Recommendation of the Federal Communications Commission (FCC) Disability Advisory Committee (DAC) on Telecommunications Relay Service (TRS) Use on Video Conferencing Platforms

Prepared by the Video Conferencing Accessibility Working Group
Adopted by the Disability Advisory Committee on February 24, 2022

Introduction

During the COVID-19 pandemic, use of Internet Protocol (IP)-based video conferencing platforms has grown significantly at home, in the workplace, in education, in healthcare, and across American society.[1] The Commission asked the DAC to prepare a report and recommendations on the opportunities and challenges of utilizing telecommunications relay service (TRS) on video conferencing platforms, including consideration of:

- Technical challenges presented by using TRS for accessing video conferencing and ways to address those challenges, and
- The appropriateness of using TRS versus other forms of accommodations during a video conference.

To inform this report, the Working Group received presentations from accessibility advocates, academic experts, TRS providers, and video conferencing platform providers.

As it relates to TRS and video conferencing platforms, the Commission has jurisdiction as required and described in the Communications Act of 1934 as amended by the Telecommunications Act of 1996, the Communications and Video Accessibility Act (CVAA), Title IV of the Americans with Disabilities Act of 1990, and other federal statues, and the Commission's implementing regulations. Except to the extent noted below, the DAC offers no opinion about whether or, if so, the extent to which the Commission has the requisite authority to enshrine the recommendations in this Report in its regulations.[2] However, the DAC recommends that the Commission, at a minimum, convene or encourage the

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[1] The DAC's pandemic working group identified various other issues concerning the accessibility of video conference platforms and recommended that the FCC clarify the appropriate uses of TRS during a video conference, including access to telehealth services, and to provide guidance on conference protocols to ensure accessibility and full inclusion for participants who are blind or have low vision. *See generally* Disability Advisory Committee, *Concerns and Lessons Learned regarding Communication Access for People with Disabilities During the Pandemic* (Sept. 9, 2021), https://www.fcc.gov/file/21920/download. This report builds on the DAC's previous recommendation.

[2] Specifically, the DAC offers no opinion about the scope of the Commission's jurisdiction over video conferencing services, including on the as-yet unresolved scope of "interoperable video conferencing services." *See* Implementation of Sections 716 and 717, Further Notice of Proposed Rulemaking, CG Docket Nos. 10-213 and 10-145, WT Docket No. 96-198, 26 FCC Rcd 14,557, 14,684–87, ¶¶ 301–305 (Oct. 7, 2011), https://www.fcc.gov/document/accessibility-rules-advanced-communications-services-0 ("seek[ing] comment on . . . alternative definitions of 'interoperable' in the context of video conferencing services and equipment used for those services").

convening of consumers, academic experts, TRS providers, and video conferencing providers to facilitate progress on the recommendations.

<div align="center">**Background**</div>

As of this date, 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 platform by dialing in via the public switched telephone network (PSTN). A number of problems emerge from this arrangement.

I. Circumstances Where PSTN Interconnection Is Not Possible

Some video conferencing platforms do not offer PSTN interconnection for video conferencing, or do not allow it for all accounts. This means that for some video conferences, users may be unable to interconnect TRS at all.

Built-in Accessibility Features. Without TRS interconnectivity, users must turn to alternative, often inferior options. Users sometimes can turn to video conferencing platforms' built-in accessibility features. For example, some 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; for example, all government calls on certain platforms do not allow the use of ASR-based captioning, apparently out of privacy and security concerns. When ASR-based captions are available, they may be of insufficient quality to ensure functional equivalence and are not subject to the minimum standards required for TRS providers. And for users who communicate primarily or exclusively using American Sign Language (ASL) or other sign languages, including those who use Certified Deaf Interpreters (CDIs) and other types of interpreters, no platforms provide automated sign language solutions.

TRS and Legal Obligations to Provide Access. In some situations, an organization or place of public accommodation (e.g., a healthcare provider, school, or employer) may have legal obligations to provide access, including situations where services such as video remote interpreting (VRI) are required to provide in-person access and video relay service (VRS) cannot be used. However, there may be closely related situations involving a video conference where a TRS user may not be able to rely on a third party to ensure access (e.g., a meeting scheduled on short notice or where there is not a legal obligation to provide accommodations, etc.) and the ability to interconnect TRS is critical. While the legal considerations surrounding these situations are complex and the neat legal divide between in-person meetings and remote communications has eroded as a result of the shift to videoconferencing during the pandemic,[3] it is critical that users have access to TRS to

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[3] *See generally* Blake Reid, Christian Vogler, and Zainab Alkebsi, *Telehealth and Telework Accessibility in a Pandemic-Induced Virtual World*, Colo. L. Rev. Forum (Nov. 9, 2020), https://lawreview.colorado.edu/digital/telehealth-and-telework-accessibility-in-a-pandemic-induced-virtual-world/.

ensure their experience using video conferencing is functionally equivalent to their hearing counterparts.

Challenges of Out-of-Band Access. Moreover, the process of scheduling access to a video conference out-of-band can add time, difficulty, and expense to the scheduling of a video conference that, for a comparable phone conference, would be largely ameliorated by the availability of a wide array of TRS providers and compensated via the TRS Fund. Participants such as employers and healthcare providers that bear the legal obligation to pay for a captioner or interpreter in some cases delay or avoid scheduling video conferencing with deaf or hard of hearing participants. And in some cases, it may be impossible to schedule an interpreter or captioner soon enough for a video conference, effectively denying TRS users the opportunity to participate in video conferences planned on short notice.

Integrating Out-of-Band Accessibility. When out-of-band interpreters, transliterators, or captioners can be secured, many video conferencing platforms do not provide sufficient accessibility features to ensure that they can be integrated properly in a video conference to ensure accessibility. Some video conferencing platforms have problems properly joining and integrating caption streams to be displayed on streams, requiring users to open a separate web browser or application to view captions. 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' display, or encounter errors in where dynamic speaker display functionality is not properly triggered or malfunctions when a sign-language user begins to speak.

II.   Circumstances Where PSTN Interconnection Is Possible

While some video conferencing platforms allow users to interconnect their preferred TRS provider via the PSTN for some video conferences, this arrangement may introduce additional problems.

Multiple-Device Issues. First, users must use two devices—one to participate in the video portion of the video conference, and the other to interconnect via their TRS provider to the audio portion of the video conference. As a result:

- The threshold cost of an additional device may prevent some users, including low-income users, from participating in video conferences altogether;

- The introduction of an additional device introduces additional networking needs, including higher bandwidth and multiple connections for cellular networks, leading to additional costs and technical constraints that may be prohibitive for some users;

- The use of multiple devices introduces significant cognitive load by requiring the navigation of multiple user interfaces that can cause confusion, fatigue, and other barriers to fully participating in a video-conference;

- TRS users must navigate having two separate "presences" on the video conference and typically cannot directly control their PSTN-interconnected TRS

presence, introducing confusion and a need to rely on the host to handle spotlighting, pinning, transitioning between breakout rooms, and other typical features.

Audio Quality Issues. Moreover, poor audio quality often results from the PSTN interconnection. This means that, for example, video relay service (VRS) users may encounter interpretation errors, and Internet Protocol Captioned Telephone Service (IP CTS) users may have additional difficulty comprehending speech or encounter additional captioning errors.

Multiple-User Issues. Additional problems also may manifest when multiple TRS users join a video conference via PSTN interconnection and separately via video. Multiple TRS users lead to multiple "instances" of multiple people on the call, increasing the overall cognitive load for video conference hosts and participants to process discussion and facilitate shared dialogue.[4]

Compensability and Coordination Issues. While some TRS providers have begun experimenting with alternative solutions to provide native TRS for video conferences, these experiments have encountered two critical problems. First, though it is widely understood that providing TRS for calls to PSTN-interconnected video conferences can be compensated from the TRS Fund, it is not clear that providing services for non-PSTN interconnected video conferences can be similarly compensated from the TRS Fund under the Commission's existing rules.

As a result, providers thus far have been limited to providing experimental services on a complimentary basis—an economically unsustainable solution approach in the long run. Second, arranging for these services requires out-of-band coordination between a TRS user and their preferred provider—and the host of the meeting, if it is not the user—to ensure that one or more communications assistants (CAs) can successfully join the meeting, introducing additional and unnecessary friction and complexity.

Solutions and Recommendations

The presentations to the Working Group made clear that some discussions had taken place between TRS providers and video conferencing platform vendors, but that progress was preliminary. Accordingly, additional work is necessary to arrive at the specifics of a cross-provider, cross-platform solution.

Against the backdrop of this complex problem space, four areas for necessary progress emerged:

- Facilitating a technical mechanism for TRS providers to natively interconnect TRS services, including video, audio, captioning, and text-based relay to video conferencing platforms;

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[4] For example, an individual who logs in to a meeting via video and also separately dials in via the PTSN on a separate device will appear to other participants in the meeting as two separate participants—one video participant and one phone participant.

- 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.

Within each of these areas, this report offers recommendations.[5]

I. Facilitating a Technical Mechanism for TRS-to-Video Conference Interconnection

Recommendation: The Commission should either directly convene or encourage the convening of TRS providers and video conferencing platform vendors, with the input of accessibility advocates and academic experts, to facilitate the development of an application programming interface (API) or other standardized technical mechanism to allow TRS providers to directly interconnect to video conferencing platforms. The Committee acknowledges that multiple convening contexts, including Commission rulemakings, standards-setting-bodies, existing industry standardization efforts, and informal efforts are possible. The Committee does not endorse a specific approach but encourages the Commission to select an approach that encourages rapid development of a mechanism, given the urgency of facilitating video conferencing accessibility.

II. Ensuring Seamless User Initiation of TRS

Recommendation: As part of its convening, the Commission should work with all stakeholders to ensure that TRS users can use standard user interfaces on all video conferencing platforms to join their preferred TRS provider to a video conference, in real-time. Once a TRS CA has been joined to a video conference, the video conference platform should appropriately integrate TRS features, including video and audio for VRS, captioning for IP CTS, and text for text-based relay, into the video conference. All users should be able to select TRS providers of their choosing on video conferencing platforms of their choosing using the API or other standardized mechanism. Platforms and TRS providers should not be able to enter into exclusivity arrangements; while reasonable implementation schedules for integration should be permissible when new videoconferencing platforms and new TRS providers come online, videoconferencing platforms and TRS providers should undertake reasonably expedient efforts to integrate with all widely used platforms and providers. A CA may be used by multiple users on the same video conference as appropriate where the users share a preferred TRS provider. Best practices for the use of multiple CAs, including certified deaf interpreters (CDIs), should be developed for complex video conferencing scenarios.

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[5] None of these recommendations are intended to suggest that that integrating TRS with video conferencing services is a replacement for existing TRS functionality, including the ability to contact 9-1-1 via TRS.

III. Addressing CA Integration and Overall Accessibility of Video Conferencing Platforms

Recommendation: As part of its convening, the Commission should work with all stakeholders to ensure that all video conferencing platforms adequately integrate TRS CAs in order to address overarching accessibility barriers. While a detailed set of performance objectives is beyond the scope of this report, the Commission should ensure at a minimum that video conferencing platforms:

- Include built-in closed captioning functionality that is available to all users, including to users with free accounts if the platform provides such accounts;
- Fully integrate support for TRS CAs, including video, audio, captioning, and text communication; and
- Allow users, including CAs, to control the activation and customize the appearance of captions and video interpreters, including caption activation, size, color, background, layout, and positioning, pinning and multi-pinning, side-by-side views, hiding non-video participants, including ASL interpreters, CDIs, other interpreters, and cued language transliterators, and exercise this control on their own clients without reliance on video conference hosts.

IV. Compensation of TRS for Video Conferencing Services

Recommendation: The Commission should modify or clarify its rules as necessary, opening a new proceeding if it believes necessary,[6] to ensure that certified TRS providers of all types of TRS, including future forms of TRS that the Commission may approve, can be compensated from the TRS Fund for TRS provided via native interconnection to video conferencing platforms.[7] To the extent that this modification or clarification may raise issues around compensation, the TRS Fund and its contribution base, and other related issues, the Commission should address them as appropriate.

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[6] Members of the Committee hold diverging views on whether a new proceeding is necessary. The Committee recommends that the Commission approach this issue in the most expedient possible way that is consistent with the Commission's authority and legal obligations.

[7] The Committee does not intend this recommendation to question in any way the widespread understanding that that providing TRS for calls to PSTN-interconnected video conferences can be compensated from the TRS Fund.