns about consumers with disabilities having insufficient opportunity to provide input into research and development of new communications technologies to meet the needs of their community.[62] In particular, AADB calls for a Deaf-Blind Telecommunications Technology Summit to address the challenges facing deaf-blind people using telecommunications equipment and services.[63]

13. Various industry associations report that their members are, in fact, taking steps to consult with people with disabilities and the accessibility community. For example, CTIA reports that, since 2012, its member companies have gained feedback on wireless accessibility issues from disability-related organizations,[64] and that its Accessibility Outreach Initiative, which has held seven meetings since 2013, assists its members to "gain a broader understanding of the accessibility community's priorities."[65] CTIA adds that service providers "have developed programs to consider accessibility throughout all

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[57] *Id.* at 7-8.

[58] *See* 47 C.F.R. §§ 6.7(b)(3), 7.7(b)(3). Beginning January 30, 2013, covered entities must keep records about their efforts to consult with people with disabilities. *See* 47 U.S.C. § 618(a)(5)(A); 47 C.F.R. § 14.31(a)(1).

[59] *2014 CVAA Assessment PN*, 29 FCC Rcd at ___, ¶¶ 7, 9, 10.

[60] Consumer Groups Comments at 3.

[61] *Id.* at n. 3, *citing* "Possible Design Change for the iPhone 6 – Eliminating the Headphone Jack – Has Some Apple Fans Fuming," NY Daily News, http://www.nydailynews.com/life-style/iphone-6-require-new-headphones-apple-fans-fuming-article-1.1826371 (Jun. 12, 2014).

[62] AADB Comments at 4. Along these lines, AADB raises concerns about the transparency of the National Deaf-Blind Equipment Distribution Program (NDBEDP), a matter outside the scope of this Report, but nevertheless of importance to the Commission. AADB expresses interest in having greater access to trends, patterns and statistics of programs certified under the NDBEDP, to better identify research needed for the development of communications devices for the deaf-blind community. *Id.*

[63] *Id.* at 5.

[64] CTIA Comments at 28. For example, CTIA member companies have met with the American Foundation for the Blind, Hearing Loss Association of America, the Telecommunications Equipment Distribution Program Association, the National Association of the Deaf, the World Institute on Disability, and Telecommunications for the Deaf and Hard of Hearing, Inc. *Id.* at 28.

[65] *Id.* at 28.

stages of product and service design and deployment."[66] It also points to efforts of its member companies to engage consumer representatives in an on-going dialogue about accessibility, including initiatives to incorporate accessibility into regular company practices and procedures.[67] For example, CTIA reports that manufacturers have worked to implement the American Foundation for the Blind's guidelines for small screen displays.[68] CTIA also notes that wireless service providers have undertaken initiatives to incorporate accessibility into their regular practices and procedures, such as through advisory panels and online resources.[69]

14. TIA states that it views the inclusion of people with disabilities to be a crucial part of the process of ensuring that accessibility is incorporated into the design during new product cycles, and that its members continue to liaise with the disability community to ensure inclusive design.[70] TIA asserts that consultation with individuals with disabilities on research and development is taking place at both the company and industry association levels.[71]

15. Microsoft reports that it places company-wide emphasis on accessibility and engages regularly with the community on disability issues.[72] For example, Microsoft states that it holds an annual summit with Microsoft employees and disability rights advocates.[73] In addition, Microsoft explains that it hires individuals with disabilities as usability testers in studies to obtain feedback on the usability of its products.[74]

16. *Information, documentation, and training*. The *2014 CVAA Assessment PN* sought comment on access by people with disabilities to information and documentation related to covered products and services, as well as the extent to which covered entities that have direct contact with the public have conducted training of their personnel on the accessibility of their products and services.[75] These requirements are designed to ensure that telecommunications and advanced communications services, as well as Internet browsers built into mobile phones, are *usable by* individuals with disabilities.[76] Consumer Groups express concern that gaps remain, both with respect to industry efforts to disseminate information about accessible products and services, and with respect to providing staff

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[66] *Id.* at 8. CTIA mentions, specifically, the establishment of a Corporate Accessible Technology Office by AT&T, and Verizon's online training courses for new employees about accessibility requirements. *Id.* at 8-9.

[67] *Id.* at 30-32.

[68] *Id.* at 12.

[69] *Id.* at 31-32.

[70] TIA Comments at 4-5.

[71] *Id.* at 6. TIA mentions, for example, that it participated in sessions at the 2014 M-Enabling Summit in Virginia and the 2014 conference of the Hearing Loss Association of America. *Id*.

[72] Microsoft Comments at 7.

[73] *Id.* at 6.

[74] *Id.*

[75] *2014 CVAA Assessment PN*, 29 FCC Rcd at ___, ¶¶ 8, 11.

[76] A product or service is "usable" if individuals with disabilities have access to the full functionality and documentation for the product or service, including instructions, product or service information (including accessible feature information), documentation and technical support functionally equivalent to that provided to individuals without disabilities. *See* 47 C.F.R. §§ 6.3(l), 7.3(l), 14.21(c). *See also* 47 C.F.R. §§ 6.11, 7.11, 14.20(d), 14.60(b)(4) (prescribing usability obligations related to information, documentation, and training for covered entities).

training on accessibility. Specifically, Consumer Groups assert that "[t]here continues to be a lack of readily available information in retail settings to help customers figure out which phone works best for them," and that retail employees are often unable to assist because they are unfamiliar with accessibility features, such as hearing aid compatible phones.[77] AADB agrees that "[e]ducation and outreach about accessibility on all mobile and desktop communications is much needed and critical."[78] It also requests easy-to-use, step-by-step instructions to enable deaf-blind individuals to navigate communication apps.[79]

17. Industry commenters underscore their efforts to disseminate information to consumers with disabilities. For example, CTIA stresses that its member companies provide accessibility information through advertisements, product packaging, user guides, and their websites, as well as through customer service representatives.[80] It states that the industry and individual providers have increased awareness of accessible services and products to an extent that goes beyond the requirements of the CVAA, including regular attendance at conferences and meetings, along with maintenance of the AccessWireless.org website, where consumers can search for wireless handsets based on accessibility features.[81]

18. With respect to staff training, Microsoft reports that it has established a "disability Answer Desk" that consumers can contact by phone, e-mail, or chat to receive assistance from staff "specifically trained in assistive technologies and assisting persons with disabilities."[82]

19. *Other issues*. Consumers point to several aspects of service plans offered by providers that they claim result in reduced accessibility for users with disabilities. Consumer Groups, whose members rely on data-based rather than voice-based communication, express serious concern about "the growing trend among wireless carriers where they are no longer offering unlimited data plans and are instead metering, throttling and sometimes capping their data plans."[83] Consumer Groups claim that because some modes of communication, particularly video conferencing, use significant amounts of data, such restrictions limit functional equivalency for deaf and hard of hearing users and result in their paying more for expensive overage charges and costly data plans.[84] Moreover, Consumer Groups point to news reports causing growing apprehension that one or more major carriers may begin throttling data speeds for customers with unlimited data plans, or may begin capping consumers' data usage.[85] Their concerns are that throttling data speed would render video communication impossible and data caps could result in

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[77] Consumer Groups Comments at 2.

[78] AADB Comments at 5.

[79] *Id.* at 3.

[80] CTIA Comments at 17-18.

[81] *Id.* at 26-30. CTIA partners with the Mobile Manufacturers Forum to make the information collected through the Global Accessibility Reporting Initiative (GARI) available to consumers through AccessWireless.org website. CTIA Comments at 27. *See also* TIA Comments at 8 (asserting that GARI continues to operate successfully) and 11 (stating that GARI is being used effectively by wireless manufacturers and is also leveraged effectively by the Commission's Accessibility Clearinghouse).

[82] Microsoft Comments at 6.

[83] Consumer Groups Comments at 7-8.

[84] *Id.* at 7.

[85] *Id.* at 8, citing "FCC Questions Verizon Plan to Manage Data Speeds for Some Customers," Wall Street Journal, http://online.wsj.com/articles/fcc-questions-verizon-plan-to-manage-data-speeds-for-some-costumers-1406756051 (Jul. 30, 2014).

sudden blockages to the network; either action, they say, could render a person who is deaf or hard of hearing unable to make calls, including calls for emergency services.[86]

20. By contrast, industry comments emphasize the wide selection of service plans tailored to fit the needs of users with disabilities. For example, CTIA points to providers' service plans that "meet the needs of people with disabilities," and offer "a variety of post- and pre-paid plans to accommodate differing abilities to pay."[87] It states that wireless service providers continue to "offer and expand their array of services that benefit the accessibility community, including by introducing voice, text, data and service plans that greatly benefit people with disabilities and seniors."[88]

B. Tentative Findings on Compliance with Sections 255, 716, and 718

21. *Section 255*. Based on the record provided in response to the *2014 CVAA Assessment PN*, the Commission tentatively finds that there is a greater selection of accessible telecommunications devices available to people with disabilities now than were available at the time that the Commission prepared its *2012 CVAA Biennial Report*. Specifically, the *2012 CVAA Biennial Report* stated that "feature phones continue to offer only limited accessibility for consumers who are blind or visually impaired."[89] Information provided to the Commission in preparation for this *Report* indicates that several feature phones now provide accessibility solutions for individuals who are blind or visually impaired and that the need for accessibility has given rise to new offerings and models specifically designed to meet accessibility needs.[90] In addition, it appears that a range of accessibility solutions have been included in many smartphones to meet the needs of individuals who are blind or have low vision, who are deaf or hard of hearing, who have dexterity impairments, and who have cognitive disabilities.[91] As such, we tentatively find that there has been an increase in the availability of telecommunications equipment with varying degrees of functionality and features, and offered at differing price points, that are accessible to individuals with disabilities during the period covered by this *Report*.

22. *Section 716*. Although less than a year has passed since implementation of Section 716 went into full effect, we tentatively find that industry has made efforts to comply with the CVAA's requirements to ensure that advanced communications services and the equipment used for these services are accessible to people with disabilities. We base this tentative finding on the extensive submissions

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[86] Consumer Groups Comments at 8.

[87] CTIA Comments at 8.

[88] *Id.* at 7. CTIA points to Sprint's "Relay Data Plan," AT&T's "Text Accessibility Plan" and "Senior Plan 200," Verizon's "Nationwide Messaging Plan" and "Nationwide 65 Plus Plan," U.S. Cellular's messaging options and messaging-only plans, and providers' HD Voice services as examples of services that benefit people with disabilities and seniors. *Id.* at 7-8.

[89] *2012 CVAA Biennial Report*, 27 FCC Rcd at 12219, ¶ 39.

[90] *See* Attachment at ¶ 7, n.33, *supra* (CTIA reporting that Pantech's Breeze and Sprint's Kyocera Kona, Verve, and Duraplus feature phones have accessibility features, and that GreatCall, Odin Mobile, and Project RAY market services and offer accessible phones to seniors and individuals who are blind or visually impaired).

[91] *See* Attachment at ¶ 7 (CTIA stating that wireless providers offer a wide range of devices with "low-end and high-end features, functions, and prices that include accessible features for people with disabilities"), nn.35-38, *supra* (CTIA discussing features that make the telecommunications services functions on smartphones more accessible to individuals with disabilities). *See also* Attachment at ¶ 2, *supra* (Consumer Groups noting "improvement in accessibility under Section 255" and support for HD voice-enabled phones and better noise-cancelling technology); ¶ 4, *supra* (ACB acknowledging that some mobile platforms now provide greater accessibility, including voice communication applications, that are accessible to individuals who are blind or visually impaired).

illustrating a range of accessible devices, from feature phones to smartphones, for individuals with varying types of disabilities,[92] along with reports by trade associations detailing industry compliance efforts.[93] In addition, we note that, although consumers were able to request assistance and file informal complaints with the Commission with respect to alleged violations of Sections 716 from October 8, 2013,[94] through the close of the reporting period on December 31, 2013, consumers submitted no such requests for assistance or informal complaints to the Commission.[95] The lack of filings during this three-month period may be due to many reasons, none of which are evidenced in the record.[96] As such, we tentatively find that the lack of such requests for assistance or informal complaints is not conclusive evidence of compliance, nor can it be used to infer compliance with Section 716.

23. *Section 718*. While only a few commenters spoke directly to the accessibility of Internet browsers built into mobile phones in response to the *2014 CVAA Assessment PN*, based on the record before us, we tentatively conclude that industry has made efforts to comply with Section 718's requirements to ensure the accessibility of such web browsers for people who are blind or visually impaired. We base this tentative finding on CTIA's reports of a wide range of wireless devices and smartphone platforms that provide "low-end and high-end features, functions, and prices that include accessible features for people with disabilities" generally,[97] and more specifically for users who are blind or visually impaired. In particular, CTIA describes smartphones that support refreshable Braille displays and include screen readers, voice control, text-to-speech, adjustable font sizes, and magnification.[98] Given that smartphones can be used to access the Internet, it seems logical to conclude that the accessibility features provided on these devices not only enable people to make calls, but also enable access to the Internet browsers built into these smartphones. This tentative finding is supported by comments that confirm the accessibility of Internet browsers on Apple iPhones,[99] as well as ACB's statement that "[w]eb accessibility has improved over the last few years."[100] Our tentative conclusion that industry is effectively providing access to Internet browsers on mobile phones is further supported by the

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[92] *See, e.g.,* Attachment at ¶ 7, n. 33, *supra* (CTIA discussing accessible feature phones and new entities that market services and offer accessible phones to seniors and individuals who are blind or visually impaired); ¶ 7, nn.35-38, *supra* (CTIA reporting on features that make the advanced communications services functions on smartphones more accessible to individuals with disabilities).

[93] *See, e.g.,* Attachment at ¶ 10, *supra* (CEA reporting that its members are actively engaged in efforts to comply with the Commission's advanced communications services accessibility rules); ¶ 11, *supra* (Microsoft noting that it provides consumers with disabilities a choice of built-in or third-party accessibility solutions).

[94] *See* Attachment at ¶ 35, *infra*.

[95] *See* Attachment at ¶ 38, *infra.*

[96] For example, there is no evidence in the record as to what covered services and equipment were deployed during that three-month period. Further, consumers may not be aware of the accessibility requirements mandated by Section 716 of the Act and the Commission's rules, or of possible violations of those requirements, or of their right to request assistance from or to file complaints with the Commission with respect to the inaccessibility of advanced communications services and equipment.

[97] CTIA Comments at 8.

[98] *See id.* at 10-12. *See, generally,* Attachment at ¶ 7, nn.33, 35, *supra* (CTIA discussing accessible feature phones and new entities that market services and offer accessible phones to seniors and individuals who are blind or visually impaired; CTIA reporting on features that make the advanced communications services functions on smartphones more accessible to individuals who are blind or visually impaired).

[99] *See* Attachment at ¶ 6, n.27, *supra.* Other individuals similarly commented on the accessibility of mobile devices, particularly the Apple iPhone, a mobile phone with a built-in Internet browser. *See* Attachment at ¶ 6, *supra*.

[100] ACB Comments at 3. *See also* Attachment at ¶ 4, *supra*.

absence in this record of comments specifically to the contrary; *i.e.*, no commenter reported that this remains a problem for people who are blind or visually impaired.[101] Additionally, we note that the Commission received no requests for dispute assistance or informal complaints concerning potential violations of Section 718 since it became effective on October 8, 2013, through the close of the reporting period on December 31, 2013.[102] As noted above, the lack of requests for assistance or complaints filed during this three-month period may be due to many reasons, none of which are evidenced in the record.[103] As such, we tentatively find that the lack of such requests for assistance or informal complaints is not conclusive evidence of compliance, nor can it be used to infer compliance with Section 718.

24. *Accessibility gaps.* While the record demonstrates progress with respect to meeting the accessibility obligations of Sections 255, 716, and 718, we nevertheless tentatively conclude that some accessibility gaps still exist and others have the potential to occur or reoccur. For example, as discussed above, consumers report on the lack of accessible alerting systems for incoming video calls and other messages.[104] They also raise concerns about technology transitions that could threaten accessibility that now exists,[105] and urge that more needs to be done to allow their participation early on in the development of products and services to ensure that their accessibility needs are met.[106] Additionally, while we tentatively concur with industry that platform-based technology has the advantage of enabling the distribution of accessibility features through software updates,[107] we note that where accessibility is not a factor designed into software updates, there are concerns that these updates can end up impairing accessibility for users with disabilities, a result that often cannot be undone after the update has been downloaded.[108] Of particular note is the apparent lack of accessibility to or compatibility with assistive

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[101] *But see* Attachment at ¶ 4, *supra*. ACB states that, even with a built-in screen reader, all of the Windows Phone features are not accessible. *Id.* ACB does not, however, identify the Internet browser as one of those inaccessible features.

[102] *See* Attachment at ¶ 36, *infra.*

[103] For example, there is no evidence in the record as to what mobile phones with built-in Internet browsers were deployed during that three-month period. Further, consumers may not be aware of the accessibility requirements mandated by Section 718 of the Act and the Commission's rules, or of possible violations of those requirements, or of their right to request assistance from or to file complaints with the Commission with respect to the inaccessibility of Internet browsers built into mobile phones.

[104] *See* Attachment at ¶ 3, *supra* (Consumer Groups noting the need for accessible alerting systems for incoming video calls or other messages).

[105] *See, e.g.,* Attachment at ¶ 2, *supra* (Consumer Groups reporting concerns about problems with CTS relay delivered over wireless systems); ¶ 12, *supra* (Consumer Groups expressing concerns about the need to maintain connections for neckloops or other assistive devices).

[106] *See* Attachment at ¶ 12, *supra* (Consumer Groups expressing concern that re-engineering happens too often without consideration of the needs of people who are deaf or hard of hearing; AADB expressing concern that people who are deaf-blind have insufficient opportunity to provide input into research and development of new communications technologies).

[107] *See* Attachment at ¶ 7, *supra* (CTIA explaining that the move to a platform-based approach by manufacturers ensures that accessibility features are more consistently available). *See also* Attachment at ¶ 9, *supra* (TIA noting that the software platform approach for inclusion of accessibility features leverages the principle of universal design and greatly simplifies upgrades).

[108] *See* Attachment at ¶ 5, *supra.* (AADB observing that upgrades or updates sometimes cause a device or app to become less accessible or totally inaccessible for the user who is deaf-blind). *See also* Attachment at ¶ 28, *infra* (discussing this further as an accessibility barrier to new communications technologies).

technology used by individuals who are deaf-blind,[109] and complaints that many of the wireless phones that are being made available to low-income consumers who are blind or visually impaired by providers that participate in the Commission's Lifeline program either lack certain accessibility features, or are not accessible at all.[110] We also note that, while some providers appear to offer service plans that generally meet the needs of consumers with disabilities,[111] consumers have concerns about provider practices that could, in the future, negatively impact data speeds or cap data usage, either of which may make video communication difficult or impossible for consumers who are deaf or hard of hearing.[112] These concerns suggest a need to be mindful about avoiding the creation of new barriers to accessibility as technologies and service plans continue to evolve.

25. *Industry consultation with individuals with disabilities*. The CVAA requires covered entities to keep records of their efforts to consult with individuals with disabilities.[113] It is apparent that industry has taken some steps to include people with disabilities in their design and development of products and services. For example, CTIA, TIA, and Microsoft each report that they or their member companies have undertaken efforts to consult with individuals with disabilities through meetings and dialogues with consumer stakeholders,[114] internal programs, [115] advisory panels, [116] and usability testing.[117] However, we note that consumers remain concerned about the extent to which engineering of products and services takes place without consideration of their accessibility needs. Consumer Groups, for example, raise concerns that "re-engineering happens too often without thought to [the] accessibility needs of people who are deaf or hard of hearing."[118] Similarly, AADB states that its constituency has insufficient opportunity to provide input into the research and development of new communications technologies to meet its needs.[119] In light of these competing views, we tentatively find that, while some efforts to consult with such individuals for this purpose have occurred over the past two years, more can be done to include people with disabilities early on in design and development of advanced communications products and services.

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[109] *See* Attachment at ¶ 5, *supra* (comments of AADB). *See also* Attachment at ¶ 28, *infra* (discussing this further as an accessibility barrier to new communications technologies).

[110] *See* Attachment at ¶ 6, *supra*. *See also* Attachment at ¶ 39, *infra* (CGB reporting on consumer complaints about inaccessible wireless handsets received in conjunction with Lifeline services).

[111] *See* Attachment at ¶ 20, *supra* (comments of CTIA).

[112] *See* Attachment at ¶ 19, *supra* (comments of Consumer Groups).

[113] *See* 47 U.S.C. § 618(a)(5)(a)(i).

[114] *See* Attachment at ¶ 13, *supra* (CTIA reporting that its member companies have met with various disability-related organizations and consumer representatives), ¶ 14, *supra* (TIA reporting that its members continue to liaise with the disability community to ensure inclusive design, and that consultation with individuals with disabilities on research and development is taking place at both the company and industry association levels), ¶ 15, *supra* (Microsoft reporting that it holds an annual summit with Microsoft employees and disability rights advocates).

[115] *See* Attachment at ¶ 13, *supra* (CTIA noting, specifically, the establishment of a Corporate Accessible Technology Office by AT&T, and Verizon's online training courses for new employees about accessibility requirements).

[116] *See* Attachment at ¶ 13, *supra* (CTIA reporting wireless provider initiatives, including advisory panels).

[117] *See* Attachment at ¶ 15, *supra* (Microsoft reporting that it hires individuals with disabilities as usability testers).

[118] *See* Attachment at ¶ 12, *supra*, citing Consumer Groups Comments at 3 (raising concerns about the possible negative effects of elimination of the headphone jack on future models of smartphones).

[119] *See* Attachment at ¶ 12, *supra*.

26. *Usability of products and services.* With respect to the usability of products and services,[120] we tentatively find that industry has engaged in some efforts to ensure the availability of information about accessible products and services to people with disabilities, including training personnel about accessible products and services.[121] Nevertheless, we also tentatively find that gaps remain in the usability of these offerings. For example, Consumer Groups report that finding information about hearing aid compatible phones is still a challenge for consumers,[122] and AADB expresses a need for information about accessible products for consumers who are deaf-blind, as well as easy-to-use instructions for communication apps.[123] In addition, we note that complaints brought to the Commission over the covered time period revealed a considerable number of problems with inaccessible instructions or billing, inaccessible contact information or directory assistance, and inaccessible customer service.[124]

II. Accessibility Barriers in New Communications Technologies

27. Section 717(b)(1)(B) of the Act requires the Commission to provide an evaluation of the extent to which any accessibility barriers still exist with respect to new communications technologies.[125] The *2012 CVAA Biennial Report* predicted that "many accessibility barriers in new communications technologies will likely be addressed by industry compliance with the new accessibility requirements under Section 716 and Section 718 when those requirements are fully effective."[126] In the *2014 CVAA Assessment PN,* the Commission sought comment on the extent to which this expectation has been met.[127] The Commission also sought comment on the extent to which new communication technologies, including new communication services, hardware, software, applications, or plug-ins, both within the scope of the Act (*e.g.*, covered under Sections 255, 716, and 718) and outside the scope of the Act, have been deployed since the *2012 CVAA Biennial Report*, and what barriers still exist with respect to these technologies.[128]

A. Comments Received

28. Comments received from consumers who are deaf or hard of hearing show that they continue to lack confidence that new communications technologies are being designed to be accessible. For example, Consumer Groups fear that the rise of voice-controlled technologies, particularly those that incorporate advanced communications services features, may exclude individuals who do not speak or who do not speak clearly, and urge the Commission to monitor these new technologies.[129] Consumer

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[120] As noted above, a product or service is "usable" if individuals with disabilities have access to the full functionality and documentation for the product or service, including instructions, product or service information (including accessible feature information), documentation and technical support functionally equivalent to that provided to individuals without disabilities. *See* Attachment at ¶ 16, n.76, *supra*.

[121] *See, e.g.,* Attachment at ¶ 17, *supra* (CTIA reporting that its members provide information about accessible products and services through a variety of means); ¶ 18, *supra* (Microsoft noting that its customer assistance is available from staff specially trained on accessibility issues).

[122] *See* Attachment at ¶ 16, *supra.*

[123] *See* Attachment at ¶ 16, *supra.*

[124] *See* Attachment at ¶ 40, *infra.*

[125] 47 U.S.C. § 618(b)(1)(B).

[126] *2012 CVAA Biennial* Report, 27 FCC Rcd at 12222, ¶ 46.

[127] *2014 CVAA Assessment PN*, 29 FCC Rcd at ___, ¶ 12.

[128] *2014 CVAA Assessment PN*, 29 FCC Rcd at ___, ¶ 12.

[129] Consumer Groups Comments at 8-9.

Groups also express concern that accessibility barriers to new communication technologies continue to exist for individuals who are deaf-blind and for deaf individuals who also have mobility disabilities.[130] In particular, they report that IP Relay service,[131] especially when used while mobile, is not accessible to deaf-blind consumers who use Braille displays.[132] Similarly, ACB's comments allege the failure of software system manufacturers, application designers, and smart television manufacturers to make their communications technologies fully accessible to the blind community.[133] For example, ACB mentions that upgrades to Skype often make its user interface more difficult to use for users who are blind or visually impaired.[134] In particular, ACB urges that a committee be established to validate the accessibility of software applications, so that consumers could know with certainty which apps are accessible.[135] At the same time, however, ACB applauds Comcast for its new set-top box that, despite some problems, represents to ACB the sole industry attempt to make this type of navigation device accessible to blind users.[136]

29. Rather than focus on the extent to which new communications technologies have been deployed since the *2012 CVAA Biennial Report or* the barriers that still exist with respect to these technologies in response to the *2014 CVAA Assessment PN*, industry commenters propose Commission actions that could be taken to increase accessibility. For example, to better serve all consumers, CTIA urges the Commission to adopt policies "that make more spectrum available for commercial use, promote infrastructure deployment, and rely on the lightest touch regulatory scheme possible."[137] Similarly, TIA suggests that the Commission can effectively increase the availability of advanced communications

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[130] *Id.* at 8. To address these issues, Consumer Groups urge the development of a new type of relay service that would enable such individuals to benefit from interpreters who are physically present, or to be matched with VRS communication assistants who can understand and communicate with them. *Id*.

[131] IP Relay service is defined in the Commission's rules as a form of TRS "that permits an individual with a hearing or a speech disability to communicate in text using an Internet Protocol-enabled device via the Internet, rather than using a text telephone (TTY) and the public switched telephone network." 47 C.F.R. § 64.601(17).

[132] AADB Comments at 3, 5; ACB Comments at 2. AADB states that manufacturers, software developers, and others often proclaim that products, such as digital talking books or audio only temperature apps, are "fully accessible" when they are not accessible to individuals who are deaf-blind. AADB Comments at 2. These kinds of products, however, do not fall within the scope of this *Report* to the extent they do not provide advanced communication services. In addition, AADB expresses dissatisfaction with their members' ability to access captions or video descriptions on video or television programs through their assistive devices, matters that are also outside the scope of this *Report*. *Id.* at 5.

[133] ACB Comments at 2-3. We note, however, that the Commission has granted a class waiver of the advanced communications services accessibility rules until October 8, 2015, for Internet protocol-enabled television sets. *ACS Waiver Order*, 27 FCC Rcd at 12973-78, ¶¶ 6-14.

[134] ACB Comments at 2.

[135] *Id*.

[136] *Id*. at 2. A set-top box is a form of navigation device "used by consumers to access multichannel video programming and other services offered over multichannel video programming system." 47 C.F.R. § 76.1200(c). Although we note ACB's praise for the accessibility of these devices here, it is not clear whether any of the navigation device features to which ACB alludes enable access to the communications technologies covered by this *Report*. We also note that the Commission granted a class waiver of the advanced communications accessibility rules until October 8, 2015, for set-top boxes that are leased by cable operators to their customers. *ACS Waiver Order*, 27 FCC Rcd at 12978-82, ¶¶ 15-22.

[137] CTIA Comments at 36. Further, with a goal toward reducing regulation, CTIA suggests that the Commission evaluate the continued need for wireless phones to be compatible with TTYs, which CTIA says may be outdated. *Id.* at 39-40.

services and products to people with disabilities by affording manufacturers maximum flexibility in meeting the requirements of the CVAA.[138] CEA notes that modern electronic devices and apps have removed many accessibility barriers (which CEA recognizes in its annual Innovation Awards), and further suggests that policy makers and advocates should encourage more advanced devices and apps to increase accessibility.[139]

B. Tentative Findings on Accessibility Barriers in New Communications Technologies

30. Based on comments filed in response to the *2014 CVAA Assessment PN*, we tentatively find that while strides have been made toward ensuring the accessibility of new communication technologies in industry design and development processes, accessibility barriers still exist with respect to certain new communications technologies. We base our tentative conclusion that accessibility gains have been made, in part, on reports of industry efforts to incorporate the input of individuals with disabilities through product testing, to consider accessibility needs during the research and development stages of new products and services,[140] and to modify internal processes as needed to comply with the accessibility requirements.[141] Further support is found in the reported breadth of accessibility features offered in today's communications technologies by manufacturers and service providers.[142]

31. Our tentative finding that accessibility barriers still exist is supported by AADB's and Consumer Groups' reports that a majority of communications technologies are not accessible to individuals who are deaf-blind.[143] Consumer Groups also report that accessibility barriers exist for deaf individuals who also have mobility disabilities.[144] In addition, Consumer Groups observe that mainstream video conferencing services remain incompatible with TRS, and that off-the-shelf video conferencing systems, upon which many individuals who use American Sign Language rely for their primary means of communication, are not interoperable among themselves or with videophones available through VRS

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[138] TIA Comments at 9. TIA asserts that strict application of the advanced communications services accessibility requirements would harm the public interest without meaningfully increasing access to advanced communications services for people with disabilities. *Id.* at 10. Microsoft also cites with approval the Commission's flexible regulations. Microsoft Comments at 3. While Microsoft uses as an example the Commission's efforts to focus on ease of use rather than specific solutions for its closed captioning requirements, we note that the Commission's rules governing closed captioning fall outside the scope of the communications accessibility discussion in this *Report*. *Id.* at 3-4.

[139] CEA Comments at 5-6. With respect to accessibility barriers that exist in new technologies, CEA recommends that the Commission's evaluation be limited to services and equipment that are subject to Sections 255, 716, and 718 of the Act. *Id.* at 6. As noted in its *2012 CVAA Biennial Report*, the Commission believes that Congress will be better informed about the state of communications that are or are not accessible to individuals with disabilities, the impact of the CVAA, and the need for additional legislative action, if any, if the Commission's report includes an account of accessibility barriers with respect to "new communications technologies" that fall within and outside the scope of the Act and that can and cannot be eliminated with reasonable effort or expense. *2012 CVAA Biennial Report*, 27 FCC Rcd at 12222, ¶ 45.

[140] *See,* Attachment at ¶¶ 13-15, *supra* (CTIA, TIA, and Microsoft reporting on efforts to consult with individuals with disabilities – from research and development through product testing).

[141] *See* Attachment at ¶ 10, *supra* (CEA discussing its members' efforts to comply with advanced communications services accessibility requirements).

[142] *See* Attachment at ¶¶ 7-8, *supra* (comments of CTIA).

[143] *See* Attachment at ¶¶ 5, 28, *supra*, (Consumer Groups advocating for a new type of relay service for such individuals).

[144] *See* Attachment at ¶ 28, *supra*.

providers.[145] Statements submitted by the Consumer Groups that accessibility barriers may be created by the advent of new technologies also lead us to tentatively conclude that there is a need for industry design and development teams to be mindful of the effects that new product and service design features can have on accessibility. For example, Consumer Groups report potential new barriers that may result if voice controls replace (rather than supplement) interfaces presently accessible to people who are deaf, hard of hearing, or have speech disabilities,[146] and if software upgrades reverse accessibility currently available on certain devices or apps.[147]

III. Complaints Received Pursuant to Section 717

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

- 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, 2012 and December 31, 2013;
- 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.[148]

33. Before addressing each of these matters, this section of the *Report* provides a brief explanation of the complaint procedures used by CGB for the handling of accessibility complaints filed under Section 255 before the effective date of the CVAA complaint procedures, and how those procedures have been changed, effective October 8, 2013, for accessibility complaints filed under Sections 255, 716, and 718.

34. *Prior accessibility complaint procedures.* In 1997, the Commission adopted procedures to address informal complaints filed under Section 255 of the Act.[149] These procedures remained in effect from January 1, 2012 until October 8, 2013, which constitutes part of the period covered by this *Report*. Under these procedures, individuals were permitted to file an informal accessibility complaint with CGB's Disability Rights Office (DRO) by letter, phone call, fax, online form, or other reasonable means.[150] Upon receipt, CGB entered the complaint into a database called the Consumer Complaint Management System (CCMS) and then served a Notice of Informal Complaint (NOIC) on the service provider and/or equipment manufacturer against whom the complaint was brought.[151] The provider or

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[145] *See* Attachment at ¶ 3, *supra* (Consumer Groups discussing accessibility barriers with respect to video conferencing services and equipment).

[146] *See* Attachment at ¶ 28, *supra* (comments of Consumer Groups).

[147] *See, e.g.,* Attachment at ¶ 28, *supra* (ACB discussing upgrades to Skype that make its user interface more difficult to use); ¶ 5, *supra* (AADB noting that upgrades or updates sometimes cause a device or app to become less accessible or totally inaccessible for the user who is deaf-blind).

[148] 47 U.S.C. §§ 618(b)(1)(C)-(F). *See also* Notice at ¶ 11, *supra*.

[149] *See* 47 C.F.R. §§ 6.16-6.20, 7.16-7.20. No formal complaints regarding accessibility were filed during the period covered by this *Report*. See 47 C.F.R. §§ 6.21-6.22, 7.21-7.22 (formal complaint procedures).

[150] 47 C.F.R. §§ 6.17(a), 7.17(a).

[151] *See* 47 C.F.R. §§ 6.18(a), 7.18(a).

manufacturer was then given 30 days in which to respond to the NOIC.[152] If DRO then concluded that all issues were satisfied and the consumer's satisfaction with the resolution was verified, or that no further action was required or possible, it considered the matter closed and sent the consumer a close-out letter.[153] DRO was not authorized to impose forfeitures or take other enforcement action in response to an informal complaint alone. However, if the consumer was not satisfied with the provider's or manufacturer's response to the complaint and the DRO decision to terminate action, the consumer could file a formal complaint that could go to the Commission's Enforcement Bureau to determine whether a material and substantial question remained with respect to compliance.[154] The Enforcement Bureau could then investigate further to determine compliance and whether any remedial actions and/or sanctions were warranted.[155]

35. *New accessibility complaint procedures.* Effective October 8, 2013, the Commission revised the complaint process for handling complaints filed under Sections 255, 716 and 718 of the CVAA, pursuant to new rules implementing Section 717(a) of the Act.[156] The new rules require that before filing an informal complaint, a consumer must submit a "request for dispute assistance" (RDA) to DRO for help in resolving the consumer's accessibility problem with a telecommunications or advanced communications service provider or equipment manufacturer.[157] If the two parties do not reach a settlement within 30 days after the filing of an RDA, 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.[158]

36. Since October 8, 2013, the Commission's new complaint rules have established minimum requirements for information that must be contained in an informal complaint.[159] These rules further 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.[160] 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.[161] Within 180 days after receipt of the complaint, the Commission must conclude an investigation into the merits of the complaint and issue

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[152] 47 C.F.R. §§ 6.19, 7.19.

[153] *See* 47 C.F.R. §§ 6.18(a)-(b), 7.18(a)-(b).

[154] *See* 47 C.F.R. §§ 6.20(b)-(c), 7.20(b)-(c).

[155] *See* 47 C.F.R. §§ 6.20(c)-(d), 7.20(c)-(d).

[156] *See* 47 C.F.R. §§ 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,* FCC 13-2177, Public Notice, 28 FCC Rcd 15712 (CGB 2013), available at https://apps.fcc.gov/edocs_public/attachmatch/DA-13-2177A1.pdf.

[157] Prior to October 8, 2013, consumers were able to file informal complaints with DRO alleging a violation of Section 255 of the Act without the prerequisite filing of an RDA.

[158] 47 C.F.R. § 14.32(e). *See also ACS Report and Order*, 26 FCC Rcd at 14658, ¶ 237. Although, previously, consumers could file informal complaints alleging a violation of Section 255, 716, or 718 of the Act with DRO, these complaints must now be filed with the Commission's Enforcement Bureau. 47 C.F.R. § 14.34(a). However, since October 8, 2013, consumers are still able to file formal complaints with the Enforcement Bureau without first submitting requests for dispute assistance. 47 C.F.R. §§ 14.38-14.52

[159] 47 C.F.R. § 14.34(b).

[160] 47 C.F.R. § 14.35(a).

[161] 47 C.F.R. §§ 14.36(b)-(c). The complainant may then file a reply. 47 C.F.R. § 14.36(d).

its order determining whether a violation has occurred.[162] 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.[163]

37. When the Commission established the RDA process, it anticipated that this process would allow for the resolution of consumer accessibility concerns through dialogue and negotiation, thereby reducing the need for informal complaints, and consequent enforcement action.[164] We believe that the new RDA process has succeeded in this respect, and that the new complaint process has further encouraged service providers and equipment manufacturers to comply with the accessibility rules.

A. Number and Nature of Complaints Received

38. From January 1, 2012, to October 7, 2013, consumers filed 85 informal complaints with the Commission, alleging violations of Section 255 of the Act or its implementing regulations.[165] Of these complaints, approximately 34% alleged violations by equipment manufacturers and 54% alleged violations by service providers, with the remaining 12% alleging both service and equipment violations. In addition, between October 8, 2013 and December 31, 2013, consumers filed seven RDAs with DRO under the new complaint procedures, all of which concerned Section 255 of the Act or its implementing regulations.[166] During that three-month period, no RDAs were filed alleging violations of Sections 716 or 718 of the Act, and no informal complaints were filed alleging violations of Sections 255, 716, or 718. Of the seven RDAs that were filed, approximately 86% alleged violations by service providers and 14% alleged violations by both equipment manufacturers and service providers. For the entire two-year period covered by this *Report*, a total of 92 informal complaints and RDAs were filed, all of which alleged accessibility violations under Section 255. An aggregate of approximately 31.5% alleged violations by equipment manufacturers and 56.5% alleged violations by service providers, with the remaining 12% alleging both service and equipment violations.

39. Equipment-related complaints and RDAs raised a wide range of accessibility issues by consumers with disabilities. Many consumers complained of handsets that lacked text-to-speech functionality, or that had keyboards that were hard to read or buttons that were too small to use. Others complained of handsets that were not compatible with their hearing aids or that had poor sound quality. Approximately 15% of all informal complaints and RDAs received during the reporting period involved complaints about inaccessible wireless handsets received in conjunction with subscriptions for telephone services under the Commission's Lifeline program.

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[162] 47 U.S.C. § 618(a)(3)(B) and (4). *See also* 47 C.F.R. § 14.37(a).

[163] 47 U.S.C. § 618(a)(3)(B)(i). *See also* 47 C.F.R. § 14.37(b). Any manufacturer or service provider that is the subject of such order has a reasonable opportunity to comment on the Commission's proposed remedial action before the Commission issues a final order with respect to that action. 47 U.S.C. § 618(a)(4). *See also* 47 C.F.R. § 14.37(c).

[164] *See 2012 CVAA Biennial* Report, 27 FCC Rcd at 12224, ¶ 49, n.148.

[165] From January 1, 2012, until October 8, 2013, consumers filing Section 255 accessibility complaints utilized the Commission's prior informal complaint procedures. *See* Attachment at ¶ 34, *supra*.

[166] From October 8, 2013, through December 31, 2013, consumers filing Section 255 accessibility complaints utilized the Commission's new accessibility complaint procedures. *See* Attachment at ¶¶ 35-36, *supra.* Also during this period, and perhaps due to consumer unfamiliarity with the new accessibility complaint procedures, DRO received an additional 21 RDAs, but because these did not involve violations of Section 255, 716 or 718, DRO converted these to complaints filed under other provisions of the Act. These 21 RDAs are therefore not included in the above statistics.

40. Complaints and RDAs involving service providers predominantly focused on their failure to provide instructions or billing in an accessible format, accessible contact information or directory assistance, and accessible customer service. More specifically, approximately 12% of all informal complaints and RDAs alleged an inability to access billing information. Most of these were from consumers who were blind or visually impaired, who expressed long-standing frustrations with acquiring access to their accounts. Some of the consumers were facing imminent service cut-offs at the time they filed their complaint or RDA, due to an inability to access their billing information. An additional 11% of informal complaints and RDAs came from consumers who, because they are blind or visually impaired, sought free access to a phone company's 411 directory assistance services because they could not access free text-based telephone directory information. Another 6% of the informal complaints and RDAs were from consumers who are deaf or hard of hearing, who alleged that certain communication service providers refused to accept calls made through TRS, a TTY, or to otherwise communicate by text.[167]

B. Actions Taken to Resolve Accessibility Complaints

41. *Complaints filed under prior accessibility complaint procedures.* For each informal complaint filed with the Commission between January 1, 2012, and October 8, 2013, DRO forwarded the complaint to, and served an NOIC on, the service provider and/or equipment manufacturer alleged to have violated Commission rules. In most cases, equipment manufacturers and service providers attempted to work with consumers to resolve their particular needs. Accessibility complaints were often addressed by providing the requested equipment, identifying equipment that was available as an upgrade, or informing consumers of new models with accessibility features that would be issued in the future. For example, DRO was generally successful in securing accessible equipment for complainants seeking accessible phones from providers in the Lifeline program because these providers typically could identify higher cost handsets with accessible features, which they provided to complainants at no additional cost. Service providers also accommodated consumers who needed accessible formats for billing, equipment instructions, and directory assistance. DRO intervention also prevented service disruption for several complainants who had been unable to pay their bills due to inaccessible formats.

42. In a majority of cases, as a result of DRO's actions, complaints about accessibility and usability problems were resolved promptly and to the satisfaction of the consumer. For all but three of the 85 informal complaints filed during the reporting period (*i.e.*, in 96% of these cases), DRO verified the consumer's satisfaction with the resolution or determined that no further action was required or possible, and sent the consumer a close-out letter during the reporting period. One of the remaining complaints was resolved after the reporting period closed. DRO is making best efforts to facilitate resolution of the two complaints that are still pending

43. *New accessibility complaint procedures.* For six of the seven RDAs filed under the new complaint procedures, DRO contacted the consumer and the manufacturer or service provider in an attempt to resolve the accessibility or usability problem. DRO dismissed one RDA because it was unable to obtain a response from the consumer to obtain additional information about the accessibility problem or to facilitate resolution. DRO was able to facilitate a resolution for each of the remaining six RDAs,

[167] For example, a deaf consumer alleged that her major mobile telephone service provider refused to communicate with her about her account through TRS, suggesting instead that it communicate with the consumer's 14-year-old daughter or by having the complainant physically appear at one of the provider's stores. The consumer's complaint was resolved when DRO informed the provider of its obligation to ensure usable customer service and technical support in call centers that support their products. *See* 47 C.F.R. § 6.11(a)(3).

and none were escalated to an informal complaint for investigation by the Enforcement Bureau.[168] Based on this experience, it appears that there is general consumer satisfaction with the new dispute assistance and complaint process.

44. The Commission did not assess any forfeiture penalties for accessibility-related violations during the period covered by this *Report*.

C. Time Used to Resolve Accessibility Complaints

45. *Complaints filed under prior accessibility complaint procedures.* Under the prior complaint procedures, there was no prescribed time frame for resolving informal complaints alleging violations of Section 255. Of the 82 informal complaints that were received and closed by DRO during the reporting period, 51 complaints, or approximately 62%, were closed within 90 days. Another 26 complaints, or approximately 32%, were closed between 90 and180 days. Five complaints, or about 6%, were closed between 180 days and one year. In other words, all 82 informal complaints that were received and closed by DRO during the reporting period were resolved within one year.

46. *New accessibility complaint procedures.* Under the new complaint procedures, a consumer must submit an RDA and allow DRO 30 days to facilitate resolution of the accessibility problem, before the consumer may file an informal complaint with the Enforcement Bureau. The time period for resolution may be extended in 30-day increments. Of the seven RDAs that were filed during the reporting period, one was dismissed at the end of 60 days because DRO was unable to obtain a response from the consumer. DRO facilitated resolution of four of the remaining RDAs within 30 days of receipt and one within 60 days of receipt. DRO resolved the final RDA after the reporting period ended, but within 180 days of receipt. None of the RDAs filed were escalated to an informal complaint for investigation by the Enforcement Bureau.

D. Actions for Mandamus and Appeals Filed

47. 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

48. Section 717(b)(1)(G) of the Act requires the Commission to provide an assessment of the effect of the requirements of Section 717 of the Act on the development and deployment of new communications technologies.[169] Section 717(a) requires the Commission to establish new recordkeeping and enforcement procedures for service providers and equipment manufacturers that are subject to Sections 255, 716, and 718.[170] In the *2014 CVAA Assessment PN*, the Commission sought comment on

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[168] For example, one service provider worked with a consumer who had difficulty in finding an accessible mobile handset with sufficiently strong signal reception in his home. The service provider allowed the consumer to test several models until the consumer was able to find an accessible handset that he could use.

[169] 47 U.S.C. § 618(b)(1)(G).

[170] 47 U.S.C. § 618(a). In October 2011, the Commission adopted these procedures, which require service providers and equipment manufacturers to maintain records to demonstrate compliance with Sections 255, 716, and 718 when a complaint is filed. 47 C.F.R. § 14.36(a). Entities must certify annually to the Commission that they have kept records pertaining to the accessibility of their products beginning January 30, 2013. *See* 47 U.S.C. § 618(a)(5)(B); 47 C.F.R. § 14.31. In response to an informal complaint, the manufacturer or service provider "must produce

the impact, if any, that the CVAA's recordkeeping requirements and enforcement measures, including the requirement for consumers to request dispute assistance from the Commission as a prerequisite to filing an informal complaint, have had on the development and deployment of accessible new communications technologies since these requirements became effective.[171] The Commission also asked whether service providers and equipment manufacturers have identified best practices with respect to the recordkeeping requirements that can be shared with others.[172]

A. Comments Received

49. No consumer organizations commented on the recordkeeping or enforcement requirements of Section 717. Industry, however, generally reports that it finds value in certain aspects of Section 717's recordkeeping and enforcement requirements, and otherwise urges clarification of or flexibility in interpretation of other aspects of those requirements. CTIA states that "the CVAA and good faith efforts of the wireless industry and accessibility community has resulted in collaborations that encourage the exchange of information about priorities, challenges, and issues."[173] In particular, CTIA believes that the requirement to provide contact information for a company representative who can address accessibility complaints "has been a resounding success," enabling resolution of accessibility concerns before requesting assistance from or filing complaints with the Commission.[174] CTIA urges that this direct engagement continue as the primary method of resolving issues.[175]

50. CTIA also urges the Commission to recognize the need for flexibility in recordkeeping and consultation requirements.[176] Nonetheless, CTIA opines that Commission actions, such as clarifying recordkeeping and consultation requirements, could improve the ability of covered entities to comply fully with the CVAA requirements.[177] For example, CTIA suggests that, in the absence of a Commission determination about "the types of records, processes, and efforts to engage the accessibility community" that comply with the Commission's rules, the Commission should "remain flexible with respect to imposing any penalties if an entity's records are ultimately unexpectedly found to be insufficient or non-compliant."[178] Similarly, TIA states that its members have been complying with the recordkeeping requirements and certifications required under the CVAA, and stresses that "it is important that the Commission continue to recognize the need for flexibility and efficiency in the approaches taken to meet

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documents demonstrating its due diligence in exploring accessibility and achievability . . . throughout the design, development, testing, and deployment stages of a product or service." 47 C.F.R. § 14.36(a). Since October 8, 2013, the Commission also has been required to investigate complaints filed under these sections and to issue orders on such investigations within 180 days after an informal complaint is filed, unless the complaint is resolved before that time. 47 C.F.R. § 14.37(a).

[171] *2014 CVAA Assessment PN*, 29 FCC Rcd at ___, ¶ 14.

[172] *Id*.

[173] CTIA Comments at 34.

[174] *Id.*

[175] *Id.*

[176] *Id.* at 35-36. CTIA also recommends streamlining hearing aid compatibility reporting requirements. *Id.* at 35. Hearing aid compatibility reporting requirements are outside the scope of Section 717 of the Act.

[177] *Id.* at 34-36.

[178] *Id.* at 36, *citing* PN Comments of CTIA-The Wireless Association – Accessibility of Communications Technologies, Docket No. 10-213 (filed Jul. 25, 2012) at 19-20 (recognizing that the "development of an effective recordkeeping process may require some experience with the rules and their enforcement," CTIA urged the Commission not to "penalize entities that are attempting in good faith to comply with the rules").

the recordkeeping obligations outlined within the CVAA."[179] Likewise, CEA applauds the flexibility provided with respect to recordkeeping mechanisms, but notes that the process still requires significant resources, and urges the Commission to continue to avoid regulations or enforcement practices that lock in any given solution that may become obsolete.[180]

B. Tentative Findings on the Effect of Section 717's Recordkeeping and Enforcement Requirements on the Development and Deployment of New Communications Technologies

51. Based on the record before us, we tentatively find that the recordkeeping obligations mandated by Section 717, along with the flexibility provided to entities charged with complying with these requirements, have helped to foster collaboration between industry and consumers, and have helped to eliminate accessibility barriers encountered by consumers with disabilities. We base this tentative conclusion on the increasing array of accessible products and services now available to consumers to access advanced communications technologies.[181] At the same time, we tentatively conclude that nothing in the record indicates that Section 717's requirements will hinder the development and deployment of new communications technologies. We base this tentative conclusion on the significant growth in the number and types of new communications technologies that have emerged over the past two years.[182]

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[179] TIA Comments at 10.

[180] CEA Comments at 6.

[181] *See, e.g.,* Attachment at ¶ 7, n.33, *supra* (CTIA discussing accessible feature phones and new entities that market services and offer accessible phones to seniors and individuals who are blind or visually impaired); ¶ 7, nn.35-38, *supra* (CTIA reporting on features that make the advanced communications services functions on smartphones more accessible to individuals with disabilities); ¶ 10, *supra* (CEA reporting that its members are actively engaged in efforts to comply with the Commission's advanced communications services accessibility rules); ¶ 11, *supra* (Microsoft noting that it provides consumers with disabilities a choice of built-in or third-party accessibility solutions). *See also* Attachment at ¶ 49, *supra* (CTIA discussing wireless industry and accessibility community collaborations).

[182] *See, e.g.,* "Ten Breakthrough Technologies 2013: Smart Watches," available at http://www.technologyreview.com/featuredstory/513376/smart-watches/ (last viewed Aug. 15, 2014) (Pebble smart watches "connect wirelessly to an iPhone or Android phone and displays notifications, messages, and other simple data of the user's choosing"); "Google Glass," available at http://www.google.com/glass/start/what-it-does/ (last viewed Aug. 15, 2014) (Send a Message: "Whether you ski, snowboard, snowshoe or anything in between, it's never easy to keep track of your friends. With Glass, you can keep your mittens on and send messages hands free through SMS or Hangouts.").