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

In the Matter of	)	
	)	
Access to Video Conferencing	)	CG Docket No. 23-161
	)	
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
	)	
Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities	)	CG Docket No. 03-123
	)	
Petition of Sorenson Communications, LLC for Limited Waiver of the Privacy Screen Rule	)	

SECOND REPORT AND ORDER AND FURTHER NOTICE OF PROPOSED RULEMAKING

Adopted: September 26, 2024 **Released: September 27, 2024**

By the Commission: Chairwoman Rosenworcel and Commissioners Starks and Gomez issuing separate statements.

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I. INTRODUCTION

1. In this *Second Report and Order*, we take steps to ensure that people with disabilities are able to access and use video conferencing, a modern communications tool that is critical in connecting for work, education, health, and other fundamental life activities.[1] We provide additional clarity on how existing accessibility performance objectives in Part 14 of our rules apply to interoperable video conferencing services (IVCS).[2] We also modify those performance objectives to ensure access to IVCS. Finally, we modify our rules for telecommunications relay services (TRS) to address how the Interstate TRS Fund will support the provision of Video Relay Service (VRS) and other forms of TRS in video conferences.[3] Regarding TRS calls in general, we authorize TRS Fund support for multiple TRS communications assistants (CAs), when warranted, on a single call.

2. In the *Further Notice of Proposed Rulemaking*, we seek comment on adopting additional amendments to our rules to further ensure the accessibility of video conferencing, including potential amendments to the Part 14 rules to provide additional specificity on user control of IVCS accessibility features and to address IVCS accessibility for individuals with vision, cognitive, and mobility disabilities. We also seek comment on whether additional changes are needed in our Part 64 rules to facilitate the provision of TRS in video conferences and protect the TRS Fund from waste, fraud, and abuse in this context.

[1] *See Access to Video Conferencing; Implementation of Sections 716 and 717 of the Communications Act of 1934, as Enacted by the Twenty-First Century Communications and Video Accessibility Act of 2010; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Petition of Sorenson Communications, LLC, for a Limited Waiver of the Privacy Screen Rule,* CG Docket Nos. 23-161, 10-213, and 03-123, Report and Order, Notice of Proposed Rulemaking, and Order, 38 FCC Rcd 6300 (2023) (*2023 Video Conferencing Order*, *Notice*, or *Privacy Screen Waiver Order*).

[2] *See* 47 CFR Pt. 14.

[3] *See id*. Pt. 64.

II. BACKGROUND

A. Application of Accessibility Rules to Video Conferencing

3. Under section 716 of the Communications Act, as amended (the Act),[4] added by the Twenty-First Century Communications and Video Accessibility Act of 2010 (CVAA),[5] providers of ACS and manufacturers of equipment used for advanced communications services (ACS) must make such services and equipment accessible to and usable by people with disabilities, if achievable.[6] Service providers and manufacturers may comply with section 716 of the Act either by building accessibility features into their services and equipment[7] or by choosing to use third-party applications, peripheral devices, software, hardware, or customer premises equipment (CPE) that are available to individuals with disabilities at nominal cost.[8] If accessibility is not achievable through either of these means, then manufacturers and service providers must make their products and services compatible with existing peripheral devices or specialized CPE commonly used by people with disabilities to achieve access, subject to the achievability criterion.[9] The Commission is directed to adopt "performance objectives to ensure the accessibility, usability, and compatibility of advanced communications services and the equipment used for such services."[10]

4. The Act defines "advanced communications services" as:

> interconnected VoIP service; (B) non-interconnected VoIP service; (C) electronic messaging service; (D) interoperable video conferencing service; and (E) any audio or video communications service used by inmates for the purpose of communicating with individuals outside the correctional institution where the inmate is held, regardless of technology used.[11]

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[4] 47 U.S.C. § 617.

[5] Pub. Law 111-260, 124 Stat. 2751 (Oct. 8, 2010).

[6] 47 U.S.C. § 617(a)(1), (b)(1); 47 CFR § 14.10(b) (defining "achievable").

[7] 47 U.S.C. § 617(a)(2)(A), (b)(2)(A).

[8] *Id*. § 617(a)(2)(B), (b)(2)(B). By contrast, section 255 of the Act, which requires that providers of telecommunications service and manufacturers of telecommunications and customer premises equipment ensure that their services and equipment are accessible to and usable by people with disabilities, if readily achievable, does not include a provision allowing service providers and equipment manufacturers to choose to meet their obligations by using third-party applications or equipment. *Id*. § 255.

[9] *Id.* § 617(c). ACS providers and equipment manufacturers are also subject to recordkeeping and reporting requirements established pursuant to section 717(a) of the Act. *Id*. § 618(a); *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; Accessible Mobile Phone Options for People who are Blind, Deaf-Blind, or Have Low Vision*, CG Docket No. 10-213, WT Docket No. 96-198, CG Docket No. 10-145, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 14557, 14650-55, paras. 219-30 (2011) (*2011 ACS Order* or *2011 ACS Further Notice*). For example, providers and manufacturers must maintain records of their efforts to ensure that their services and products are accessible (47 CFR § 14.31(a)), and must be prepared to demonstrate due diligence in exploring accessibility and achievability in response to complaints (*id*. § 14.36(a)).

[10] 47 U.S.C. § 617(e)(1)(A).

[11] *Id.* § 153(1).

"Interoperable video conferencing service," in turn, is defined as:

> A service that provides real-time video communications, including audio, to enable users to share information of the user's choosing.[12]

5. In initially adopting rules to implement section 716, the Commission incorporated without change the statutory definition of "interoperable video conferencing service,"[13] but it also attempted to determine what Congress meant by including the word "interoperable" as part of the term.[14] Finding that the record before it was insufficient to decide this question, the Commission sought further comment on the issue.[15]

6. The extent to which section 716 applies to video conferencing remained undecided for many years. In that period, video conferencing technology evolved substantially and its use increased. After the onset of the COVID-19 pandemic, the growth of video conferencing accelerated, to the point that it became recognized as a central pillar of our communications infrastructure.[16] Concomitantly with its growth came heightened concerns about its accessibility to people with disabilities.[17] In the 2022 Biennial Report to Congress required by the CVAA,[18] while recognizing that some accessibility features had been introduced by some video conferencing platforms, the Commission noted numerous examples of video conferencing platforms' lack of accessibility, as described by commenters on the draft Biennial Report, including the following:

- Automatic captioning producing incomplete or delayed transcriptions, causing cognitive overload;
- Screen reader incompatibility with platforms' chat features and user screen sharing;
- Difficulty toggling sound and mute features for people with vision disabilities, as well as lack of access to verbosity settings that allow users to control when notifications are voiced;
- Difficulty with enlarging content or viewing two windows at once;
- Poor video quality hindering sign language communication; and
- Audio-only workarounds during system crashes and low-bandwidth situations not adequately serving people who are deaf and hard of hearing.[19]

7. In June 2023, after refreshing the record on the definition of "interoperable video conferencing service,"[20] the Commission resolved the definitional issue, revisiting its previously stated

[12] *Id.* § 153(27).

[13] *2011 ACS Order*, 26 FCC Rcd at 14709, Appx. B; 47 CFR § 14.10(m).

[14] *2011 ACS Order*, 26 FCC Rcd at 14576-77, paras. 46-47.

[15] *2011 ACS Further Notice*, 26 FCC Rcd at 14684-87, paras. 301-05.

[16] *2023 Video Conferencing Order*, 38 FCC Rcd at 6303-04, paras. 6-7.

[17] *Id.* at 6304-06, paras. 8-11.

[18] *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, 37 FCC Rcd 11360 (CGB 2022) (*2022 CVAA Report to Congress*).

[19] *Id.* at 11370-72, paras. 23-27.

[20] *See Consumer and Governmental Affairs, Media, And Wireless Telecommunications Bureaus Seek Update On Commission's Fulfillment of The Twenty-First Century Communications and Video Accessibility Act*, GN Docket No. 21-140, Public Notice, 36 FCC Rcd 7108, 7109 (2021) (*2021 CVAA Refresh Public Notice*); *Consumer and Governmental Affairs Bureau Seeks to Refresh* the *Record on Interoperable Video Conferencing Services*, CG Docket No. 10-213, Public Notice, 37 FCC Rcd 5647, 5651 (CGB 2022) (*2022 IVCS Refresh Public Notice*).

views regarding the interpretation of this statutory term.[21] Noting that the Act specifically defines "interoperable video conferencing service" as "a service that provides real-time video communications, including audio, to enable users to share information of the user's choosing,"[22] the Commission found no persuasive reason to modify or limit the scope of the statutory definition. Therefore, the Commission concluded that its Part 14 accessibility rules apply to all services and equipment that "provid[e] real-time video communications, including audio, to enable users to share information of the user's choosing."[23] Given the extended pendency of questions regarding the application of Part 14 to video conferencing, the Commission recognized that some service providers might need additional time to comply with those rules, and therefore allowed IVCS providers one year from the effective date of the *2023 Video Conferencing Order* to come into compliance with the existing Part 14 rules.[24]

B. TRS and Video Conferencing

8. Enacted in 1990, Title IV of the Americans With Disabilities Act (ADA), codified as section 225 of the Act, directs the Commission to "ensure that interstate and intrastate telecommunications relay services are available, to the extent possible and in the most efficient manner," to people in the United States with hearing or speech disabilities.[25] TRS are defined as "telephone transmission services" enabling such persons to communicate by wire or radio "in a manner that is functionally equivalent to the ability of [a person without hearing or speech disabilities] to communicate using voice communication services."[26] There are currently three forms of Internet-based TRS: (1) Video Relay Service (VRS) "allows people with hearing or speech disabilities who use sign language to communicate with voice telephone users through video equipment;"[27] (2) Internet Protocol Relay Service (IP Relay) allows an individual with a hearing or speech disability to communicate with voice telephone users by transmitting text via the Internet;[28] and (3) Internet Protocol Captioned Telephone Service (IP CTS) permits a person with hearing loss to have a telephone conversation while reading captions of what the other party is saying on an Internet-connected device.[29] The provision of Internet-based TRS is

[21] *2023 Video Conferencing Order*, 38 FCC Rcd at 6312-15, paras. 27-33.

[22] *Id.* at 6313, para. 28.

[23] *Id.*; *see* 47 U.S.C. § 153(27).

[24] *See 2023 Video Conferencing Order*, 38 FCC Rcd at 6317-18, para. 41. IVCS providers were required to comply with the Part 14 accessibility rules no later than September 3, 2024. *See Consumer and Governmental Affairs Bureau Announces Compliance and Comment Dates for the Interoperable Video Conferencing Services Proceeding*, CG Docket Nos. 03-123, 10-213, and 23-161, Public Notice, 38 FCC Rcd 6778, 6778 (CGB 2023) (*2023 Video Conferencing Effective Date Public Notice*).

[25] 47 U.S.C. § 225(b)(1).

[26] *Id.* § 225(a)(3).

[27] 47 CFR § 64.601(a)(51); *see also Structure and Practices of the Video Relay Service Program,* CG Docket No. 10-51, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 5545, 5548-49, para. 2 (2011) (*2011 VRS Call Practices Order*).

[28] 47 CFR § 64.601(a)(24). The text transmission is delivered to an IP Relay call center, where a CA converts the user's text to speech for the hearing party and converts that party's speech to text for the IP Relay user. *See Provision of Improved Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities,* CC Docket No. 98-67, Declaratory Ruling and Second Further Notice of Proposed Rulemaking, 17 FCC Rcd 7779, 7780, para. 3 (2002) (*2002 IP Relay Declaratory Ruling*).

[29] 47 CFR § 64.601(a)(23); *see Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Internet-based Captioned Telephone Service*, CG Docket No. 03-123, Declaratory Ruling, 22 FCC Rcd 379, 385, para. 14 (2007) (*2007 IP CTS Declaratory Ruling*).

supported by the Interstate TRS Fund, maintained through mandatory contributions from providers of telecommunications service, interconnected VoIP service, and non-interconnected VoIP service.[30]

9. The structure of the Commission's TRS program reflects the fact that, historically, most people have used wireline or wireless telephone networks to communicate remotely by voice. Thus, North American Numbering Plan (NANP) telephone numbers are used to route calls between TRS users and the people they are calling, and the provision of TRS, to date, has typically been configured to fit within the typical structure of a traditional telephone call, with a "calling party" and "called party" and originating and terminating NANP numbers. This structure has continued to be used to frame the provision of TRS even after the development of Internet-based forms of TRS. For example, VRS, which requires an Internet video link between VRS user and CA, has been configured to fit the traditional framework in which one party places a call to another party (or parties, in the case of a conference call) by dialing a phone number.[31] The other "leg" of an ordinary VRS call is simply a voice connection between the CA and the hearing party (or parties), using ordinary telephone service. As a result, even though a VRS user's connection with a CA is established via an Internet video link, the Commission has been able to rely on originating and terminating telephone numbers as part of the information required to verify the user's eligibility and the minutes of service for which TRS providers are compensated.[32]

10. Video conferencing, however, is generally accessed through the Internet, without necessarily involving any telephone numbers. While a consumer can obtain audio-only access to some video conferences by dialing a telephone number, full video access is usually achieved directly through the Internet, without the use of originating or terminating telephone numbers. As a result, for a consumer to use VRS to participate in a video conference (absent the new arrangements discussed in this *Second Report and Order*), a telephone number must be available for an audio-only connection to the video conference. The VRS consumer must (1) establish a direct video connection to the conference—in the same way as other participants, but independently of the VRS provider—and (2) establish a second, separate video connection to the VRS provider. The CA then establishes a separate, audio-only connection to the conference, using the dial-in number. The CA's only connection to the VRS user is via the second video connection. Thus, the CA cannot see the other video conference participants, and the VRS user can only view the CA over the second video connection, often on a separate screen.

11. To address concerns about the availability of TRS on video conferencing platforms, the Commission requested the Disability Advisory Committee (DAC) to study the matter. In its 2022 report, the DAC stated:

> It is impossible for users of most video conferencing platforms and most TRS providers to natively interconnect their preferred TRS provider to video conferencing platforms. Typically, TRS users can only interconnect their preferred TRS provider to a video conferencing

[30] 47 CFR § 64.604(c)(5)(iii)(A). Three non-Internet-based forms of TRS—traditional TRS using text telephony (TTY), Captioned Telephone Service (CTS), and Speech-to-Speech Relay (STS)—are also supported in part by the TRS Fund and are available through state TRS programs.

[31] In 2008, to enable VRS to function more like traditional telephone service, the Commission required that VRS users be assigned NANP telephone numbers, which can be dialed to reach a VRS user, and to maintain those numbers (with associated Internet routing information) in a TRS Numbering Directory, to facilitate the routing of calls between Internet-based TRS users and end users served by other service providers. 47 CFR § 64.613; *see also Telecommunications Relay Services And Speech-to-Speech Services For Individuals With Hearing And Speech Disabilities, E911 Requirements For IP-Enabled Service Providers*, CG Docket No. 03-123, WC Docket No. 05-196, Report and Order and Further Notice of Proposed Rulemaking, 23 FCC Rcd 11591 (2008).

[32] *See* 47 CFR § 64.611(a)(4) (requiring telephone numbers for registration in the User Database for VRS and IP Relay), (j)(2) (same for IP CTS); *id.* § 64.604(c)(5)(iii)(D)(2) (requiring telephone numbers in call data records).

> platform by dialing in via the public switched telephone network (PSTN).[33]

12. Such a dial-in connection is often unavailable,[34] and even when available, dialing into a video conference poses multiple difficulties.[35] First, the TRS provider's CA, who is connected to the video conference via the audio-only dial-in connection, has no visual access to the video conference participants (including visual cues to indicate who is speaking) as well as any documents or other visual aids being shown to participants.[36] Second, as Communications Equality Advocates (CEA)[37] explains, these arrangements:

> essentially force a participant using TRS to deal with the hassle of running two applications (to wit, two windows) on the same device or juggling two devices during the conference, one to participate in the video portion of the conference, and another to communicate with the TRS provider's [CA]. As anyone who has participated in a video conference—particularly with a large group—knows, following the discussion is challenging enough with one application or one device; having to toggle between two applications or two devices makes meaningful participation even more arduous.[38]

13. For all these reasons, the DAC recommended that the FCC resolve these issues by:

- Facilitating a technical mechanism for TRS providers to natively interconnect TRS services, including video, audio, captioning, and text-based relay to video conferencing platforms;
- Ensuring that users can seamlessly initiate TRS from the provider of their choice on any video conferencing platform;
- Addressing the integration of CAs and the overall accessibility challenges of video conferencing platforms; and,
- Clarifying the legal ability of TRS providers to seek compensation for service provided for video conferences from the TRS Fund.[39]

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[33] Recommendation of the Federal Communications Commission (FCC) Disability Advisory Committee (DAC) on Telecommunications Relay Service (TRS) Use on Video Conferencing Platforms at 2 (Feb. 24, 2022), https://www.fcc.gov/file/22912/download (DAC Video Conferencing Report). Since the DAC recommendations were published, one VRS provider has reported that it now offers a means of integrating its provision of VRS with one video conferencing platform. *See* Letter from John T. Nakahata, Counsel to Sorenson Communications, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 10-51 and 03-123 (filed Mar. 10, 2023).

[34] DAC Video Conferencing Report at 2.

[35] *Id.* at 3-4.

[36] *See*, *e.g.*, Comments of Sorenson Communications, LLC, at 7-8 (filed Sept. 6, 2023) (Sorenson Comments). Further, the CA's audio-only connection may result in poor audio quality, causing errors in interpretation or captioning. DAC Video Conferencing Report at 4.

[37] CEA is a coalition of advocacy organizations for the deaf and hard of hearing, comprising the National Association of the Deaf (NAD), Northern Virginia Resource Center for Deaf and Hard of Hearing Persons (NVRC), Communication Service for the Deaf (CSD), TDIforAccess, Inc. (TDI), accesSOS, Deaf Seniors of America (DSA), Hearing Loss Association of America (HLAA), Deaf In Government (DIG), Association of Late-Deafened Adults (ALDA), Global Alliance of Speech-to-Text Captioning, National Association of State Agencies of the Deaf and Hard of Hearing (NASADHH), Cerebral Palsy and Deaf Organization (CPADO), and Registry of Interpreters for the Deaf (RID).

[38] Comments of Communications Equality Advocates on Notice of Proposed Rulemaking, at 8 (filed Sept. 6, 2023) (CEA Comments).

[39] DAC Video Conferencing Report at 4-5.

C. 2023 Notice of Proposed Rulemaking

14. On June 12, 2023, the Commission released a *Notice* proposing (1) IVCS-specific amendments to the performance objectives in the Part 14 rules on accessibility of ACS and (2) amendments to the TRS rules to authorize and facilitate the provision of TRS in video conferences. Specifically, the Commission proposed to require IVCS providers to include speech-to-text (*i.e.*, captioning of all voice communications) and text-to-speech capability,[40] to enable the use of sign language interpreting,[41] and to include accessibility settings in the user interface controls.[42] The Commission also sought comment on whether technical standards are available or could be fashioned for use as safe harbors, whereby certain performance objectives for IVCS can be satisfied by providing access to relevant forms of TRS.[43]

15. Regarding its TRS rules, the Commission proposed to clarify that the integrated provision of TRS in video conferences can be supported by the Interstate TRS Fund.[44] The Commission also proposed additional rule amendments specific to video conferences, addressing (1) VRS user validation and call detail supporting compensation requests;[45] (2) participation of VRS CAs and the use of multiple CAs and multiple VRS providers;[46] and (3) the ability of VRS users and CAs to turn off their cameras when not actively participating in a video conference.[47] Regarding TRS generally, the Commission proposed to amend the confidentiality requirements for TRS CAs and providers in the context of video conferences[48] and prohibit exclusivity agreements between TRS providers and IVCS providers.[49] Finally, the Commission sought comment on how to avoid TRS substituting for accommodations for individuals with disabilities that employers, educational institutions, health care organizations, and government agencies are required to provide under other applicable laws,[50] including whether to allow TRS users to reserve a CA in advance of a video conference.[51]

16. In response to the *Notice,* the Commission received comments from a broad range of industry and consumer representatives: a task force composed of a consortium of constituents with disabilities,[52] three advocacy organizations for the blind;[53] two communications industry trade

[40] *Notice,* 38 FCC Rcd at 6320-22, paras. 48-54.

[41] *Id.* at 6322-24, paras. 55-57.

[42] *Id.* at 6324, paras. 58-59.

[43] *Id.* at 6326, paras. 65-67; 47 U.S.C. § 617(e)(1)(D).

[44] *Notice,* 38 FCC Rcd at 6326-28, paras. 68-73.

[45] *Id.* at 6329-30, paras. 77-80.

[46] *Id.* at 6330-32, paras. 81-86.

[47] *Id.* at 6332, paras. 87-89. The Commission also sought comment on whether rule changes were needed to address the integration of other forms of TRS into video conferences. *Id.* at 6332-34, paras. 90-94.

[48] *Id*. at 6334-35, paras. 96-98.

[49] *Id.* at 6335, para. 99.

[50] *Id.* at 6335-36, paras. 100-01.

[51] *Id.* at 6336, para. 102.

[52] Comments of the Consortium of Constituents with Disabilities (CCD) Technology and Telecommunications (Tech) Task Force (filed Sept. 6, 2023) (CCD-TTTF Comments).

[53] Comments of: American Council of the Blind (ACB Comments); American Foundation for the Blind (AFB Comments); National Federation of the Blind (NFB Comments) (all filed Sept. 6, 2023).

organizations;[54] two VRS providers;[55] two IP CTS providers;[56] two ASL technology or interpreting organizations;[57] two accessibility consulting firms;[58] CEA; one consumer privacy advocate;[59] one assistive technology firm supporting individuals with speech disabilities;[60] one state relay service program;[61] the People's Republic of China;[62] and several dozen "express comments" from individual commenters. Reply comments were filed by the coalition of advocacy organizations for the deaf and hard of hearing,[63] two VRS providers,[64] one IP Relay provider,[65] one industry trade organization,[66] one state public utility commission,[67] and one ASL technology organization.[68] Subsequently, Sorenson Communications, LLC (Sorenson) a VRS provider that developed a mechanism to allow use of VRS on one video conferencing platform, requested clarification of the existing TRS rules with respect to the integrated provision of VRS in video conferences.[69]

III. SECOND REPORT AND ORDER

17. In this *Second Report and Order*, we adopt new or modified objectives to improve the accessibility and usability of video conferencing services for individuals with disabilities. In addition, we amend Part 64 of our rules to expressly authorize the provision of TRS with video conferencing and to

[54] Comments of USTelecom—The Broadband Association (filed Sept. 6, 2023) (USTelecom Comments); Comments of Consumer Technology Association (filed Sept. 6, 2023) (CTA Comments).

[55] Sorenson Comments; Comments of Convo Communications, LLC (filed Sept. 6, 2023) (Convo Comments).

[56] Comments of Hamilton Relay, Inc. (filed Sept. 6, 2023) (Hamilton Comments); ClearCaptions, LLC Comments (filed Sept. 6, 2023) (ClearCaptions Comments).

[57] Comments of Sign-Speak Inc. (filed Sept. 6, 2023) (Sign-Speak Comments); Comments of LanguageLine Solutions (filed Sept. 6, 2023) (LanguageLine Comments).

[58] Comments of Marc Safman, Safman Consulting (filed Aug. 11, 2023) (Safman Comments); Comments of Matthew Kaplowitz, Bridge Multimedia (filed Aug. 29, 2023) (Bridge Comments).

[59] Comments of Electronic Privacy Information Center (filed Sept. 6, 2023 (EPIC Comments).

[60] Comments of Voiceitt, Inc. (filed Sept. 6, 2023) (Voiceitt Comments).

[61] Letter from David Bahar, Director, Telecommunications Access of Maryland, to Marlene H. Dortch, Secretary, FCC (filed Sept. 6, 2023) (Maryland Relay Comments).

[62] Comments from P.R. China on United States Notification G/TBT/N/USA 2029: Access to Video Programming (filed Oct. 5, 2023) (PRC Comments).

[63] Reply Comments of Communications Equality Associates on Notice of Proposed Rulemaking (filed Oct. 6, 2023) (CEA Reply Comments).

[64] Reply Comments of Sorenson Communications, LLC (filed Oct. 6 2023) (Sorenson Reply Comments); Reply Comments of ZP Better Together, LLC (filed Oct. 6, 2023) (ZP Reply Comments).

[65] T-Mobile Accessibility Reply Comments (filed Oct. 6, 2023) (T-Mobile Reply Comments).

[66] Reply Comments of Consumer Technology Association (filed Oct. 6, 2023) (CTA Reply Comments).

[67] Letter from Lisa-Marie G. Clark, Staff Counsel, California Public Utilities Commission, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 03-123, 10-213, and 23-161 (filed Oct. 6, 2023) (CPUC Reply Comments).

[68] Reply Comments of Sign-Speak Inc. on Notice of Proposed Rulemaking (filed Oct. 6, 2023) (Sign-Speak Reply Comments).

[69] *See* Letter from John T. Nakahata, Counsel to Sorenson Communications, to Alejandro Roark, Chief, CGB, and Mark Stephens, Chief, OMD, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 23-161, 10-213, and 03-123 (filed Oct. 19, 2023) (Sorenson Request Letter); Letter from John T. Nakahata, Counsel to Sorenson, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 23-161, 10-213, and 03-123 (filed Oct. 16, 2023) (Sorenson October 2023 *Ex Parte*); Letter from John T. Nakahata, Counsel to Sorenson, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 23-161, 10-213, and 03-123 (filed Jan. 25, 2024) (Sorenson Jan. 25 *Ex Parte*).

define how providers of TRS Fund-supported VRS and other relay services may integrate the provision of TRS with video conferencing.

A. Video Conferencing Accessibility

1. Need for Improvement

18. We find that there is a continuing need for improvement in making video conferencing accessible. Commenters generally agree with the Commission's assessment that video conferencing has grown from a niche product to an essential vehicle of communication.[70] As CEA points out, "consumer-grade video conferencing services, unheard of when the CVAA was passed, are now an everyday communications tool used in every aspect of our personal, educational, and business lives."[71] Sorenson concurs, noting: "Day-to-day activities—such as work meetings, parent-teacher conferences, family gatherings, and social hangouts—predominantly shifted from traditional telephone calls and audio conference bridges to [video conferencing] platforms during the COVID-19 pandemic."[72] According to other commenters, video conferencing services "have become the preferred platforms for discourse throughout the country,"[73] and their use "is required for many employees and contractors to maintain productivity at the workplace."[74]

19. Video conferencing has become a routine facet of everyday life. Recent data from Gallup show that, as of February 2024, only 20% of U.S. employees with remote-capable jobs work exclusively on-site (compared to 60% in January 2019); 54% have hybrid work arrangements, and 27% have exclusively remote work arrangements.[75] The Pew Research Center has found that 78% of remote workers use video or online conferencing services at least "sometimes," with more than half using such services "often."[76] Convo Communications, a TRS provider, points out that "[v]ideo conferencing is here to stay as an important component of communications going forward."[77] Similarly, the Consumer Technology Association (CTA) notes that "[g]oing forward, video conferencing and other technologies with accessibility features will continue to be a catalyst for post-COVID economic recovery, opening important employment opportunities for traditionally underserved and underemployed communities."[78] We agree with CEA's assessment of the record: "In short, there is no disagreement among commenters as to the importance of video conferencing services to our everyday lives or the need to improve the accessibility and usability of those services for individuals with disabilities."[79]

20. The record also reflects that there are significant gaps in the accessibility of video conferencing platforms. As the Commission has previously noted, some video conferencing platforms have implemented accessibility features, such as braille display support, captioning, keyboard accessibility features, high-contrast visual elements, customizable notifications, verbosity controls,

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[70] *Notice*, 38 FCC Rcd at 6303-04, para. 67.

[71] CEA Comments at 4.

[72] Sorenson Comments at 5.

[73] T-Mobile Reply Comments at 2.

[74] ZP Reply Comments at 2.

[75] *Indicators: Hybrid Work*, https://www.gallup.com/401384/indicator-hybrid-work.aspx (last visited Aug. 30, 2024).

[76] Ruth Igielnik, *As telework continues for many U.S. workers, no sign of widespread 'Zoom fatigue'* (May 4, 2022), https://www.pewresearch.org/fact-tank/2022/05/04/as-telework-continues-for-many-u-s-workers-no-sign-of-widespread-zoom-fatigue/.

[77] Convo Comments at 3.

[78] CTA Comments at 3.

[79] CEA Reply Comments at 4.

pinning and spotlighting, and support for screen readers.[80] However, even with these advances, challenges remain. Numerous comments from consumers request that we ensure the availability of features and enhancements needed to make video conferences more accessible.[81] The Disability Advisory Committee observed that:

> [S]ome video conferencing platforms incorporate live closed captioning using automatic speech recognition (ASR). However, these solutions are not available for all platforms or on all video conferences for platforms that do provide them. . . . When ASR-based captions are available, they may be of insufficient quality. . . . Some platforms do not allow users to customize caption size, color, opacity, and other critical settings to ensure readability. And some platforms lack sufficient user control to ensure that interpreters and signers are properly displayed and can be properly pinned on users' displays.[82]

21. CEA notes that "often the [video] windows in which speakers and interpreters appear are too small for a viewer to be able to read lips or observe sign language interpreting."[83] And, while some IVCS providers offer captioning, if the video conference host controls the captioning, other users may not be able to adjust the captioning when "the captioning appears too small and lacks adequate contrast against the background to be reasonably legible."[84] Further, consumers can access video conferences from a wide range of Internet-enabled devices, increasing the need for customizing what they see on their screens.[85] However, "[e]ach video conferencing platform uniquely arranges and identifies its controls and settings, which makes it more difficult for unfamiliar users to adjust the settings on their devices for optimal presentation as needed during a video conference."[86]

22. Individuals who are blind or have low vision also report problems accessing video conferences. The National Federation of the Blind (NFB) points out that "[c]reating, hosting, or joining a meeting presents multiple accessibility barriers for members of these communities, regardless of which platform and device combination are utilized."[87] Users who are blind or have low vision may encounter difficulty navigating features, controls, and settings of video conferencing platforms with their preferred

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[80] *2022 CVAA Report to Congress*, 37 FCC Rcd at 11369-70, paras. 22-24; *see also* National Association of the Deaf, "Video Conferencing Platforms Feature Matrix," https://www.nad.org/videoconferencing-platforms-feature-matrix/ (last visited Aug. 30, 2024); CTA Comments at 7.

[81] *See, e.g.,* Express Comments of: Elizabeth Speirs (Sept. 6, 2024) (captioning, spotlighting); Holly Ragar (Sept. 5, 2023) (ASL interpretation); Everette Bacon (Sept. 5, 2023) (screen readers); Gregory Spera (Sept. 3, 2023) (ASL interpretation); Caroline Davis (Aug. 16, 2023) (ASL interpretation); William Harkness (Aug. 9, 2023) (captioning and other features); Kristy Stellato (Aug. 8, 2023) (pinning and other features); *see also* 2024 CVAA Biennial Report Comments of TDIforAccess, Inc., Communication Service for the Deaf, Inc., National Association of the Deaf, Hearing Loss Association of America, and Registry of Interpreters for the Deaf, CG Docket No. 10-213, at 5-6 (discussing lack of essential accessibility features such as captioning, spotlighting, customizable screen layouts, visual descriptions, voice controls, and accessible user interfaces) (May 6, 2024).

[82] DAC Video Conferencing Report at 2-3.

[83] CEA Comments at 7.

[84] *Id.*; *see also* Letter from Karen Peltz Strauss, CSD, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 23-161, 10-213, and 03-123, at 1 (filed April 30, 2024) (AAO Apr. 30 *Ex Parte*). This letter was submitted on behalf of CSD, TDI, NAD, and HLAA (collectively, the Accessibility Advocacy Organizations (AAO)).

[85] CEA Comments at 9.

[86] *Id.*

[87] NFB Comments at 1.

assistive technology.[88] As a commenter states, "[i]f, for example, certain controls are not operable with assistive technology or are not properly labeled, people who are blind or have low vision are not able to enter, operate, and conclude a call."[89] Furthermore, if control and setting features of the conference platform are purely visual, they may be inaccessible to users who are blind or have low vision.[90]

23. A 2024 study examining the experiences of people with various disabilities when using popular video conferencing platforms reveals additional challenges, particularly for neurodivergent participants or those with physical or motor impairments.[91] For example, some respondents with speech, motor, or cognitive disabilities described being unable to formulate questions or locate and activate a video conferencing platform's "raise your hand" function in time to contribute in calls.[92] Other respondents described being overwhelmed by the need to learn new functions and tools on different video conferencing platforms.[93]

24. As several commenters point out, these concerns are heightened because conference call participants are generally not in a position to dictate what video conferencing platform will be used for a particular conference.[94] For example, a patient who is deaf may not be able to obtain healthcare because the doctor's telehealth conferencing platform does not enable a connection to a sign language interpreter or VRS.[95] Similarly, "[v]isual content shared in the video conferencing platform during a video conference is usually not accessible to people who use screen readers or braille displays because shared documents typically appear only as a flat image without perceivable elements."[96] In these and other scenarios, a person with a disability often has no opportunity to request a different, accessible video conferencing system.

2. Compliance with Existing General Performance Objectives

25. As discussed above, IVCS poses a broad range of accessibility issues, which often require solutions specifically tailored to the multimedia aspect of this subcategory of ACS. Attempts to address these issues were delayed while the Commission's interpretation of the term "interoperable video conferencing service" remained unresolved. The result is a patchwork of different accessibility features from different video conferencing providers, causing a confusing and inconsistent landscape for people with disabilities to navigate.[97] In addition, because IVCS is so often used for pre-scheduled, multi-party

[88] AFB Comments at 2; ACB Comments at 2.

[89] AFB Comments at 2.

[90] NFB Comments at 1.

[91] Hersh, M., Leporini, B., & Buzzi, M., "A Comparative Study of Disabled People's Experiences With the Video Conferencing Tools Zoom, MS Teams, Google Meet and Skype. *Behaviour & Information Technology*, 1–20 (Jan. 9, 2024), https://doi.org/10.1080/0144929X.2023.228653.

[92] *Id.*

[93] *Id.*

[94] CEA Comments at 9.

[95] *Id.* at 15. A 2024 report from the U.S. Department of Health and Human Services finds that (1) people with disabilities use telehealth more than people without disabilities, and (2) people with disabilities rely on audio rather than video telehealth, suggesting that video telehealth may not always be available or accessible to all individuals with disabilities. Madjid Karimi, Lok Wong Samson *et al.*, "Trends and Disparities in Pandemic Telehealth Use among People with Disabilities," p. 9 (May 14, 2024), https://aspe.hhs.gov/reports/pandemic-telehealth-use-people-disabilities.

[96] AFB Comments at 1; *see also* NFB Comments at 1; ACB Comments at 1-2.

[97] *See, e.g.,* CEA Comments at 6 ("*some* video conferencing services are accessible to *some* people with *some* disabilities in *some* contexts.") (emphases in original).

communication, consumers with disabilities often have no choice as to which service is used for a video conference—that choice is made by the person or organization hosting the video conference.[98]

26. These accessibility gaps can be closed to a substantial extent if IVCS providers and equipment manufacturers comply with the Commission's current rules. Part 14 of those rules, initially adopted in 2011 to implement section 716(e) of the Act, includes a set of "performance objectives to ensure the accessibility, usability, and compatibility of advanced communications services and the equipment used for such services."[99] The current performance objectives define, in general terms, what providers of IVCS and manufacturers of equipment used for IVCS must accomplish to make their services, equipment, and software accessible, usable, and compatible.[100] In general, for services, equipment, and software to be "accessible": (1) input, control, and mechanical functions must be "locatable, identifiable, and operable" by people with disabilities; and (2) "[a]ll information necessary to operate and use the product" must be available to people with disabilities.[101] Within this rubric, the provision sets forth a list of performance objectives defining further what "accessible" means for people with specific types of disabilities.[102] For example, one provision states that advanced communications services, equipment, and software shall be "[o]perable without hearing," i.e., shall "[p]rovide at least one mode that does not require user auditory perception."[103] Like other providers of ACS and manufacturers of ACS equipment, IVCS providers and manufacturers are required to meet each of these objectives (unless an objective is not achievable). Pursuant to the *2023 Video Conferencing Order*, IVCS providers were allowed additional time (until September 3, 2024) to comply with these objectives.[104]

27. A number of the accessibility improvements sought by commenters can be addressed by IVCS providers coming into compliance with the existing rules. For example, section 14.21(b)(1) states that, for services, equipment, and software to be accessible to people who are blind, "input" and "control" functions shall be "provided in at least one mode that does not require user vision,"[105] and "all information necessary to operate and use the product, including but not limited to, text, static or dynamic images, icons, labels . . ."[106] shall be available "through at least one mode in auditory form." Meeting these

[98] *See id*. at 9.

[99] 47 U.S.C. § 617(e)(1)(A).

[100] *See* 47 CFR § 14.21. In its initial implementation of section 716 of the Act, the Commission recognized that performance objectives should "clearly define the outcome needed to be achieved without specifying how these ends could be accomplished." *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; Accessible Mobile Phone Options for People who are Blind, Deaf-Blind, or Have Low Vision*, CG Docket No. 10-213, WT Docket No. 96-198, CG Docket No. 10-145, Notice of Proposed Rulemaking, 26 FCC Rcd 3133, 3171-72, para. 105 (2011) (*2011 ACS Notice*). Therefore, the Commission adopted general, outcome-oriented provisions, patterned on the older provisions of Part 6 and Part 7 rules, which apply to telecommunications, voicemail, and interactive menu services and equipment. *2011 ACS Order*, 26 FCC Rcd at 14647, para. 211. The Commission also recognized that performance objectives should be "testable, concrete, and enforceable," *2011 ACS Notice*, 26 FCC Rcd at 3171-72, para. 105 (quoting a comment), but decided to defer consideration of more specific performance criteria pending further developments. *2011 ACS Order*, 26 FCC Rcd at 14647-48, para. 212; *see also id*. at 14563, para. 10.

[101] 47 CFR § 14.21(b).

[102] *Id*. Other performance objectives define "usable" and "compatible." *Id*. § 14.21(c), (d).

[103] *Id*. § 14.21(b)(1)(iv).

[104] *See 2023 Video Conferencing Order*, 38 FCC Rcd at 6317-18, para. 41; *2023 Video Conferencing Effective Date Public Notice*, 38 FCC Rcd at 6778.

[105] 47 CFR § 14.21(b)(1)(i).

[106] *Id.* § 14.21(b)(2).

performance objectives (e.g., by providing, among other things, voice-activated control settings and screen-reader functionality or compatibility) would address AFB's concerns that chat functions and control settings on IVCS platforms are often visual only, and thus inaccessible to blind and low-vision users.[107] As of September 3, 2024, IVCS providers should have rolled out updates to address such deficiencies, if achievable.

28. Additionally, section 14.21(b)(2) states that in at least one mode, ACS shall permit operation by, and provide visual information to, people with "visual acuity between 20/70 and 20/200, without relying on audio."[108] Meeting this objective through, *e.g.*, magnification, high-contrast, and color inversion options, as well as compatibility with third-party refreshable braille displays, would be important steps toward making IVCS platforms accessible to low-vision and deafblind users.[109]

29. Similarly, compliance with the existing rules could substantially reduce accessibility gaps faced by people with cognitive and mobility disabilities. Section 14.21(b)(1) specifies that, to be accessible, advanced communications services and equipment must have modes that are operable with limited manual dexterity, and with limited reach and strength, without requiring body contact or close body proximity, and without time-dependent controls,[110] and "at least one mode that minimizes the cognitive, memory, language, and learning skills required of the user."[111] Steps that providers could take to implement these requirements include providing voice- or gesture-based controls, one-button shortcuts, an "easy-to-use" setting, and other features.

30. In the *Further Notice*, we seek additional comment on whether the performance objectives described above need further modification to ensure the accessibility of IVCS.

3. Need for IVCS-Specific Performance Objectives

31. While accessibility gaps in IVCS can be addressed to some extent by implementing the performance objectives of our current rules, the record makes clear that, in a number of areas, more specific guidance is needed to promote accessibility in the IVCS context. For example, captions are an obvious means for IVCS providers to implement the existing performance objective specifying that ACS "[p]rovide auditory information through at least one mode in visual form,"[112] and many IVCS platforms offer ASR-generated captioning. However, the record indicates that captions are often inaccurate, too small, or difficult to turn on and manipulate.[113] As AAO explains:

> IVCS platforms vary considerably with respect to the ability to activate and effectively use automated captions. Users are often at a loss as to how to turn on captions and frequently are unable to position and otherwise manipulate captions, which is necessary for optimal viewing. For example, on some platforms the captions have been too small for effective reading. Other platforms fail to ensure a sufficient level of

[107] AFB Comments at 2.

[108] 47 CFR § 14.21(b)(2)(ii).

[109] *See* AFB Comments at 2.

[110] 47 CFR § 14.21(b)(1)(v)-(viii).

[111] *Id.* § 14.21(b)(1)(x).

[112] *Id.* § 14.21(b)(2)(iv). *Cf. id*. § 79.1(a)(2) (defining "[c]losed captioning, or captioning" as "[t]he *visual display of the audio portion* of video programming pursuant to the technical specifications set forth in this part") (emphasis added).

[113] *See, e.g.*, AAO Apr. 30 *Ex Parte* at 1.

> captioning quality, resulting in excessive errors that make it difficult to follow the dialogue.[114]

In addition, some accessibility concerns are not directly addressed at all by the current rules. For example, none of the existing performance objectives requires IVCS platforms to facilitate the use of sign language and sign language interpretation—a key omission for a medium inherently suited to sign language communication. Therefore, we amend Part 14 of our rules as discussed below, to define more specifically the objectives that IVCS providers must meet to achieve accessibility and promote more consistency in their implementation, thereby enabling people with disabilities to participate in video conferences whenever accessibility is achievable.[115]

32. These outcome-oriented[116] performance objectives maintain incentives and opportunities for innovative design in this rapidly developing industry sector[117] and avoid straying into the prohibited territory of mandatory technical standards.[118] Consistent with section 716 of the Act,[119] these performance objectives will allow IVCS providers to choose whether to satisfy their accessibility obligations by building certain features directly into their applications or by "using third party applications, peripheral devices, software, hardware, or CPE that is available to the consumer at nominal cost and that individuals

[114] *Id*.

[115] In its comments, the People's Republic of China recommends that the Commission make the performance objectives optional, contending that mandatory requirements would "impose significant cost burdens on businesses and impact the overall cost for the general public." PRC Comments at 3. The comments do not elaborate on what these costs might be. We reiterate that Part 14 performance objectives are subject to the caveat that compliance is not required if the performance objective is not "achievable"—a criterion that is defined in terms of "reasonable effort or expense." 47 CFR § 14.10(b). However, while entities may petition for waiver of the performance objectives, the CVAA did not grant the Commission authority to make ACS performance objectives optional. *See* 47 U.S.C. § 617(e)(1)(A) ("In prescribing implementing regulations, the Commission . . . shall include performance objectives to ensure the accessibility, usability, and compatibility of [ACS]."); *id*. § 617(a)(1), (b)(1) (stating that equipment manufacturers and service providers shall ensure that covered equipment and services shall be accessible to and usable by individuals with disabilities, unless these requirements are not achievable). The repeated use of the word "shall" in these provisions denotes that they are mandatory, not permissive requirements.

[116] *See 2011 ACS Notice*, 26 FCC Rcd at 3171-72, para. 105 (agreeing with "the broad range of commenters who stress the importance of having performance objectives that would clearly define the outcome needed to be achieved without specifying how these ends should be accomplished"). Thus, we find inapposite the People's Republic of China's concern that the proposed performance objectives do not include reference standards or compliance procedures. *See* PRC Comments at 3. This is by design, and is true of all the performance objectives in Part 14. As noted earlier, section 716 of the Act expressly requires the Commission to allow flexibility in the implementation of accessibility objectives and precludes us from imposing mandatory technical standards. 47 U.S.C. § 617(a)(2), (e)(1)(D).

[117] *See*, *e.g.*, CTA Comments at 10 (cautioning against "assumptions about user needs and preferences that would lock in user interface designs and video conferencing capabilities that would ultimately stifle innovation"). We share CTA's general concern, and on this basis reject some commenters' recommendations for more granular performance objectives. However, as discussed further below, we do not agree that the performance objectives adopted herein would have these adverse effects.

[118] 47 U.S.C. § 617(e)(1)(D) (providing that the Commission shall not mandate technical standards, except as a safe harbor if necessary to facilitate compliance); *see also* CTA Reply Comments at 4 (cautioning that "certain proposals appear to be so burdensome and granular that they would rise to the level of unlawful technical mandates and otherwise make business and design decisions solely for compliance rather than to benefit consumers."); *id*. at 5 ("Many of the proposals in the record are equivalent to technical mandates that would force innovators into confined design choices.").

[119] 47 U.S.C. § 617(b)(2).

with disabilities can access."[120] In addition, the new performance objectives are subject to the achievability criterion,[121] as well as the special exemption and waiver provisions of the ACS rules.[122]

33. Just as the existing Part 14 performance objectives apply both to advanced communications services and to equipment and software used with ACS,[123] the performance objectives we adopt for specific application for IVCS also apply to equipment and software used for IVCS. Manufacturers of equipment used for IVCS must ensure that such equipment, as well as software components of such equipment,[124] meet these new and modified objectives, unless that is not achievable.

34. *Timing of Commission Action*. Given the critical importance of access to video conferencing for people with disabilities, we find no cause for further delay in providing specific guidance on the necessary steps to make video conferencing accessible. Where the adoption of a proposed rule is supported by the record, we find no persuasive reason to defer its adoption, as some commenters urge, pending an assessment of what has been achieved during the extended compliance period[125] or the outcome of potential collaboration among stakeholders.[126] As CEA points out, even if some issues may require additional time to resolve, "implementation of new performance objectives can begin while fact-finding and deliberation over more complex policy and operational issues proceeds on a parallel track."[127] Similarly, although we encourage collaboration among stakeholders to further improve the accessibility of features and functions of video conferencing services, we see no reason to delay the adoption of more specific performance objectives while waiting for such collaboration to bear fruit. The record reflects consensus both that video conferencing has become a ubiquitous and critical part of daily life and that video conferencing accessibility remains a work in progress. The untenable result is that people with disabilities are unable to participate fully in what is now a routine mode of communication. Given the centrality of video conferencing in modern American society, and that 14 years have passed since Congress mandated the accessibility of IVCS, video conferences should be made accessible as soon as it is achievable to do so.

35. However, we recognize that bringing accessibility to video conferencing may pose some technical challenges, especially for smaller IVCS providers. It may also require substantial interaction with other parties, including TRS providers and the disability community. Therefore, we do not require compliance with the Part 14 rules adopted in this *Second Report and Order* until two years after the effective date.

4. IVCS Performance Objectives

a. Captions

36. *Background*. Section 14.21(b)(2)(iv) of the Commission's rules sets forth the performance objective that ACS shall "[p]rovide auditory information through at least one mode in visual

[120] *Id.* § 617(b)(2)(B). "Nominal cost" means that "any fee for third-party software or hardware accessibility solutions [shall] be 'small enough so as to generally not be a factor in the consumer's decision to acquire a product or service that the consumer otherwise desires.'" *2011 ACS Order*, 26 FCC Rcd at 14621, para. 152.

[121] 47 U.S.C. § 617(a)(1), (b)(1); 47 CFR § 14.20; *see also id*. § 14.10(b) (defining "achievable").

[122] 47 CFR § 14.3 (exemption for customized equipment or services); *id*. § 14.5 (waivers for multipurpose services and equipment).

[123] *Id.* § 14.1(a).

[124] *See 2011 ACS Order*, 26 FCC Rcd at 14585-86, para. 69.

[125] CTA Comments at 2.

[126] *See id*. at 2-4; CTA Reply Comments at 2 (asserting that "additional stakeholder dialogue to determine needs, preferences and feasibility are critical to ensuring that the Commission only adopts those requirements that can address consumer needs effectively").

[127] CEA Comments at 7.

form and, where appropriate, in tactile form."[128] In the *Notice*, the Commission proposed to amend section 14.21(b)(2)(iv) of its rules to specify that IVCS "provide at least one mode with captions that are accurate and synchronous"[129] and sought comment on whether to specify that IVCS enable the use of alternative captioning methods.[130]

37. *Comments*. CEA generally supports the Commission's proposal, while urging that it be expanded to also require that "human-generated captioning (CART) services" be available to users on request.[131] Regarding caption quality, CTA cautions that it can be affected by factors outside an IVCS provider's control and that "AI caption technologies have technical limitations that cannot be eliminated without innovation."[132] CTA also contends that a benchmark based on the standard for captioned telephone service provides insufficient clarity as to the applicable standard.[133] Noting that third-party access to IVCS necessarily implicates interoperability and security concerns, CTA argues that requiring such access "would lock in user interface designs and video conferencing capabilities in ways that would ultimately stifle innovation."[134]

38. *Discussion*. We modify Rule 14.21(b)(2)(iv) to read:

> *Availability of auditory information*. Provide auditory information through at least one mode in visual form and, where appropriate, in tactile form. For interoperable video conferencing services, provide at least one mode with captions that accurately and synchronously display the spoken communications in a video conference, and enable users to connect with third-party captioning services so that captions provided by such services appear on the requesting user's video conference screen. In this paragraph (iv):
>
> (A) *Accurately* means that captioning matches the spoken words of a conversation, in the order spoken, verbatim, without summarizing or paraphrasing, sufficiently to enable a user to understand what is being said.
>
> (B) *Synchronously* means that, to the greatest extent possible, the captions begin to appear at the time that the corresponding speech or sounds begin and end approximately when the speech or sounds end, are delivered fast enough to keep up with the speed of those words and sounds, and remain displayed long enough to be read by the user.

This amendment directly addresses one of the most broadly impactful and persistent accessibility issues concerning video conferences, *i.e.*, the inconsistent availability of accurate captions across video conferencing providers.[135] The record is clear that captions play a crucial role in allowing people who are

[128] 47 CFR § 14.21(b)(2)(iv).

[129] *Notice*, 38 FCC Rcd at 6321, para. 50.

[130] *Id.* at 6322, para. 53.

[131] CEA Comments at 20.

[132] CTA Comments at 9.

[133] *Id.* at 10.

[134] *Id.*

[135] One of the major recommendations in the DAC's Video Conferencing Report was the inclusion of "built-in closed captioning functionality that is available to all users… ." *See* DAC Video Conferencing Report at 6.

(continued….)

deaf or hard of hearing to be fully engaged in a video conference conversation. As a coalition of accessibility advocacy organizations explains, for people who are deaf or hard of hearing, "a lack of captions can make meaningful interaction impossible."[136] While the existing rule already makes clear that captioning (the provision of "auditory information . . . in visual form") is necessary for accessibility, it does not address the quality of captions. Therefore, to provide additional guidance, we amend the rule as shown above.

39. As modified, the performance objective states that captions must be accurate and synchronous.[137] We do not include the language proposed in the *Notice* stating that caption quality must be "comparable to that provided on TRS Fund-supported captioned telephone services."[138] As multiple commenters noted, our rules do not currently provide quantitative standards to measure accuracy or latency in the IP CTS context.[139] Pending further development of quantitative measures, we limit this performance objective to a qualitative standard, similar to the qualitative standards currently applicable to IP CTS and live television programming. We define "accurate," to mean that captioning matches the spoken words of a conversation, in the order spoken, verbatim, without summarizing or paraphrasing.[140] Given that IVCS, like IP CTS or live video programming, involves real-time communication without advance scripting, 100% error-free captioning may not always be achievable. However, captioning should be sufficiently accurate to enable a user to understand what is being said.[141] We define "synchronous" to mean that captions must coincide with the corresponding spoken words and sounds to the greatest extent possible,[142] be delivered fast enough to keep up with the speed of those words and

(Continued from previous page)
Additionally, CEA made "integrated, automated closed captioning" the first item in their list of proposed performance objectives. CEA Comments at 20.

[136] Accessibility Advocacy and Research Organizations (AARO) 2022 IVCS Refresh Comments at 8 (filed July 18, 2022).

[137] While we recognize that captioning placement is also important for accessibility, most videoconferencing platforms meet this need by placing the captions on top or bottom outside the window with meeting participants' video screens, or by making such captions relocatable by participants.

[138] *See Notice*, 38 FCC Rcd at 6321, para. 50.

[139] *See*, *e.g.*, CTA Comments at 10; CEA Comments at 16-17; Sorenson Comments at 17; *see also Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CG Docket No. 03-123, Order, DA 24-49, para. 16 n.52 (CGB Jan. 17, 2024) ("[T]he Commission's minimum TRS standards do not currently include quantitative metrics.").

[140] *See* 47 CFR § 64.604(a)(2)(ii) (TRS CAs "must relay all conversation verbatim" unless the user requests summarization); *id*. § 79.1(j)(2)(i) ("Captioning shall match the spoken words (or song lyrics when provided on the audio track) in their original language (English or Spanish), in the order spoken, without substituting words for proper names and places, and without paraphrasing, except to the extent that paraphrasing is necessary to resolve any time constraints.").

[141] *See Closed Captioning of Video Programming; Telecommunications for the Deaf and Hard of Hearing, Inc. Petition for Rulemaking*, CG Docket No. 05-231, Report and Order, Declaratory Ruling, and Further Notice of Proposed Rulemaking, 29 FCC Rcd 2221, 2250, para. 42 (2014) (*CC Quality Order*) (acknowledging that 100% accuracy is not possible with live captioning, and stating that the overall object is to ensure accessibility, and that complaints will be considered, on a case-by-case basis, to assess overall understandability and accuracy). Similarly, implementation of this performance objective will be evaluated on a case-by-case basis, considering overall understandability and accuracy, the ability of the captions to convey the aural content of the call in a manner equivalent to the aural communication, and the extent to which captioning errors made the video conference inaccessible. *Cf. id.*

[142] *Cf. id*. at 2243-44, para. 30.

sounds, and remain displayed long enough to be read by the user.[143] In other words, to the greatest extent possible, the captions should begin to appear at the time that the corresponding speech or sounds begin and end approximately when the speech or sounds end.[144] Captions must be sufficiently synchronous to enable a user to participate in real-time in a conversation among video conference participants. While a quantitative standard may be preferable, we reject CTA's contention that a qualitative standard provides insufficient notice regarding the quality required, given that analogous qualitative standards are already in place for video programming and TRS.[145]

40. *Third-Party Captioning Services*. As modified, the performance objective also specifies that IVCS enable users to connect with third-party captioning services and enable the display of such captions on the requesting party's video conference screen. In some instances, participants in video conferences may prefer a third-party captioning service, which may provide a higher degree of accuracy than can be achieved by using the IVCS provider's native captioning.[146] Or a video conference host may be legally obligated to provide (and pay for) captioning service for a video conference that poses specific captioning challenges.[147] As the Disability Advisory Committee explains, some video conferencing services struggle to integrate third-party captioning services into their conference calls.[148] In some cases, users must open a separate web browser or application to view captions, forcing them to split their attention between two screens (if a second screen is even available to the user).[149] If deaf and hard of hearing participants are forced to split their attention between multiple screens, or multiple devices, it often will be difficult to follow the visual conversation on one screen while simultaneously reading the captions on another.[150]

41. To address these problems, the amended performance objective provides that IVCS shall enable users to connect with such third-party accommodations services, such that the captions provided by third parties are viewable on the user's video conference screen, rather than on a separate screen.[151] In other words, to be accessible, IVCS must enable a user[152] to view on-screen the display of captioning provided by a third party.

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[143] *2007 IP CTS Declaratory Ruling*, 22 FCC Rcd at 388-89, para. 22 & n.69 (Captions must be delivered "fast enough so that they keep up with the speed of the other party's speech."); 47 CFR § 79.1(j)(2)(ii) ("Captions shall be displayed on the screen at a speed that permits them to be read by viewers.").

[144] *See CC Quality Order*, 29 FCC Rcd at 2243, para. 30.

[145] CTA Comments at 10. Regarding CTA's concerns about factors outside a provider's control affecting caption quality, we note that the obligation to meet this performance objective, like all Part 14 performance objectives, is qualified by the criterion of achievability.

[146] *See* CEA Comments at 20 (asserting that "automated captioning has a higher error rate than human-generated captioning" and that "users should have the option of human-generated captioning services in lieu of ASR"); Angie L. Fuoco, Express Comment (Sept. 6, 2023) ("Please require the use of live captioners, because ASR isn't up to the standards of human captioners."). As noted in the text below, this performance objective does not differentiate between human-generated and ASR-generated captions.

[147] *See Notice*, 38 FCC Rcd at 6321-22, para. 52.

[148] DAC Video Conferencing Report at 3; AAO Apr. 30 *Ex Parte* at 1-2 ("A more seamless process is needed to streamline the integration of CART services on IVCS calls.").

[149] DAC Video Conferencing Report at 3.

[150] *See id.* at 6.

[151] We do not prohibit IVCS providers from affording participants the option to view captions on a separate screen, which may be preferable in some instances to accommodate certain disabilities, peripheral devices, or accessibility software.

[152] This *Second Report and Order* uses the terms "user" and "participant" or "call participant" interchangeably to refer to anyone that is present in a given video conference. This includes the parties to the call as well as CAs and the call's host, if there is one.

42. Although some commenters focus on a need to access human captioners,[153] we do not limit the kinds of third-party captioning services that may be accessed by IVCS users. Consistent with the technology-neutral, outcome-oriented nature of performance objectives, the rule does not differentiate between captioning generated with human involvement and captions created entirely with automatic speech recognition technology.

43. We also note that the requirement to enable third-party captioning does not require an IVCS provider to ensure that third-party captioning is available to users at no or nominal cost—unless the IVCS provider is relying on a third party to fulfill its primary captioning obligation.[154] Similarly, if an IVCS provider is not relying on a third party to fulfill its primary captioning obligation, the IVCS provider is not responsible for ensuring that captions provided by a third party are accurate and synchronous, except to the extent of its obligation to not impair or impede accessibility.[155]

44. *Access to IP CTS*. One commenter urges the Commission to require video conferencing providers to integrate with IP CTS providers, suggesting that IVCS providers will not be able to offer captioning services equal in quality to IP CTS.[156] IP CTS is one type of third-party captioning service. Accordingly, the performance objective we adopt requires that IVCS providers provide a mechanism for conference hosts and users to connect with an IP CTS provider, if that is their preference, unless the capability for such connection is not achievable.[157]

b. Sign Language Interpreting

45. *Background*. To ensure that video conferences are accessible to users who communicate in sign language, the Commission proposed to adopt a new performance objective providing that IVCS "enable the use of sign language interpretation, including the transmission of user requests for sign language interpretation to providers of video relay service and other entities and the provision of sufficient video quality to support sign language communication."[158]

46. *Comments.* CEA generally supports the Commission's proposal, while suggesting that it be broadened to include other forms of TRS and to specify the provision of "appropriate sizing features to enable users to fully see and comprehend [sign language] interpreters."[159] CTA raises the same interoperability and security concerns described above regarding captioning, as well as the claim that requiring such access would stifle innovation.[160]

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[153] *See*, *e.g.*, CEA Reply Comments at 13 ("Users should also have the option to choose between ASR and live human captioning."); Jonathan Paul Katz, Express Comment (filed Sept. 6, 2023) ("It would be helpful to require both automated captioning and the ability to link to human captioning."); Angie L. Fuoco, Express Comment (filed Sept. 6, 2023) ("Please require ease and possibility of using live human captioners for all video conferencing platforms. . . . ASR captions are not up to the standards of human captioners by any means in 2023.").

[154] *See* 47 U.S.C. § 617(b)(2)(B) (allowing ACS providers the flexibility to fulfill their accessibility obligations by "using third party applications, peripheral devices, software, hardware, or customer premises equipment that is available to the consumer at nominal cost and that individuals with disabilities can access").

[155] *See* 47 CFR § 14.20(a)(4)-(5).

[156] *See* ClearCaptions Comments at 4-5 (IVCS providers should be required to integrate with TRS providers).

[157] We also note that this performance objective does not dictate the specifics of any technical interface or "lock in user interface designs." CTA Comments at 10. In particular, we do not mandate that an IVCS provider make its connection interface for third parties compatible with any specific technology that may be used by a particular captioning service or IP CTS provider.

[158] *Notice*, 38 FCC Rcd at 6323, para. 56.

[159] CEA Comments at 20. A user's ability to adjust the display of video windows in which speakers and signers appear is addressed in Part III.A.3.c.

[160] CTA Comments at 10.

47. *Discussion*. We adopt the proposed performance objective with a few modifications:

> 14.21(b)(4) In addition to the other requirements of this section, interoperable video conferencing services and covered equipment and software used with such services shall:
>
> (i) Enable the use of sign language interpretation provided by third parties, including the transmission of user requests for sign language interpretation to providers of video relay service and other entities and the provision of sufficient video quality to support sign language communication.

This performance objective provides that accessibility for IVCS includes enabling a video connection for sign language interpreters, so that they can view and be viewed by users of these services.[161] The performance objective is modified to make clear its applicability to both IVCS itself and to equipment and software used for IVCS. For additional clarity, the proposed rule is modified by inserting the words "provided by third parties" after "enable the use of sign language interpretation."[162]

48. This performance objective does not differentiate regarding the type of sign language service that may be offered by a third party. We anticipate that most sign language users who participate in video conferences will be using American Sign Language (ASL). However, this performance objective is intended to apply broadly to all forms of visual language commonly in use by people with disabilities. For example, Cued English uses hand shapes, hand placements, and non-manual signals on the mouth to provide a transliteration of spoken English for some individuals with hearing disabilities.[163] We believe that the same technology that facilitates the inclusion of ASL interpreters is equally applicable to other forms of interpretation or transliteration.

49. We decline, at this time, to modify this performance objective as Sign-Speak proposes: to require IVCS platforms to "provide" sign language interpretation, rather than merely "enable" it.[164] Adopting this recommendation would mean that IVCS providers would need to arrange for sign language interpreting to be available to users at all times and would be responsible for the quality of the service provided. The record is insufficient for us to assess this proposal, which likely would be implemented through automatic sign language interpretation software, akin to automatic speech recognition. We seek further comment on this proposal in the *Further Notice*.

50. *Video Quality*. Although we do not mandate a particular level of video quality, the quality must be sufficient to allow users to see and understand interpreters' signing, and for users' own

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[161] *Notice*, 38 FCC Rcd at 6323, para. 56. In Part III.B below, we also amend our TRS rules to further facilitate the provision of VRS in video conferences on an integrated basis.

[162] This change addresses the concern of the People's Republic of China as to whether a sign language interpretation function must be integrated into an IVCS platform. PRC Comments at 3. The performance objective does not require IVCS providers to *provide* sign language interpretation as part of their services; rather, it specifies that an IVCS provider shall enable users to access sign language interpretation services provided by others.

[163] *See* Letter from Nicole Dugan, National Cued Speech Association, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 21-140 and 10-213 (filed June 2, 2023); AARO 2022 IVCS Refresh Comments at 20-21 (urging the Commission to "mandate the inclusion of essential accessibility features . . . including the appearance of cued language transliterators").

[164] *See* Sign-Speak Comments; Sign-Speak Reply Comments at 5-7. Sign-Speak contends that the rule "must be crafted so that ASL interpretation and English Captioning have *functional equivalency* within IVCS platforms." Sign-Speak Reply Comments at 5 (emphasis in original). The Commission's goal in the TRS context to devise accessibility requirements that will allow individuals with disabilities to have a communication experience that is functionally equivalent to the experience of those without such disabilities. We do not require different accessibility tools to be equal to each other.

sign language to be seen and understood by interpreters and others.[165] We do not anticipate—and the record does not indicate—that this criterion will pose any undue burden on video conferencing providers. Video quality is a fundamental component of a competitive video conferencing product. Providers are therefore independently motivated to provide high-quality video.

c. User Interface Controls

51. *Background*. To implement the Disability Advisory Committee's recommendation that the Commission ensure users' ability "to control the activation and customize the appearance of captions and video interpreters,"[166] the Commission sought comment on adopting a new performance objective providing that IVCS provide user interface control functions that permit users to adjust the display of captions, speakers, and signers and other features for which user interface control is necessary for accessibility.[167]

52. *Comments*. CEA generally supports the Commission's proposal, while urging that it specify in greater detail the particular accessibility-related features that IVCS users need to be able to control.[168] AFB recommends that the performance objective specify the ability of users who are blind to control the "verbosity" of the on-screen information conveyed by a screen reader.[169] CTA contends that some proposals for user interface controls are "so burdensome and granular" as to be "unlawful technical mandates" that "would force innovators into confined design choices."[170]

53. *Discussion*. To ensure that accessibility features can be adjusted to address the specific needs of individual users and the various circumstances in which IVCS may be used, we adopt the performance objective set forth in the *Notice*, with modifications:[171]

> 14.21(b)(4) In addition to the other requirements of this section, interoperable video conferencing services and covered equipment and software used with such services shall:
>
> * * *
>
> (ii) provide user interface control functions that permit users to activate and adjust the display of captions, speakers, and signers and other features for which user interface control is necessary for accessibility. In this paragraph (ii):
>
> (A) *Adjust the display of captions* means that a video conference participant can alter the size, font, and on-screen location of captions and

[165] *Cf*. Access Board, *Section 508 and 225 Guidelines*, § 412.7, https://www.access-board.gov/ict/#412.7 ("Where ICT provides real-time video functionality, the quality of the video shall be sufficient to support communication using sign language.").

[166] DAC Video Conferencing Report at 6.

[167] *Notice*, 38 FCC Rcd at 6324, para. 59.

[168] CEA Comments at 21.

[169] AFB Comments at 2.

[170] CTA Reply Comments at 4, 5; *id*. at 5-6 & n.15 (citing 47 U.S.C. § 617(e)(1)(D)).

[171] The proposed performance objective is modified by adding the words "activate and" before "adjust." This ensures that individual users have the ability to activate, as well as adjust, features such as captions. In addition, the performance objective is modified to make clear its applicability to both IVCS itself and to equipment and software used for IVCS. Finally, we clarify that this performance objective includes participants' ability to edit their display names before or after joining a video conference. *See* Letter from John T. Nakahata, Counsel to Sorenson, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 23-161, 10-213, and 03-123, at 2 (filed Sept. 20, 2024) (Sorenson Sept. 20 *Ex Parte*).

> adjust the color and opacity of both the captions and the caption background.
>
> (B) *Adjust the display of speakers and signers* means that video conference participants can minimize or hide extraneous windows, expand the windows of their choice, or relocate particular windows; and edit their own display names before or after joining a video conference.

54. As CEA explains, "given the wide range of IP-enabled devices that can be used for video conferences, the need for individual users to be able to customize what they see on their screens is critical."[172] However, user controls that allow such customization are frequently unavailable or insufficient.[173] Further, existing ACS performance objectives do not directly address this problem. Although Rule 14.21(b)(1) generally requires that control functions necessary for a user to operate a covered service or product shall be accessible,[174] that performance objective does not expressly address the need for control functions to enable a user, not only to *operate* the service, but to *ensure its accessibility*. Accessibility is not a static condition: to ensure that a video conferencing service is accessible across the wide range of devices that may be used to access it, by users with varying disability-related needs, individual users must themselves be able to manipulate accessibility-related functions.[175] The performance objective we adopt addresses this problem by providing that video conference participants be able to control the activation and settings of accessibility-related features. The text of the new provision reflects that user control is especially important in two areas: captioning and the visual display of speakers and signers.

55. *Captioning*. In its 2022 report, the DAC states that, among the platforms that offer captions, some "do not allow users to customize caption size, color, opacity, and other critical settings to ensure readability."[176] The Accessibility Advocacy Organizations explain further:

> IVCS platforms vary considerably with respect to the ability to activate and effectively use automated captions. Users are often at a loss as to how to turn on captions and frequently are unable to position and otherwise manipulate captions, which is necessary for optimal viewing. For example, on some platforms the captions have been too small for effective reading.[177]

56. To address these concerns, the performance objective we adopt requires IVCS providers

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[172] CEA Comments at 9.

[173] *Id*.

[174] 47 CFR § 14.21(b)(1).

[175] *See, e.g.,* Letter from Karen Peltz Strauss on behalf of CSD, HLAA, NAD, and TDI, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 23-161, 10-51, and 03-123, at 3 (filed July 23, 2024) (seeking "Accessible user interfaces and non-host dependent control over" all accessibility features); Letter from Zainab Alkebsi, NAD, on behalf on NAD, HLAA, and TDI, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 23-161, 10-51, and 03-123, at 2 (filed May 7, 2024) (AAO May 7 *Ex Parte*) ("independent user control over accessibility-related settings…is necessary to empower…individuals to manage their own preferences and needs"); Angie Fuoco, Express Comment (Sept. 6, 2023) (seeking consistent ability across platforms to customize captions for each individual user); Jennifer Schuck, Express Comment (Sept. 5, 2023) (stating that a "user-friendly interface that allows easy control over these services is essential"); Megan L. Speed, Express Comment (Sept. 5, 2023) ("Enhancements to existing assistive features should focus on universal standards for accessibility across platforms to ensure a consistently high-quality service.").

[176] DAC Video Conferencing Report at 3.

[177] AAO Apr. 30 *Ex Parte* at 1.

to allow call participants to independently control the activation and display of captions on their individual devices. To the degree achievable, call participants must be able to alter the size, font, and on-screen location of captions and to adjust the color and opacity of both the captions and the caption background.[178] This objective generally aligns with the Commission's requirements in other contexts, particularly with regard to the customizability of captions on digital apparatus.[179]

57. *Display of Speakers and Signers*. The record reveals that additional accessibility challenges arise as the number of participants in a video conference grows. For example, when faced with numerous, undifferentiated video windows, which are automatically enlarged based only on sound cues, it can be extremely challenging to determine when an interpreter (or another sign language user) is signing. A sign language user who loses sight of the interpreter is effectively exiled from the conversation until they regain that visual connection. Ensuring that the interpreter's video window is always prominently displayed, even if another participant is sharing their screen, is therefore vital to maintaining effective communication. As AAO explains, these issues can be partially addressed by "spotlighting" and "multi-pinning":[180]

> Spotlighting sign language, cued speech or other interpreters ensures that these individuals are easily visible amidst multiple video streams or when displayed on small screens. While this is necessary for all individuals who rely on interpreters, it is especially important for consumers with visual impairments or close vision, who need full visibility of an interpreter to actively participate.[181]

58. To ensure that critical visual information is accessible, users also must be able to reconfigure the layout and visibility of video windows appearing on the users' own device. Each open video window reduces the on-screen real estate available for other windows. As a result, a sign language user's window may become too small to allow for effective sign language communication. This is true even if the user's video window is pinned, because pinning, alone, does not alter the relative size of the video windows. A call participant who requires sign language must therefore be able to minimize or hide extraneous windows, expand the windows of their choice, or relocate particular windows. For example, a participant may utilize the multi-pinning feature to pin both a presentation leader and an interpreter, move the windows so they remain side-by-side, and then expand both windows to allow the participant to clearly view the interpreter without missing out on visual cues from the speaker. As another example, a sign language user on a conference call with multiple other sign language users may want to pin all of their windows and place them together to ensure all sign language users are visible.

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[178] *See* DAC Video Conferencing Report at 3.

[179] *See* 47 CFR § 79.103(c)(1)-(10). The character customization requirements for digital apparatus mandate the ability to change character size between 50% and 200% of the default size. *See id*. § 79.103(c)(4). Digital apparatus covered by section 79.103 must also allow captions and caption backgrounds that can display the 64 colors and 8 fonts defined in the CEA-708 standard, as well as allow users to override the authored colors and choose from at least 8 specified colors. *Id.* § 79.103(c)(2), (5), (6), (8). We do not replicate those specific requirements here. However, the CEA-708 standard may provide a useful reference point for IVCS providers and equipment manufacturers in assessing their caption customization options. Additionally, we note that limiting captions to a very small character size range may be insufficient to meet the performance objective.

[180] "Spotlighting" identifies a particular window as the active speaker, making that user's window visible on all other users' screens. Spotlighting capability is generally only available to a conference call's host. "Pinning" and "multi-pinning" allow a user to disable the active speaker view and determine which video window (or windows) will always be visible on the user's own screen. *See, e.g.*, "Pin or Spotlight a video in Zoom Rooms," (Dec. 22, 2023), https://support.zoom.com/hc/en/article?id=zm_kb&sysparm_article=KB0068261#:~:text=Pinning%20another%20user's%20video%20will,the%20meeting%20and%20cloud%20recordings.

[181] AAO Apr. 30 *Ex Parte* at 1.

59. In addition, participants must be able to edit their own display names.[182] This allows participants (including interpreters and third-party accommodation services) to quickly differentiate themselves from other call participants, helping sign language users and interpreters find each other more easily, especially in conference calls with many participants. Again, every moment a sign language user and an interpreter spend trying to connect to each other is a moment of lost communication and participation for the user.

60. The record indicates that, while some video conferencing providers currently offer spotlighting and multi-pinning capabilities, typically they are controlled by the call's host, who must either make such adjustments themselves or specifically allow that privilege to a requesting participant.[183] As a result, individual users may be deprived of the ability to directly customize their in-call experience in a way that works best for them.[184] Commenters therefore assert that IVCS providers should enable any participant in a video conference to customize their settings for accessibility.[185]

61. Accordingly, the performance objective we adopt specifically provides that *users* be able to activate and adjust the display of speakers and signers. As with captioning controls, the relevant or achievable settings may vary for different kinds of IVCS (*e.g.*, more settings may be needed for a video conferencing service that is frequently used for conferences involving large groups, than for one whose target market rarely includes participants in large-group video conferences). For large-group video conferences, in particular, accessibility requires that pinning, multi-pinning, spotlighting, and window configuration functionality be available, and that those functions can be accessed in individual users' settings menus, without having to obtain permission from a call host.[186]

62. CTA raises a general concern that an overly detailed performance objective "would lock in user interface designs," and urges the Commission to "resist making regulatory choices that will necessarily limit the ability of IVCS providers and equipment manufacturers to shape and adjust their user interfaces."[187] We conclude that this performance objective strikes an appropriate balance between flexibility and specificity. As with all Part 14 performance objectives, the new and amended objectives are outcome-oriented and do not mandate a technical standard.[188] We also emphasize that the rule we adopt does not dictate how IVCS providers must organize their user controls. Individual providers may decide what layouts and configurations are appropriate for their services, as long as the results comply with our rules.

63. *User Control of Other Features*. The performance objective we adopt also provides that users be able to activate and adjust "other features for which user interface control is necessary for

[182] As Sorenson notes, VRS CAs identify themselves by a CA Number, rather than their name, to protect their privacy. *See* Sorenson Comments at 40. As discussed below (*infra* para. 115), we amend our TRS rules to *require* VRS CAs to identify their employer. Compliance with this rule requires that participants be able to change their display names.

[183] AAO Apr. 30 *Ex Parte* at 1. A conference call host may also disable the in-call chat feature, leaving participants unable to contact the host to request access to these features. In such scenarios the host may not even be aware that accommodations are needed.

[184] *Id.* ("[H]aving to make this request impedes the independence of participants who need this feature and more often than not causes a delay before the call can get underway.").

[185] *See*, *e.g.*, CEA Comments at 20 (agreeing with the DAC Video Conferencing Report's recommendation to require user control of accessibility settings); Sorenson Comments at 40 (same).

[186] We note that while some IVCS calls utilize a "hosted" conference room, *i.e.*, a single virtual location that all call participants connect to, others are designed primarily for unhosted, person-to-person video calls. The performance objective we adopt applies to all forms of IVCS.

[187] CTA Comments at 10.

[188] *See* 47 U.S.C. § 617(e)(1)(D).

accessibility." Although some commenters argue for additional specificity,[189] at this time, we do not attempt an exhaustive catalog of all such features. However, the fact that a particular feature is not mentioned in the performance objective does not imply that it is unnecessary for accessibility. For example, AFB recommends that we include a specific requirement for IVCS platforms to include screen reader verbosity controls.[190] We agree that this functionality is an important means for blind and low-vision users to be able to follow and participate in a video conference and that such user control may often be necessary for accessibility.[191] To that extent, verbosity controls (as well as other features not specifically mentioned) are included in the performance objective. However, to individually address this and other user controls recommended by commenters, we believe the record would benefit from additional information about the specific aspects of interface control that are most important to address in the video conference setting. We seek further comment on this issue in the *Further Notice*.

64. *Settings Retention*. CEA suggests that IVCS users' accessibility preferences should be stored and retained within the IVCS platform, so that users will not have to change the settings each time they use the service.[192] We find the record insufficient to address this proposal. In the *Further Notice*, we seek additional comment on the need for such an objective, how it would apply across devices, and the technical issues involved.

d. Text-to-Speech

65. *Background*. To ensure that IVCS is accessible for people with speech disabilities, the Commission proposed to amend Rule 14.21(b)(1)(ix), which specifies that ACS be operable in "at least one mode that does not require user speech,"[193] to specify that IVCS provide text-to-speech functionality.[194]

66. *Comments.* Three commenters directly address this issue. CEA and NFB express support for the proposal, while CTA opposes it, contending that AI-based text-to-speech software is "still nascent."[195] Another commenter urges the Commission to address speech disabilities in a different way, by modifying its rules to "ensure integration of and compatibility with ASR engines capable of making the speech of people with nonstandard or atypical speech comprehensible to others on video conference calls."[196]

67. *Discussion.* The existing rule specifies that, to be accessible, IVCS must be operable

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[189] *See* CEA Comments at 21 & Appx. A.

[190] AFB Comments at 2. Many screen readers include settings to determine what on-screen information is conveyed via the screen reader. In a video conference, some screen reader users may prefer to hear only the conversation itself, while others may want to be made aware of non-auditory information such as reaction emojis and chat conversations. Screen readers generally allow some degree of control over what information is read aloud; however, device-level settings may not be able to convey information that is specific to an IVCS platform, such as raised hands or notifications when a participant enters or leaves the conference call.

[191] According to AFB, some video conferencing platforms currently allow users to independently customize their verbosity settings. *See id*. at 2. For example, at least one popular video conferencing platform allows users to select whether their screen reader will announce when they have received a chat message, when their audio is muted by a host, when screen sharing has been started or stopped by a participant, and other non-auditory information.

[192] CEA Comments at 40 (Appx. A).

[193] 47 CFR § 14.21(b)(1)(x).

[194] *Notice*, 38 FCC Rcd at 6322, para. 54.

[195] *See* CEA Comments at 13; NFB Comments at 1-2; CTA Comments at 11.

[196] VoiceItt Reply Comments at 5; *see also* AAO Apr. 30 *Ex Parte* at 3 (asking the Commission to require the ability for people with speech disabilities "to access both text-to-speech functionality and automated speech recognition functionalities that are specially designed to generate understandable speech for these individuals").

without user speech—for which a logical implementation would be the provision of text-to-speech functionality. However, the record indicates that an additional way of making IVCS operable by people with speech disabilities is available, in the form of speech-to-speech technology products, which automatically convert speech that is difficult to understand to speech that is more understandable.[197] Therefore, at this time we do not adopt the proposed modification. Instead, in the *Further Notice*, we seek additional comment on modifying section 14.21(b)(1)(ix) to encompass a broader range of solutions for people with speech disabilities.

e. Other Performance Objectives Proposed by Commenters

68. In the *Notice*, the Commission sought comment on whether additional performance objectives should be specified for IVCS to address other accessibility concerns.[198] A number of the performance objectives suggested by commenters merit the Commission's consideration. In many instances, however, the current record is insufficient to address them at this time. In the *Further Notice*, we seek additional comment on these proposals. Other commenter proposals appear to be inconsistent with the flexible, outcome-oriented approach the statute directs us to take.

69. *Tablet Support*. CEA recommends adoption of a performance objective requiring that video functionality, screen sharing, video window re-sizing, and video sharing be compatible with tablets.[199] CTA objects to this proposal, contending that tablet compatibility represents a *de facto* technical mandate.[200] While we recognize that people with disabilities often have particular difficulty in accessing IVCS on tablets, the record is insufficient to enable us to determine whether a performance objective specific to tablets is needed, and how it should apply. For example, an IVCS provider may choose not to make its service available on tablets, or may not design an app specifically for tablets. Further, it is unclear to what extent responsibility for tablet compatibility should be placed on tablet manufacturers, IVCS providers, or both. In the *Further Notice*, we seek additional comment on whether a tablet-specific performance objective is needed, and whether additional performance objectives should apply to manufacturers of tablets and other devices used to access IVCS.

70. *Window Layout and Extra Channels.* The current record is also insufficient to address CEA's recommendations that performance objectives specify that IVCS provide a "gallery view mode," "ensure that a sufficient number of videos is supported without degrading the quality of the video or audio," and include dedicated video- and text-based side channels.[201] CTA raises several objections to these proposals, stating variously that they are technologically infeasible, implicate variables outside of a video conferencing provider's control, exceed the Commission's authority, or are technical mandates in all but name.[202] While the proposed features can be beneficial, we are concerned that unnecessarily specific requirements could dampen incentives for entrepreneurship and innovation in this rapidly evolving market. In addition, as noted in the *2023 Video Conferencing Order*, IVCS encompasses a broad variety of video communication services,[203] for which the recommended performance objectives may not be uniformly applicable or relevant. In the *Further Notice*, we seek additional comment on the need for specific performance objectives in these areas, as well as whether such objectives could be implemented without adversely affecting the benefits of innovation in this sector.

71. *Audio Description, Tactile Mode, and Accessibility of Shared Documents.* For similar

[197] VoiceItt Reply Comments.

[198] *Notice*, 38 FCC Rcd at 6324, para. 57.

[199] CEA Comments at 35 (Appx. A).

[200] CTA Reply Comments at 5-6.

[201] CEA Comments at 33-41 (Appx. A).

[202] *See* CTA Reply Comments at 4-8.

[203] *See 2023 Video Conferencing Order*, 38 FCC Rcd at 6313-14, para. 29.

reasons, we also conclude that the record is insufficient to address ACB's recommendation that IVCS providers be required to enable access for audio description of video and visual images,[204] ACB's and AFB's requests that performance objectives be adopted or amended to provide that IVCS be operable and visual information be available in tactile mode,[205] and AFB's recommendation to add "shared documents" to the list of information that must be made accessible pursuant to section 14.21(b)(2).[206] However, we stress that our rules prohibit IVCS providers from impeding the use of third-party services, equipment, or software to provide audio descriptions.[207] In the accompanying *Further Notice*, we seek additional comment on whether to adopt a performance objective specifying these functions.

72. *Ten-Digit Telephone Numbers*. We decline CEA's recommendation that the Commission require IVCS providers to offer a dial-in option via a ten-digit telephone number,[208] so that TRS-eligible IVCS users can use TRS in video conferences despite the difficulties described elsewhere in this *Second Report and Order*. Such a requirement would entail a major change in business practices for IVCS providers, many of whom have not designed their platforms to connect with telephone networks. Further, the rules adopted in this *Second Report and Order* will require IVCS providers to enable users to connect with providers of third-party captioning and sign-language interpretation services, including IP CTS and VRS. Thus, developments are already under way to accomplish the goal CEA seeks, without the need to force disruptive changes in IVCS providers' business models.[209]

73. *Application to Recorded Video Conferences*. We decline to adopt ACB's recommendation that any accessibility requirements for IVCS should apply if a video conference is recorded and subsequently shared.[210] If the video conference is recorded and shared by a host, participant, or third party, it is not evident why the IVCS provider should be responsible for the accessibility of such recordings. Further, many IVCS platforms may not include a feature that facilitates or delivers such recordings.[211]

74. *Accessibility Symbols and Language*. We decline to adopt the recommendations of the Global Alliance of Speech-to-Text Captioning to require that all IVCS platforms use the "universal captioning symbol "(CC)" to identify captioning settings, and that those settings be on the first screen of

[204] ACB Comments at 2; CCD-TTTF Comments; *see also* Bridge Comments at 2 (urging the Commission to require IVCS providers to offer audio description of videos played during the course of a meeting). Relatedly, Bridge Multimedia urges the Commission to expand TRS eligibility to include providers of live audio description and visual image descriptive services. Bridge Comments at 1. Our section 225 authority is limited to making TRS available for people who are deaf, hard of hearing, deafblind, or have a speech disability. *See* 47 U.S.C. § 225(a)(3), (b)(1). An audio description service would not fall within this definition, and the Commission lacks authority to expand the definition beyond the boundaries dictated by Congress.

[205] ACB Comments at 1; AFB Comments at 2.

[206] AFB Comments at 2. The regulation currently states that section 14.21(b)(2) applies to "all information necessary to operate and use the product, including but not limited to, text, static or dynamic images, icons, labels, sounds, or incidental operating cues."

[207] *See* 47 CFR § 14.20(a)(4) ("Providers of advanced communications services shall not install network features, functions, or capabilities that impede accessibility or usability"); *id*. § 14.20(a)(5) ("Providers of advanced communications services, manufacturers of equipment used with these services, and providers of networks used with these services may not impair or impede the accessibility of information content when accessibility has been incorporated into that content for transmission through such services, equipment or networks."); *id.* § 14.20(c).

[208] CEA Comments at 30 (Appx. A).

[209] The Commission may revisit whether a dial-in option is needed if future developments cast doubt on these assumptions.

[210] ACB Comments at 3; *see also* Bridge Comments at 2.

[211] *See* 47 U.S.C. § 153(27) (defining "IVCS" as "[a] service that provides *real-time* video communications, including audio, to enable users to share information of the user's choosing") (emphasis added).

the settings menu.[212] The group also suggests requiring "consistent accessibility language related to captioning" across platforms.[213] Performance objectives are outcome-oriented requirements that allow flexibility for providers to accomplish the objectives in the means best suited to their specific circumstances.[214] They should not mandate what symbols IVCS providers must use, where they must put those symbols, and what terms they must use when describing their accessibility offerings.

5. Safe Harbor Technical Standards

75. Section 716 of the Act provides that the Commission shall not adopt mandatory technical standards for ACS accessibility.[215] However, the Commission may adopt technical standards "as a safe harbor for such compliance if necessary to facilitate the manufacturers' and service providers' compliance."[216] The *Notice* sought comment on whether there were any technical standards available or in development that could serve as safe harbors for IVCS compliance with one or more performance objectives.[217]

76. We do not adopt any safe harbor standards for IVCS accessibility at this time, as no relevant standards were identified by commenters. Indeed, some commenters expressed doubts as to whether safe harbor standards could be helpful in this context. For example, CEA contends that establishing a safe harbor risks locking in *de facto* technical mandates, thereby inhibiting innovation.[218] CTA echoes this assessment, noting that specific technical standards could stifle the development of new accessibility features.[219]

77. One candidate for a safe harbor standard was suggested by the California Public Utilities Commission and Telecommunications Access of Maryland (Maryland Relay), who recommend the real-time text (RTT) technical standard as a safe harbor.[220] Maryland Relay notes that RTT allows for simultaneous transmission of text, audio, video, and data; is already supported on most modern smartphones; and has already been implemented in VRS, making it relatively easy to further incorporate into video conferencing platforms.[221] CPUC adds that RTT is a widely known, well understood, and user-friendly standard.[222]

78. However, neither Maryland Relay nor CPUC explain which performance objectives

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[212] *See* Global Alliance of Speech-to-Text Captioning Express Comments (filed Sept. 4, 2023) (Global Alliance Comments).

[213] *Id.* at 2.

[214] *See 2011 ACS Notice*, 26 FCC Rcd at 3171-72, para. 105.

[215] 47 U.S.C. § 617(e)(1)(D).

[216] *Id.*

[217] *Notice*, 38 FCC Rcd at 6326, paras. 65-67.

[218] CEA Comments at 16 ("Objectives inspire creativity while mandatory standards have the potential to stifle innovation and delay development."); *id.* at 17 ("technical standards, even as safe harbors, would discourage creativity and innovation and lead to a lowest-common denominator technical environment, rather than spurring fresh ideas.").

[219] CTA Comments at 2.

[220] *See* CPUC Reply Comments at 1-2; Maryland Relay Comments at 1-3. The term "real-time text" does not itself denote a particular technical standard; rather, it refers to communications technology that enables "text communications that are transmitted over Internet Protocol immediately as they are created, *e.g.*, on a character-by-character basis." 47 CFR § 67.1(g). These commenters appear to be referring to RFC 4103, a technical standard that is currently referenced by the Commission's rule governing RTT. *Id.* § 67.2(a)(2).

[221] Maryland Relay Comments at 3.

[222] CPUC Reply Comments at 1-2.

would be implemented using RTT, or why the designation of RFC 4103 as a safe harbor is necessary to facilitate compliance with Part 14 with respect to IVCS. Without a more detailed explanation of why an RTT-based safe harbor would further the Commission's goal of increasing video conferencing accessibility, we are not persuaded that it is needed in this context.

6. Part 14 Compliance Dates

79. We allow IVCS providers two years to comply with the accessibility requirements adopted in this *Second Report and Order*.

80. Two commenters directly address the compliance date issue. CTA urges the Commission to allow three years for compliance, asserting that a three-year period "reflects the product development timelines for today's sophisticated video conferencing products and services and would be consistent with Commission precedent for the implementation of new rules."[223] CEA argues that 18 months is sufficient, stating that most of the proposals in the *Notice* "are very straightforward and should be easily achievable by service providers within a relatively short period of time."[224]

81. We conclude that a full product development cycle should not be needed to implement the additional rule provisions added by this *Second Report and Order*. The performance objectives we adopt today supplement the existing performance objectives for ACS, which became effective in 2012. Pursuant to the *2023 Video Conferencing Order*, IVCS providers were allowed an additional year, until September 3, 2024, to meet the existing performance objectives.[225] We find that an additional two-year period is appropriate for IVCS providers to complete any further development, testing, and deployment of modified software, to the extent needed to comply with the new provisions.[226]

82. Although we largely agree with CEA that, for some service providers, the proposed performance objectives "should be easily achievable . . . within a relatively short period of time,"[227] for other (perhaps smaller) providers, compliance may require additional preparation and consultation. Additionally, as noted earlier, the breadth of IVCS entities now subject to the ACS rules is expansive. Providers of small, niche, or startup conferencing services may need to prioritize software development to suit their specific circumstances. Given these dueling considerations, we conclude that the most appropriate compliance date is two years from the effective date of this *Second Report and Order*.[228]

7. Costs and Benefits

83. We conclude that the substantial benefits of our actions in this proceeding outweigh any costs they are likely to impose. Our actions in this proceeding implement Congress' directive to adopt performance objectives to ensure the accessibility of ACS, including IVCS, without unduly burdening the provision of IVCS. Like the existing performance objectives, the amended performance objectives are outcome-oriented, preserving flexibility in implementation and encouraging the development of efficient accessibility solutions. Further, the two-year compliance deadline balances the potentially significant

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[223] *See* CTA Comments at 3.

[224] *See* CEA Comments at 2.

[225] *2023 Video Conferencing Order*, 38 FCC Rcd at 6343, para. 131; *2023 Video Conferencing Effective Date Public Notice,* 38 FCC Rcd at 6778.

[226] To reiterate, compliance with the new provisions within the two-year timeline is only required to the extent that such compliance is achievable. 47 CFR § 14.20.

[227] CEA Reply Comments at 2.

[228] The *2011 ACS Order* allowed two years after the release date for compliance with the initial Part 14 rules, except for the recordkeeping requirements, for which compliance was required one year after the effective date of the rules. *2011 ACS Order*, 26 FCC Rcd at 14601-05, paras. 105-13. We do not amend the recordkeeping requirements in this *Second Report and Order*.

industry-wide changes the CVAA requires with the need to ensure that people with disabilities can take advantage of the benefits of IVCS.

84. The benefits of the IVCS rules for people with disabilities are extensive. As the COVID pandemic made clear, the benefits of ensuring access to video conferencing are enormous. Indeed, as we have noted repeatedly, video conferencing is now a practical necessity for communication, having become, for most of our population, a mainstay of business, education, health,[229] and personal life. Whether talking one-on-one with friends or participating in a multi-party conference call, people with disabilities benefit enormously from having the same opportunities as other Americans to make use of this modern form of communication service. As CEA points out: "The near ubiquity of video conferencing, and the heavy reliance on it by educators, government, and business for virtual meetings and collaboration, not to mention its use for social interaction, have made accessibility to, and usability of, these services a necessity for our community if we are to aspire to full participation in modern life."[230]

85. Although the *Notice* requested comment on the potential costs that the Commission's proposals would impose, we received no specific cost estimates from commenters. Regardless, we emphasize that, as with the existing Part 14 performance objectives, compliance with each of the amended performance objectives adopted here is conditioned on the objective being "achievable," which means it can be achieved "with reasonable effort or expense."[231] Therefore, the rules themselves include a safeguard to ensure that the burden and cost of compliance will not be unreasonable, considering, among other factors, the technical and economic impact on the company's operation and the extent to which accessible services or equipment are already being offered by the company.[232] We conclude that, as a result of this safeguard, which is applicable to certain other accessibility obligations imposed by the Act, the resulting cost burden is likely to be comparable to the cost imposed on other segments of the communications industry by rules incorporating an analogous condition—*e.g.*, the cost incurred by other ACS providers and manufacturers to comply with the generally applicable accessibility requirements of section 617.[233] To a significant extent, the rules we adopt today serve to clarify pre-existing obligations of IVCS providers, and for that reason as well are unlikely to be more burdensome than existing accessibility requirements.

B. Providing TRS in Video Conferences

86. In Part III.A. above, we amend our Part 14 rules to require, among other things, that IVCS providers allow users to connect with third-party captioning and sign language interpretation services, unless it is not achievable to do so. In this Part, we amend our rules to facilitate the integrated provision of TRS to enable functionally equivalent participation in video conferences.[234] By "integrated provision of TRS" in a video conference, we mean an arrangement whereby communication between the CA (or automated equivalent) and the TRS user, whether by text or video, takes place on the video conferencing platform, rather than through a separate connection.[235] Just as the TRS Fund has long been

[229] CTA noted in an earlier comment that "video conferencing has been a key component of the move to telehealth," which it calls a "great equalizer in a healthcare system where social and economic disparities continue to affect patient care." CTA Comments, CG Docket No. 10-213 and GN Docket No. 21-140, at 4 (filed June 21, 2022) (CTA 2022 IVCS Refresh Comments).

[230] CEA Comments at iv.

[231] 47 CFR § 14.10(b); 47 U.S.C. § 617(g).

[232] 47 CFR § 14.10(b)(2), (4); 47 U.S.C. § 617(g)(2), (4).

[233] *See 2011 ACS Order*, 26 FCC Rcd at 14605-19, paras. 114-48.

[234] *See* DAC Video Conferencing Report at 5-6; CEA Comments at 9-11; Sorenson Comments at 34-38; Hamilton Reply Comments at 2; Convo Comments at 2; ZP Reply Comments at 2; ClearCaptions Comments at 4-5.

[235] *See* DAC Video Conferencing Report at 3-4 (describing how the difficulties associated with the need for a separate video connection between VRS user and CA on video conference calls); Sorenson Comments at 6-8 (same).

used to support the provision of TRS with audio-only teleconferencing, we find it is necessary and appropriate that the TRS Fund be used to support the provision of TRS with video conferencing, as needed for functionally equivalent communication.[236] At this time, we do not *require* any TRS provider to provide TRS in video conferences on an integrated basis. Rather, the rules adopted in this *Second Report and Order* are intended to facilitate the provision of TRS in video conferences while protecting the TRS Fund against potential waste, fraud, and abuse. In the *Further Notice,* we seek comment on what additional rules may be needed to achieve these objectives.

1. Legal Authority

87. *Comments*. Two commenters discussed in detail whether the Commission has statutory authority to direct TRS Fund support to the provision of TRS in video conferences on an integrated basis.[237] Both agree with the Commission's tentative conclusion that it has such authority.[238] The only dissenter, Sign-Speak, filed reply comments in which it contends, with little elaboration, that "[p]roviding interpretation for video calls held on privately hosted IVCS platforms falls outside the scope of the TRS fund."[239]

88. *Discussion*. We adopt the Commission's tentative conclusion. Specifically, we conclude that the integrated provision of relay service in a video conference (i.e., without the need for the CA to have a voice-only connection to the video conference and a separate data or video connection to the TRS user) fits the statutory definition of TRS as a "telephone transmission service" enabling "communication by wire or radio . . . 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."[240]

89. As indicated by the text quoted above, section 225 defines relay services in terms of their purpose—to enable people with hearing or speech disabilities to "communicat[e] by wire or radio" in a manner that is functionally equivalent to how people without such disabilities use "voice communication services."[241] In turn, "communication by wire" and "communication by radio" are broadly defined by the Act,[242] using terms that encompass, among other things, communication via the Internet or Internet Protocol.[243] In addition, IVCS, which is defined to include audio communication,[244] is appropriately

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[236] LanguageLine contends that funding TRS users' participation in video conference calls is somehow a "profound change" that will negatively impact the deaf community in various areas such as healthcare. LanguageLine Comments at 1. The TRS Fund already compensates TRS providers for their users' participation in video and audio conference calls. The obligations of various industry sectors to provide accommodations for individuals with disabilities under federal, state, and local laws remain unchanged.

[237] *Notice*, 38 FCC Rcd at 6327, para. 69.

[238] *See* Sorenson Comments at 34-38; Sorenson Reply Comments at 21-23; CEA Comments at 9-13, 21-22; CEA Reply Comments at 5.

[239] Sign-Speak Reply Comments at 5.

[240] 47 U.S.C. § 225(a)(3) (defining TRS).

[241] *Id.*

[242] *See* 47 U.S.C. § 153(59) (defining "communication by wire" as "the transmission of writing, signs, signals, pictures and sounds of all kinds by aid of wire, cable, or other like connection between the points of origin and reception of such transmission, including all instrumentalities, facilities, apparatus, and services (among other things, the receipt, forwarding, and delivery of communications) incidental to such transmission"); *id.* § 153(40) (defining "communication by radio" as "the transmission by radio of writing, signs, signals, pictures and sounds of all kinds, including all instrumentalities, facilities, apparatus, and services (among other things, the receipt, forwarding, and delivery of communications) incidental to such transmission").

[243] *See, e.g., Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities,* CC Docket No. 98-67, Report and Order and Further Notice of Proposed Rulemaking, 15 FCC

(continued….)

characterized as a "voice communication service" for purposes of section 225.

90. As for "telephone transmission service," which is not defined in the Act, the Commission has given this term a broad interpretation, noting that it is "constrained only by the requirement that such service provide a specific functionality," namely the ability to communicate by wire or radio in a manner functionally equivalent to *voice* communication.[245] For example, in prior decisions authorizing new forms of TRS, the Commission has repeatedly found that Internet-based relay services are not limited to a specific technical configuration,[246] and has not interpreted "telephone transmission service" as requiring the use of telephone numbers.[247] Consistent with these prior decisions, we conclude that the inclusion of video imaging in the underlying service to which TRS is applied does not change the fundamental character of TRS itself as a "telephone transmission service." Whether TRS is used to relay ordinary voice telephone service or the voice portion of a video conferencing service, it remains essentially *telephone* transmission service: regardless of the additional content that may be included, along with voice, in the underlying communication, the essential purpose of TRS is to ensure that the *telephonic* (i.e., voice) characteristics of a communication are rendered communicable, in a functionally equivalent manner, to people with hearing or speech disabilities.[248]

91. Commenters addressing the issue generally agree with our analysis of section 225.[249] For example, Sorenson notes that the Senate Report to the ADA explained that "the provisions of this section [225] do not seek to entrench current technology but rather to allow for new, more advanced, and more efficient technology."[250]

2. Timing of Commission Action

92. *Comments*. Several commenters recommended that the Commission delay the adoption

(Continued from previous page)
Rcd 5140, 5152-54, paras. 21-27 (2000) (*2000 TRS Order*) (allowing TRS Fund compensation for VRS); *2007 IP CTS Declaratory Ruling*, 22 FCC Rcd at 387-90, paras. 19-26.

[244] 47 U.S.C. § 153(27).

[245] *2002 IP Relay Declaratory Ruling,* 17 FCC Rcd at 7783, para. 10. Further, section 225 directs the Commission to "ensure that regulations prescribed to implement this section encourage, consistent with Section 7(a) of this Act, the use of existing technology and do not discourage or impair the development of improved technology." 47 U.S.C. § 225(d)(2).

[246] *2007 IP CTS Declaratory Ruling*, 22 FCC Rcd at 387-38, paras. 20-22; *2000 TRS Order*, 15 FCC Rcd at 5152-53, paras. 22-23.

[247] VRS users were not assigned NANP numbers until 2008. *See Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; E911 Requirements for IP-Enabled Service Providers,* CG Docket No. 03-123 and WC Docket No. 05-196, 23 FCC Rcd 11591, 11594, para. 4 (2008) (prior to assignment of 10-digit telephone numbers, VRS users were assigned "dynamic" Internet addresses).

[248] *See* https://www.collinsdictionary.com/us/dictionary/english/telephone (quoting various dictionary definitions of "telephone," including, e.g., as "an apparatus, system, or process for transmission of sound or speech to a distant point, esp. by an electric device").

[249] *See* Sorenson Comments at 34-38; Sorenson Reply Comments at 21-23; CEA Comments at 9-13, 21-22; CEA Reply Comments at 4-5 (stating that "[t]here is no question that the Commission has the authority to take further action to improve the accessibility and usability of interoperable video conferencing services"). The only dissenter, Sign-Speak, contends, without further explanation, that "[p]roviding interpretation for video calls held on privately hosted IVCS platforms falls outside the scope of the TRS fund," asserting that the TRS Fund's purpose "is [to compensate] TRS providers for reasonable costs of providing interstate telephone transmission services." Sign-Speak Reply Comments at 4-5. As explained above, the Commission has rejected this narrow view of section 225.

[250] Sorenson Comments at 35.

of new TRS rules to allow more time for collaboration among stakeholders on potential solutions.[251] Some commenters also suggest that the Commission form a DAC working group tasked to develop recommendations for any further rules.[252] Convo also proposes the creation of a VRS-on-IVCS pilot program to "develop important data to inform the Working Group's efforts and the FCC's rulemaking process."[253] Pointing to the success of the pilot program for at-home VRS call handling, Convo contends that such a pilot program would help identify challenges and determine effective means for using VRS on IVCS calls.[254]

93. *Discussion*. We agree that collaboration among stakeholders may help accelerate efforts to provide TRS in video conferences on an integrated basis. However, given the centrality of video conferencing in today's society, it is important that we adopt rules addressing the provision of TRS in video conferences without undue delay. This is especially true for VRS, as alternative sign language interpretation services are not always available for video conferences. Therefore, in this part of the *Second Report and Order*, we amend our rules in a number of ways to facilitate the integrated provision of TRS, and especially VRS, in video conferences.[255] Regarding some aspects of VRS, as well as other forms of TRS, we find that the current record does not enable us to formulate an appropriate rule, and we seek further comment on such unresolved issues in the accompanying *Further Notice*.

94. *VRS-on-IVCS Pilot Program.* We do not see a need to authorize a pilot program for the integrated provision of VRS in video conferences, as suggested by Convo.[256] The Commission has conducted pilot programs, such as the at-home VRS call handling pilot program[257] and the National Deaf-Blind Equipment Distribution Program (NDBEDP),[258] in the context of allowing a service or a mode of providing a service that was not previously allowed by our rules, or when a pilot program is mandated by Congress.[259] With such a pilot program, the Commission can study what adjustments to its rules may be

[251] *See* Convo Comments at 5-7; Hamilton Comments at 1; Sorenson Comments at 44 (with respect to IP CTS); T-Mobile Accessibility Comments at 2-4.

[252] *See* ClearCaptions Comments at 4-5; Convo Comments at 1; Hamilton Comments at 1; T-Mobile Reply Comments at 3-4.

[253] Convo Comments at 1.

[254] *Id.* at 8; *see Structure and Practices of the Video Relay Service Program; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CG Docket Nos. 10-51 and 03-123, Report and Order, 35 FCC Rcd 831 (2020) (*At-Home Call-Handling Order*) (adopting final at-home VRS call-handling rules).

[255] Unlike the rules adopted in Part III.A, for which compliance is required within two years after the effective date, the rules adopted in this Part are applicable on the effective date.

[256] Convo Comments at 7-11.

[257] *See Structure and Practices of the Video Relay Service Program; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities,* CG Docket Nos. 10-51 and 03-123, Report and Order, Notice of Inquiry, Further Notice of Proposed Rulemaking, and Order, 32 FCC Rcd 2436, 2455-57, paras. 46-49 (2017) (*2017 VRS Improvements Order*) (initiating pilot program).

[258] *Implementation of the Twenty-First Century Communications and Video Accessibility Act of 2010, Section 105, Equipment for Deaf-Blind Individuals,* CG Docket No 10-210, Report and Order, 26 FCC Rcd 5640 (2011) (*2011 NDBEDP Order*).

[259] *See Rural Health Care Support Mechanism,* WC Docket No. 02-60, Order, 21 FCC Rcd 11111 (2006) (*RHC Pilot Program Order*) (establishing a pilot program to examine how the rural health care funding mechanism can be used to enhance public and non-profit health care providers' access to advanced telecommunications and information services, pursuant to the Telecommunications Act of 1996).

needed to allow a new service or new program.[260]

95. However, pilot programs, by their nature, have a sunset date, and require affirmative action by the Commission to extend the sunset date or convert the pilot program to permanent rules allowing the new service.[261] Given the importance and urgency of making VRS available in video conferences on an integrated basis, and the progress that has been made to date in integrating VRS with IVCS, we do not believe the more tentative, pilot-program approach is appropriate here. Indeed, the integrated provision of VRS on video conference calls has already begun on a limited scale.[262] Instituting a pilot program could be incorrectly perceived as signaling uncertainty as to the net benefits of such integration, potentially causing unnecessary delay in the availability of integrated VRS.[263]

96. It is clear from the comments that TRS and video conferencing service providers believe collaboration will continue for the foreseeable future. Any insights gleaned from such collaboration can inform the Commission's rulemaking process going forward, without the need to wait for a pilot program to produce results.[264]

3. Integrating the Provision of VRS in Video Conferencing

97. We also adopt the Commission's tentative conclusion, with which commenting parties generally agree,[265] that the integrated provision of VRS with video conferencing is often necessary to enable sign language users to communicate in a functionally equivalent manner.[266] As noted previously, connecting a VRS CA to a video conference may not be possible if there is no dial-in connection,[267] and, even if there is, that configuration creates difficulties for the VRS user, if, for example, the user must

[260] *See 2017 VRS Improvements Order*, 32 FCC Rcd at 2463, para. 59 (pilot program will provide comprehensive information about the costs and benefits of allowing at-home workstations); *2011 NDBEDP Order,* 26 FCC Rcd at 5642, para. 3 (experience of pilot program will inform Commission action in establishing a permanent program in compliance with the statute); *RHC Pilot Program Order*, 21 FCC Rcd at 11112, para. 4 (pilot program will lay the foundation for a rulemaking proceeding).

[261] *See At-Home Call-Handling Order*, 35 FCC Rcd at 833-34 (adopting permanent rules for at-home VRS call-handling).

[262] *See* Sorenson Comments at 8-12 (describing efforts to provide integrated VRS on video conferences).

[263] *See* Sorenson Reply Comments at 18 ("It's not clear what a pilot program would accomplish except to delay rollout of VRS-IVCS solutions.").

[264] Convo Comments at 7. Multiple commenters suggest that the Commission charter a DAC working group composed of representatives of video conferencing providers, TRS providers, and accessibility advocates, who would be tasked with developing recommendations for further rules. *See, e.g.*, ClearCaptions Comments at 4-5; Convo Comments at 1; Hamilton Comments at 1; Sorenson Comments at 18; T-Mobile Reply Comments at 3-4. As indicated in the text, we believe that we can make significant progress now toward improving the accessibility of video conferencing calls. As stakeholders continue to collaborate, we can consider whether chartering a DAC working group with specific tasks would be useful for this effort.

[265] *See* Sorenson Comments at 2-11 (describing improved participation in IVCS with integrated VRS); Convo Comments at 3-5 (describing challenges of participating in video conferences for deaf and hard of hearing individuals); CEA Comments at 6-9 (same).

[266] By "integrated provision of VRS" in a video conference, we mean an arrangement whereby a CA is included as a participant in the video conference and all communication between the CA and the participants takes place on the video conferencing platform rather than through a separate connection. A VRS user relying on a CA who appears on a separate screen while connected to the conference audio is non-integrated provision of VRS. Non-integrated provision of VRS remains a compensable form of TRS, and is not affected by the rules adopted in this proceeding.

[267] Such a connection is often unavailable. DAC Video Conferencing Report at 2-4; CEA Comments at 8. Assuming the video conferencing platform allows a dial-in connection, in a hosted video conference it is the host who determines whether to provide such an option.

constantly navigate between devices.[268]

98. Sign-Speak objects to our approach to integrating VRS with video conferencing services, claiming that authorizing TRS Fund compensation for VRS integrated with video conferencing platforms will "nationalize" the ASL interpreting industry, putting out of business many Video Remote Interpretation (VRI) services, who currently provide translation services for conference calls.[269] Such speculative concerns do not justify prohibiting or delaying the integrated provision of VRS in video conferences. The rules adopted in this *Second Report and Order* do not prohibit video conference hosts or participants from using non-VRS interpretation services. Indeed, we expect that VRI will be preferred for video conferences, as VRI interpreters employed by a video conference host generally will have more opportunity to prepare, and are more likely to have expertise in the specific subject matter of a video conference. Many organizers and hosts of video conferences calls have obligations under the ADA or other laws to provide accommodations for people with disabilities, including English-to-ASL interpretation, for which the use of VRS often may not be suitable.

99. To facilitate the integration of VRS with IVCS, we amend our rules, as set forth below, to ensure the appropriate use of VRS with video conferencing, and to prevent waste, fraud, and abuse. The rules we adopt today are designed to allow VRS providers to integrate their services with video conferencing so that VRS customers can participate in a video conference call with the presence of a VRS CA on the video platform, while protecting the TRS Fund from waste, fraud, and abuse. As video conferencing service evolves and VRS providers and the Commission gain more experience with the integrated provision of VRS in video conferences, some of the rules below may be revisited.

a. Permissive Approach

100. At this time, we do not *require* VRS providers to provide VRS in video conferences on an integrated basis.[270] We believe that VRS and video conferencing providers need to continue collaborating to ensure that VRS is available to sign language users on IVCS platforms, and we generally encourage all VRS and video conferencing providers to be receptive to such collaboration. However, we recognize that integration of VRS with video conferencing services, including all necessary user verification, billing, and other requirements, may present technical issues for both VRS and video conferencing providers.[271] The record does not provide useful information on how much time IVCS providers and TRS providers may require to develop integration solutions, nor the extent to which a solution may be applicable to multiple video conferencing platforms. As ZP notes, "full TRS integration on IVCS may take time and significant collaborative efforts among providers and the stakeholders."[272]

101. We are concerned that mandating integration of VRS with video conferencing services at this early stage in the technological development of the service could stymie experimentation with different technologies. We find that allowing experimentation and innovation, including technical

[268] *See supra* para. 12; DAC Video Conferencing Report at 2-4; CEA Comments at 8-9; Sorenson Comments at 6-9. In addition, the CA who, unlike other participants, is limited to an audio connection, is unable to read documents or other text that may be displayed, interpret facial expressions, or attend to other visual cues on which video conference participants often rely for effective communication. *See* DAC Video Conferencing Report at 3.

[269] Sign-Speak Reply Comments at 3-5; Letter from The Sign-Speak Team to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 23-161, 10-213, and 03-123, at 2 (filed Dec. 6, 2023); LanguageLine Comments at 2 (expressing a similar concern that "[m]erging these systems [VRI and VRS] under the TRS could inadvertently ostracize a significant portion of language-services firms").

[270] *Notice*, 38 FCC Rcd at 6329, para. 76.

[271] *See* Sorenson Comments at 12 ("Each [IVCS] platform requires a unique integration development effort by VRS providers as well as ongoing engineering work to maintain a seamless integration as the platforms themselves develop and change.").

[272] ZP Reply Comments at 9.

collaboration among stakeholders will result in better integration of VRS, and is therefore consistent with the statutory mandate that TRS services are to be provided to "the extent possible" and in the "most efficient manner."[273]

b. User Validation

102. *Background*. VRS is available only to eligible users, i.e., persons authorized to use VRS pursuant to a registration in the User Database.[274] Ordinarily, a person's status as an eligible VRS user is verified by means of the NANP telephone number from which or to which a call is placed.[275] By contrast, video conference participants typically enter a video conference via the Internet (e.g., by clicking a link provided by the host of a video conference, or entering a URL in a search engine or app) without dialing from a line associated with a telephone number.[276] In further contrast with ordinary telephone calls, the video conference format invites VRS users to connect directly, rather than through their VRS providers. In the *Notice*, the Commission sought comment on how VRS providers can most efficiently and effectively confirm a video conference participant's eligibility for VRS.[277]

103. *Discussion*. Consistent with the requirement for other VRS calls, we require that, when VRS is provided in video conferences, VRS providers must validate eligibility by collecting the user's assigned 10-digit NANP telephone number,[278] even if the number is not technically used to connect to the video conference. For example, the VRS provider may request registered users to enter their VRS telephone number in an application or plug-in that the VRS provider makes available to video conference participants to request a VRS CA.[279] Whatever the process, the VRS provider must verify that the user's telephone number is registered in the User Database before allowing the assigned CA(s) to participate in the call.[280] We encourage video conferencing service providers and VRS providers to collaborate on development of such sign-on procedures.

c. Call Detail Requirements

104. *Background*. To collect compensation from the TRS Fund for a particular call, a VRS provider must submit call detail records (CDRs) to the TRS Fund administrator with the information required by our rules.[281] In the *Notice*, the Commission proposed to require that CDRs submitted by VRS providers identify, as such, video conferences in which VRS is provided on an integrated basis, and sought comment on whether additional modification of the Call Data Rule is necessary to address the provision of integrated VRS in video conferences.[282]

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[273] 47 U.S.C. § 225(b)(1).

[274] *See* 47 CFR § 64.615(a)(1), (2).

[275] *See id.* § 64.615(a)(1).

[276] While some video conferencing platforms may allow a participant to connect via a voice-only connection, the availability of such a connection for a particular video conference may be at the discretion of the conference host or organizer.

[277] *Notice,* 38 FCC Rcd at 6329, para. 77.

[278] This approach is supported by Sorenson and ZP. *See* Sorenson Comments at 17-19; Sorenson Reply Comments at 7; ZP Reply Comments at 4; Sorenson Request Letter at 3.

[279] *See* Sorenson Comments at 8-11 (describing processes used to verify eligibility of a VRS user on Zoom).

[280] In some instances, our rules allow the provision of VRS to users without validation of the individual user's registration, if authorized by an "enterprise" or "public videophone" registration. 47 CFR § 64.611(a)(6). VRS may be provided in a video conference when such provision of VRS is permitted by the applicable rules.

[281] *Id*. § 64.604(c)(5)(iii)(D) (Call Data Rule).

[282] *Notice,* 38 FCC Rcd at 6330, para. 80.

105. *Comments.* No party opposes requiring that CDRs identify, as such, the integrated provision of VRS in a video conference. VRS providers Sorenson and ZP both support the inclusion of the URL or IP address of a video conference, in lieu of a terminating telephone number.[283]

106. *Discussion*. To take account of the distinctive characteristics of and special requirements applicable to video conferencing,[284] we adopt the proposed amendment to the Call Data Rule, requiring that a VRS provider's CDRs identify each video conference in which integrated VRS is provided. We note that IP addresses can be used, in the context of video conferences, to identify the Internet location to which participants all connect[285] and that a conference provider's URL can assist the Fund administrator's oversight of this new application of TRS, by identifying which video conferencing provider is responsible for handling the underlying communication. However, to ensure flexibility in the administration of TRS, the rule we adopt authorizes the TRS Fund administrator to determine, and provide specific guidance to VRS providers regarding, the specific information and format that are needed to indicate that integrated VRS was provided in a video conference and to sufficiently identify the particular video conference involved, taking account of the need to provide an auditable record, as well as any legitimate security or data protection concerns.[286] In this regard, we direct the administrator to collect, and by extension to use, process, store, and maintain, only information—insofar as it may qualify as personally identifiable information—that is directly relevant and necessary to accomplish its specific purpose.[287] If necessary, the administrator may also provide instructions to ensure that providers correctly identify non-compensable international video conferences[288] and other instances where, based on the parties involved, the provision of VRS in a video conference is not eligible for TRS Fund compensation.[289]

d. When Compensable Time Starts

107. *Background*. The CDRs submitted by TRS providers must record when compensable

[283] *See* Sorenson Comments at 13-16 (supporting use of URLs to identify video conferences in CDRs); Sorenson Reply Comments at 4-7 (same); ZP Reply Comments at 4 (same); *see also* 47 CFR § 64.604(c)(5)(iii)(D)(*2*)(vi) (requiring that CDRs include "[o]utbound telephone number (if call terminates to a telephone) and IP address (if call terminates to an IP-based device) at the time of call").

[284] For example, these characteristics and requirements include special criteria for counting CA minutes of use and limitations on the number of CAs that may be assigned to a multi-party video conference. *See infra* Part III.B.3.d-e.

[285] *See* Sorenson Request Letter at 2; 47 CFR § 64.604(c)(5)(iii)(D)(2)(vi).

[286] *See* Sorenson Sept. 20 *Ex Parte* at 7 (noting that IVCS providers may have security or data protection concerns with supplying certain information). For example, the administrator might determine that an IP address is needed to identify the specific Internet location of the video conference, and that the provision of a short-form URL will sufficiently identify the IVCS provider while limiting any security or privacy risk that might result from requiring the submission of a long-form URL. However, we emphasize that, contrary to Sorenson's assertion, this *Second Report and Order* does *not* determine the specific additional or alternative information regarding video conferences that shall be submitted in CDRs. *Cf. id*. at 7 ("The Order would require providers to collect and submit to the TRS Administrator the IVCS platform IP address *and* URL") (emphasis in original). Rather, we rely on the on the TRS Fund administrator to make that determination, based on its expertise and experience.

[287] *See* Office of Management and Budget, To the Heads of Executive Departments and Agencies, Managing Information as a Strategic Resource, Circular A-130, App. II, Section 3(d) (2016).

[288] An ordinary VRS call placed by a registered VRS user temporarily located outside the United States to a party in the United States is not compensable if the VRS user has not first notified their VRS provider of their travel plans. *See* 47 CFR § 64.604(d)(6).

[289] For example, a video conference involving only VRS users does not require a CA to relay the conversation because the participants can sign directly to one another. Such a video conference is not eligible for TRS Fund compensation. *See Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CG Docket No. 03-123, Report and Order and Further Notice of Proposed Rulemaking, 34 FCC Rcd 8483, 8487, paras. 10-11 (2019) (*2019 TRS Definition Order*) ("people using the same form of TRS can understand each other without additional help from a relay service").

call time begins and ends.[290] For an ordinary VRS call, compensable call time usually starts when the called party answers, because at that point the CA is already present. Identifying a start time is not so obvious for video conferences. The CA may not be present when a video conference begins. Further, the need for interpretation in a video conference does not always start as soon as two participants have logged on; for example, both of the first two participants may be signers, or hearing users; and, on some calls, participants may be placed in a "waiting room" before entering the call.[291] In the *Notice*, the Commission proposed that, for video conferences, a VRS provider's TRS minutes of use begin when a VRS CA is connected to a video conference and two or more participants are actively present.[292]

108. *Comments.* Sorenson recommends that compensable time on a video conference should start when the VRS CA enters the video conference.[293] Sorenson also recommends that a VRS provider be compensated for time that a CA spends in a "waiting room," analogizing this to when a VRS user and CA are placed "on hold" during a telephone call.[294]

109. *Discussion*. We adopt a modified version of the proposed rule to facilitate the automatic provision of conversation start times in CDRs, so that a CA does not ordinarily need to make a determination when compensable time begins.[295] Compensable time for a video conference shall begin when a VRS CA enters the video conference, provided that the CA identifies the requesting VRS user within five minutes of entering the video conference.[296] If, within that time, the CA cannot identify the requesting VRS user, or it becomes evident that VRS is not needed,[297] then the call must be identified as non-compensable.

110. At this time, we decline to allow compensation for periods when CAs are in a waiting room before joining a video conference. There is a significant difference between being "on hold" for a voice telephone call and being in a "waiting room" prior to joining a video conference. When a VRS user and CA are "on hold," they are in communication with each other, and the CA is able to interpret any oral announcements or other audio information conveyed by the other party's answering device. In a video conference "waiting room," however, the CA may be the only one "waiting," and even if a registered VRS user is also "waiting," communication between them may not be possible. Further, if announcements by the conference host are conveyed by text (as appears to be the usual case), instead of orally, no VRS interpretation of such announcements is needed.

111. We recognize that the VRS user and CA may not be able to control when they are admitted to a video conference from a waiting room.[298] However, compensation for time in a waiting

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[290] *See* 47 CFR § 64.604(c)(5)(iii)(D)(*2*)(*iii*).

[291] *See* Sorenson Comments at 17.

[292] *Notice*, 38 FCC Rcd at 6351-54, Appx. B (proposed § 64.604(c)(5)(iii)(E)(*2*)).

[293] Sorenson Comments at 16-17; Sorenson Reply Comments at 9-10; Sorenson Request Letter at 3; Letter from John T. Nakahata, Counsel to Sorenson, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 23-161, 10-213, and 03-123, at 2 (filed Jan. 25, 2024) (Sorenson Jan. 25 *Ex Parte*).

[294] *See* Sorenson Jan. 25 *Ex Parte* at 2 (comparing IVCS "waiting rooms" to being placed "on hold" in an audio call); *2011 VRS Call Practices Order*, 26 FCC Rcd at 5567, para. 41 (distinguishing idle calls which must be terminated from calls where the VRS user is place on hold).

[295] *See* 47 CFR § 64.604(c)(5)(iii)(D)(*4*) (requiring the use of an automated record keeping system to capture required call data). The proposed start-time rule would require action by the CA to record the start of compensable time. *See* Sorenson Sept. 20 *Ex Parte* at 3-5.

[296] *See* Sorenson Sept. 20 *Ex Parte* at 4-5 (recommending this change).

[297] The TRS Fund should not support the participation of a CA in a video conference where, e.g., no hearing users log on and all participants communicate using sign language.

[298] If the VRS user and CA attempt to join a call before the host initiates the connection and are then waiting on-line, that time would be considered non-compensable call set-up time.

room, or other pre-conference statuses where the VRS user and CA are unable, or have no need, to communicate, would expend TRS Funds without even the possibility for the provision of interpretation services.

e. CA-Related Issues

112. *Background.* As acknowledged in the *Notice,* there may be a number of situations in which more than one VRS CA potentially may be asked to interpret a video conference.[299] For example: (1) two or more participants may request VRS from different providers in the same video conference; (2) two or more VRS users may each request VRS from the same provider on the same video conference; or (3) the nature of the video conference may be such that a VRS provider determines that more than one CA (i.e., team interpreting) is needed for effective communication. In the *Notice*, the Commission asked whether the TRS rules should apply differently in this respect to a video conference than to a teleconference.[300] The Commission also proposed that, in the ordinary case, if the VRS user who requested service leaves a video conference, or is disconnected, before the session ends, then the billable period has ended and the CA should leave the video conference, and sought comment on what exceptions should be allowed.[301]

113. *Comments.* Sorenson and ZP contend that the Commission should not restrict VRS users' ability, as currently supported, to use their chosen provider on video conference calls.[302] These commenters also recommend that additional compensation should be provided for team interpreting in conference calls, as warranted.[303] Sorenson also urges the Commission to compensate a VRS provider for time that a CA remains in a video conference after the requesting VRS user has left, in the event that there are remaining participants who require ASL interpretation.[304]

114. *CAs from Different Providers*. At this time, we do not prohibit multiple providers from responding to service requests from different users for the same video conference. Implementing such a rule would require logistics and coordination procedures among VRS providers, about which we have no record information or recommendations. However, we note that our rules do not prohibit TRS providers from reaching agreements for the efficient use of CAs. For example, the restrictions on VRS contracting do not preclude a VRS provider from authorizing another VRS provider to provide interpretation service to the first provider's registered users.[305] Thus, VRS providers may arrange for their registered users participating in the same video conference to be served by a single CA as long as there is no double-billing of the TRS Fund for the services of that CA.

115. *Multiple CAs from a Single Provider*. In an audio-only teleconference, where two or more registered VRS users are participating, the TRS Fund supports the provision of a CA for each registered user—with each user's connection through a CA being treated as a separate call because the VRS CAs are connected to the VRS users on separate screens. However, in a video conference with integrated VRS, unlike a teleconference, it is possible for all participants to be served by one CA from the same VRS provider. To prevent unnecessary, redundant provision of interpreting by the *same* VRS

[299] *Notice*, 38 FCC Rcd at 6330, para. 81.

[300] *Id.* In a multi-party teleconference involving at least one hearing user, our rules do not restrict the number of different TRS providers whose services may be used by various parties to the call.

[301] *Id*. at 6331, para. 84.

[302] Sorenson Comments at 21-22; Sorenson Reply Comments at 8-10; ZP Reply Comments at 5-6; Hamilton Comments at 10; Sorenson Request Letter at 2-3.

[303] Sorenson Comments at 22-26 (explaining situations that warrant team interpreting); ZP Reply Comments at 7-8 (supporting compensation for team interpreting); Sorenson Reply Comments at 16-17.

[304] Sorenson Comments at 27-29; Sorenson Request Letter at 4.

[305] *See* 47 CFR § 64.604(d)(1)(iii)(A).

provider, and to limit the risk of waste, fraud, and abuse, we require that, when a VRS provider receives two requests for VRS for a single video conference, the VRS provider shall only bill the TRS Fund for VRS provided to the first requesting user.[306] If a CA joins a video conferencing call and detects that a VRS CA from the same VRS provider is already present on the call, the later-in-time CA should terminate participation in the call, and no separate CDR shall be submitted to seek compensation for that CA's presence on the call.[307] To facilitate implementation of this practice, we require that VRS CAs identify themselves as such in a video conference, including the name of their VRS employer. CAs may identify themselves for this purpose by indicating in their display name that they are an interpreter and identifying the VRS provider with which they are affiliated.[308]

116. *Team Interpreting.* Under our rules, VRS providers are not prohibited from assigning an additional CA to a particular VRS call, if deemed necessary. However, no additional compensation is paid for the second CA.[309] We recognize that video conferences often involve longer conversations with more complex interaction among multiple participants.[310] The current record does not enable us to formulate a bright-line rule defining the circumstances, if any, that warrant TRS Fund compensation for the addition of a second CA, nor an appropriate rate of compensation for team interpreting. Therefore, we seek additional comment in the *Further Notice* regarding the circumstances, if any, under which TRS Fund compensation should be permitted for team interpreting in a video conference, as well as what compensation should be provided.

117. *Extending Service to Accommodate Remaining Users*. We adopt the Commission's proposal that, in the ordinary case, if the VRS user who requested service leaves a video conference, or is disconnected, before the session ends, then the billable period has ended and the CA should leave the video conference.[311] As an exception, we allow the continuation of TRS Fund-supported service to a video conference after the initiating user drops off, provided that a registered VRS user who remains in the video conference has made a request for service.[312] (In addition, at least one non-signing user must remain on the call.) In implementing this exception, VRS providers may choose to include in their software for managing service to video conferences the capability to hold in reserve any extra service requests from video conference participants that were not fulfilled when made because another participant already requested VRS for the conference. By holding an additional request in reserve, it can be automatically fulfilled if the first-in-line requester leaves the conference early. If there are no requests held in reserve, and the CA is aware that other sign language users may remain in the video conference, the CA may delay exiting the conference for up to five minutes of additional compensable time, to allow a new (replacement) registered user to request service. Upon verification of the new registered user, the CA (or a replacement) may continue service to the video conference beyond the five-minute grace period.

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[306] *See* US Telecom Comments at 2 (urging Commission to manage the TRS Fund in a fiscally responsible manner).

[307] In certain situations, the two VRS CAs may not immediately know which is the "later-in-time." Communication between the two CAs may be possible, in which case they can decide who drops off, or VRS providers may want to establish their own protocols for which CA drops off in this situation.

[308] *See* Sorenson Sept. 20 *Ex Parte* at 2-3 (recommending this change).

[309] *See Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, Structure and Practices of the Video Relay Service Program*, CG Docket Nos. 03-123 and 10-51, 38 FCC Rcd 9157, 9207-08, paras. 133-35 (2023) (*2023 VRS Compensation Order and Further Notice*) (seeking comment on allowing additional compensation when a certified deaf interpreter is added to a VRS call).

[310] *See* Sorenson Comments at 22-26 (citing call length and call complexity as reasons for team interpreting); ZP Reply Comments at 7-8 (same).

[311] *See Notice,* 38 FCC Rcd at 6331, para. 84. In the context of an ordinary VRS call or conference call, if the TRS user is voluntarily or involuntarily disconnected from the call, he or she must initiate another call with a new CA.

[312] *See* ZP Reply Comments at 6-7 (supporting allowing a VRS CA to remain in a video conference after the initiating VRS user drops off, when other registered VRS users remain).

We require that the second registered VRS user's telephone number be included in the call data submitted for compensation. We direct the TRS Fund administrator to provide appropriate guidance to VRS providers on how an extension of service, in response to a remaining participant's request, should be reflected in the CDRs submitted by a provider in support of compensation requests.[313]

118. Sorenson raises a concern that its current system for responding to requests for integrated VRS does not allow a new request for VRS to be made until the initial CA has disconnected from the video conference.[314] As a result, any Sorenson users remaining in a video conference after the first requesting user drops off would not be able to request service during the five-minute period allowed for that purpose.[315] The current record is insufficient to allow us to assess the nature and extent of such limitations and fully consider the possible alternatives for addressing Sorenson's concerns. In the *Further Notice of Proposed Rulemaking*, we seek additional comment on this issue. In addition, we note that Sorenson may request relief pursuant to the Commission's waiver process.[316]

119. We are not persuaded that a VRS provider should continue to receive TRS Fund compensation for extended service to ASL users who are not registered VRS users, as Sorenson recommends.[317] Our TRS program is premised on service to individuals who meet the eligibility criteria of section 225 and our implementing rules.[318] Further, allowing compensation for service to users who are not confirmed as eligible by a TRS provider may result in longer wait times for relay service requested by eligible users on other calls.

120. *Call Takeover Issues*. We do not modify our current rule requiring that VRS CAs stay on a call for a minimum of 10 minutes before being replaced by another CA.[319] At this time, we also decline commenters' recommendation to allow additional compensation for the presence of multiple CAs if the replacement CA enters the call early to observe or acquire background information before taking over the first CA's duties.[320] The record does not clearly demonstrate to what extent there is a material difference between call takeovers in a video conference and call takeovers in an ordinary telephone call or teleconference of comparable duration, such that our rules should allow extra compensation for transitional observation periods. If further experience warrants, the Commission may revisit this issue in a future proceeding.

121. *Automatic CDR Recording; Compliance Reports*. Our rules require that call detail,

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[313] This rule only applies when two registered VRS users initiate an invitation to the same conference call through the same VRS provider.

[314] Sorenson Sept. 20 *Ex Parte* at 5.

[315] *Id*.

[316] *See* 47 CFR § 1.3.

[317] Sorenson Comments at 27-29; Sorenson Sept. 20 *Ex Parte* at 5-7.

[318] *See, e.g., Structure and Practices of the Video Relay Service Program; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities,* CG Docket Nos. 10-51 and 03-123, Report and Order and Further Notice of Proposed Rulemaking, 28 FCC Rcd 8618, 8648-49, paras. 65-66 (2013) (*2013 VRS Reform Order*) (establishing the User Database), *aff'd in part and vacated in part, Sorenson Communications, LLC v. FCC*, 765 F.3d 37 (2014).

[319] *See* 47 CFR § 64.604(a)(1)(v); *Notice*, 38 FCC Rcd at 6331, para. 85; Sorenson Comments at 28 (recommending retention of the 10-minute rule).

[320] *See* Sorenson Comments at 26; ZP Reply Comments at 8. Paying for, e.g., an additional two minutes of overlap would add approximately $8 to $15 to the cost of a call each time a new CA takes over. *See 2023 VRS Compensation Order and Further Notice*, 38 FCC Rcd at 9201, para. 114, Table 3 (adopting per-minute rates for small VRS providers of $7.77, and $6.27 (first 1 million monthly minutes) and $3.92 (monthly minutes above 1 million) for larger providers). There could be four or five takeover CAs during an hour-long video conference.

including the start and end of conversation time, be recorded automatically.[321] Given that the rules we adopt require CAs to make certain determinations—e.g., as to when they must exit a video conference because none of the remaining participants has requested VRS—we amend our rules to provide that the generation of a CDR based on a CA's exit from a video conference in accordance with our rules does not violate the automatic recording rule. To assist in review and auditing of compensation payments, we require VRS providers to include in their annual compliance reports a detailed explanation of the guidance they provide to CAs regarding when compensable time starts and stops, in the various circumstances discussed above.[322]

f. Privacy Screen Rule

122. *Background*. Our current rules, which were adopted before video conferencing became widespread, prohibit a VRS CA from enabling a visual privacy screen or similar feature during a VRS call and require the CA to disconnect a VRS call if the caller or called party enables a visual privacy screen or similar feature for more than five minutes or is otherwise unresponsive or unengaged for more than five minutes.[323] A "visual privacy screen" is defined as "[a] screen or any other feature that is designed to prevent one party or both parties on the video leg of a VRS call from viewing the other party during a call."[324] The rule's original purpose was to stop "illicit schemes that result in calls 'running' without any communication between the parties for the sole purpose of fraudulently billing the Fund."[325] In the *Notice*, the Commission recognized that in a multi-party video conference, participants may turn off their video cameras for various reasons wholly unrelated to the reason for the rule.[326] Therefore, the Commission proposed to amend the rule to allow more flexibility in the activation of cameras when VRS is provided in a video conference on an integrated basis.[327] The Commission also waived the privacy screen rule, in part, pending the outcome of this rulemaking.[328]

123. *Discussion*. We adopt the proposed amendment to the privacy screen rule. The record supports the Commission's assumption that in multi-party video conferences, there are a variety of reasons why VRS users and CAs, like other participants, may turn off their videos without any fraudulent intent, and without thereby indicating lack of interest or engagement in the video conference. For example, in some video conferences, the host may request that all participants turn off their videos unless speaking, to make it easier for participants who are deaf to view a sign language interpreter.[329] Further, in

[321] *See* 47 CFR § 64.604(c)(5)(iii)(D)(*4*)(*i*); *see also Notice*, 38 FCC Rcd at 6330, para. 80 (seeking comment on compliance with the automatic CDR rule in the video conferencing context).

[322] *See* 47 CFR § 64.606(g) ("Internet-based TRS providers . . . shall file with the Commission, on an annual basis, a report demonstrating that they are in compliance with § 64.604."); *id.* § 64.606(g)(3)(v) (requiring VRS providers to include in compliance reports "[a] description of all policies and practices that the provider is following to prevent waste, fraud, and abuse of the TRS Fund."); *see also id.* § 64.604(c)(5)(iii)(D)(*6*) (TRS providers must submit to audits and produce relevant documentation so the auditor may "examine and verify TRS provider data as necessary to assure the accuracy and integrity of TRS Fund payments").

[323] *See id.* § 64.604(d)(5).

[324] *Id.* § 64.601(a)(53).

[325] *2011 VRS Call Practices Order,* 26 FCC Rcd at 5567, para. 40.

[326] *See Notice,* 38 FCC Rcd at 6332, para. 88; Sorenson Comments at 32-34; ZP Reply Comments at 3.

[327] *Notice,* 38 FCC Rcd at 6332, paras. 87-89.

[328] *Privacy Screen Waiver Order*, 38 FCC Rcd at 6339-41, paras. 113-19; *see also Access to Video Conferencing; Implementation of Section 716 and 717 of the Communications Act of 1934, as Enacted by the Twenty-First Century Communications and Video Accessibility Act of 2010; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities,* CG Docket Nos. 23-161, 10-213, and 03-123, Order, DA 24-545 (June 10, 2024) (extending the privacy screen waiver).

[329] Sorenson Petition at 4-5.

a video conference where one or more participants are speaking at length, participants who are deaf may (like other participants) choose to turn off their videos until it is their turn to speak.

124. Our revised privacy screen rule allows VRS CAs to continue providing relay services integrated with a multi-party video conference when the VRS user who requested service has turned off his or her video connection for more than five minutes, as long as at least one other party is continuing to speak and the VRS user is still connected to the video conference. If five minutes elapse in which no party on a multi-party video conference is responsive or engaged in conversation, the VRS CA shall follow the current procedure, i.e., announce that VRS will be terminated and leave the video conference. The amended rule also allows VRS CAs to turn off their video connections when not actively relaying a conversation, e.g., with another VRS CA as a team on a multi-party video conference.[330] Finally, we adopt our proposed definition of "multi-party video conference" as a video conference with three or more participants, excluding VRS CAs and any other participant providing an accommodation for a participant.[331]

4. Integrating Other Types of TRS with Video Conferencing

125. *Background*. In the *Notice*, the Commission sought comment on the need to facilitate the integration of non-VRS types of TRS with video conferencing and on the existence and progress of any efforts to develop technology to enable such integration.[332] Limited comments were received on this issue.[333] At this time, we adopt certain rules, discussed below, for application to non-VRS TRS, to the extent that IP CTS providers have developed methods of providing this service on an integrated basis. However, the record is insufficient to resolve some issues, and we seek additional comment on those in the *Further Notice*.[334]

a. IP CTS

126. *Background.* Currently, registered IP CTS users can use IP CTS with video conferencing on a non-integrated basis. For example, a video conferencing participant can access IP CTS captioning when a telephone connection to the video conference is available.[335] In this configuration, IP CTS captions are only visible to the requesting user—and may require a separate screen.[336] However, captioning is currently available as a native feature on some IVCS platforms, with captions displayed on the same screen as the video conference. Further, in Part III.A above, we amend Part 14 of our rules to expressly require that IVCS providers make captioning available on their video conferencing platforms (unless that is not achievable). In addition, our Part 14 amendments require IVCS providers to enable the connection of IVCS users to third-party captioning services (including IP CTS providers) and to display

[330] Although the TRS Fund does not currently provide additional compensation for team interpreting, our rules do not prohibit team interpreting in video conferences. *See supra* para. 116; *see also infra* paras. 179-83 (seeking comment on appropriate criteria for the payment of additional compensation for team interpreting).

[331] *See Notice,* 38 FCC Rcd at 6332, para. 89.

[332] *Id.* at 6332-33, para. 90.

[333] *See, e.g.*, Hamilton Comments at 3-7; Sorenson Comments at 44; ClearCaptions Comments at 4-5 (FCC should require a standard interface on IVCS platforms for IP CTS users to connect to captioning); CEA Comments at 20 (FCC should require integration of IP CTS and IP Relay with video conferencing services).

[334] *See infra* paras. 192-98.

[335] Hamilton Comments at 3-4.

[336] Further, in this configuration, a human captioner cannot see the video conference participants. *See id*. at 4. Hamilton reports that its WebCapTel relay service allows IP CTS captions to appear on the same screen with the video participants. *Id.* at 3.

such captions on the user's video conference screen (unless these requirements are not achievable).[337] Some people with hearing loss may prefer to use third-party captions produced by an IP CTS provider rather than those provided by the IVCS provider or a fee-based captioning service.[338]

127. *Comments*. Hamilton supports authorizing the integrated provision of IP CTS but notes there are a number of unresolved technical and policy issues regarding integration of IP CTS with video conferences.[339] Sorenson (provider of CaptionCall IP CTS) recommends that we not adopt rules governing integration of IP CTS into video conferencing platforms at this time, pending the results of voluntary collaboration between IP CTS providers and video conferencing platforms.[340]

128. With multiple captioning options already available, the extent of the need for integrated provision of IP CTS (i.e., so that captions are displayed on the IP CTS user's video conference screen) is currently unclear. Consistent with our determination that the TRS Fund can support the provision of TRS in video conferences, we *allow* IP CTS providers to seek compensation for providing video conference captioning on an integrated basis, in compliance with our current TRS rules.[341] However, we do not require IP CTS providers to do so.[342] In the *Further Notice,* we seek further comment on whether amendments to our rules are needed to facilitate the integrated provision of IP CTS while preventing waste, fraud, and abuse.

129. *IP Relay*. T-Mobile, the only provider of IP Relay, did not offer any specific recommendations regarding the use of IP Relay on video conferencing calls,[343] and we did not receive any such recommendations from other parties.[344] In the *Further Notice*, we seek further comment on whether there is a need for integrated provision of IP Relay in video conferences, and if so, what regulatory changes may be needed to facilitate such integration and prevent waste, fraud, and abuse.

5. Rules Applicable to All TRS

130. In the *Notice*, we sought comment on proposed rules that would be applicable to VRS and any other form of TRS that is integrated with video conferencing services.[345] We adopt several generally applicable rules, as discussed below.

a. Confidentiality

131. *Background*. Section 225 of the Act requires the Commission to "prescribe regulations to

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[337] *See* CEA Comments at 7-8 (noting difficulty of monitoring captions on a separate screen from the video conference).

[338] Hamilton Comments at 9-10.

[339] *Id.* at 5-6 (discussing technical and policy issues for the integration of IP CTS into video conferencing services—for example, how to avoid competing IP CTS captioning in the same conference call; whether non-IP CTS registrants should have the benefit of captioning).

[340] *See* Sorenson Comments at 44.

[341] IP CTS providers that seek compensation for providing captioning in video conferences on an integrated basis may use the same billing and CDR guidelines discussed above for VRS. *See supra* para. 106. *See* Hamilton Comments at 9 (IP CTS users should have access to their preferred provider).

[342] On the other hand, the existing Part 14 ACS rules prohibit IVCS providers from impeding the use of third-party captioning services by call participants. *See* 47 CFR § 14.20(a)(4) ("Providers of advanced communications services shall not install network features, functions, or capabilities that impede accessibility or usability.").

[343] *See* T-Mobile Reply Comments at 2-4 (recommending formation of an industry group to consider issues related to integration of TRS with video conferencing).

[344] CEA recommended integration of all forms of TRS with video conferences including IP Relay. CEA Comments at 20.

[345] *See Notice*, 38 FCC Rcd at 6334-36, paras. 95-102.

implement this section, including . . . regulations that prohibit relay operators from disclosing the content of any relayed conversation and from keeping records of the content of any such conversation beyond the duration of the call."[346] The confidentiality provision of our TRS rules largely repeats this statutory text, providing that "[e]xcept as authorized by section 705 of the Communications Act, 47 U.S.C. 605, CAs are prohibited from disclosing the content of any relayed conversation regardless of content, and … from keeping records of the content of any conversation beyond the duration of a call, even if to do so would be inconsistent with state or local law."[347] Some features of video conferences are not explicitly addressed by this rule. For example, a CA may become aware of "sidebar" conversations between two or more video conference participants (whether in speech or sign language), which the CA concludes are not intended to be communicated to other participants. Or a CA may review the text of "chat" conversations or PowerPoints and other presentation material shared among participants, even though this information may not be orally recited or discussed and thus may not be relayed by the CA.[348] Such content may not be covered by the current rule. The Commission proposed to amend the TRS confidentiality rule to ensure that such information is treated as confidential.[349] The Commission also proposed to amend the confidentiality rule to codify the Commission's prior rulings indicating that the rule expressly applies to TRS providers as well as to CAs.[350]

132. *Comments*. The Electronic Privacy Information Center and Sorenson support these proposals, and no commenter opposes them[351]—although CTA expresses a general concern that, in light of the TRS confidentiality rule, the integration of TRS with video conferencing could inadvertently "cut off" video conferencing features such as "open captioning, recording and cloud-stored transcripts."[352]

133. *Discussion*. As proposed, we amend the TRS confidentiality rule[353] to expressly prohibit CAs from disclosing non-relayed content (as described above) communicated in a video conference or from maintaining records of such content beyond the duration of the video conference. The amended rule prohibits a TRS provider and its CAs from disclosing "sidebar" conversations, chat, presentation material, and other content that may be observed by a CA, and requires TRS providers and CAs to destroy any notes or records of such content upon termination of the call.[354] We also amend the confidentiality rule to codify the Commission's prior rulings indicating that the rule expressly applies to TRS providers as well as to CAs, so that the rule explicitly covers TRS calls (including but not limited to video conferences)

[346] 47 U.S.C. § 225(d)(1), (1)(F).

[347] 47 CFR § 64.604(a)(2)(i). There is a limited exception for Speech-to-Speech CAs: "STS CAs may retain information from a particular call in order to facilitate the completion of consecutive calls, at the request of the user. The caller may request the STS CA to retain such information, or the CA may ask the caller if they want the CA to repeat the same information during subsequent calls. The CA may retain the information only for as long as it takes to complete the subsequent calls." *Id.*

[348] We note that Mike Calvo of Pneuma Solutions (Express Comment, Aug. 8. 2023) described a product called "Scribe For Meetings" that "provides an accessible HTML version of a slide presentation that the user can then read using a screen-reader, Braille display, or screen magnification software on PCs and mobile devices."

[349] *See Notice,* 38 FCC Rcd at 6334-35, paras. 96-98.

[350] *See id.*

[351] *See* EPIC Comments at 4; Sorenson Request Letter at 3-4. EPIC also asks us to clarify that VRS providers may not retain video transcripts of calls to use in training AI programs. EPIC Comments at 2-3. Our TRS confidentiality rule already prohibits TRS providers from "keeping records of the content of any conversation beyond the duration of a call." 47 CFR § 64.604(a)(2). We will investigate any alleged violation of this rule if brought to our attention through the complaint process.

[352] CTA Comments at 11.

[353] 47 CFR § 64.604(a)(2).

[354] For example, if a CA keeps notes during a call of, *e.g.*, names, specialized vocabulary, etc., such notes must be destroyed at the end of the call.

where TRS is provided without the involvement of a CA.[355]

134. As with ordinary telephone calls, video conference participants typically have an expectation that, unless the circumstances indicate otherwise, the content of their communications will not be disclosed to non-participants.[356] Further, section 225 of the Act specifically mandates that the confidentiality of relayed conversations be protected, highlighting the paramount importance of privacy for TRS users.[357] TRS providers and their CAs are invited into the communication process for the sole purpose of enabling people with hearing and speech disabilities to participate in telephonic conversations in a functionally equivalent manner.[358] They are not authorized to be sources of information about the conversations they facilitate, except in narrowly defined circumstances.[359]

135. Our expansion of the rule to cover non-relayed content observed by a CA reflects that, unlike an ordinary telephone call, the multimedia nature of a video conference may expose a CA to textual or other non-aural information shared among some or all participants, as to which they may have a legitimate expectation of privacy. Although the rule that section 225 of the Act expressly *directs* us to adopt only covers "the content of any relayed conversation," this specific direction is part of a general direction to the Commission to "prescribe regulations to implement this section."[360] We do not interpret section 225 as precluding the Commission from modifying its confidentiality rule to cover additional information to which TRS CAs may be exposed in the course of their work.

136. We emphasize that the TRS confidentiality rule only applies to TRS CAs and TRS providers (i.e., entities seeking compensation from the TRS Fund).[361] Neither IVCS providers nor the participants in a video conference (other than CAs) are subject to the rule. Therefore, we find no basis for concern that expanding the scope of the rule as described above would somehow curb participants ability to use "common and legitimate video conferencing features" such as open captioning, recording and cloud-stored transcripts."[362] As far as the TRS rules are concerned, IVCS providers and video conference participants remain free to provide and use captioning and recording features, or disclose information to non-participants, subject to whatever restrictions may apply under other laws.

b. Exclusivity Agreements

137. We adopt the Commission's proposal to prohibit exclusivity agreements between TRS

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[355] *See Misuse of Internet Protocol (IP) Captioned Telephone Service; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities,* CG Docket Nos. 13-24 and 01-123, Report and Order, Declaratory Ruling, Further Notice of Proposed Rulemaking, and Notice of Inquiry, 33 FCC Rcd 5800, 5832, para. 60 (2018) (IP CTS providers relying on Automatic Speech Recognition (ASR), rather than CAs, must adhere to TRS confidentiality rule); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities,* CG Docket No. 03-123, Memorandum Opinion and Order, 35 FCC Rcd 4568, 4572, para. 8 (CGB 2020) (ASR-only IP CTS provider must maintain confidentiality of calls).

[356] *See* 47 U.S.C. § 605(a) (prohibition on unauthorized disclosure of wire and radio communications).

[357] *See id.* § 225(d)(1)(F).

[358] *See Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities,* CG Docket No. 03-123, 19 FCC Rcd 12475, 12534-35, paras. 154-55 (2004) (describing limited role of TRS CA as a "transparent conduit between two people communicating through disparate modes").

[359] *See Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; E911 Requirements for IP-Enabled Service Providers,* CG Docket N0. 03-123, CC Docket No. 98-67, and WC Docket No. 05-96, Second Report and Order and Order On Reconsideration, 24 FCC Rcd 791, 799-800, para. 17 & n.73 (2008) (VRS CAs may report background auditory and visual information to emergency responders).

[360] 47 U.S.C. § 225(d)(1), (1)(F).

[361] *See* 47 CFR § 64.604(a)(2)(i).

[362] CTA Comments at 11.

providers and video conferencing providers.[363] This rule was recommended by the DAC,[364] and no party opposes it.[365] In general, an exclusivity agreement is an express or implied agreement between a TRS provider and a video conferencing provider that has the purpose or effect of preventing other providers from offering similar services to consumers.[366] As we stated in the *Notice,* exclusivity agreements may deprive consumers of the opportunity to rely on their chosen TRS provider when using video conferencing services, contrary to the Commission's policy.[367] Similarly, such exclusivity agreements may restrict the ability of conference hosts and TRS users to select a preferred video conferencing provider.

138. Although the Notice also sought comment on addressing arrangements that create *de facto* exclusivity but do not constitute express or implied exclusivity agreements,[368] the record is insufficient for us to do so. However, we stress that our Part 14 rules prohibit IVCS providers from installing network features, functions, or capabilities that impede accessibility or usability.[369] Although the application of this rule to network features, functions, and capabilities is determined on a case-by-case basis, we emphasize that software applications that are installed, e.g., to enable IVCS users to request a VRS CA, must not impede the ability of users to request service from their preferred provider.

c. Scheduling the Provision of TRS

139. *Background.* In the *Notice*, the Commission took note that video conferencing can function as a substitute for in-person meetings as well as teleconferences, and that many employers, educational institutions, health care providers, government agencies, and other entities currently provide ASL interpreting, captioning and other accommodations—either voluntarily or to fulfill obligations under the Americans with Disabilities Act or other laws.[370] In these contexts, dedicated ASL interpreters, captioners, and others may be trained and gain experience in a specific subject matter and may have the opportunity to prepare in advance for a scheduled meeting or class. The Commission sought comment on the implications of this for the provision of TRS. The Commission also asked how the Commission can ensure that the use of TRS in video conferences does not detract from the effective implementation of ADA and other legal requirements. In particular, the Commission sought comment on a tentative conclusion that TRS providers must continue to decline requests to reserve a TRS CA in advance of a scheduled video conference.[371]

140. *Comments*. Hamilton Relay and T-Mobile encourage the Commission to explore whether and how Remote Conference Captioning (RCC), a CART service that is scheduled in advance, could be

[363] *See Notice*, 38 FCC Rcd at 6335, para. 99.

[364] DAC Video Conferencing Report at 5.

[365] *See* Hamilton Comments at 8-9 (supporting proposal).

[366] *See, e.g.*, *Exclusive Service Contracts for Provision of Video Services in Multiple Dwelling Units and Other Real Estate Developments*, MB Docket No. 07-51, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 20235 (2007) (banning exclusive service contracts between cable operators and MDUs).

[367] *See Structure and Practices of the Video Relay Service Program; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CG Docket Nos. 10-51 and 03-123, 32 FCC Rcd 5891, 5908-10, paras. 34-36 (2017) (*2017 VRS Compensation Order*), *aff'd sub nom. Sorenson Communications, LLC v. FCC*, 897 F.3d 214 (2018); *2013 VRS Reform Order*, 28 FCC Rcd at 8699, para. 200.

[368] *See Notice,* 38 FCC Rcd at 6335, para. 99.

[369] 47 CFR § 14.20(a)(4).

[370] *Notice,* 38 FCC Rcd at 6335-36, para. 100.

[371] *Id.* at 6336, para. 102.

used to provide IP CTS in video conferences.[372] T-Mobile explains that RCC "provides high-quality captioning,"[373] combining "real-time captioning and voice relay service through an internet connection, and leverages a fully customizable transcript window that maximizes user choice and accessibility."[374] Convo, however, opposes the scheduled use of VRS in video conferences.[375] Sorenson does not advocate advance scheduling, but urges the Commission to permit VRS providers, when responding to a service request for a video conference, to assign a video-conferencing specialist CA, rather than the first available CA.[376] According to Sorenson, VRS CAs require specific training "in navigating the specific video conferencing platforms and functionality, such as using the chat and multi-pinning features[, which] are different on each platform, and it is not economical or practical for VRS providers to train their entire interpreter workforce on these platform-specific skills."[377]

141. *Discussion*. We adopt the tentative conclusion in the *Notice* that TRS providers must continue to decline requests to reserve a TRS CA in advance of a scheduled video conference.[378] The Commission has long held that the role of TRS is to be available for calls consumers choose to make, when they choose to make them, i.e., to be the "dial tone" for a call that requires assistance for effective communication.[379] For this reason, the Commission requires TRS providers to handle service requests in the order in which they are received, in accordance with "speed-of-answer" standards.[380] As a consequence, the Commission has found that the practice of permitting TRS users to reserve in advance a time at which a CA will handle a call is inconsistent with the nature of TRS and the functional equivalency mandate.[381] The provision of ASL interpreting, captioning, and other assistance by prior reservation is a different kind of service, which is available from other sources, such as VRI and CART service providers.[382] Commenters urging us to modify the rule against advance scheduling do not provide

[372] Hamilton Comments at 12-13; T-Mobile Reply Comments at 4-5. RCC is a service that allows a conference call host or organizer to obtain captioning service for a virtual audio or video conference, using Communication Access Real-Time Translation (CART) service, a stenographer-based captioning service. The captioner connects to the audio of a call and produces a text of the conversation. Users can access the captioning stream over the Internet on a separate screen during an audio call or the same screen during a video call.

[373] T-Mobile Reply Comments at 5.

[374] *Id.* at 4.

[375] Convo Comments at 9.

[376] *See* Sorenson Comments at 30-32; Sorenson Request Letter at 4-5.

[377] Sorenson Request Letter at 4; ZP Reply Comments at 5 (agreeing with Sorenson's position). *But see* Convo Comments at 9 (supporting continued prohibition on scheduling calls in the context of a pilot program).

[378] *Notice,* 38 FCC Rcd at 6336, para. 102.

[379] *See 2000 TRS Order*, 15 FCC Rcd at 5165-66, para. 60; *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities,* CG Docket No. 03-123, Report and Order and Declaratory Ruling, 22 FCC Rcd 20140, 20176, para. 96 (2007); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities,* CG Docket No. 03-123, Declaratory Ruling, 20 FCC Rcd 1466, 1469, para. 8 (CGB 2005).

[380] *See 2000 TRS Order*, 15 FCC Rcd at 5165-66, paras. 60-63; 47 CFR § 64.604(b)(2).

[381] *FCC Clarifies that Certain TRS Marketing and Call Handling Practices are Improper and Reminds that VRS May Not Be Used as a Video Remote Interpreting Service*, CG Docket Nos. 98-67, 03-123, Public Notice, 20 FCC Rcd 1471 (2005) (*2005 Call Handling PN*).

[382] LanguageLine suggests that the first-come, first-served rule for TRS will somehow interfere with language access to various services mandated by the federal government. LanguageLine Comments at 1. The first-come, first-served rule only applies to TRS CAs responding to requests for TRS. The rule does not apply outside that context. The general accessibility of federal programs will not be affected in any new or comprehensive way by this determination.

persuasive reasons why such a change is necessary, given the availability of non-TRS services.

142. At this time, we also decline to authorize VRS providers to assign a specialized CA to handle a video conference, rather than assigning the first available CA, as is currently required.[383] Based on the current record, we are not persuaded that every video conference call will be so complex as to require specially trained CAs. Further, Sorenson's proposal raises substantial concerns about speed of answer[384] and how the quality of TRS provided for ordinary telephone calls would be affected, were we to adopt a rule authorizing CAs with special training —who likely would be among the most talented and experienced TRS CAs—to be assigned specifically to the provision of video conferences. We seek additional comment on this proposal in the *Further Notice of Proposed Rulemaking*.[385]

C. Amendment of the Commission's Rules for TRS Calls with Multiple CAs

143. *Background*. Section 64.604(c)(14) of the Commission's rules was adopted in 2014 to codify existing practices whereby compensation was paid for the use of multiple CAs to handle certain types of calls.[386] The rule states that compensation is authorized for the provision of multiple CAs to handle TRS calls between two or more users of captioned telephone service—CTS or IP CTS[387]—and for calls between a captioned telephone service user and a user of TTY-based TRS or VRS.[388] Subsequently, the Commission amended the definition of "telecommunications relay service" to reflect the statutory definition of that term as amended by the CVAA.[389] The amended definition provides that TRS enables functionally equivalent communication between "an individual who is deaf, hard of hearing, deaf-blind, or who has a speech disability" and "one or more individuals."[390] The Commission explained that the revised definition "will allow compensation from the TRS Fund for relay calls involving two or more persons using different forms of relay services, including calls whose handling may require more than one

[383] *See 2005 Call Handling PN*, 20 FCC Rcd at 1473 ("Providers must handle incoming calls in the order that they are received."); *2013 VRS Reform Order*, 28 FCC Rcd at 8691, para. 180 n.470 (same).

[384] *See 2000 TRS Order*, 15 FCC Rcd at 5165-66, para. 60 ("For a TRS user, reaching a CA to place a relay call is the equivalent of picking up a phone and getting a dial tone. Any interpretation of our [speed-of-answer] rule that delays a customer's ability to place a call through the relay center clearly compromises the functional equivalence of relay service.").

[385] We also note that there is Commission precedent indicating that the Commission's rules allow the assignment of VRS calls to CAs based on the technical capability of the equipment at a CA station, as opposed to the skills of a particular CA. *See Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing & Speech Disabilities; Waivers of iTRS Mandatory Minimum Standards*, Report and Order, Order, Declaratory Ruling, and Further Notice of Proposed Rulemaking, 29 FCC Rcd 10697, 10714-15, para. 40 (2014); *see also* Letter from John T. Nakahata, Counsel to Sorenson, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 23-161, 10-213, and 03-123 (filed Sept. 25, 2024). This *Second Report and Order* does not overrule prior precedent or alter the Commission's current rules in this regard.

[386] *Telecommunications Relay Services and Speech to Speech Services for Individuals with Hearing and Speech Disabilities; Waivers of ITRS Mandatory Minimum Standards*, CG Docket No. 03-123, Report and Order, Order, Declaratory Ruling, and Further Notice of Proposed Rulemaking, 29 FCC Rcd 10697, 10718-19, para. 49 & n.189 (2014) (*Multiple Relay Calls Order* or *TRS Definition Further Notice*).

[387] 47 CFR § 64.604(c)(14)(i).

[388] *Id.* § 64.604(c)(14)(ii), (iii).

[389] *See 2019 TRS Definition Order*, 34 FCC Rcd at 8487, para. 10.

[390] 47 CFR § 64.601(a)(43); *see also* 47 U.S.C. § 225(a)(3); CVAA, § 103(a). Before enactment of the CVAA, TRS was defined as enabling functionally equivalent communication between "an individual who has a hearing impairment or speech impairment" and "an individual who does *not* have a hearing impairment or speech impairment." 47 U.S.C. § 225(a)(3) (2009) (emphasis added).

CA."[391] However, in adopting the amended definition of TRS, the Commission did not modify the multiple-CA rule to reflect its stated intent regarding compensation for calls handled by multiple CAs. As a result, some categories of calls that qualify as TRS under the amended statutory definition and that may warrant multiple CAs, are not currently addressed by the multiple-CA rule.[392] In the *Notice*, the Commission proposed to amend this rule to address these gaps to harmonize this rule with the current definition of TRS.[393]

144. We adopt the proposed amendment to the multiple-CA rule, which states that compensation may be paid for more than one CA to handle, among other categories, "[c]alls between users of different types of relay services where more than one CA is warranted."[394] This amendment, supported by Sorenson,[395] and unopposed by any commenter, broadens the scope of the rule to more fully reflect the Commission's stated intent in adopting the amended definition of TRS. We also clarify that, for purposes of this rule, "CA" can refer to an automated CA equivalent, such as an ASR program used to provide ASR-only IP CTS.

IV. FURTHER NOTICE OF PROPOSED RULEMAKING

145. In this *Further Notice of Proposed Rulemaking* (*Further Notice*), we seek additional comment on certain unresolved issues raised in the initial *Notice* and comments thereon, concerning the accessibility of IVCS and the use of TRS with video conferencing.

A. Part 14 Issues

146. In the *Second Report and Order*, we adopt certain new or modified performance objectives that are needed to define the outcomes needed for IVCS accessibility.[396] In this *Further Notice*, we seek additional comment on whether to adopt certain performance objectives proposed in the *Notice* or in comments on the *Notice*, for which the current record is insufficient to enable a full assessment.

147. Given the emergence of video conferencing as a basic communication vehicle for all Americans,[397] and the inconsistent implementation of accessibility to date in the video conferencing environment,[398] we seek to assess whether additional, more specific performance objectives are needed for ensuring accessibility and usability in the specific context of IVCS. Like all the performance objectives currently included in Part 14 of our rules, these performance objectives, if adopted, would further define what "accessible" and "usable" mean in the IVCS context. IVCS service providers and manufacturers would be required to meet these objectives to the extent that they are achievable.[399]

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[391] *TRS Definition Further Notice*, 29 FCC Rcd at 10725, para. 65; *see also id*. at 10725, para. 64 (citing the legislative history of the CVAA); *TRS Definition Order*, 34 FCC Rcd at 8487, para. 10 (explaining that by revising the definition of TRS, the Commission "formally confirm[s] what our program administration already recognizes in practice—that in some instances, achieving communication between two individuals who have speech or hearing disabilities requires more than one type of relay service").

[392] For example, the current rule does not address when the use of two CAs is appropriate for calls between users of IP Relay and other forms of TRS.

[393] *Notice*, 38 FCC Rcd at 6337-38, paras. 108-11.

[394] Section 64.604(c)(14)(i) remains necessary to allow compensation for calls between users of the same captioning service. *See Multiple Relay Calls Order*, 29 FCC Rcd at 10718-19, para. 49.

[395] *See* Sorenson Comments at 26-27 (supporting proposed amendment).

[396] *See supra* Part III.A.4.

[397] *See supra* paras. 18-19.

[398] *See supra* paras. 20-25.

[399] *See* 47 CFR § 14.20(a)(1), (2) (requiring manufacturers and service providers to ensure that equipment and software is accessible and usable "unless [these requirements] are not achievable"); *see also id*. § 14.20(a)(3) ("If accessibility is not achievable either by building it in or by using third party accessibility solutions available to the (continued….)

However, we also seek to ensure that any additional IVCS performance objectives we adopt are relevant to various types of IVCS and are currently achievable by at least some IVCS providers. We seek to avoid limiting the incentives and opportunities for innovative design in this rapidly developing industry sector,[400] or adopting rules so specific as to constitute *de facto* mandatory technical standards.[401] In this regard, we note that section 14.20(b)(1) of our rules requires ACS providers and manufacturers to "consider performance objectives set forth in section 14.21 at the design stage as early as possible."[402] In some instances, adopting more specific performance objectives may help focus the accessibility design processes of IVCS providers on solutions that are most likely to be relevant, effective, and achievable.[403] In other instances, more specific performance objectives might unnecessarily constrain design choices.

148. Regarding each of the proposals discussed below, we seek further comment on the specific benefits and costs of the proposal, including: How would the proposed performance objective promote accessibility of IVCS for people with disabilities? Is the relevant accessibility problem is already sufficiently addressed by the more general performance objectives set forth in the existing rules? Is the proposed performance objective likely to be achievable for at least some IVCS providers? For example, are there commercially available products or services that would meet the performance objective?[404] Would the proposed performance objective unduly constrain the design of video conferencing platforms and services—and if so, how, specifically would it do so?

149. We also seek comment on whether each proposed performance objective is relevant and applicable to all IVCS, or only certain subcategories of IVCS? As noted in the *2023 Video Conferencing Order*, the IVCS subcategory encompasses a wide variety of video communication services.[405] Some, like Zoom, Google Meet, Microsoft Teams, or Facebook Messenger, are globally popular platforms with millions of active daily users. Others, like Discord, Signal, or Slack, have smaller customer bases and may cater to more targeted audiences. Some video conferencing applications are designed primarily for one-to-one video calling,[406] including dating apps like Tinder, Bumble, and Hinge. Some of the proposed performance objectives may not be relevant on such platforms. The relevance of certain kinds of accessibility solutions also may vary depending on the type of device used to access a video

(Continued from previous page)
consumer at nominal cost and that individuals with disabilities can access, then a manufacturer or service provider shall ensure that its equipment or service is compatible with existing peripheral devices or specialized customer premises equipment, unless the requirements of this subsection are not achievable.").

[400] *See* CTA Comments at 10.

[401] 47 U.S.C. § 617(e)(1)(D) (prohibiting the Commission from mandating technical standards, except as a safe harbor); *see also* CTA Reply Comments at 4-5.

[402] 47 CFR § 14.20(b)(1).

[403] *See, e.g., supra* para. 31 (explaining that modifying a performance objective to specify captioning capability serves to clarify the existing performance objective specifying that auditory information be available "through at least one mode in visual form").

[404] *See Notice*, 38 FCC Rcd at 6325, para. 62 (noting that, while all Part 14 performance objectives are conditional on achievability, the Commission "can better assess the likely benefits of our proposals if there is evidence as to whether or not a performance objective is likely to be achievable, for at least some covered entities, within the foreseeable future"). We emphasize that commercial availability, or lack thereof, is not dispositive of whether a performance objective is likely to be achievable. However, it may be relevant, along with other information, to a preliminary assessment of the overall likelihood that a performance objective can be accomplished by at least some IVCS providers "with reasonable effort or expense." 47 CFR § 14.10(b) (defining "achievable").

[405] *2023 Video Conferencing Order*, 38 FCC Rcd at 6313-14, para. 29.

[406] For example, Slack's "Huddles" feature allows for video conference calls, but the free version of the service limits the call to two participants. *See* Slack help center, https://slack.com/help/articles/4402059015315-Use-huddles-in-Slack (last visited July 25, 2024).

conference.[407] In determining whether to adopt a specific performance objective, to what extent should we consider its relevance and applicability to a wide range of video conferencing services?[408] We also invite commenters to submit information about the range of video conferencing services currently offered or under development and how they currently address accessibility. For example, are there video conferencing platforms that exclusively offer one-on-one communication, without the ability to allow group calls? Are there platforms that operate exclusively on particular kinds of devices, such as mobile phones?

150. In addition to these general questions, which apply to all the Part 14 proposals discussed herein, we seek comment on certain aspects of individual proposals and particular accessibility issues, as discussed below.

1. Addressing Speech Disabilities

151. In the *Notice*, the Commission proposed to amend section 14.21(b)(1)(ix) of its rules, which specifies that ACS be operable in "at least one mode that does not require user speech,"[409] by adding the further specification stating: "For interoperable video conferencing services, provide at least text-to-speech functionality."

152. We seek further comment on whether a more specific performance objective is needed to ensure accessibility for people with speech disabilities, if achievable.[410] The record reflects that there is more than one mode in which IVCS can potentially be made accessible for people with speech disabilities, for example, by providing text-to-speech functionality, or providing speech-to-speech functionality. Regarding the latter solution, the record indicates that ASR technology has been applied to develop products that automatically convert speech that is difficult to understand to speech that is more understandable.[411] In addition, we note that enabling a connection to VRS or other sign language interpretation services can also address accessibility for people with speech disabilities who also know ASL. We seek further comment on whether to modify this rule to specify text-to-speech functionality, speech-to-speech functionality, or both.

153. To what extent are text-to-speech and speech-to-speech products and services commercially available and widely used by people with speech disabilities?[412] What are the potential benefits and costs of implementing text-to-speech and speech-to-speech functionality? How can such products or services be integrated with videoconferencing platforms? How do text-to-speech and speech-to-speech functionalities compare, as accessibility solutions?

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[407] *See* CTA Reply Comments at 6 (noting that "different participants in the video conferencing ecosystem control different elements of the user experience and interface").

[408] *See id.* at 6 (noting that some performance objectives proposed by commenters "appear to assume multi-point connectivity, when some services, by design, only offer one-to-one video conferencing"); *see also id.* at 7 n.23 (noting that "[m]any IVCS products do not interconnect with the public switched telephone network (PSTN), include an audio-only option (i.e., no video), or include text/messaging capabilities" and cautioning against the imposition of objectives that would require an IVCS provider to add such capabilities).

[409] *Notice*, 38 FCC Rcd at 6321, para. 54; 47 CFR § 14.21(b)(1)(ix) ("*Operable without speech*. Provide at least one mode that does not require user speech.").

[410] *See* AAO Apr. 30 *Ex Parte* at 3 (asking the Commission to require the ability for people with speech disabilities "to access both text-to-speech functionality and automated speech recognition functionalities that are specially designed to generate understandable speech for these individuals"); VoiceItt Comments at 5 (stating "[t]echnology levels the playing field for Americans with disabilities, and new regulations can reflect this technological reality by mandating that IVCS systems ensure integration of and compatibility with ASR engines capable of making the speech of people with nonstandard or atypical speech comprehensible to others on video conference calls").

[411] VoiceItt Comments.

[412] CTA Comments at 11.

2. Sign Language Interpretation

154. We seek further comment on whether additional specificity is needed in the performance objective for sign language interpretation adopted in the *Second Report and Order*, which states:

> 14.21(b)(4) In addition to the other requirements of this section, interoperable video conferencing services and covered equipment and software used with such services shall:
>
> (i) Enable the use of sign language interpretation provided by third parties, including the transmission of user requests for sign language interpretation to providers of video relay service and other entities and the provision of sufficient video quality to support sign language interpretation.[413]

In its comments, Sign-Speak argues that this performance objective should not merely specify that IVCS "enable the use" of sign language interpretation, but actually "provide" it (or more specifically, provide ASL interpretation).[414]

155. We seek further comment on the need for and feasibility of Sign-Speak's proposal. If VRS and video remote interpreting (VRI) are generally available to IVCS users on an integrated basis, pursuant to the rules adopted in the *Second Report and Order*, to what extent would there be a need for IVCS providers to also provide sign language interpretation? Would such a performance objective likely be achievable for IVCS providers, e.g., by using automated sign language interpretation software? While ASR speech-to-text technology has been in development since 1952[415] and has seen widespread commercial adoption across various sectors, automatic sign language interpretation is a nascent technology. To what extent has the accuracy and reliability of automatic sign-language interpretation been established?[416]

3. User Control of Accessibility Features

156. In the *Second Report and Order*, recognizing that user control of features is often necessary for accessibility, we adopt a new performance objective specifying the provision of:

> 14.21(b)(4) In addition to the other requirements of this section, interoperable video conferencing services and covered equipment and software used with such services shall:
>
> (i) provide user interface control functions that permit users to activate and adjust the display of captions, speakers, and signers, and other features for which user interface control is necessary for accessibility.[417]

157. Some commenters sought a more detailed performance objective that would list the specific aspects of captions, participant windows, and other features that must be subject to user control. For example, CEA recommends that we specify that users be able to "customize the appearance of captions, including options for font size, font edges (i.e., outline, shadow, etc. to work without

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[413] *See infra* Appendix B.

[414] Sign-Speak Comments at 1.

[415] *See* U.S. Legal Support, History of ASR Technologies (Aug. 31, 2023), https://www.uslegalsupport.com/blog/asr-history/.

[416] *See, e.g.*, CTA Reply Comments at 7 ("automatic speech, sign language and visual information are all still very much in the experimentation and developmental phase.").

[417] *See supra* para. 53.

background) color and background (color and transparency level)."[418]

158. The performance objective adopted in the *Second Report and Order* requires IVCS providers to allow video conference participants to independently alter the font, size, location, color, and opacity of the captions and caption backgrounds appearing on the participant's screen. It also requires, where relevant, participant access to pinning and multi-pinning, spotlighting, and video window reconfiguration features.[419] We seek comment on whether additional user-control performance objectives are necessary to further ensure accessibility of IVCS.

159. AFB recommends that IVCS performance objectives should explicitly address the need for screen-reader verbosity controls.[420] We note that the performance objective we adopt in the *Second Report and Order* specifies that users be able to activate and adjust "features for which user interface control is necessary for accessibility."[421] Thus, verbosity controls, among other user controls, are included in the performance objective to the extent that they are necessary for accessibility. We seek additional comment on the particular aspects of screen-reader verbosity control that are most important in the video conference setting, and any other considerations that we should take account of in framing a performance objective that specifically addresses verbosity control.

160. CEA also suggests that IVCS users' accessibility preferences should be stored and retained within the IVCS platform, so users will not have to change the settings each time they use the service.[422] To what extent is this capability necessary for accessibility? Are there technical challenges to implementing such a feature? If so, what, and how severe, are those challenges? Should the settings be tied to the video conferencing service, or to the type of device used to access it? For example, should accessibility settings on a mobile version of an IVCS platform be retained when accessing the platform's web application?

4. Other Accessibility Proposals

161. CEA recommends performance objectives specifying that IVCS provide a "gallery view mode" and "ensure that a sufficient number of videos is supported without degrading the quality of the video or audio."[423] We seek comment on these proposals. In what respect are such performance objectives necessary for accessibility? What variables, if any, could impact the quality of a user's video or audio if a user elects to have numerous video windows displayed? What variables, if any, could impact an IVCS provider's ability to provide high-quality videos?

162. CEA also suggests a performance objective requiring that video functionality, screen sharing, video window re-sizing, and video sharing be compatible with tablets.[424] CEA states that the performance objective can be achieved by designing the IVCS user interface to be tablet-friendly, *i.e.*, able to adapt between different screen sizes and allow for multi-touch gestures and split-screen multitasking.[425] In its reply comments, CTA objects to this proposal, contending that tablet compatibility represents a *de facto* technical mandate.[426] As stated in the *Second Report and Order*,[427] we do not

[418] CEA Comments at 27 (Appx. A).

[419] *See supra*, paras. 57-61.

[420] AFB Comments at 2.

[421] *See* Appendix B (Final Rules).

[422] CEA Comments at 40 (Appx. A).

[423] *Id.* at 33-34 (Appx. A).

[424] *Id.* at 35 (Appx. A).

[425] *Id.*.

[426] CTA Reply Comments at 5-6.

mandate that any particular IVCS must be able to be used on a tablet. However, we recognize that many IVCS providers choose to make their products available on tablets. Accordingly, we seek comment on whether to adopt a performance objective specifying that, where IVCS is available on tablets, it provide the functionalities described in CEA's proposal. Would provision of the functionalities CEA describes, pose unusually difficult design or technical challenges? To what degree do current IVCS offerings provide such device-specific functionality? Should the Commission consider device-specific performance objectives?

163. We also seek further comment on CEA's proposal to require IVCS providers to offer dedicated text and video side channels.[428] According to CEA, these additional channels are necessary to facilitate communication between sign language interpreters and sign language users, and between multiple interpreters in "team interpreting" scenarios.[429] CTA objects to this proposal, countering that some IVCS platforms do not offer text-based communication, and requiring them to do so would constitute a technical mandate and an economic burden. Additionally, CTA contends that because side channels are only tangentially related to the video conference call itself, the absence of those channels should not affect compliance with the video conferencing rules.[430] We seek comment on these arguments, as well as comments on the need for and feasibility of CEA's proposal.

5. Accessibility for People Who Are Blind or Have Low Vision

164. *Audio Description and Visual Image Description*. Part 14 of our rules currently includes a following generally applicable performance objective addressing the availability of visual information for people who are blind or have low vision:

> ***Availability of visual information.*** Provide visual information through at least one mode in auditory form.[431]

165. We seek comment on whether to amend this performance objective to specify the provision of audio description and visual image descriptive functionality, as well as compatibility with third-party visual image descriptive services.[432] The term *audio description* refers to a feature that is required for some television and other video programming pursuant to the Commission's Part 79 rules.[433] Under those rules, an audio description of a program's key visual elements must be inserted into natural pauses in the program's dialogue.[434] The term "visual image description" refers to a related feature, described by a commenter as "functionality that generates real-time descriptions of visual information for people who are blind or low vision."[435] We seek comment on the extent to which these terms refer to different functions in the context of IVCS.

166. Additionally, we seek comment on other ways that relevant visual information could be provided in auditory form. Is the provision of audio description of video and visual images implicit in the existing performance objective? Would a rule directly specifying the provision of audio description or visual image description, or both, be helpful as a way of clarifying IVCS provider's obligations under the

(Continued from previous page)

[427] *Supra* para. 69.

[428] CEA Comments at 37-38 (Appx. A).

[429] *Id.*

[430] CTA Reply Comments at 7.

[431] 47 CFR § 14.21(b)(2)(i).

[432] *See* ACB Comments at 3; CCD-TTTF Comments at 3; AAO Apr. 30 *Ex Parte* at 3.

[433] 47 CFR § 79.3(a)(3).

[434] *Id.*

[435] AAO Apr. 30 *Ex Parte* at 3.

existing rule? To what extent should we mandate compatibility with third-party description services, such as AIRA and Be My Eyes, if at all? To what extent are third-party description services currently being used in conjunction with IVCS, if at all?

167. We also seek comment on the scope of visual information that should be provided through audio description in IVCS. Section 14.21(b)(2) currently provides that it covers "[a]ll information necessary to operate and use the product, including but not limited to, text, static or dynamic images, icons, labels, sounds, or incidental operating cues."[436] Does section 14.21(b)(2) sufficiently describe the kinds of visual information that an IVCS provider is or should be required to make available in auditory form, or should we amend it to provide greater clarity? For example, should we adopt AFB's recommendation to add "shared documents," to the list of information that must be made accessible? [437] Should shared videos be included?[438] Should coverage of shared documents or videos be affected by the extent to which a video conferencing service enables such sharing of visual information by participants?

168. We also seek comment on the potential costs and benefits of integrating video description and visual image description into IVCS platforms. Are audio description and visual image descriptive third-party services commercially available? What are the technical or financial challenges, if any, of integrating these services? How would conference call participants access this function?[439]

169. *Tactile Mode*. ACB and AFB also request that performance objectives be adopted or amended to provide that IVCS (and other types of ACS) be operable and visual information be available in tactile mode.[440] Rule 14.21(b)(1)(i) currently states that, to be accessible, the input, control, and mechanical functions advanced communications services, equipment and software must:

> Provide *at least one mode* that does not require user vision.[441]

AFB urges that we modify this performance objective to read: "Provide *auditory and tactile modes* that do not require user vision."[442]

170. In addition, Rule 14.21(b)(2)(i) states that, to be accessible, advanced communications services, equipment and software must:

> Provide visual information through at least one mode in auditory form.[443]

AFB urges that we modify this performance objective to read: "Provide visual information *in both auditory and tactile forms*."[444]

171. These changes would make clearer what is required to make IVCS (and other types of ACS) accessible to people who are deafblind or who otherwise require that controls and information be accessed tactilely. We seek comment on the benefits and costs of these proposed changes, including

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[436] 47 CFR § 14.21(b)(2).

[437] *See* AFB Comments at 2.

[438] *See* Bridge Comments at 2.

[439] To access audio description, a viewer of television programming will generally switch from the main program audio to a secondary audio stream. *See Video Description: Implementation of the Twenty-First Century Communications and Video Accessibility Act of 2010*, Report and Order, MB Docket No. 11-43, 35 FCC Rcd 12577-78, para. 2 (2020).

[440] ACB Comments at 1; AFB Comments at 2.

[441] 47 CFR § 14.21(b)(1)(i) (emphasis added).

[442] AFB Comments at 2.

[443] 47 CFR § 14.21(b)(2)(i) (emphasis added).

[444] AFB Comments at 2.

specific examples of how they would improve the accessibility of covered services and the equipment and software used to access them.

6. Accessibility for People with Cognitive and Mobility Disabilities

172. We seek comment on whether more specific performance objectives are needed to address the challenges people with cognitive and mobility disabilities face when attempting to access video conferencing services.[445]

173. *Cognitive Disabilities*. Currently, the performance objectives set forth in section 14.21 of our rules include a performance objective specifying that IVCS should "[p]rovide at least one mode that minimizes the cognitive, memory, language, and learning skills required of the user."[446] AAO urges the Commission to adopt a more specific performance objective specifying the provision of "a simplified secure modality for initiating, authenticating and interfacing with a video conferencing session."[447] What would such a feature entail, and what is its likely cost?

174. We also seek comment on AAO's recommendation to adopt a usability-related performance objective for people with cognitive disabilities, specifying the provision of "plain and simple language and iconography on instructional materials on how to activate a video conferencing session,"[448] to supplement the current, more general usability objective specifies that people with disabilities "have access to the full functionality and documentation for the product, including instructions, product information (including accessible feature information), documentation and technical support functionally equivalent to that provided to individuals without disabilities."[449] We invite commenters to submit examples of instruction manuals, tutorials, or guides for other products and services that have been produced for people with cognitive disabilities.

175. *Usability Generally*. We also seek comment on whether any other amendments to the usability provision of the rules, section 14.21(c), are needed to ensure that people with disabilities have access to the "full functionality and documentation" for IVCS, including "instructions, product information (including accessible feature information), documentation and technical support functionally equivalent to that provided to individuals without disabilities."[450]

176. *Mobility Disabilities*. Currently, Part 14 prescribes several performance objectives specifying that ACS be operable in various ways by users with mobility disabilities.[451] We seek comment on whether any more specific performance objectives are needed to ensure that people with mobility disabilities can access and use IVCS. For example, AAO recommends that IVCS user controls be accessible via voice activation or other hands-free technologies.[452] We seek further comment on the likely costs and benefits of such a requirement. Is this performance objective likely to be achievable independently of the devices available to the user? For example, could an IVCS provider develop or purchase a voice-activation application for its user controls that is compatible with commonly used user devices (*e.g.*, smartphones, tablets, and PCs), and make it available for downloading at no charge, or a

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[445] *See supra* para. 29 (discussing general performance objectives that address mobility and cognitive disabilities).

[446] 47 CFR § 14.21(b)(1)(x).

[447] AAO Apr. 30 *Ex Parte* at 3.

[448] *Id. See, e.g.,* https://www.fcc.gov/cognitive-disabilities (last visited Sept. 25, 2024).

[449] 47 CFR § 14.21(c) (defining "usable").

[450] *Id.*

[451] *Id.* § 14.21(b)(1)(v) ("Provide at least one mode that does not require user fine motor control or simultaneous actions."); *d.* § 14.21(b)(1)(vi) ("Provide at least one mode that is operable with user limited reach and strength."); *Id.* § 14.21(b)(1)(vii) ("Controls shall be operable without requiring body contact or close body proximity.").

[452] AAO Apr. 30 *Ex Parte* at 3.

nominal charge?[453] What would be the likely cost of such a solution? Alternatively, could an IVCS provider ensure that its service is compatible with existing peripheral devices or specialized customer premises equipment offering voice activation?[454]

7. Application to Covered Equipment and Software

177. We seek comment on whether additional amendments to our Part 14 rules are needed to ensure the accessibility of equipment and software that is used to provide or use IVCS. Under section 716 of the Act and our implementing rules, manufacturers of "equipment used for advanced communications services, including end user equipment, network equipment, and software," are required to "ensure that the equipment and software that such manufacturer offers for sale or otherwise distributes in interstate commerce shall be accessible to and usable by individuals with disabilities, unless [these requirements] are not achievable."[455] Accordingly, manufacturers of equipment used for IVCS are required to ensure that their equipment and software meets the performance objectives of section 14.21 of our rules, except to the extent that is not achievable.

178. What kinds of equipment- and software-related challenges do people with disabilities currently face in using end-user equipment and software to access and use IVCS? Are such challenges sufficiently addressed by the current Part 14 rules? Are there specific performance objectives that are uniquely or peculiarly applicable to such equipment and software (as opposed to services), such that we should amend section 14.21 to include them, to ensure the accessibility of such equipment and software?

B. TRS Rules (Part 64)

1. VRS – Team Interpreting and Other CA-Related Issues

179. We seek further comment on whether to authorize the TRS Fund to support team interpreting by two VRS CAs from the same provider participating simultaneously in a video conference, and on what criteria should be applied for allowing such additional support.[456] In the *Second Report and Order*, we find the record insufficient to formulate a bright-line rule providing objective criteria for application by providers and the administrator. While guidelines for professional interpreters issued by RID reference a number of factors, those factors are stated in very general terms, leaving much room for subjective or discretionary judgment in their application.[457] We believe it would be preferable to adopt a bright-line rule in this area, as advocated by Sorenson.[458] Both Sorenson and ZP assert that the duration and complexity of a call are two important factors in determining when team interpreting is needed, but

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[453] *See* 47 U.S.C. § 617(b)(2)(B) (providing ACS providers flexibility to achieve accessibility by "using third party applications, peripheral devices, software, hardware, or customer premises equipment that is available to the consumer at nominal cost and that individuals with disabilities can access").

[454] *See* 47 CFR §§ 14.20(a)(3), 14.21(d).

[455] *See id.* § 14.20(a)(1); *see also* 47 U.S.C. § 617(b)(1).

[456] *See Notice,* 38 FCC Rcd at 6331, para. 83. Under the current rules, providers are free to provide team interpreting as they deem necessary, but are only compensated for a single CA per call. *But see 2023 VRS Compensation Order and Further Notice,* 38 FCC Rcd at 9207-08, paras. 133-35 (seeking comment on whether additional compensation should be available when a certified deaf interpreter is added to a VRS call).

[457] *See* The Registry for Interpreters for the Deaf (RID), *Team Interpreting,* Standard Practice Paper, https://nvrc.org/wp-content/uploads/2011/07/Team_Interpreting_SPP.pdf (last visited May 16, 2023) (*RID Standard Practice Paper*). RID references: (1) the length and complexity of the assignment; (2) unique needs of the persons being served; (3) physical and emotional dynamics of the setting; and (4) avoidance of repetitive stress injuries for interpreters.

[458] Sorenson Comments at 25.

no commenter proposes specific, bright-line criteria for assessing these or other relevant factors.[459]

180. With respect to the considerations that may support team interpreting, there appear to be significant differences between VRS and traditional community interpreting. With community interpreting, which is arranged by appointment, there is usually advance knowledge of the likely duration and complexity of an assignment. In addition, the assigned interpreter(s) cannot be quickly replaced, if that proves necessary, after a meeting has begun. Therefore, a community interpreting agency usually needs to determine in advance, based on the likely duration and complexity of the assignment, how many interpreters may be needed, and commit the time of those interpreters for the duration. By contrast, with VRS, CAs can be added, as needed, to a call or video conference whose duration is not known in advance. We seek comment on these assumptions and how they should affect our selection of criteria for authorizing team interpreting in VRS.

181. In light of the above assumptions, would the duration of a video conference, standing alone, ever justify assignment of a second VRS CA to be present simultaneously with the first, regardless of the complexity of the video conference? For example, for a video conference with only two participants, would team interpreting ever be warranted, given that the CA can easily be replaced on a long-duration call?

182. To address call complexity, if we allow team interpreting, should we set a minimum number of participants that must be present in a video conference, to warrant compensation for a second simultaneous VRS CA?[460] If so, what number should that be? Alternatively, should we require a minimum number of registered VRS users—or of hearing individuals, or both? For video conferences with the requisite number of users, should we also set a minimum period of time that should elapse before a second VRS CA is added?[461] For example, should we set 10 minutes,[462] 30 minutes,[463] or another period as the minimum threshold for adding a second simultaneous CA to a call?

183. Are there other indicia of complexity that lend themselves to a bright-line rule addressing compensation for an additional CA? What call scenarios might be better served by having two CAs

[459] *See id.* at 22-26; ZP Reply Comments at 7-8; *see also* LinguabeeLearn, "What is team interpreting and when is it needed?" (Nov. 5, 2019), https://learn.linguabee.com/what-is-team-interpreting-and-when-is-a-team-needed/.

[460] *See* Sorenson Comments at 25 (identifying call complexity as an important factor and noting that the number of participants is one factor contributing to call complexity).

[461] *See id.* at 23-25 (identifying call length as an important factor); ZP Reply Comments at 7 (noting that video conferences typically last longer than ordinary VRS calls).

[462] *See* 47 CFR § 64.604(a)(1)(v) (a VRS CA assigned to a call must stay with the call for a minimum of 10 minutes, unless the call ends earlier).

[463] Sorenson Comments at 23 ("in Sorenson's experience, IVCS calls are on average *seven times* longer than VRS telephone calls"). Sorenson also cites research suggesting that "a significant loss of accuracy occurs after approximately thirty minutes of interpretation due to mental fatigue." *Id.* at 23-24, citing Barbara Moser-Mercer et al., *Prolonged Turns in Interpreting: Effects on Quality, Physiological and Psychological Stress (Pilot Study)*, 3 INTERPRETING 47, 47 (1998), https://doi.org/10.1075/intp.3.1.03mos. Sorenson also notes that "ASL interpretation has an additional physical demand that is especially pronounced during long calls." Sorenson Comments at 24, citing RID, *Self-Care for Interpreters: Prevention and Care of Repetitive Strain Injuries*, Standard Practice Paper at 1 (updated 2007), https://nwasla.com/wp-content/uploads/2019/02/Self-Care_SPP.pdf ("RID RSI Standard Practice Paper") (describing how "[t]he inherent nature of interpreting puts interpreters, young and old, at high risk for developing some type of [Repetitive Strain Injury] during their career."); J.D. Stedt, *Interpreter's Wrist – Repetitive Stress Injury and Carpal Tunnel Syndrome in Sign Language Interpreters*, 137 AM. ANN. DEAF (1992), https://pubmed.ncbi.nlm.nih.gov/1605099/ (finding that 87.5% of interpreters sampled suffered from some form of repetitive stress injury); *Sign Language Interpreters at High Ergonomic Risk*, ROCHESTER INST. OF TECH. (Apr. 19, 2008), https://www.sciencedaily.com/releases/2008/04/080417105449.htm (finding that ASL interpretation is one of the highest-risk professions for ergonomic injury).

remain on the call taking turns, rather than having a brand new CA enter the call to relieve the current CA? Complexity of subject matter may be a significant factor influencing whether there is a need for two simultaneous CAs; but the subject matter of a video conference will not be known to the VRS provider or the CA before it starts. Are there objective factors that could be used to define the complexity of the subject matter, and which, after a call begins, could be communicated by the CA (without violating the Commission's TRS confidentiality rule) to indicate to the provider that team interpreting is warranted for the video conference?

184. We also seek comment on whether the TRS Fund should provide compensation for the assignment of additional VRS CAs when video conferences are split into breakout groups.[464] We seek comment on the extent to which these scenarios are likely to occur, and whether they would justify a special rule. We also seek comment on how to most effectively address such scenarios. For example, should we modify the rule adopted in the *Second Report and Order*—which allows a VRS provider to respond to only one service request for a video conference (until the first requester drops off)— to allow additional CA(s) to be assigned if a second VRS user (or more) so requests after ending up in a breakout room without a CA? How should the provision of additional service to a breakout room be documented in CDRs submitted to the TRS Fund administrator? And, how would a second VRS CA find out which room to join?

185. Finally, we seek comment on whether to amend our rules (1) to provide more specific guidance on how a video conference participant who is a registered VRS user may request VRS (if the initially requesting VRS user has disconnected) and (2) to enable a participant to request the assignment of an additional CA (should the user find the number of CAs on the call insufficient for effective communication). The rules adopted in the *Second Report and Order* allow a registered VRS user to request that VRS be extended if the requesting user drops off; however, Sorenson asserts that its system for automatically processing requests for VRS in video conferences does not allow such a request while a CA is already serving the video conference. Are there alternative, non-automated means by which such requests could be efficiently made and fulfilled, without causing a significant risk of waste, fraud, and abuse? Could such a method be adapted to enable a participant to request the assignment of an additional CA to a complex video conference?

2. VRS – Use of Specialized CAs in Video Conferences

186. We seek further comment on whether to amend our rules to permit VRS providers to assign the provision of integrated VRS in video conferences to CAs that have been specially trained to handle video conferences, rather than to the first available CA, as is otherwise required. In the *Second Report and Order*, we find the current record insufficient to support such a rule,[465] noting that not every video conference may be sufficiently complex to require a specially trained CA, and that speed of answer, as well as the quality of TRS provided for traditional telephone calls could be affected if we were to authorize the assignment of specially trained CAs from a select group to handle the provision of VRS in video conferences.[466]

187. Sorenson contends that assigning video conferences to specialist CAs will provide a more functionally equivalent experience for VRS users participating in video conferences because those CAs will be trained on the mechanics and features of various video conferencing platforms, and so, will be able to more quickly and efficiently interpret for the VRS user.[467] Sorenson adds that specially trained CAs would be proficient in interpreting in large group settings as well as navigating the accessibility

[464] *See* Sorenson Comments at 28.

[465] *See supra* para. 142.

[466] *See* Sorenson Comments at 30-32; Sorenson Sept. 20 *Ex Parte* at 8.

[467] Sorenson Sept. 20 *Ex Parte* at 8. The AAO also support VRS providers having "a dedicated pool of interpreters familiar with video conferencing platforms." AAO May 7 *Ex Parte* at 2.

features of each specific IVCS platform, and that it would not be feasible to train every CA on these factors.[468] ZP agrees, stating: "Handling VRS calls in a video conference setting requires CAs to possess specific skills, such as the ability to manage multiple users in a video conference and familiarity with various IVCS features and functionalities."[469]

188. We seek additional comment on Sorenson's proposal. Currently, all VRS calls must be answered in the order received—a requirement that is intended to ensure that VRS providers do not discriminate against, or in favor of, particular VRS users.[470] We recognize that the assignment of CAs who are specially trained to handle video conferences could raise the quality of VRS provided in video conferences. On the other hand, it seems reasonable to assume that, in general, CAs who qualify for assignment to video conferences are also likely to have above-average skills and experience in handling and interpreting for traditional telephone calls. We seek comment on this assumption. We also seek comment on the specific challenges of video conferences that require special training for CAs? Do all types of video conferences present such challenges, or only those video conferences with many participants? How would the benefits of improving service quality for video conferences compare with the potential harm resulting from removal of highly qualified CAs from the queue for voice calls? What steps could the Commission take to minimize such potential harm? To limit such potential harm, should the Commission require that specially trained CAs participate in both call queues, so that they can be available to interpret for voice-only calls when not needed for a video conference? What other steps could the Commission take to limit potential harm to service quality for traditional voice calls?

189. Further, if only a limited number of CAs are trained to handle video conferences, what impact would such a limitation have on the speed of answer for video conferences? What percentage of VRS minutes do providers estimate will involve video conferences, and what percentage of CAs would need to receive special training to avoid a significant decline in average speed-of-answer for video conferences, relative to traditional telephone calls?[471] To avoid excessive delays, should the Commission require that a minimum number or percentage of CAs be trained to handle video conferences?

190. We also seek comment on the specific amount of training that is necessary to ensure acceptable service quality for video conferences. What is the estimated cost of such training, on a per-CA basis? What would be the cost of training all of a provider's CAs to handle video conferences?

191. Finally, we note that there is some likelihood that, over time, the use of VRS in video conferences may increase to a substantial percentage of total VRS minutes. If the Commission were to authorize the use of a specialist CA queue for video conferences, should it do so as a pilot program with a sunset date, to ensure that the impact of this practice and the need for it to continue can be assessed before deciding whether to adopt a more permanent rule?

3. Integrated Provision of IP CTS

192. *IP CTS.* IP CTS is currently available for use in video conferences where participants can connect by dialing a telephone number. In the *Second Report and Order*, we amend our Part 14 rules to provide that, unless it is not achievable to do so, IVCS providers "shall enable users to connect with third-party captioning services"—a category that includes IP CTS—"so that captions provided by such

[468] Sorenson Comments at 30-31.

[469] ZP Reply Comments at 5.

[470] *2013 VRS Reform Order*, 28 FCC Rcd at 8691, para. 180 n.470; *2005 Call Handling PN*, 20 FCC Rcd at 1473.

[471] Our speed-of-answer rule for VRS is substantially less strict than the rule for other relay services. For most forms of TRS, providers must answer 85% of all calls within 10 seconds, measured daily. 47 CFR § 64.604(b)(2)(ii). For VRS, by contrast, providers must answer 80% of all VRS calls within 120 seconds, measured on a monthly basis. *Id*. § 64.604(b)(2)(iii). However, service-quality competition among providers generally has resulted in a substantially lower average delay in answering VRS calls.

services appear on the requesting user's video conference screen."[472] We also affirm that the TRS Fund supports the provision of TRS—including IP CTS—in video conferences on an integrated basis, as long as the service is provided in compliance with our TRS rules. We seek comment on whether additional amendments to our rules are needed to facilitate the integrated provision of IP CTS on a video conferencing platform, that is, to participants who do not connect to a video conference by dialing a telephone number, and to prevent waste, fraud, or abuse of the TRS Fund.

193. As a preliminary matter, we seek comment on the extent to which IP CTS is currently used in video conferences, as well as the extent of demand and additional benefits likely to result from its availability on an integrated basis.[473] There are a number of captioning solutions that are now or may soon be available in the video conferencing context for people with hearing loss, including captions provided by the IVCS provider, CART and other fee-based captioning services, and captioning applications provided by various large and small technology companies.[474] We seek comment on the extent of additional demand and additional benefits likely to result from the availability of integrated IP CTS in video conferences. What factors would lead a video conference participant to request integrated IP CTS captions when the IVCS platform offers native captioning and participants can view captioning from another source on their own screen? To what extent do video conference participants who need captioning currently use IP CTS rather than other sources of captioning, and to what extent would they be likely to use integrated IP CTS, if available? If a video conference participant invites IP CTS captioning on an integrated basis to the call, will participants be able to control the size, font, and placement of the captions? Should we adopt any other restrictions on the use of integrated IP CTS captions to prevent waste, fraud, and abuse?

194. *Call Detail Requirements*. We seek comment on whether any amendments to the current call detail requirements of the Commission's rules are necessary to facilitate review and approval of compensation requests for the provision of IP CTS in video conferences on an integrated basis.[475]

195. *Limits on Duplicative IP CTS Captioning*. To prevent billing of the TRS Fund for duplicative captioning, we propose to adopt a similar rule to that adopted for VRS in the *Second Report and Order*. Specifically, we propose that, if the captions supplied by an IP CTS provider can be viewed by all video conference participants (rather than only by the individual who requested captioning from an IP CTS provider), then the provider shall not submit more than one call detail record (CDR) for that video conference and shall not be paid for more than one instance of captioning to that video conference. In other words, the total compensation received by a single IP CTS provider for captioning a video conference would not exceed the applicable compensation rate multiplied by the number of minutes in the video conference. We seek comment on this proposal. We also seek comment on whether to allow compensation for the provision of IP CTS in a video conference to an individual registered user, on a non-integrated basis, if the provider is already providing IP CTS to all participants on an integrated basis, at

[472] *See supra* paras. 38-44.

[473] In this regard, we note that IP CTS must be requested by a registered IP CTS user. 47 CFR § 64.611(j)(1)(i). It may be that a video conference host or organizer seeking to make captioning available could perceive IP CTS as a desirable alternative to other sources of captioning in some circumstances, e.g., for reasons related to quality or cost. However, in contrast with VRS, for which our rules authorize "enterprise" registration, whereby VRS may be provided to an organization for use by eligible employees or other users, *id*. § 64.611(a)(6), "enterprise" registration is not authorized for IP CTS, except for certain specified entities. *See id*. § 64.611(j)(2)(iii) (allowing service to unregistered users at a temporary, public IP CTS device set up in an emergency shelter); *Incarcerated People's Communications Services; Implementation of the Martha Wright-Reed Act; Rates for Interstate Inmate Calling Services,* WC Docket Nos. 23-62 and 12-375, Report and Order, Order on Reconsideration, Clarification, and Waiver, and Further Notice of Proposed Rulemaking, FCC 24-75, paras. 491-94 (July 22, 2024) (adopting enterprise registration rules for IP CTS and IP Relay provided in carceral facilities).

[474] *See supra* paras. 38-44.

[475] *See*, *e.g.*, 47 CFR § 64.604(c)(5)(iii)(D).

the request of another registered user. Further, are there any circumstances in which more than one IP CTS provider is needed to provide integrated IP CTS captioning in a video conference? If not, how can we prevent duplicative captioning?

4. Integration of Other Forms of TRS

196. *Analog TRS.* We seek further comment on whether and how the Commission should amend its rules to facilitate the provision in video conferences of non-Internet-based TRS—Text Telephone (TTY)-based TRS, Captioned Telephone Service (CTS), and Speech-to-Speech Relay (STS).[476] These services, offered through state TRS programs, are intended for use on an ordinary telephone line. While users of these services may be able to participate in a video conference call over a voice connection (where available), it is unclear whether or how these forms of TRS could be integrated with video conferencing platforms. Further, given the availability of IP CTS, which provides the functionality of CTS and TTY-based TRS for users with Internet access, it seems unlikely that there would be significant demand for integrated provision of these services in Internet-based video conferences. We seek comment on this assessment.

197. *IP Relay.* No comments were received in response to the questions in the *Notice* concerning the integration provision of IP Relay in video conferences. IP Relay is a service often used with refreshable braille devices and screen readers and by the deafblind community.[477] Would integration of IP Relay with video conferencing service platforms improve the ability of these or other consumers to participate in video conferencing calls? Are there other steps we should take to facilitate an IP Relay user's participation in video conferences? We seek comment on these issues and any rule changes that may be necessary to facilitate the integration provision of IP Relay video conferencing platforms.

198. *Advancing Equity, Diversity, and Inclusion.* The Commission, as part of its continuing effort to advance digital equity for all,[478] including people of color, persons with disabilities, persons who live in rural or Tribal areas, and others who are or have been historically underserved, marginalized, or adversely affected by persistent poverty or inequality, invites comment on any equity-related considerations[479] and benefits, if any, that may be associated with the proposals and issues discussed herein. Specifically, we seek comment on how our proposals may promote or inhibit advances in diversity, equity, inclusion, and accessibility.

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[476] For TTY-based TRS a user calls a relay center and types the number to be called. The CA makes the telephone call and then relays the call between the parties by speaking what a text user types, and typing what a voice telephone user speaks. For STS, a CA (who is specially trained in understanding a variety of speech disorders) repeats what the caller says in a manner that makes the caller's words clear and understandable to the called party. CTS is similar to IP CTS, with captions being provided over the telephone network instead of the Internet.

[477] *See Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Petition for Rulemaking of Sprint Corporation,* CG Docket No. 03-123 and RM-11820, Report and Order, 37 FCC Rcd 8009, 8014-15, para. 13 (2022).

[478] Section 1 of the Communications Act of 1934, as amended, provides that the FCC "regulat[es] interstate and foreign commerce in communication by wire and radio so as to make [such service] available, so far as possible, to all the people of the United States, without discrimination on the basis of race, color, religion, national origin, or sex." 47 U.S.C. § 151.

[479] The term "equity" is used here consistent with Executive Order 13985 as the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality. *See* Exec. Order No. 13985, 86 Fed. Reg. 7009, Executive Order on Advancing Racial Equity and Support for Underserved Communities Through the Federal Government (Jan. 20, 2021).

V. PROCEDURAL MATTERS

199. *Regulatory Flexibility Act.* The Regulatory Flexibility Act of 1980, as amended (RFA),[480] requires that an agency prepare a regulatory flexibility analysis for notice and comment rulemakings, unless the agency certifies that "the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities.[481] Accordingly, we have prepared a Final Regulatory Flexibility Analysis (FRFA) concerning the possible impact of the rule changes and policy contained in this *Second Report and Order* on small entities. The FRFA is set forth in Appendix C.

200. The Commission seeks comment on potential rule and policy changes contained in the *Further Notice of Proposed Rulemaking (Notice)*, and accordingly, has prepared an Initial Regulatory Flexibility Analysis (IRFA). The IRFA is set forth in Appendix D. Written public comments are requested on the IRFA. Comments must be filed by the deadlines for comments on the *Notice* indicated on the first page of this document and must have a separate and distinct heading designating them as responses to the IRFA.

201. *Congressional Review Act*. The Commission has determined, and the Administrator of the Office of Information and Regulatory Affairs, Office of Management and Budget, concurs that this rule is "non-major" under the Congressional Review Act, 5 U.S.C. § 804(2). The Commission will send a copy of this *Second Report and Order and Further Notice of Proposed Rulemaking* to Congress and the Government Accountability Office pursuant to 5 U.S.C. § 801(a)(1)(A).[482]

202. *Paperwork Reduction Act Analysis.* The *Second Report and Order* contains new or modified information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA).[483] It will be submitted to the Office of Management and Budget (OMB) for review under section 3507(d) of the PRA.[484] OMB, the general public, and other Federal agencies are invited to comment on the new or modified information collection requirements contained in this proceeding. In addition, we note that pursuant to the Small Business Paperwork Relief Act of 2002,[485] we previously sought specific comment on how the Commission might further reduce the information collection burden for small business concerns with fewer than 25 employees. In Appendix C, we have assessed the effects of the required collection of information on these small entities.

203. *Initial Paperwork Reduction Act of 1995 Analysis*. The *Further Notice of Proposed Rulemaking* may contain new or modified information collection(s) subject to the PRA.[486] If the Commission adopts any new or modified information collection requirements, they will be submitted to the Office of Management and Budget (OMB) for review under section 3507(d) of the PRA. OMB, the general public, and other federal agencies are invited to comment on the new or modified information collection requirements contained in this proceeding. In addition, pursuant to the Small Business Paperwork Relief Act of 2002,[487] we seek specific comment on how we might "further reduce the information collection burden for small business concerns with fewer than 25 employees."[488]

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[480] The RFA, 5 U.S.C. §§ 601-602, was amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

[481] 5 U.S.C. §§ 603, 605(b).

[482] *Id*. § 801(a)(1)(A).

[483] Pub. L. 104-13, 109 Stat. 163 (1995) (codified at 44 U.S.C. §§ 3501-3520).

[484] 44 U.S.C. § 3507(d).

[485] Paperwork Reduction Act of 1995, 44 U.S.C. §§ 3501-3520 (2016).

[486] Pub. L. 104-13.

[487] Pub. L. 107-198.

[488] 44 U.S.C. § 3506(c)(4).

204. *Comments*. Interested parties may file comments on or before the dates indicated on the first page of this document.[489] Comments may be filed using the Commission's Electronic Comment Filing System (ECFS).[490]

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: https://www.fcc.gov/ecfs/.
- Paper Filers:
  - Parties who choose to file by paper must file an original and one copy of each filing.
  - Filings can be sent by hand or messenger delivery, by commercial courier, or by the U.S. Postal Service. All filings must be addressed to the Secretary, Federal Communications Commission.
  - Hand-delivered or messenger-delivered paper filings for the Commission's Secretary are accepted between 8:00 a.m. and 4:00 p.m. by the FCC's mailing contractor at 9050 Junction Drive, Annapolis Junction, MD 20701. 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 courier deliveries (any deliveries not by the U.S. Postal Service) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.
  - Filings sent by U.S. Postal Service First-Class Mail, Priority Mail, and Priority Mail Express must be sent to 45 L Street NE, Washington, DC 20554.

205. *Ex Parte Rules*. The proceeding the *Further Notice of Proposed Rulemaking* initiates shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's *ex parte* rules.[491] Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or 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 section 1.1206(b). In proceedings governed by section 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

206. *People with Disabilities*: To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer and Governmental Affairs Bureau at 202-418-0530.

207. *Availability of Documents*. Comments, reply comments, and *ex parte* submissions will be available via ECFS. Documents will be available electronically in ASCII, Microsoft Word, and/or Adobe Acrobat. These documents will also be available for public inspection during regular business

[489] 47 CFR §§ 1.415, 1.419.

[490] *See* FCC, Electronic Filing of Documents in Rulemaking Proceedings, 63 Fed. Reg. 24121 (May 1, 1998).

[491] 47 CFR § 1.1200 *et seq.*

hours in the FCC Reference Center, Federal Communications Commission, 45 L Street NE, Washington, DC 20554.

208. *Additional Information*. For additional information on this proceeding, contact William Wallace, Disability Rights Office, Consumer and Governmental Affairs Bureau, at 202-418-2716, or William.Wallace@fcc.gov, or Ike Ofobike, Consumer and Governmental Affairs Bureau, at 202-418-1028, or Ike.Ofobike@fcc.gov.

VI. ORDERING CLAUSES

209. Accordingly, IT IS ORDERED that, pursuant to sections 1, 2, 3, 225 and 716 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 153, 225, 617, the foregoing *Second Report and Order* IS ADOPTED.

210. IT IS FURTHER ORDERED that the *Second Report and Order* SHALL BE EFFECTIVE 30 days after publication of a summary in the Federal Register, except that the amendments to section 64.606(g)(6) will not become effective until OMB completes any review that the Consumer and Governmental Affairs Bureau determines is required under the Paperwork Reduction Act and provides an effective date by subsequent Public Notice 30 days after publication of a summary in the Federal Register.

211. IT IS FURTHER ORDERED that the Office of the Managing Director, Performance and Program Management, SHALL SEND a copy of the *Second Report and Order* in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act, 5 U.S.C. § 801(a)(1)(A).

212. IT IS FURTHER ORDERED that, pursuant to sections 1, 2, 3, (4)(i), (4)(j), 225, and 716 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 153, 154(i), 154(j), 225, and 617, the foregoing *Further Notice of Proposed Rulemaking* IS ADOPTED.

213. IT IS FURTHER ORDERED that, pursuant to applicable procedures set forth in sections 1.415 and 1.419 of the Commission's Rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments on the *Further Notice of Proposed Rulemaking* on or before 30 days after publication in the Federal Register, and reply comments on or before 60 days after publication in the Federal Register.

214. IT IS FURTHER ORDERED that the Commission's Office of the Secretary, Reference Information Center, SHALL SEND a copy of the *Second Report and Order and Further Notice of Proposed Rulemaking*, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

List of Commenting Parties

Commenting Organizations:

American Council of the Blind
American Foundation for the Blind
Bridge Multimedia
ClearCaptions, LLC
Communications Equality Advocates (National Association of the Deaf, Northern Virginia Resource Center for Deaf and Hard of Hearing Persons, Communication Service for the Deaf, TDIforAccess, accesSOS, Deaf Seniors of America, Hearing Loss Association of America, Deaf in Government, Association of Late-Deafened Adults, Global Alliance of Speech-to-Text Captioning, Cerebral Palsy and Deaf Organization, Registry of Interpreters for the Deaf)
Consortium of Constituents with Disabilities (CCD) Technology and Telecommunications (Tech) Task Force
Consumer Technology Association
Convo Communications, LLC
Electronic Privacy Information Center
Hamilton Relay, Inc.
LanguageLine Solutions
National Federation of the Blind
People's Republic of China
Safman Consulting
Sign-Speak Inc.
Sorenson Communications, LLC
Telecommunications Access of Maryland
USTelecom—The Broadband Association
Voiceitt, Inc.

Reply Comments:

California Public Utilities Commission
Communications Equality Advocates
Consumer Technology Association
Sorenson Communications, LLC
Sign-Speak Inc.
T-Mobile USA, Inc.
ZP Better Together, LLC

Note: The Commission appreciates the numerous comments from concerned individuals in this proceeding. These comments are available through the Commission's Electronic Comment Filing System.

APPENDIX B

Final Rules

The Federal Communications Commission amends Title 47 of the Code of Federal Regulations as follows:

Part 14 – ACCESS TO ADVANCED COMMUNICATION SERVICES AND EQUIPMENT BY PERSONS WITH DISABILITIES

1. The authority citation for part 14 continues to read as follows:

Authority: 47 U.S.C. [to be completed prior to publication in the Federal Register], unless otherwise noted.

2. Amend § 14.21 by revising paragraph (b)(2)(iv) and adding new paragraph (b)(4) to read as follows:

§ 14.21 Performance Objectives.

* * * * *

(b) * * *

(2) * * *

(iv) *Availability of auditory information*. Provide auditory information through at least one mode in visual form and, where appropriate, in tactile form. For interoperable video conferencing services, beginning [**TWO YEARS AND 30 DAYS AFTER THE DATE OF PUBLICATION IN THE FEDERAL REGISTER**], provide at least one mode with captions that accurately and synchronously display the spoken communications in a video conference, and enable users to connect with third-party captioning services so that captions provided by such services appear on the requesting user's video conference screen. In this paragraph (iv):

(A) *Accurately* means that captioning matches the spoken words of a conversation, in the order spoken, verbatim, without summarizing or paraphrasing, sufficiently to enable a user to understand what is being said.

(B) *Synchronously* means that, to the greatest extent possible, the captions begin to appear at the time that the corresponding speech or sounds begin and end approximately when the speech or sounds end, are delivered fast enough to keep up with the speed of those words and sounds, and remain displayed long enough to be read by the user.

* * * * *

(4) *Interoperable Video Conferencing Service*. In addition to the other requirements of this section, beginning [**TWO YEARS AND 30 DAYS AFTER THE DATE OF PUBLICATION IN THE FEDERAL REGISTER**], interoperable video conferencing services and covered equipment and software used with such services shall:

(i) Enable the use of sign language interpretation provided by third parties, including the transmission of user requests for sign language interpretation to providers of video relay service and other entities and the provision of sufficient video quality to support sign language communication.

(ii) Provide user interface control functions that permit users to activate and adjust the display of captions, speakers, and signers and other features for which user control is necessary for accessibility. In this paragraph (ii):

(A) *Adjust the display of captions* means that a video conference participant can alter the size, font, and on-screen location of captions and adjust the color and opacity of both the captions and the caption background.

(B) *Adjust the display of speakers and signers* means that video conference participants can minimize or hide extraneous windows, expand the windows of their choice, or relocate particular windows; and edit their own display names before or after joining a video conference.

Part 64 - MISCELLANEOUS RULES RELATING TO COMMON CARRIERS

3. The authority citation for part 64 continues to read as follows:

Authority: 47 U.S.C. [to be completed prior to publication in the Federal Register], unless otherwise noted.

4. The authority citation for subpart F continues to read as follows:

Authority: 47 U.S.C. [to be completed prior to publication in the Federal Register], unless otherwise noted.

5. Amend 64.601(a) by:

a. redesignating paragraphs (23) through (26) as (24) through (27), (27) and (28) as paragraphs (29) and (30), paragraphs (29) through (52) as paragraphs (32) through (55), and paragraphs (53) through (58) as paragraphs (57) through (61); and

b. adding new paragraphs (23), (28), (31), and (56) to read as follows:

§ 64.601 Definitions and provisions of general applicability.

* * * * *

(a) * * *

(23) Integrated VRS. The provision of VRS in a video conference whereby the CA is included as a participant in the video conference and communication between the CA and the participants takes place on the video conferencing platform rather than through a separate connection.

* * * * *

(28) Interoperable video conferencing service (IVCS). Has the meaning given in Part 14 of this chapter.

* * * * *

(31) Multi-party video conference. A video conference call with three or more participants, excluding VRS CAs and any other participant providing an accommodation for a participant.

* * * * *

(56) Video conference. A session of IVCS involving two-way real-time communication between two or more IVCS users.

* * * * *

6. Amend § 64.604 by:

a. revising paragraphs (a)(2)(i), (c)(5)(iii)(D)(*4*), (c)(5)(iii)(E)(*2*), (c)(14), (d)(5), and (e); and

b. adding paragraphs (c)(5)(iii)(D)(*8*), (c)(15), and (f);

to read as follows:

§ 64.604 Mandatory minimum standards.

(a) * * *

(2) * * *

(i) Except as authorized by section 705 of the Communications Act, 47 U.S.C 605, TRS providers and CAs are prohibited from disclosing the content of any relayed conversation (and any non-relayed content

communicated in a video conference) regardless of content, and with a limited exception for STS CAs, from keeping records of the content of any conversation (and any non-relayed content communicated in a video conference) beyond the duration of a call, even if to do so would be inconsistent with state or local law. STS CAs may retain information from a particular call in order to facilitate the completion of consecutive calls, at the request of the user. The caller may request the STS CA to retain such information, or the CA may ask the caller if he wants the CA to repeat the same information during subsequent calls. The CA may retain the information only for as long as it takes to complete the subsequent calls.

* * * * *

(c) * * *

(5) * * *

(iii) * * *

(D) * * *

(*4*) * * *

(*ii*) Submit such data electronically, in a standardized format. For purposes of this subparagraph, an automated record keeping system is a system that captures data in a computerized and electronic format that does not allow human intervention during the call session for either conversation or session time; *provided that*, this subparagraph (c)(5)(iii)(D)(*4*) does not prohibit the submission of a CDR in which the end of conversation or session time is automatically determined by a CA's exit from a video conference prior to its termination, in accordance with the Commission's applicable rules.

(*8*) A VRS provider's call data shall identify each video conference in which integrated VRS is provided. For such video conferences, in lieu of the information specified in paragraphs (c)(5)(iii)(D)(*1*)(*v*) and (*vi*) of this section, a VRS provider may submit information, as specified in instructions issued by the administrator, that identifies the VRS user requesting service and the video conference session in which service was provided.

* * * * *

(E) * * *

(*2*) TRS minutes of use for purposes of cost recovery from the TRS Fund are defined as the minutes of use for completed interstate or Internet-based TRS calls placed through the TRS center beginning after call set-up and concluding after the last message call unit, except that for the provision of integrated VRS in a video conference, a VRS provider's TRS minutes of use are defined in paragraph (e) of this section.

* * * * *

(14) TRS calls requiring the use of multiple CAs. TRS Fund compensation may be paid for more than one CA (or automated equivalent of a CA, when authorized) to handle the following types of calls:

(i) VCO-to-VCO calls between multiple captioned telephone relay service users, multiple IP CTS users, or captioned telephone relay service users and IP CTS users; and

(ii) Calls between users of different types of relay services for which more than one CA is warranted.

(15) Exclusivity Agreements. A TRS provider may not enter into an agreement with an IVCS provider if such agreement would give the TRS provider exclusive access among TRS providers to the IVCS provider's facilities or such agreement would give the IVCS provider exclusive access among IVCS providers to the TRS provider's service via a video connection.

(d) * * *

(5) Visual privacy screens/idle calls.

(i) Except as provided in this paragraph (d)(5), a VRS CA shall not enable a visual privacy screen or similar feature during a VRS call and must disconnect a VRS call if the caller or the called party enables a privacy screen or similar feature for more than five minutes or is otherwise unresponsive or unengaged for more than five minutes, unless the call is a 9-1-1 emergency call or the caller or called party is legitimately placed on hold and is present and waiting for active communications to commence. Prior to disconnecting the call, the CA must announce to both parties the intent to terminate the call and may reverse the decision to disconnect if one of the parties indicates continued engagement with the call.

(ii) A VRS CA providing integrated VRS in a multi-party video conference:

(A) may temporarily turn off the CA's video camera when engaged in team interpreting, if the other CA is actively providing ASL interpretation;

(B) may stay connected to the video conference if the VRS user who requested service has turned off the user's camera, as long as that user stays connected to the video conference; and,

(C) if five minutes elapse in which no party is responsive or engaged in conversation, shall announce that VRS will be terminated and the CA shall disconnect from the video conference.

* * * * *

(e) Provision of integrated VRS in video conferences

(1) A VRS provider may provide integrated VRS in a video conference upon request by a registered VRS user (or by a person authorized by a registered enterprise VRS user).

(2) A VRS provider providing integrated VRS in a video conference shall:

(i) Collect from the party requesting service sufficient information to confirm the requesting party's registration for VRS;

(ii) Require CAs, when joining a video conference, to self-identify as a CA and provide the name of the VRS provider (e.g., by editing their display name); and

(iii) Treat each video conference as a single call for compensation purposes, except as specifically authorized by the Commission.

(3) For the purpose of TRS Fund compensation for the provision of integrated VRS in a video conference, a VRS provider's TRS minutes of use begin when a CA enters the video conference, provided that the CA identifies the requesting VRS user within five minutes of entering the video conference. If, within that time, the CA cannot identify the requesting VRS user, or it is evident that VRS is not needed, then the call must be identified as non-compensable.

(4) For the purpose of TRS Fund compensation for the provision of integrated VRS in a video conference, a VRS provider's TRS minutes of use end when the earliest of the following events occurs:

(i) The CA disconnects from the video conference;

(ii) All non-signing participants disconnect from the video conference;

(iii) All signing participants disconnect from the video conference; or

(iv) The registered VRS user who initially requested service disconnects from the video conference and five minutes elapse without a further request for service by a registered VRS user participant.

(f) **Other standards.** The applicable requirements of § 9.14 of this chapter and §§ 64.611, 64.615, 64.621, 64.631, 64.632, 64.644, 64.5105, 64.5107, 64.5108, 64.5109, and 64.5110 are to be considered mandatory minimum standards.

7. Amend section 64.606 by adding paragraph (g)(6) to read as follows:

§ 64.606 Internet-based TRS provider and TRS program certification.

* * * * *

(g) * * *

(6) If a VRS provider provides integrated VRS in video conferences, its annual report shall provide a detailed explanation of the instructions and training provided to CAs on implementation of § 64.604(e), including guidance on how to make the determinations required by § 64.604(e)(3).

8. Amend section 64.615 by revising paragraph (a)(1)(i) to read as follows:

§ 64.615 TRS User Registration Database and administrator.

(a) * * *

(1) * * *

(i) Validation shall occur during the call setup process, prior to the placement of the call, except that validation of the provision of integrated VRS in a video conference shall occur prior to the connection of a VRS CA to the video conference.

APPENDIX C

FINAL REGULATORY FLEXIBILITY ANALYSIS

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),[1] the Federal Communications Commission (Commission) incorporated an Initial Regulatory Flexibility Analysis (IRFA) into the *2023 IVCS NPRM* released in June 2023.[2] The Commission sought written public comment on the proposals in the *2023 IVCS NPRM*, including comment on the IRFA.[3] No comments were filed addressing the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.[4]

A. Need For, and Objectives of, the Report and Order

2. In the Se*cond Report and Order*, the Commission amends its rules to ensure that people with disabilities are able to access and use interoperable video conferencing service (IVCS), a category of advanced communication service (ACS).[5] As video conferencing has grown from a niche product to an essential vehicle of communication, the need for accessibility has become acute; yet, there remain significant gaps in the accessibility of video conferencing services. Therefore, the Commission amends its Part 14 rules, which govern accessibility of ACS, adding performance objectives that specifically enable the accessibility of IVCS. These performance objectives include: (1) providing speech-to-text (captioning); (2) enabling access to sign language interpreting provided by third parties, including video relay service (VRS); and (3) providing user interface controls for video conferences.[6] In addition, the Commission amends its Part 64 rules governing telecommunications relay services (TRS) to reflect that the Interstate TRS Fund can support the integrated provision of relay services in video conferences—whether or not the video conferencing platform can be accessed via a dial-up telephone call.[7] The Commission modifies the TRS rules to facilitate such integration and prevent waste, fraud, and abuse.[8] Finally, the Commission amends the TRS rule governing use of multiple forms of TRS on the same call to ensure that individuals with differing forms of disability can communicate using their preferred form of TRS.[9]

B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA

3. There were no comments filed that specifically addressed the proposed rules and policies presented in the IRFA.

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[1] *See* 5 U.S.C. § 603. The RFA, 5 U.S.C. §§ 601-612, was amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

[2] *Accessibility of Video Conferencing; Implementation of Sections 716 and 717 of the Communications Act of 1934, as Enacted by the Twenty-First Century Communications and Video Accessibility Act of 2010;Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CG Docket Nos. 23-161, 10-213, and 03-123, Report and Order, Notice of Proposed Rulemaking, and Order, 38 FCC Rcd 6300, 6355-58, App. C (IRFA) (2023) (*2023 IVCS Definition Order* or 2023 *IVCS NPRM*).

[3] *See 2023 IVCS NPRM*, 38 FCC Rcd 6341-42, paras. 123-24.

[4] *See* 5 U.S.C. § 604.

[5] *See* 47 U.S.C. § 153(1) (definition of ACS).

[6] *See Second Report and Order*, Part III.A.4.

[7] *Id.,* Part III.B.1.

[8] *Id.,* Part III.B.3.

[9] *Id.,* Part III.C.

C. Response to Comments by the Chief Counsel for Advocacy of the Small Business Administration

4. Pursuant to the Small Business Jobs Act of 2010, which amended the RFA, the Commission is required to respond to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration (SBA), and to provide a detailed statement of any change made to the proposed rules as a result of those comments.[10] The Chief Counsel did not file any comments in response to the proposed rules in this proceeding.

D. Description and Estimate of the Number of Small Entities to which the Rules will Apply

5. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the rules adopted herein.[11] The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[12] In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.[13] A "small business concern" is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.[14]

6. The Commission's decisions in the *Second Report and Order* will affect the obligations of providers of interoperable video conferencing services and telecommunications relay services. These services can be included within the broad economic category of All Other Telecommunications.

7. *All Other Telecommunications*. This industry is comprised of establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation.[15] This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems.[16] Providers of Internet services (e.g. dial-up ISPs) or voice over Internet protocol (VoIP) services, via client-supplied telecommunications connections are also included in this industry.[17] The SBA small business size standard for this industry classifies firms with annual receipts of $35 million or less as small.[18] U.S. Census Bureau data for 2017 show that there were 1,079 firms in this industry that operated for the entire year.[19] Of those firms, 1,039 had revenue of less than $25 million.[20] Based on this

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[10] 5 U.S.C. § 604(a)(3).

[11] *Id.* § 604(a)(4).

[12] *Id.* § 601(6).

[13] *Id.* § 601(3) (incorporating by reference the definition of "small-business concern" in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register."

[14] 15 U.S.C. § 632.

[15] *See* U.S. Census Bureau, 2017 NAICS Definition, "517919 All Other Telecommunications," https://www.census.gov/naics/?input=517919&year=2017&details=517919.

[16] *Id.*

[17] *Id.*

[18] *See* 13 CFR § 121.201, NAICS Code 517919 (as of 10/2/22, NAICS Code 517810).

[19] *See* U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Sales, Value of Shipments, or Revenue Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEREVFIRM, NAICS Code 517919,

(continued….)

data, the Commission estimates that the majority of "All Other Telecommunications" firms can be considered small.

E. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

8. The amendments to the Commission's rules adopted in the *Second Report and Order* may modify certain reporting, recordkeeping or other compliance obligations of certain small entities that provide IVCS or TRS. Compliance with these amended rules will be required two years after the effective date of the *Second Report and Order*. The performance objectives adopted clarifying existing obligations, and are subject to existing achievability criterion.[21] As a result, small entities should not find compliance with these rules overly burdensome.

9. *Accessibility of IVCS*. Part 14 of the Commission's rules requires that providers of ACS—including IVCS—and manufacturers of equipment used with ACS ensure that their services and equipment (including associated software) are accessible and usable by people with disabilities, unless these requirements are not achievable.[22] The IVCS-specific performance objectives adopted by the Commission must be implemented by IVCS providers and manufacturers, including small entities, unless they are not achievable. The Commission establishes performance objectives to ensure flexibility in allowing entities to meet the statutory obligations of ensuring services and equipment are accessible to people with disabilities.

10. *IVCS Recordkeeping*. The Commission's existing rules require that each provider of ACS (including IVCS) and each manufacturer of equipment used to provide ACS maintain, in the ordinary course of business and for a reasonable period, records documenting the efforts taken by such service provider or manufacturer to implement section 716 of the Communications Act of 1934, as amended,[23] including: (1) information about the manufacturer's or provider's efforts to consult with individuals with disabilities; (2) descriptions of the accessibility features of its products and services; and (3) information about the compatibility of such products and services with peripheral devices or specialized customer premise equipment commonly used by individuals with disabilities to achieve access.[24] Providers of IVCS and manufacturers of equipment used for IVCS are subject to these existing requirements. In adopting additional performance objectives for IVCS, the Commission increases the amount of information that entities must retain and report under the recordkeeping. The time and resources needed to fulfill this additional recordkeeping should be minimal given the ongoing obligation to retain such records.

11. *IVCS Reporting*. The Commission's existing rules require that an officer of each provider of ACS (including IVCS) and an officer of each manufacturer of ACS equipment must submit to the Commission an annual certificate that records are being kept in accordance with the above recordkeeping requirements, unless such manufacturer or provider has been exempted from compliance with Section 716 under applicable rules.[25] The form and content of the reporting will be unchanged, but

(Continued from previous page)
https://data.census.gov/cedsci/table?y=2017&n=517919&tid=ECNSIZE2017.EC1700SIZEREVFIRM&hidePreview=false. At this time, the 2022 Economic Census data is not available.

[20] *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard. We also note that according to the U.S. Census Bureau glossary, the terms receipts and revenues are used interchangeably, *see* https://www.census.gov/glossary/#term_ReceiptsRevenueServices.

[21] 47 U.S.C. § 617(a)(1), (b)(1); 47 CFR § 14.20; *see also* 47 CFR § 14.10(b) (defining "achievable").

[22] 47 CFR § 14.20(a)(1)-(2).

[23] 47 U.S.C. § 617.

[24] 47 CFR § 14.31(a).

[25] *Id.* § 14.31(b).

the officer may require additional time to confirm the records for the new performance objectives are kept in accordance with the recordkeeping requirements.

12. *IVCS Compliance Costs*. As discussed in the *Second Report and Order*, we received no specific cost estimates from commenters. Due to the diversity of IVCS service providers and IVCS equipment manufacturers subject to section 716, as well as the multiple general and entity-specific factors used in determining whether, for a given service provider or manufacturer, accessibility for a particular service item of IVCS equipment (or a particular) is achievable, it is difficult to estimate the costs of compliance for those small entities covered by the amended rules. However, the rules themselves include a safeguard to ensure that the burden and cost of compliance will not be unreasonable: compliance is conditioned on each objective being "achievable," i.e., "with reasonable effort or expense."[26] An achievability determination must consider the nature and cost of the steps needed to meet the requirement, the technical and economic impact on the company's operation, the type of operations of the company, and the extent to which accessible services or equipment are already being offered by the company.[27]

13. *TRS Amendments*. The amendments to the Commission's rules governing TRS are designed to facilitate the use of TRS Communications Assistants (CAs) in video conferences while minimizing the risk of waste, fraud, and abuse of the TRS Fund. These modifications only apply to a small entity TRS provider to the extent that users of the provider's TRS participate in video conference calls. Otherwise, the TRS compliance requirements would remain unchanged. Most of the TRS rule changes are a clarification of the extent of a rule's application to provision of TRS in video conferences. For example, providers of VRS, a form of TRS, must continue to meet user validation and call detail record reporting obligations when opting to provide VRS in video conferences. Call detail records must be recorded automatically. VRS providers must also include a detailed explanation of the guidance they provide to CAs regarding when compensable time starts and stops in their annual compliance reports. To collect compensation from the TRS Fund for a particular call, a VRS provider must submit call detail record to the TRS Fund administrator identifying video conferences where VRS is provided on integrated basis. These compliance and reporting requirements are consistent with existing obligations that VRS providers must meet in providing VRS and do not change the burdens of such entities.

F. Steps Taken to Minimize Significant Impact on Small Entities, and Significant Alternatives Considered

14. The RFA requires an agency to provide "a description of the steps the agency has taken to minimize the significant economic impact on small entities . . . including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected."[28]

15. The requirements for ACS in Part 14 were adopted in 2011.[29] When the Commission confirmed the definition of IVCS in the 2023 IVCS Definition Order, it gave all IVCS providers one year to come into compliance with the existing ACS accessibility requirements in Part 14.[30] In the *Second*

[26] 47 CFR § 14.10(b); 47 U.S.C. § 617(g).

[27] 47 CFR § 14.10(b)(2), (4); 47 U.S.C. § 617(g)(2), (4).

[28] 5 U.S.C. § 604(a)(6).

[29] *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; Accessible Mobile Phone Options for People who are Blind, Deaf-Blind, or Have Low Vision*, CG Docket No. 10-213, WT Docket No. 96-198, CG Docket No. 10-145, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 14557 (2011).

[30] *2023 IVCS Definition Order*, 38 FCC Rcd at 6317-18, para. 41.

Report and Order, the Commission considered a number of alternatives in adopting performance objectives for achieving accessibility applicable to IVCS.[31] The Commission provides all entities subject to the new rules two years from the effective date of the *Second Report and Order* to come into compliance. This will allow for product development and implementation within typical product upgrade and development cycles and minimize development burdens on small entities.[32] Like all performance objectives in Part 14, these modified requirements are subject to options to make a product or service accessible by incorporating accessibility features into the product or service itself, or by relying third party applications, peripheral devices, software, hardware, or CPE that are available to the consumer at nominal cost.[33] All Part 14 performance objectives are also subject to an "achievability" standard that takes into account the cost of compliance and the nature of the impact of compliance on a specific entity.[34] In addition, the rules provide an exemption for customized services and equipment and authorize the grant of waivers for multipurpose services and equipment.[35] These flexibility and achievability conditions apply equally to all covered entities, including small entities and are necessary to ensure video conferencing is accessible to people with disabilities.

16. The amendments to the TRS rules are designed to facilitate access to TRS on video conferencing platforms. In the *Second Report and Order*, the Commission determines that TRS provided on video conferences are compensable from the TRS Fund and detail the applicability of the existing TRS rules to such rules to minimize the potential for waste, fraud, and abuse from the expansion of services. In allowing a voluntary approach to integrating TRS, the Commission allows providers to opt into the provision of such services and flexibility in the method of developing such integrated services. In clarifying the extent to which existing rules are applicable and amending such rules to account for TRS provided in video conferences the Commission ensures providers are able to receive TRS Fund compensation for their provision of TRS in video conferences, while continuing to protect the TRS Fund from potential waste, fraud, and abuse if existing protections were thought inapplicable. The Commission also determined to further develop the record and give providers the opportunity to experience providing integrated services before addressing additional proposals from the *2023 IVCS NPRM*, minimizing the potential burden of implementing requirements before fully understanding the benefits and burdens of those proposals.

G. Report to Congress

17. The Commission will send a copy of the *Second Report and Order*, including this FRFA, in a report to Congress, pursuant to the Congressional Review Act.[36] In addition, the Commission will send a copy of the *Second Report and Order*, including this FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of the *Second Report and Order* and FRFA (or summaries thereof), will also be published in the *Federal Register*.

[31] *Second Report and Order*, Part III.A.4.

[32] *Id.*, paras. 79-82.

[33] 47 CFR § 14.10(a)(3).

[34] *Id*. § 14.20(a)(1)-(2); *id*. § 14.10(b) (definition of "achievable").

[35] *See id*. § 14.3 (exemption for customized equipment or services); *id*. § 14.5 (waivers for multipurpose services and equipment).

[36] *See* 5 U.S.C. § 801(a)(1)(A).

APPENDIX D

INITIAL REGULATORY FLEXIBILITY ANALYSIS

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),[1] the Federal Communications Commission (Commission) has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in the *Further Notice of Proposed Rulemaking* (*Further Notice*). Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines on the *Further Notice* provided in the item. The Commission will send a copy of the entire *Further Notice*, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).[2] In addition, the *Further Notice* and the IRFA (or summaries thereof) will be published in the *Federal Register*.[3]

A. Need for, and Objective of, Proposed Rules

2. In the *Further Notice*, the Commission proposes to adopt additional requirements in Part 14 of its rules to improve the accessibility of Interoperable Video Conferencing Services (IVCS), a form of advanced communication service (ACS).[4] First, the Commission seeks comment on whether to add a Part 14 performance objective for video conferencing services to provide text-to-speech and speech-to-speech capability for individuals with speech disabilities,[5] and whether to require IVCS platforms to provide sign language interpretation, and the costs and benefits of such actions.[6] The Commission also seeks comment on additional Part 14 performance objectives for user controls, video window characteristics, and audio description and visual image description services.[7] Further, the Commission seeks comment on Part 14 requirements on IVCS platforms for persons with cognitive and motor disabilities.[8] Finally, the Commission seeks comment on whether additional performance objectives are necessary to ensure that equipment and covered software are accessible to people with disabilities.[9]

3. The Commission seeks comment on additional requirements in Part 64 of its rules to facilitate the integration of telecommunications relay services (TRS) with video conferencing services. The Commission seeks comment on whether there are objective, bright line guidelines that it could use to determine when it would be warranted to compensate a Video Relay Service (VRS) provider for sending a team of two or more sign language interpreters to a video conference call.[10] The Commission also seeks comment on whether it should adopt additional amendments to its rules to facilitate the integrated provision of Internet Protocol Captioned Telephone Service (IP CTS) for participants within a video conferencing platform and how to prevent waste, fraud, or abuse of the Interstate TRS Fund.[11] Finally,

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[1] 5 U.S.C. § 603. The RFA, 5 U.S.C. §§ 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

[2] 5 U.S.C. § 603(a).

[3] *Id.*

[4] *See* 47 U.S.C. § 153(1) (definition of ACS).

[5] *Further Notice,* paras. 151-52.

[6] *Id.,* paras. 153-54.

[7] *Id.,* paras. 155-59, 163-67.

[8] *Id.*, paras. 171-75.

[9] *Id.*, paras. 176-77.

[10] *Id.*, paras. 179-83.

[11] *Id.,* paras. 184-87.

the Commission seeks comment on whether and how it could adopt rules to facilitate use of analog forms of TRS and Internet Protocol Relay Service (IP Relay) on video conferencing calls.[12]

4. In proposing these amendments to its Part 14 and Part 64 rules, the Commission addresses comments in the record that recommend specific accessibility requirements for video conferencing platforms to enable individuals with hearing, speech, vision, cognitive, and mobility disabilities to participate in video conference in a manner equivalent to the experience of individuals without such disabilities.

B. Legal Basis

5. The proposed action is authorized pursuant to sections 1, 2, 3, (4)(i), (4)(j), 225, and 716 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 153, 154(i), 154(j), 225, 617.

C. Description and Estimate of the Number of Small Entities Impacted

6. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the proposed rules and policies, if adopted.[13] The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[14] In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.[15] A "small business concern" is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.[16]

7. If the proposed rules are adopted, the rules will affect the obligations of providers of IVCS and providers of TRS. IVCS can be included within the broad economic category of All Other Telecommunications.

8. *All Other Telecommunications*. This industry is comprised of establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation.[17] This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems.[18] Providers of Internet services (e.g. dial-up ISPs) or voice over Internet protocol (VoIP) services, via client-supplied telecommunications connections are also included in this industry.[19] The SBA small business size standard for this industry classifies firms with annual receipts of $35 million or less as small.[20] U.S. Census Bureau data for 2017 show that there were 1,079 firms in this industry that

[12] *Id.*, paras. 188-89.

[13] 5 U.S.C. § 603(b)(c).

[14] *Id.* § 601(6).

[15] *Id.* § 601(3) (incorporating by reference the definition of "small-business concern" in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register."

[16] 15 U.S.C. § 632.

[17] *See* U.S. Census Bureau, 2017 NAICS Definition, "517919 All Other Telecommunications," https://www.census.gov/naics/?input=517919&year=2017&details=517919.

[18] *Id.*

[19] *Id.*

[20] 13 CFR § 121.201, NAICS Code 517919 (as of 10/1/22, NAICS Code 517810).

operated for the entire year.[21] Of those firms, 1,039 had revenue of less than $25 million.[22] Based on this data, the Commission estimates that the majority of "All Other Telecommunications" firms can be considered small.

9. *Telecommunications Relay Service (TRS) Providers*. Telecommunications relay services enable individuals who are deaf, hard of hearing, deafblind, or who have a speech disability to communicate by telephone in a manner that is functionally equivalent to using voice communication services.[23] Internet-based TRS connects an individual with a hearing or a speech disability to a TRS communications assistant using an Internet Protocol-enabled device via the Internet, rather than the public switched telephone network.[24] Video Relay Service (VRS) one form of Internet-based TRS, enables people with hearing or speech disabilities who use sign language to communicate with voice telephone users over a broadband connection using a video communication device.[25] Internet Protocol Captioned Telephone Service (IP CTS) another form of Internet-based TRS, permits a person with hearing loss to have a telephone conversation while reading captions of what the other party is saying on an Internet-connected device.[26] A third form of Internet-based TRS, Internet Protocol Relay Service (IP Relay), 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.[27] Providers must be certified by the Commission to provide VRS and IP CTS[28] and to receive compensation from the TRS Fund for TRS provided in accordance with applicable rules.[29] Analog forms of TRS, text telephone (TTY),[30] Speech-to-Speech Relay Service,[31] and Captioned Telephone Service,[32] are provided through state TRS programs, which also must be certified by the Commission.[33]

10. Neither the Commission nor the SBA have developed a small business size standard specifically for TRS Providers. All Other Telecommunications is the closest industry with a SBA small

[21] *See* U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Sales, Value of Shipments, or Revenue Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEREVFIRM, NAICS Code 517919, https://data.census.gov/cedsci/table?y=2017&n=517919&tid=ECNSIZE2017.EC1700SIZEREVFIRM&hidePreview=false.

[22] *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard. We also note that according to the U.S. Census Bureau glossary, the terms receipts and revenues are used interchangeably, *see* https://www.census.gov/glossary/#term_ReceiptsRevenueServices.

[23] 47 U.S.C. § 225(a)(3).

[24] 47 CFR § 64.601(a)(22). IP CTS can also be provided with an Automatic Speech Recognition programs producing the captions. Except as authorized or required by the Commission, Internet-based TRS does not include the use of a text telephone (TTY) or RTT over an interconnected Voice over Internet Protocol service.

[25] *Id.* § 64.601(a)(51).

[26] *Id.* § 64.601(a)(23).

[27] *Id.* § 64.601(24).

[28] *Id.* § 64.606(a)(2).

[29] *Id.* § 64.604(c)(5)(iii)(F).

[30] *Id.* § 64.601(a)(44) ("A machine that employs graphic communication in the transmission of coded signals through a wire or radio communication system.").

[31] *Id.* § 64.601(a)(41) ("A telecommunications relay service that allows individuals with speech disabilities to communicate with voice telephone users through the use of specially trained CAs who understand the speech patterns of persons with speech disabilities and can repeat the words spoken by that person.").

[32] A telephone captioning service provided over the public switched telephone network.

[33] *Id.* § 64.606(a)(1).

business size standard.[34] Internet Service Providers (ISPs) and Voice over Internet Protocol (VoIP) services, via client-supplied telecommunications connections are included in this industry.[35] The SBA small business size standard for this industry classifies firms with annual receipts of $35 million or less as small.[36] U.S. Census Bureau data for 2017 show that there were 1,079 firms in this industry that operated for the entire year.[37] Of those firms, 1,039 had revenue of less than $25 million.[38] Based on Commission data there are 14 certified Internet-based TRS providers and two analog forms of TRS providers.[39] The Commission however does not compile financial information for these providers. Nevertheless, based on available information, the Commission estimates that most providers in this industry are small entities.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

11. The proposed changes for which comment is sought in the *Further Notice,* if adopted, would impose new or modified reporting, recordkeeping or other compliance obligations on certain small entities that provide TRS, IVCS, or manufacturer equipment and software for use with IVCS. Although, the Commission cannot, at present, determine whether small entities will have to hire professionals to implement and comply with the proposed requirements in the *Further Notice*, nor can it quantify the cost of compliance for small entities, we anticipate the information we receive in comments, including cost and benefit analyses where requested, will help the Commission identify and evaluate relevant compliance matters for small entities, including compliance costs and other burdens that may result from the proposals and inquiries we make in the *Further Notice*. We expect that the approaches the Commission proposes will have minimal cost implications for covered entities because many of these requirements are part of existing reporting processes for these entities. Further, the rules themselves include a safeguard to ensure that the burden and cost of compliance will not be unreasonable: compliance is conditioned on each objective being "achievable," i.e., "with reasonable effort or expense."[40] An achievability determination must consider the nature and cost of the steps needed to meet the requirement, the technical and economic impact on the company's operation, the type of operations of the company, and the extent to which accessible services or equipment are already being offered by the company.[41]

12. *Accessibility of IVCS Equipment*. Part 14 of the Commission's rules requires that providers of ACS—including IVCS—and manufacturers of equipment used with ACS ensure that their services and equipment (including associated software) are accessible and usable by people with

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[34] *See* U.S. Census Bureau, *2017 NAICS Definition*, "*517919 All Other Telecommunications,*" https://www.census.gov/naics/?input=517919&year=2017&details=517919.

[35] *Id*.

[36] *See* 13 CFR § 121.201, NAICS Code 517919 (as of 10/1/22, NAICS Code 517810).

[37] *See* U.S. Census Bureau, *2017 Economic Census of the United States*, *Selected Sectors: Sales, Value of Shipments, or Revenue Size of Firms for the U.S.: 2017,* Table ID: EC1700SIZEREVFIRM, NAICS Code 517919, https://data.census.gov/cedsci/table?y=2017&n=517919&tid=ECNSIZE2017.EC1700SIZEREVFIRM&hidePreview=false. At this time, the 2022 Economic Census data is not available.

[38] *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard. We also note that according to the U.S. Census Bureau glossary, the terms receipts and revenues are used interchangeably, *see* https://www.census.gov/glossary/#term_ReceiptsRevenueServices.

[39] *See* Internet-Based TRS Providers | Federal Communications Commission (fcc.gov), https://www.fcc.gov/general/internet-based-trs-providers (last visited May 13, 2024); TRS by State and Territories, Federal Communications Commission (fcc.gov), https://www.fcc.gov/general/trs-state-and-territories (last visited May 13, 2024).

[40] 47 CFR § 14.10(b); 47 U.S.C. § 617(g).

[41] 47 CFR § 14.10(b)(2), (4); 47 U.S.C. § 617(g)(2), (4).

disabilities, unless these requirements are not achievable.[42] The Commission seeks comment on performance standards for ensuring equipment used with IVCS are accessible and usable by people with disabilities. Such performance objectives if adopted could modify reporting, recordkeeping, and compliance obligations of such entities.

13. *IVCS Recordkeeping.* The Commission's existing rules require that each provider of ACS (including IVCS) and each manufacturer of equipment used to provide IVCS maintain, in the ordinary course of business and for a reasonable period, records documenting the efforts taken by such manufacturer or service provider to implement sections 716 of the Communications Act of 1934, as amended:[43] (1) information about the manufacturer's or provider's efforts to consult with individuals with disabilities; (2) descriptions of the accessibility features of its products and services; and (3) information about the compatibility of such products and services with peripheral devices or specialized customer premise equipment commonly used by individuals with disabilities to achieve access.[44] If the Commission adopts additional performance objectives under part 14, it may increase the amount of information that entities must retain and report under the recordkeeping requirement. The time and resources needed to fulfill this additional recordkeeping should be minimal given the ongoing obligation to retain such records.

14. *IVCS Reporting.* The Commission's existing rules require that an officer of each provider of ACS (including IVCS) and an officer of each manufacturer of equipment (including software) used to provide ACS submit to the Commission an annual certificate that records are being kept in accordance with the above recordkeeping requirements, unless such manufacturer or provider has been exempted from compliance with section 716 under applicable rules.[45] The Commission anticipates that the form and content of the reporting will be unchanged, but the office may require additional time to confirm the records for any new performance objectives are kept in accordance with the reporting requirements.

15. *TRS Amendments.* The proposed amendments to the Commission's rules governing TRS are designed to facilitate the use of TRS Communications Assistants (CAs) in video conferences, while minimizing the risk of waste, fraud, and abuse of the TRS Fund. These modifications would only apply to an entity that provides TRS to the extent that users of that entity opts to participate in video conference calls. Otherwise, the TRS compliance and reporting requirements remain consistent with existing reporting obligations and our proposals would only clarify those obligations without changing the burden to small entities.

E. Steps Taken to Minimize Significant Impact on Small Entities, and Significant Alternatives Considered

16. The RFA requires an agency to describe any significant alternatives that could minimize impacts to small entities that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): "(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.[46]

[42] 47 CFR § 14.20(a)(1)-(2).

[43] 47 U.S.C. § 617.

[44] 47 CFR § 14.31(a).

[45] *Id.* § 14.31(b).

[46] 5 U.S.C. § 603(c)(1)-(4).

17. The *Further Notice* seeks comments on a number of alternatives that may impact small entities. The proposed Part 14 performance objectives would be subject to options to make a product or service accessible by incorporating accessibility features into the product or service itself or by relying on third party applications, peripheral devices, software, hardware, or CPE that are available to the consumer at nominal cost.[47] All Part 14 performance objectives are also subject to an "achievability" standard that takes into account the cost of compliance and the nature of the impact of compliance on a specific entity.[48] In addition, the rules provide an exemption for customized services and equipment and authorize the grant of waivers for multipurpose services and equipment.[49] These flexibility and achievability conditions apply equally to all covered entities, including small entities.

18. The proposed requirements would apply equally to all IVCS providers and are necessary to ensure video conferencing is accessible to and usable by people with disabilities. The amendments to the TRS rules will only apply to the extent a small entity TRS provider allows its users to participate in integrated IVCS calls. The Commission seeks comment on multiple alternatives to ensure it is able to implement rules to facilitate the availability of and compensation for multiple communications assistants during a video conference call, while minimizing the potential risk of waste, fraud, and abuse to the TRS Fund in allowing such practices. Further developing this record will allow the Commission to minimize potential burdens to small entities, while protecting the integrity of the TRS Fund.

19. The *Further Notice* seeks comment from all interested parties. Small entities are encouraged to bring to the Commission's attention any specific concerns they may have with the proposals outlined in the *Further Notice*. The Commission expects to consider the economic impact on, and alternatives for, small entities as identified in comments filed in response to the *Further Notice*, in reaching its final conclusions and taking action in this proceeding.

F. Federal Rules Which Duplicate, Overlap, or Conflict with, the Commission's Proposals.

20. None.

[47] 47 CFR § 14.10(a)(3).

[48] *Id.* § 14.20(a)(1)-(2); *id.* § 14.10(b) (definition of "achievable").

[49] *See* 47 CFR §§ 14.3 (exemption for customized equipment or services); 14.5 (waivers for multipurpose services and equipment).

STATEMENT OF
CHAIRWOMAN JESSICA ROSENWORCEL

Re: *Access to Video Conferencing*; *Implementation of Sections 716 and 717 of the Communications Act of 1934, as Enacted by the Twenty-First Century Communications and Video Accessibility Act of 2010*; *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*; *Petition of Sorenson Communications, LLC for a Limited Waiver of the Privacy Screen Rule*, CG Docket Nos. 23-161, 10-213, 03-123, Second Report and Order, and Further Notice of Proposed Rulemaking (September 26, 2024)

There was only one time I was in the White House with Stevie Wonder. It was over a decade ago, when the President signed the Twenty-First Century Communications and Video Accessibility Act into law. The iconic and fearless musician was there to celebrate this legislation that updated the Americans with Disabilities Act for the digital age.

Celebrations are important. We should take a moment to cheer the signing of a new civil rights law. But it is just as important that we give it meaning over time—and that is what we do here today.

In this decision we take note of changes in the way we communicate accelerated by the pandemic. When physical doors closed, the virtual spaces provided by conferencing platforms like Zoom, Teams, and WebEx became an essential way to connect for work, school, health, and simple contact with family and friends. And while we have moved back to in-person meetings, the role video conferencing platforms play in modern life has expanded.

Yet for those with disabilities this shift has not been easy. That's because inconsistent accessibility features on these platforms have not always made it possible to use them. This needs to change, because no matter who you are, you deserve the opportunity to communicate in the digital age.

Last year we began our efforts to remedy this problem. We issued an order clarifying that under the Twenty-First Century Communications and Video Accessibility Act, "interoperable video conferencing services" must comply with our accessibility rules.

Today we follow up with details. We update our rules to establish specific performance objectives so that video conferencing platforms offer captioning and also support third-party captioning and sign language interpretation services. We make clear users should have the ability to adjust features so that interpreters can always be visible on screen, regardless of who is speaking and who has joined a conference. On top of that, we amend our rules so that the Telecommunications Relay Service Fund supports the integration of relay services with video conferencing platforms. Then we seek comment on ways we can adopt other performance objectives for video conferencing services, in order to ensure that these platforms remain accessible over time.

Our efforts are consistent with the law and aligned with the fundamental idea behind it—that when technology changes our accessibility policies need to evolve and keep pace.

In his 1976 hit Sir Duke, Stevie Wonder sings "Music is a world within itself, with a language we all understand. With equal opportunity for all to sing, dance, and clap hands." I've always loved those words. I think they resonate with what we do here today—foster equal opportunity to communicate in a language that we understand, making it possible for everyone to create, participate, and take a stand.

Thank you to the staff responsible for today's effort, including Bob Aldrich, Michael Scott, Suzy Rosen Singleton, Will Schell, Bill Wallace, Ike Ofobike, Josh Mendelsohn, Stephen Wang, Molly Burgdorf, Dana Warrick, and Timothy Wynn from the Consumer and Governmental Affairs Bureau; Chin Yoo, David Konczal, Karen Schroeder, Richard Mallen, Terry Cavanaugh, Erika Olsen, and Joel Rabinovitz from the Office of General Counsel; Rachel Kazan, Andrew Wise, Mark Montano, Michelle Schaefer, Emily Talaga, Patrick Brogan, and Kim Makuch from the Office of Economics and Analytics; Soumitra Das and Andrew Mulitz from the Office of the Managing Director; Sharon Lee from the Enforcement Bureau; and Joycelyn James from the Office of Communications Business Opportunities.

STATEMENT OF
COMMISSIONER GEOFFREY STARKS

Re: *Access to Video Conferencing*; *Implementation of Sections 716 and 717 of the Communications Act of 1934, as Enacted by the Twenty-First Century Communications and Video Accessibility Act of 2010*; *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*; *Petition of Sorenson Communications, LLC for a Limited Waiver of the Privacy Screen Rule*, CG Docket Nos. 23-161, 10-213, 03-123, Second Report and Order, and Further Notice of Proposed Rulemaking (September 26, 2024)

In 2023, the Commission took a critical – if overdue – step. We made clear that interoperable video conferencing services (IVCS) – think Teams, Zoom, Google Meet, etc. – are subject to the FCC's accessibility requirements. At the time, I said that IVCS had become one of the primary ways that we communicate. That statement still rings true today.

So I am proud that today's item continues the push for Americans that need access to these critical services. Last year, we said that IVCS must comply with the Commission's existing accessibility performance objectives. Today, we amend and strengthen those objectives. Following the recommendations of our Disability Advisory Committee (DAC), we will now require IVCS providers to interconnect with third party captioning and sign language interpretation services (e.g., telecommunications relay services (TRS)). We will also require them to give users greater control over the display of captions, speakers, signers, and other accessibility features. This means that a deaf user will be able to pin their interpreter, for example, and a low vision user will have greater control over screen reader functionality.

We also recognize that our work to ensure full and equal access to IVCS is not done. In the Further Notice, we seek comment on additional updates. Are more specific performance objectives needed to ensure accessibility for people with speech disabilities, or people with cognitive and mobility disabilities? Are additional amendments needed to ensure the accessibility of equipment and software used to provide and access IVCS? I look forward to the record that will develop on these and other issues.

Finally, I would be remiss if I didn't note that the ubiquity of IVCS is yet another reason why it is critical to ensure that all Americans have access to high-speed broadband. In a world where everything from parent-teacher conferences, to telehealth visits, to calls to grandma and grandpa happen over IVCS, neither disability, nor location, nor income should stand in the way of Americans being connected.

Thank you to the stakeholders who are hard at work improving and ensuring the accessibility of IVCS, to the DAC, and of course to the Commission staff who worked on this item.

STATEMENT OF
COMMISSIONER ANNA M. GOMEZ

Re: *Access to Video Conferencing*; *Implementation of Sections 716 and 717 of the Communications Act of 1934, as Enacted by the Twenty-First Century Communications and Video Accessibility Act of 2010*; *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*; *Petition of Sorenson Communications, LLC for a Limited Waiver of the Privacy Screen Rule*, CG Docket Nos. 23-161, 10-213, 03-123, Second Report and Order and Further Notice of Proposed Rulemaking (September 26, 2024)

The COVID-19 pandemic reshaped our daily lives. During the difficult time when we had to stay apart from each other to protect our health and that of others, we relied on technology to work, study, visit our doctors, and to maintain all too important connections. Interconnected video conferencing services became our saving grace – a window to family, friends, and colleagues. A necessity to maintain a sense of community despite our physical distance.

I remember how important it was to see my family using a video conferencing service. We even celebrated my partner's birthday on a video call with family and friends. But what became an essential tool could not be used to its fullest promise by people with disabilities. For many people with disabilities, these necessary tools fall short. No longer.

Today, we require interoperable video conferencing services to make accessibility a priority. By updating our Part 14 rules, we promote improvements like accurate and synchronous captioning, allowing users to connect with third-party captioning and sign language interpretation services, and interface controls that allow users to adjust the display of captions, speakers, and signers. This is a big deal.

When we encourage accessibility by design, we all win. I look forward to seeing collaborations between IVCS providers, TRS providers, and providers of third-party services to innovate on accessibility tools in interoperable video conferencing services, and ultimately to increase access to critical modern tools for people with disabilities.

Thank you to the Consumer and Governmental Affairs Bureau for your hard work on this pivotal item.