

**Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Misuse of Internet Protocol (IP) Captioned Telephone Service)	CG Docket No. 13-24
)	
Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities)	CG Docket No. 03-123
)	
)	

MEMORANDUM OPINION AND ORDER

Adopted: December 11, 2020

Released: December 11, 2020

By the Chief, Consumer and Governmental Affairs Bureau:

I. INTRODUCTION

1. By this Memorandum Opinion and Order,¹ the Consumer and Governmental Affairs Bureau (Bureau) of the Federal Communications Commission (Commission) conditionally grants Mezmo Corporation d/b/a InnoCaption (InnoCaption)'s application to provide Internet Protocol Captioned Telephone Service (IP CTS) on a fully automatic basis. Specifically, we conditionally certify InnoCaption to provide telephone captions using only automatic speech recognition (ASR)—without the participation of a communications assistant (CA)—to supplement InnoCaption's current CA-assisted approach. We dismiss InnoCaption's associated waiver request because the rule for which InnoCaption requests a waiver does not apply to relay service using ASR.²

¹ See Amendment to Application of Mezmo Corporation for Certification as a Provider of IP Captioned Telephone Services, CG Docket Nos. 13-24 and 03-123 (filed Mar. 13, 2020) (InnoCaption Amendment), https://ecfsapi.fcc.gov/file/10313420020708/FINAL_Amendment%20to%20InnoCaption%20Application_%2003.13.2020.pdf. IP CTS is a form of Internet-based telecommunications relay service (TRS) that allows individuals with hearing loss to both read captions and use their residual hearing to understand a telephone conversation. See 47 CFR § 64.601(a)(22) (defining IP CTS). Captions may be displayed on a specialized IP CTS device or an off-the-shelf computer, tablet, or smartphone. Internet-based TRS providers obtain certification from the Commission in order to be eligible to receive compensation for minutes of use from the TRS Fund. *Id.* § 64.606.

² See Mezmo Corporation Request for Limited Waiver, CG Docket Nos. 13-24 and 03-123 (filed Mar. 13, 2020) (InnoCaption Waiver Request), https://ecfsapi.fcc.gov/file/10313298322251/FINAL_Request%20for%20Limited%20Waiver_3.13.2020.pdf. While the Bureau ordinarily announces certification decisions by a document formally captioned as a Public Notice, we elect to caption this decision as a Memorandum Opinion and Order because it decides the associated waiver request. We deem this Memorandum Opinion and Order to constitute conditional certification that InnoCaption's proposed service is eligible for compensation from the Interstate TRS Fund in accordance with section 64.606(b)(2) of the Commission's rules. Subject to a final determination of its qualifications, InnoCaption's proposed service is eligible for compensation from the Interstate TRS Fund in accordance with section 64.606(b)(2) of the Commission's rules. See 47 CFR § 64.606(b)(2); see also *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CG Docket No. 03-123, 35 FCC Rcd 4568, 4568-69 n.3 (CGB 2020) (*MachineGenius*) (conditionally certifying MachineGenius, Inc., to provide ASR-only IP CTS); *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 5635, 5635-36 n.3 (CGB 2020) (*Clarity*) (conditionally certifying Clarity Products, LLC, to provide ASR-only IP CTS).

II. BACKGROUND

2. InnoCaption currently is conditionally certified to provide CA-assisted IP CTS with support from the Interstate TRS Fund,³ relying on stenographers as CAs to produce telephone captions using the Communications Access Realtime Translation (CART) method.⁴ In 2018, the Commission ruled that an IP CTS provider may be conditionally authorized to use ASR to generate captions without a CA—in other words, to provide fully automatic IP CTS—if the Commission finds that the provider’s service using this method will meet or exceed the Commission’s minimum TRS standards.⁵ On March 13, 2020, InnoCaption amended its application for IP CTS certification⁶ to request approval to provide fully automatic IP CTS in addition to, and in combination with, its CA-assisted service.⁷ InnoCaption separately filed a request for waiver of the Commission’s rule requiring TRS providers to alert users when recorded messages or interactive menus are encountered during a call.⁸

3. According to the amendment, fully automatic IP CTS will be available as an optional “ASR Calling Feature” on the company’s “InnoCaption+” mobile application.⁹ This feature has been

³ See *Notice of Conditional Grant of Application of Miracom USA, Inc., for Certification as a Provider of Internet Protocol Captioned Telephone Service Eligible for Compensation from the Telecommunications Relay Services Fund*, CG Docket Nos. 03-123, 10-51, and 13-24, Public Notice, 29 FCC Rcd 5105, 5107-09 (CGB 2014) (*InnoCaption Conditional Certification Notice*); see also *Structure and Practices of the Video Relay Service Program*, CG Docket No. 10-51, Second Report and Order and Order, 26 FCC Rcd 10898, 10914-15, para. 37 (2011) (*2011 Internet-based TRS Certification Order*) (authorizing conditional certification of Internet-based TRS providers).

⁴ *InnoCaption Conditional Certification Notice*, 29 FCC Rcd at 5106-07. Under the CART method of providing IP CTS, a stenographer types the words spoken by a caller into a program that delivers the typed captions to the IP CTS user’s device. In the method used by most IP CTS providers, “the content communicated orally by the other party to a call is revoiced by the communications assistant (CA) into a speech recognition computer program, which produces caption text automatically.” *Id.* n.8; 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 03-123, Report and Order and Further Notice of Proposed Rulemaking, 28 FCC Rcd 13420, 13423, para. 6 n.7 (2013), *vacated in part, Sorenson Communications, Inc. and CaptionCall LLC v. FCC*, 755 F.3d 702 (D.C. Cir. 2014).

⁵ *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 03-123, Report and Order, Declaratory Ruling, Further Notice of Proposed Rulemaking, and Notice of Inquiry, 33 FCC Rcd 5800, 5827-36, paras. 48-64 (2018) (*2018 ASR Declaratory Ruling*).

⁶ When an applicant is conditionally certified to provide Internet-based TRS, the original application remains in pending status until full certification is granted. See *2011 Internet-based TRS Certification Order*, 26 FCC Rcd at 10914-15, para. 37; see also *InnoCaption Conditional Certification Notice*, 29 FCC Rcd at 5111.

⁷ InnoCaption Amendment. On October 1, 2020, InnoCaption filed a supplement to its amendment with additional information regarding its ASR-only service. Supplement to Amendment of Application of Mezmo Corporation for Certification as a Provider of IP Caption Telephone Services, CG Docket Nos. 13-24 and 03-123 (filed Oct. 1, 2020) (InnoCaption Supplement), <https://ecfsapi.fcc.gov/file/1001106028181/ASR%20Supplement%20-%20Final%20Redacted%20-%2010.01.2020.pdf> (redacted); see also Substitute Supplement to Amendment to Application of Mezmo Corporation for Certification as a Provider of IP Captioned Telephone Services, CG Docket Nos. 13-24 and 03-123 (filed Dec. 3, 2020) (InnoCaption Substitute Supplement) (withdrawing confidentiality request for confidential treatment of certain material included in the InnoCaption Supplement). In this Order, references in the text to the “amendment” include both the InnoCaption Amendment and the later-filed InnoCaption Supplement.

⁸ See InnoCaption Waiver Request.

⁹ InnoCaption Amendment at 2-3; see also *InnoCaption Conditional Certification Notice*, 29 FCC Rcd at 5106 (describing InnoCaption’s mobile application); Letter from Cristina O. Duarte, InnoCaption, to Marlene H. Dortch,

(continued...)

tested in a beta trial since March 2019, logging more than 123,000 minutes of ASR-captioned calls prior to InnoCaption's March 2020 filing.¹⁰ Captions are produced using the Google Cloud Speech-to-Text API, augmented with InnoCaption's proprietary software.¹¹

4. According to the amendment, InnoCaption has designed its hybrid IP CTS offering to enable users to decide which form of IP CTS best meets their needs.¹² InnoCaption plans to offer its users a choice among three "Caption Modes": CA Only, which routes calls to a CA unless the user affirmatively selects ASR for a specific call; CA Priority, which routes calls to a CA as the default mode but temporarily routes calls to ASR in the event of an unprojected call surge; and ASR Only, which by default routes all calls to ASR except for 911 calls, which are routed to a CA.¹³ Regardless of which Caption Mode they select—including CA Only and ASR Only—users will be able to switch between ASR and CA service during a single call.¹⁴ According to InnoCaption, users may find that each caption mode has advantages for different kinds of telephone conversations. For example, InnoCaption suggests hypothetically that ASR may be better at processing a computer-generated voice in an interactive voice response (IVR) menu, while CAs may provide better captioning for persons with heavy accents.¹⁵ The ASR mode also may be favored by users who prefer not to have a CA involved in their personal calls.¹⁶ With switching capability, InnoCaption explains, consumers can redirect each call to ASR or a CA, based on their own assessments of how each conversation is best handled. InnoCaption believes that providing consumers the ability to select the captioning mode that they find most suitable for a particular call "will enhance the usability of ASR captions and help achieve functional equivalency."¹⁷

FCC, CG Docket Nos. 03-123 and 10-51, Notice of Substantive Change (filed Mar. 8, 2019) (identifying InnoCaption's current mobile application as "InnoCaption+").

¹⁰ InnoCaption Amendment at 2-3. InnoCaption notes that it has not sought compensation from the TRS Fund for any beta trial minutes. *Id.* at 2 n.5.

¹¹ *Id.* at 8. Information on the Google Cloud Speech-to-Text API is available at <https://cloud.google.com/speech-to-text>.

¹² InnoCaption Amendment at 3-4.

¹³ *Id.*

¹⁴ *Id.* If a user attempts to switch from ASR to CA service in the middle of a call, and a live CA is not available, the user will not be placed into a queue, but rather will receive a pop-up notice that a CA is not available and the suggestion that the user try again later. *Id.* At the time InnoCaption filed its initial amendment, the switching feature was still in development. *Id.* at 4. Subsequently, InnoCaption completed development and added this feature to its mobile application. Letter from Cristina O. Duarte, InnoCaption, to Marlene H. Dortch, FCC, CG Docket Nos. 13-24 and 03-123, at 1 (filed May 5, 2020) (May 5 InnoCaption Update). Accordingly, objections to granting the amendment before InnoCaption implemented this feature are moot. *See* Comments of CaptionCall, LLC on the Amendment of Mezmo Corp. (d/b/a InnoCaption) for Certification to Provide Automatic Speech Recognition Based Internet Protocol Captioned Telephone Services, at 13 (rec. Apr. 20, 2020) (CaptionCall Comments) (suggesting that the Commission should require InnoCaption to submit another amendment "once this functionality is ready to be deployed"); Comments of Hamilton Relay, Inc., at 4 (rec. Apr. 20, 2020) (Hamilton Comments) (without deployment of the switching function, InnoCaption's ASR "is not a functionally equivalent service").

¹⁵ InnoCaption Amendment at 5.

¹⁶ *Id.* (describing specific calling scenarios).

¹⁷ *Id.* at 7. "The ability to switch between captioning modes was developed to account for calls where a user feels that the ASR Calling Feature is no longer meeting their accessibility needs and ensures that [] they are able to seamlessly switch over to a CART CA without having to disconnect the call." *Id.* at 4.

5. On March 20, 2020, the Bureau released a Public Notice seeking comment on InnoCaption's amendment and waiver request.¹⁸ Two IP CTS providers and two consumer groups filed comments, and InnoCaption filed reply comments.¹⁹ In addition, 12 InnoCaption customers filed comments in support of its amendment.²⁰ InnoCaption filed a Supplement to its amendment on October 1, 2020, and no party has submitted responses to the Supplement.²¹

III. CERTIFICATION

6. We find that InnoCaption's amendment facially meets the certification requirements, and we conditionally grant the amendment to verify—based on actual operating experience—that InnoCaption's hybrid offering of fully automatic captioning in combination with CA-assisted service meets or exceeds the Commission's minimum TRS standards.²² By granting conditional certification for InnoCaption's use of this method, we eliminate unnecessary delay in the availability of relay services using improved technologies.²³

7. *Sufficiency of the Amendment.* InnoCaption is already conditionally certified to provide CA-assisted IP CTS and provides annual confirmation that its CA-assisted IP CTS is in compliance with the Commission's minimum TRS standards.²⁴ Therefore, we need not reevaluate InnoCaption's overall fitness to provide IP CTS. Instead, our evaluation is limited to the extent to which InnoCaption's

¹⁸ See *Comment Sought on Amendment to Application of InnoCaption for Certification as a Provider of IP Captioned Telephone Services*, CG Docket Nos. 03-123 and 13-24, Public Notice, 35 FCC Rcd 2818 (CGB 2020).

¹⁹ See Hamilton Comments; CaptionCall Comments; Clear2Connect Comments (rec. Apr. 20, 2020) (Clear2Connect Comments); Comments on Amendment to Application of InnoCaption for Certification as a Provider of IP Captioned Telephone Service of Hearing Loss Association of America (HLAA), Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI), National Association of the Deaf (NAD), Association of Late-Deafened Adults (ALDA), Cerebral Palsy and Deaf Organization (CPADO), American Association of the Deaf-Blind (AADB), Deaf Seniors of America (DSA), Deaf/Hard of Hearing Technology Rehabilitation Engineering Center (DHH-RERC), Rehabilitation Engineering Research Center on Universal Interface & Information Technology Access (IT-RERC) (rec. Apr. 20, 2020) (Consumer Groups and Accessibility Researchers); see also Letter from Tamar Finn, Counsel to ClearCaptions, LLC, to Marlene H. Dortch, FCC, CG Dockets 13-24 and 03-123, at 2 (filed Apr. 16, 2020) (ClearCaptions *Ex Parte*); InnoCaption Reply (rec. May 5, 2020).

²⁰ See Sharon King (rec. May 7, 2020); Dr. Tina Childress (rec. Apr. 20, 2020); Mary Beth Napoli (rec. Apr. 20, 2020); Mary Karas (rec. Apr. 20, 2020); Barbara Chertok (rec. Apr. 20, 2020); Ron R. Bibler (rec. Apr. 20, 2020); Kevin N. Ponder (rec. Apr. 20, 2020); Louis Petroni (rec. Apr. 17, 2020); Daniel Scott (rec. Apr. 16, 2020); Patrick T. (rec. Apr. 16, 2020); Richard Engle (rec. Apr. 13, 2020) (styled "13-24"); Philip Zazove (rec. Apr. 13, 2020).

²¹ Although not specifically addressing InnoCaption's application, on November 20, 2020, RAZ Mobility filed a letter, which is addressed later in this Order, arguing generally that the Commission should not grant additional applications to provide fully automatic IP CTS. See Letter from Robert Felgar, RAZ Mobility, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 13-24 and 03-123 (filed Nov. 20, 2020) (RAZ Mobility November 20 Letter); see also Letter from Robert Felgar, RAZ Mobility, to Marlene H. Dortch, Secretary, FCC, CG Docket No. 13-24 (filed Sept. 14, 2020) (RAZ Mobility September 14 Letter) (advocating various changes in the Commission's TRS rules in light of Google's recently introduced ASR feature for smartphones).

²² 47 CFR § 64.606(b)(1).

²³ 47 U.S.C. § 225(d)(2) (requiring Commission to ensure that its regulations do not discourage or impair the development of improved technologies); see also *2018 ASR Declaratory Ruling*, 33 FCC Rcd at 5807, para. 13 (noting that, due to recent advances, ASR "holds great promise for a telephone communication experience that may be superior to and more efficient than existing IP CTS"); *id.* at 5829-30, para. 52 (allowing the introduction of ASR without delay will enable the Commission to "gather data that can inform our adoption of further measures to improve its utility").

²⁴ See, e.g., Letter from Cristina O. Duarte, InnoCaption, to Marlene H. Dortch, FCC, CG Docket No. 03-123, Att. 3 (filed July 7, 2020) (redacted) (2020 Annual Report); see also Letter from Cristina O. Duarte, InnoCaption, to Marlene H. Dortch, FCC, CG Docket No. 03-123, at 2 (filed July 16, 2019) (redacted) (2019 Annual Report).

proposed hybrid service will affect InnoCaption's ability to continue to meet or exceed the Commission's minimum standards—especially the Commission's technical, operational, and emergency calling standards for TRS, which are most likely to be affected by any change in the mode of delivery of IP CTS.²⁵

8. InnoCaption's amendment is facially sufficient to show that the Commission's operational, technical, and emergency call-handling standards will continue to be met and that compliance with other applicable TRS standards will not be adversely affected, subject to further verification pursuant to the conditional nature of this certification. The amendment provides a detailed explanation with documentary and other evidence as to how the applicant's hybrid service will meet or exceed all technical and operational standards applicable to IP CTS.²⁶ Among other things, InnoCaption has sufficiently supported its claims regarding its use of ASR and the efficacy of such use in meeting the relevant minimum TRS standards relating to speed of answer, caption speed (or caption delay), accuracy, readability, verbatim transcription, privacy, and emergency call handling.²⁷ With respect to caption delay and accuracy, performance testing of CA-assisted and ASR-based IP CTS technologies by the Commission's National Test Lab provides further assurance that InnoCaption's proposed service will meet or exceed minimum TRS standards.²⁸

9. *Speed of Answer.* InnoCaption has established that with its chosen ASR technology, it will substantially exceed the minimum TRS standard for speed of answer.²⁹ InnoCaption describes ASR-mode calls as connecting to "virtual" CAs hosted on its system.³⁰ Unlike live CAs, however, a virtual CA can be activated immediately, regardless of current traffic levels.³¹ In addition, InnoCaption notes that it can quickly increase the number of available virtual CAs at any time to meet demand and utilization trends.³² During 18 months of beta-testing, InnoCaption reports that over 99% of calls were connected in less than one second, greatly exceeding the minimum TRS standard.³³

²⁵ See 47 CFR § 64.604(a) (operational standards); *id.* § 64.604(b) (technical standards); *id.* § 9.14 (emergency call handling).

²⁶ See InnoCaption Amendment at 7-9; InnoCaption Substitute Supplement at 2-7.

²⁷ See 47 CFR §§ 64.604(a)(1)(ii) (accuracy and readability), (iii) (caption speed or delay), (2)(i) (confidentiality of call content), (2)(ii) (verbatim transcription), (b)(2) (speed of answer); 9.14 (emergency call handling).

²⁸ See FCC Telecommunications Relay Services Project, Captioning Device Performance Testing, InnoCaption Automatic Speech Recognition (ASR) Assessment (July 2020), CG Docket Nos. 13-24 and 03-123 (filed Nov. 13, 2020) (NTL July 2020 Test Report). The National Test Lab is operated by MITRE Corporation (MITRE) as part of the CMS Alliance to Modernize Healthcare, a Federally Funded Research and Development Center sponsored by the Centers for Medicare & Medicaid Services (CMS). See CMS Alliance to Modernize Healthcare, Internet Protocol Caption Telephone Service (IP CTS) Devices: Summary of Phase I Activities, at 1 (July 24, 2017), CG Docket Nos. 13-24 and 03-123 (filed by CGB Apr. 11, 2018).

²⁹ See 47 CFR § 64.604(b)(2)(ii) (requiring TRS facilities to answer 85 percent of calls within 10 seconds).

³⁰ InnoCaption Substitute Supplement at 3.

³¹ *Id.*

³² *Id.*

³³ *Id.* We note that this reported speed-of-answer performance includes the period after the onset of the COVID-19 pandemic—an unsurprising result, as call center staffing is not an issue for fully automatic IP CTS. Due to call center staffing issues experienced by providers of CA-assisted IP CTS, the speed-of-answer standard for IP CTS is currently waived, and IP CTS providers are only required to answer 80% of calls within 120 seconds, measured monthly. See *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Structure and Practices of Video Relay Service Program*, CG Docket Nos. 03-123 and 10-51, Order, 35 FCC Rcd 2715 (CGB 2020) (temporarily granting conditional waivers of (1) certain regulations governing at-home VRS call handling and (2) speed-of-answer requirements for other forms of TRS); *Telecommunications*

(continued...)

10. *Captioning Speed / Delay.* InnoCaption has established that with its chosen ASR technology, it will substantially exceed the minimum TRS standards relating to captioning speed and delay.³⁴ According to InnoCaption's amendment, InnoCaption speed-tested its ASR engine using a library of 43 audio files designed for testing stenographers for certification as court reporters. The speech contained in these files ranged in speed from 110 to 240 words per minute, with a median speed of 180 words per minute.³⁵ InnoCaption's speed tests showed that its ASR engine was capable of captioning speech at the maximum speed tested, 240 words per minute, well in excess of the minimum TRS standard of 60 words per minute.³⁶

11. Further, in performance testing of CA-assisted and ASR-based IP CTS technologies by the Commission's TRS research contractor, MITRE Corporation, InnoCaption's average caption delays for various call scenarios ranged from 1.1 to 1.6 seconds for ASR-based calls, while other CA-based providers' caption delays were significantly longer, ranging from 5.4 to 8.0 seconds.³⁷ Therefore, we conclude that InnoCaption has sufficiently supported its claims regarding captioning speed.

12. *Accuracy and Readability.* Although the TRS rules do not currently provide metrics for accuracy and readability, the typing, grammar, and spelling of captions must be "competent," and conversations must be transcribed "verbatim," with no intentional alteration of content unless a user

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, Order, 35 FCC Rcd 4894 (CGB 2020) (extending and modifying previously granted COVID-19 waivers); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Structure and Practices of Video Relay Service Program*, CG Docket Nos. 03-123 and 10-51, Order, 35 FCC Rcd 6432 (CGB 2020) (extending previously granted COVID-19 waivers); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Structure and Practices of Video Relay Service Program*, CG Docket Nos. 03-123 and 10-51, Order, 35 FCC Rcd 9783 (CGB 2020) (extending all previously granted COVID-19 waivers through Nov. 30, 2020); *Misuse of Internet Protocol (IP) Captioned Telephone Service; Telecommunications Relay Services for Individuals with Hearing and Speech Disabilities; Structure and Practices of the Video Relay Service Program*, CG Docket Nos. 13-24, 03-123, and 10-51, Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking, 35 FCC Rcd 10866, 10892-94, paras. 54-56 (2020) (*2020 IP CTS Compensation Order and FNPRM*) (extending all previously granted COVID-19 waivers through Feb. 28, 2021).

³⁴ Currently, there is no quantitative standard for IP CTS caption delay *per se*. However, captions must be delivered "fast enough so that they keep up with the speed of the other party's speech," and "if captions are not keeping up with the speech (although a short delay is inevitable), at some point the provider is no longer offering relay service and the call is not compensable." *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, 388-89, para. 22 & n.69 (2007) (*2007 IP CTS Declaratory Ruling*). In addition, the typing speed standard for text-based TRS is applicable. *See id.* at 388, para. 22 n.69; 47 CFR § 64.604(a)(1)(iii) (requiring TRS CAs to have a minimum typing speed of 60 words per minute). Based on the test results and other evidence discussed above, InnoCaption's ASR-based IP CTS has shown not only that it will meet this standard but also that it will "keep up with the speed of the other party's speech." *2007 IP CTS Declaratory Ruling*, 22 FCC Rcd at 388, para. 22. On October 2, 2020, the Commission released a Further Notice of Proposed Rulemaking that proposed quantitative standards for IP CTS caption delay. *2020 IP CTS Order and FNPRM*, 35 FCC Rcd at 10898-900, paras. 67-70.

³⁵ InnoCaption Supplement at 2.

³⁶ InnoCaption Amendment at 8; InnoCaption Supplement at 2.

³⁷ NTL July 2020 Test Report at 3.

specifically requests summarization.³⁸ The Commission has previously ruled that the competence and verbatim transcription standards apply to captions generated with ASR.³⁹

13. We find sufficient record evidence that InnoCaption's fully automatic IP CTS will meet or exceed the Commission's competence and "verbatim" requirements. InnoCaption states that it tested a number of ASR engines before selecting Google's Speech-to-Text program, in part because of its caption accuracy.⁴⁰ Recent National Test Lab testing of InnoCaption's ASR feature similarly indicates a high degree of accuracy. Average word error rates for various call scenarios ranged from 4.2% to 12.0% for InnoCaption's fully automatic IP CTS, while the average word error rates for CA-assisted providers (other than InnoCaption) were higher, ranging from 8.0% to 19.7% for the same call scenarios.⁴¹ Indeed, InnoCaption's ASR feature outperformed the average accuracy rates of CA-assisted services on all five call scenarios included in the National Test Lab testing.⁴²

14. In addition, InnoCaption states it has been "carefully monitoring captioning quality and user satisfaction through a combination of data collected from our 5-star call rating system, internal live call test calls [sic], as well as anecdotal feedback from our user community."⁴³ According to the amendment, InnoCaption asked beta trial participants to rate calls for captioning accuracy on a scale of 1 to 5 stars, with 5 as the best.⁴⁴ In the first phase of beta testing, from March 2019 through February 2020, 74% of the 5,489 rated ASR-only calls were given 4- or 5-star ratings.⁴⁵ In the second phase, from March through August 2020, covering more than 11,000 calls, the percentage of calls given 4- or 5-star ratings increased to 84%.⁴⁶ As some commenters point out, InnoCaption's user ratings are not claimed to result from a peer-reviewed, statistically valid study.⁴⁷ However, the ratings (the accuracy of which have not otherwise been called into question by any commenter) provide reliable evidence that, for a significant segment of InnoCaption's users, its ASR mode is perceived to provide high-quality service. Further, InnoCaption's hybrid model allows consumers to affirmatively choose the service mode that they deem

³⁸ 47 CFR § 64.604(a)(1)(ii), (2)(ii). The Commission recently proposed a quantitative standard for accuracy based on measuring word error rate. *2020 IP CTS Order and FNPRM*, 35 FCC Rcd at 10900-02, paras. 71-78.

³⁹ See *Telecommunications Relay Services and Speech-to-Speech Services for Individual with Hearing and Speech Disabilities*, CC Docket No. 98-67, Declaratory Ruling, 18 FCC Rcd 16121, 16134-35, paras. 37-39 (2003) (*Captioned Telephone Declaratory Ruling*); *2018 ASR Declaratory Ruling*, 33 FCC Rcd at 5832, para. 60. InnoCaption contends that the verbatim rule only prohibits *intentional* alteration of a relayed conversation, and that because ASR is "[b]y design . . . a verbatim, real-time transcription software," the verbatim rule "does not apply to ASR captioning services." InnoCaption Amendment at 8. The Commission's *2018 ASR Declaratory Ruling* states otherwise.

⁴⁰ InnoCaption Supplement at 4. InnoCaption cites as other factors in selecting Google's Speech-to-Text Program the reliability of API integration, features offered, languages supported, and pace of ASR engine improvement. InnoCaption notes that it "continues to test and compare other ASR engines to Google's offering and may use other vendors in parallel to or in place of Google in the future." *Id.*

⁴¹ NTL July 2020 Test Report at 3.

⁴² *Id.* at 4.

⁴³ InnoCaption Amendment at 5-6.

⁴⁴ InnoCaption Substitute Supplement at 2.

⁴⁵ *Id.* Of CA-assisted calls, 86% were given 4- or 5-star ratings. *Id.*

⁴⁶ *Id.* at 2-3.

⁴⁷ CaptionCall Comments at 8-9; Clear2Connect Comments at 3; Hamilton Comments at 6-8.

most effective in delivering functionally equivalent service. Thus, users that do not perceive the ASR mode as meeting their needs can instead select InnoCaption's CA-assisted mode.⁴⁸

15. *Privacy.* InnoCaption's amendment sufficiently describes how its ASR-based service will comply with the Commission's TRS confidentiality requirements, which prohibit the retention of call content for any purpose, whether locally or in the "cloud."⁴⁹ InnoCaption states that users' call audio files or transcripts are never stored or used for machine learning purposes and are deleted as soon as a call ends.⁵⁰ Although the captions delivered to the user's device may be retained by the user, neither InnoCaption nor its vendor retains any record of the captions.⁵¹ InnoCaption points out that Google's Speech-to-Text program does not retain transcripts or audio files of conversations unless affirmatively permitted by the customer, which for Google would be InnoCaption.⁵² InnoCaption affirms that it does not allow such retention.⁵³ InnoCaption also notes that, to ensure that it complies with the confidentiality requirement, it will closely monitor Google's policies and can easily shift to another ASR program if Google's policies change. Finally, we note that, while the Commission's rules necessarily permit CAs themselves to hear the contents of a captioned conversation, the ASR-only mode allows complete privacy, which some InnoCaption customers indicate they prefer.⁵⁴

16. *Emergency Call Handling.* InnoCaption has established that, with the addition of its ASR Calling Feature, it remains capable of handling emergency calls in accordance with the applicable Commission rule. Under the Commission's TRS standard for emergency call handling, an IP CTS provider covered by the rule must ensure that 911 calls and required caller information are delivered to the appropriate public safety answering point (PSAP) as specified in the rule.⁵⁵ InnoCaption, which is

⁴⁸ In fact, InnoCaption reports that a substantial number of users have selected the ASR mode for their calls during the beta testing. *See* InnoCaption Substitute Supplement at 5 n.7 (reporting that in September 2020, beta-test ASR usage represented more than 10% of InnoCaption's total call minutes).

⁴⁹ InnoCaption Amendment at 8.

⁵⁰ *Id.*

⁵¹ *Id.*

⁵² InnoCaption Supplement at 4.

⁵³ The Consumer Groups and Accessibility Researchers raise the concern that InnoCaption has not submitted an agreement with its vendor "explicitly stating that no user call audio transcripts will be stored." Consumer Groups and Accessibility Researchers at 3. The Commission's rules do not require submission of vendor agreements for IP CTS certification applications. However, such agreements must be available to the Commission upon request. 47 CFR § 64.604(c)(5)(iii)(D)(6). In this instance, where the vendor's default policy is not to store such call content unless expressly authorized, we conclude that submission of specific language in a vendor agreement is not necessary for our evaluation.

⁵⁴ Petroni ("The reason I prefer the ASR over the CA, is the privacy the ASR affords"); Napoli ("ASR allows me to have private phone conversations as a late-deafened adult.").

⁵⁵ *See* 47 CFR § 9.14(b)(2), (e); *see also* *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 03-123, Report and Order, Further Notice of Proposed Rulemaking, and Order, 34 FCC Rcd 691, 711-15, paras. 44-53 (2019) (*2019 IP CTS Order*) (partially waiving certain provisions of the emergency call-handling rule for IP CTS providers).

covered by this rule,⁵⁶ previously detailed its 911 call handling procedure,⁵⁷ which we found met the Commission's 911 call-handling requirements.⁵⁸ All InnoCaption 911 calls are routed to West Corporation's Emergency Call Relay Center (West), where an operator will ask for the user's name, location, and captioning number. The callback number is transmitted automatically. The West operator will connect the call to the appropriate PSAP and give the PSAP the caller's name, location, and callback number and disconnect when the caller is connected with the PSAP.⁵⁹ InnoCaption's amendment demonstrates that its ability to follow these procedures will not be affected by its introduction of a fully automatic service option, because (1) InnoCaption's practice is to have all 911 calls captioned by a CA, regardless of which service mode was pre-selected by the user for IP CTS,⁶⁰ and (2) in the event that any 911 call might need to be handled by ASR (i.e., because no CA is available), no change in the above procedures would be required, as CAs do not play a role in the routing or provision of information about 911 calls.⁶¹

17. IP CTS providers also must ensure that 911 calls are given priority over non-911 calls.⁶² To ensure compliance with this provision, consistent with its practice of routing 911 calls to CAs, InnoCaption explains that the following procedure is in place. If no CA is available when a 911 call is received, the system shifts the CA call that has been on a non-911 call for the shortest period of time to ASR, so that the CA can answer the 911 call.⁶³ If for some reason no CA can be made available, a 911 call would be captioned by the ASR program.⁶⁴ We find that this procedure will effectively ensure that 911 calls are given priority over non-emergency calls.

18. *Service Continuity.* IP CTS providers must have redundancy features functionally equivalent to the equipment in telephone company central offices.⁶⁵ InnoCaption's Service Level Agreement with Google includes a Service Level Objective that the ASR program will be available 99.9% of the time.⁶⁶ InnoCaption notes that since the ASR program was initiated in March 2019, it has had no cloud service outages.⁶⁷

⁵⁶ See 47 CFR § 9.14(b)(2)(i) (covering IP CTS providers "When responsible for placing or routing voice calls to the public switched telephone network"); *id.* § 9.14(e)(1) (covering "providers of IP CTS to the extent that the IP CTS provider, itself or through an entity with whom the IP CTS provider contracts, places or routes voice calls to the public switched telephone network").

⁵⁷ See Amendment to Application of Mezmo Corporation for Certification as a Provider of Internet Protocol Captioned Telephone Services, CG Docket No. 03-123, at 2-3 (filed Jan. 19, 2016) (detailing InnoCaption's 911 Call Handling Procedures).

⁵⁸ *Misuse of Internet Protocol (IP) Captioned Telephone Service et al.*, CG Docket Nos. 13-24 et al., Order, 31 FCC Rcd 7023, 7027-28, paras. 10-13 (2016) (*2016 InnoCaption Reinstatement Order*).

⁵⁹ *2016 InnoCaption Reinstatement Order*, 31 FCC Rcd at 7027-28, para. 12.

⁶⁰ InnoCaption Amendment at 8.

⁶¹ See *2019 IP CTS Order*, 34 FCC Rcd at 695, para. 11.

⁶² 47 CFR § 9.14(b)(2).

⁶³ InnoCaption Supplement at 7.

⁶⁴ *Id.*

⁶⁵ 47 CFR § 64.604(b)(4)(ii); see InnoCaption 2020 Annual Report, Attach. 3 at 6.

⁶⁶ InnoCaption Substitute Supplement at 5 n.5.

⁶⁷ *Id.* at 3.

19. *Other Certification Criteria.* As noted above, InnoCaption is already conditionally certified to provide IP CTS and has committed to file complaint logs and annual reports. Its Director of Regulatory Affairs certified to the accuracy of the amendment.⁶⁸

20. In sum, InnoCaption's amendment and information submitted in support of its original application and the National Test Lab's test results facially establish that InnoCaption will meet or exceed the operational, technical, and functional mandatory minimum standards applicable to its ASR Calling Feature, and that the company has in place sufficient procedures and remedies for ensuring compliance with the applicable TRS rules.⁶⁹

21. *Conditional Certification.* We grant certification for its ASR Calling Feature on a conditional basis, pending further verification that its ASR-based service complies with the Commission's minimum TRS standards. Because ASR-based IP CTS is a new method for providing this service, we believe the best course is to collect additional information through observing InnoCaption's service in operation to confirm that this service will meet or exceed the minimum TRS standards.⁷⁰

22. To assist the Bureau in a final determination of InnoCaption's qualifications to provide fully automatic IP CTS, we apply the same reporting requirements adopted in two previous orders conditionally-certifying applicants to provide fully automatic IP CTS.⁷¹ We require InnoCaption to file quarterly reports of consumer complaints during the initial year of service to be filed with the Commission in the same format and with the same degree of detail required in the log of consumer complaints that providers must file annually with the Commission.⁷² The first report shall be due May 1, 2021, and shall cover the period from the commencement of TRS-funded ASR service through March 31, 2021.⁷³ Each subsequent report shall be filed on the first day of the second month of each calendar quarter and shall cover the preceding calendar quarter. For example, the second report shall be due August 1, 2021, and shall cover the calendar quarter from April 1 through June 30, 2021. InnoCaption shall continue to file reports on a quarterly schedule until the Commission acts on granting or denying full certification, whichever occurs earlier.⁷⁴

23. Further, for this "hybrid" service, which offers both CA-assisted and fully automatic captioning—sometimes within a single captioned call—we impose additional conditions to ensure effective review of requests for Fund compensation and speed-of-answer reports, to prevent waste, fraud, and abuse, and to enable the Commission to assess the levels of demand for fully automatic and CA-

⁶⁸ InnoCaption Amendment, Attach. A.

⁶⁹ See 47 CFR § 64.604(b)(2).

⁷⁰ See *2011 Internet-based TRS Certification Order*, 26 FCC Rcd at 10914-15, para. 37 (reserving the right to grant conditional certification "where the Commission, upon initial review of the application, determines that the application facially meets the certification requirements, but that the Commission needs to verify some of the information contained in the application"); *2018 ASR Declaratory Ruling*, 33 FCC Rcd at 5834-35, para. 63 (stating that "no application to provide ASR will be approved unless the applicant demonstrates that the specific ASR technology described in the application meets applicable FCC requirements"); *id.* at 5835, para. 64 (noting that certification of an ASR-only provider may be granted on a conditional basis to enable assessment of an applicant's actual performance).

⁷¹ See *MachineGenius*, 35 FCC Rcd at 4574, paras. 13-14; see also *Clarity*, 35 FCC Rcd at 5640-41, paras. 13-14.

⁷² See 47 CFR § 64.604(c)(1); see also *2018 ASR Declaratory Ruling*, 33 FCC Rcd at 5835, para. 64 (noting that to the extent deemed necessary certification of a provider may be conditioned on the submission of periodic data to help confirm whether fully automatic IP CTS is providing functionally equivalent service).

⁷³ The first report shall specify the date of InnoCaption's first TRS Fund-supported call using its ASR Calling Feature as its commencement of service date for fully automatic IP CTS.

⁷⁴ After such time, InnoCaption shall file one annual consumer complaint log covering both CA-supported and fully automatic IP CTS in accordance with the rule. 47 CFR § 64.604(c)(1).

assisted IP CTS, respectively. Specifically, InnoCaption shall identify, in its monthly call detail reports, those calls and minutes handled by ASR without CA assistance. In addition, to enable the Administrator and the Commission to assess the impact of fully automatic IP CTS on speed-of-answer performance, InnoCaption shall report its daily speed of answer statistics separately for ASR and CA-based IP CTS calls, as well as the aggregate daily statistics for the two modes together.⁷⁵

24. Pending a decision on full certification, the Bureau may request additional information in order to complete our review of InnoCaption's amendment, such as the results and protocols for performance tests conducted by InnoCaption or independent third parties.⁷⁶ We also require InnoCaption to report promptly any changes in the information previously provided to the Commission in its amendment and supplemental filings, including, for example, any changes in service agreements and suppliers or in the manner in which InnoCaption provides service with its ASR Calling Feature.⁷⁷

25. Pursuant to this grant of conditional certification, InnoCaption may provide Fund-supported IP CTS in the manner described in its amendment, for a period not to exceed two years, pending a final determination of its qualifications to provide fully automatic IP CTS. This conditional certification is issued without prejudice to such final determination, which is dependent on verification of the information provided in InnoCaption's amendment and supplemental filings, as well as the additional information provided pursuant to this order, and on the veracity of the applicant's representations that it will provide service in compliance with all pertinent Commission requirements. To assist in reaching a final determination, the Bureau may conduct one or more unannounced site visits of InnoCaption's premises and may request additional documentation relating to InnoCaption's provision of fully automatic IP CTS. Conversion to full certification will be granted if, based on a review of the applicant's documentation and other relevant information, the Commission finds that InnoCaption is in compliance with applicable Commission rules and orders and is qualified to receive compensation from the Fund for the provision of fully automatic IP CTS. If, at any time during the period in which InnoCaption is operating pursuant to this conditional certification, the Commission determines that InnoCaption has failed to provide sufficient supporting documentation for any of the assertions in its application, determines that any of those assertions cannot be supported, or finds evidence of any apparent rule violation, fraud, waste, or abuse, the Commission will take appropriate action, which may include the denial of InnoCaption's amended application. In the event of such denial, InnoCaption's conditional certification will automatically terminate thirty-five (35) days after such denial.⁷⁸

⁷⁵ See 47 CFR § 64.604(b)(2). In requiring separate reporting of speed-of-answer for each mode of service, we do not alter the current rule or the conditions of the pandemic-related waiver of that rule. See *2020 IP CTS Compensation Order*, 35 FCC Rcd at 10892-94, paras. 54-56 (extending through February 28, 2021, a partial waiver of the speed-of-answer rule, such that all TRS providers' compliance with speed-of-answer requirements is measured on a monthly, not daily, basis). Thus, speed-of-answer compliance will continue to be determined based on a provider's overall performance in each daily or monthly measuring period, regardless of the captioning mode used.

⁷⁶ See *2018 ASR Declaratory Ruling*, 33 FCC Rcd at 5834-35, para. 63 (citing test results as an example of supporting information an ASR applicant might provide); *InnoCaption Conditional Certification Notice*, 29 FCC Rcd at 5107 (requiring quarterly testing and reports). With some exceptions, such as speed of answer, the Commission's minimum TRS standards do not currently include quantitative metrics. However, testing with respect to various performance criteria, such as caption delay and accuracy, may be helpful in the overall evaluation of this application for the purpose of deciding whether to grant full certification. Further, the Commission recently proposed to adopt quantified standards for caption delay and accuracy, which, if adopted, would be applicable to all IP CTS providers, including those applying for certification or authorized under conditional certification. See *2020 IP CTS Order and FNPRM*, 35 FCC Rcd at 10898-902, paras. 66-78.

⁷⁷ See *InnoCaption Conditional Certification Notice*, 29 FCC Rcd at 5110 (requiring the provider to promptly update the information in its application, pending final certification).

⁷⁸ See *2011 Internet-based TRS Certification Order*, 26 FCC Rcd at 10914-15, para. 37.

26. *Preventing Misuse.* We remind InnoCaption and all other TRS providers that IP CTS is intended to provide a service functionally equivalent to voice telephone service, and must not be provided as a substitute for non-TRS in-person transcription services.⁷⁹ Further, although our rules do not prohibit InnoCaption from enabling its registered users to save the captions as they appear on a device,⁸⁰ they do prohibit an IP CTS provider itself from retaining call transcripts or subsequently providing transcripts to IP CTS users beyond the duration of the call.⁸¹ We also remind InnoCaption that its marketing of this service must conform with the Commission's rules.⁸²

27. *Response to Comments.* We disagree with comments recommending denial or deferral of action on InnoCaption's amendment.⁸³ Several of the issues raised appear to be attempts to relitigate the Commission's *2018 Declaratory Ruling* regarding the merits of fully automatic IP CTS *in general*, rather than the specific service proposed by InnoCaption. For example, the view of some commenters that ASR technology in general is not yet "able to provide, accurate, reliable captioning for all callers and call types"⁸⁴ is not a valid basis for withholding certification of InnoCaption's proposed service.⁸⁵ In the *2018 Declaratory Ruling*, the Commission recognized that fully automatic IP CTS is "a nascent form of the

⁷⁹ For example, CART is often used to generate captions for live meetings, speeches, and other in-person situations where the provision of TRS Fund-supported relay services is not permitted. *See InnoCaption Conditional Certification Notice*, 29 FCC Rcd at 5109-10; *see also 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, 8691, para. 180 & n.465 (2013) (explaining that the use of TRS Fund-supported VRS to substitute for video remote interpreting—a service that is used when an interpreter cannot be physically present to interpret for two or more persons who are in the same location—is not permitted).

⁸⁰ *See InnoCaption Amendment* at 8 ("The only transcript which remains after a call is stored on the user's device.").

⁸¹ *See* 47 CFR § 64.604(a)(2)(i). There is a limited exception applicable only to speech-to-speech services.

⁸² *See, e.g., id.* § 64.604(c)(8), (c)(11), (c)(13). The Commission has noted the ease and convenience of using IP CTS, while facilitating use of the service by people with hearing loss who need it for effective communication, also creates a risk that IP CTS will be used even when it is not needed. *See 2018 ASR Declaratory Ruling*, 33 FCC Rcd at 5805, para. 9. Regarding the proposed switching function, ClearCaptions raises a concern that allowing unlimited toggling by users between the ASR and CA modes "could result in extended call length" by consumers performing unnecessary tests of call quality or otherwise abusing the toggling function. *ClearCaptions Ex Parte* at 2. In the absence of any record evidence, we are unpersuaded that this purely theoretical possibility merits delaying or denying conditional certification. Should there be actual evidence of such abuse in the future, the Commission can address it through appropriate action.

⁸³ *See* CaptionCall Comments at 14 (FCC should not grant application); Clear2Connect Comments at 3 (same); Consumer Groups and Accessibility Researchers Comments at 3 (FCC should defer action on the application); Hamilton Comments at 9 (same).

⁸⁴ *See* Clear2Connect Comments at 2; *see also* CaptionCall Comments at 4 ("current ASR technology is vulnerable to bias and prone to errors in several important call contexts"); Hamilton Comments at 3 ("ASR, while promising, is not ready for deployment to the general public because it is not functionally equivalent to voice communications used by hearing individuals.").

⁸⁵ As the Bureau explained in the *MachineGenius* and *Clarity* orders, the "types of calls" requirement, cited by CaptionCall (CaptionCall Comments at 5) "was adopted to ensure that the same calling and billing options that carriers commonly make available to voice telephone users are also available to TRS users; it does not refer to variations in call environments, individual callers, or call content." *MachineGenius*, 35 FCC Rcd at 4576, para. 19 n.63 (citing 47 CFR § 64.604(a)(3)); *Telecommunications Services for Individuals with Hearing and Speech Disabilities, and the Americans with Disabilities Act of 1990*, CC Docket No. 90-571, Report and Order and Request for Comments, 6 FCC Rcd 4657, 4660-61, paras. 17-19 (1991)); *see also Clarity*, 35 FCC Rcd at 5643, para. 19 n.63.

service, and that there are various factors that may influence its effectiveness for different calls.”⁸⁶ Nonetheless, the Commission declined to delay the introduction of fully automatic methods of providing IP CTS, concluding that the capabilities of ASR are sufficient to warrant its recognition as a TRS Fund-supported alternative to CA-assisted IP CTS offerings, and indeed may be more desirable for some IP CTS users given its speed and privacy advantages.⁸⁷ Revisiting this Commission determination is beyond the Bureau’s authority—and, in any event, would not be supported by the record regarding InnoCaption’s proposed service.⁸⁸

28. For similar reasons, we reject some commenters’ requests to defer a decision on InnoCaption’s proposal until the Commission adopts more specific or quantifiable performance standards for ASR,⁸⁹ or a special framework for evaluating applications to provide ASR-based IP CTS.⁹⁰ As explained in earlier orders, the Commission authorized provider certification for fully automatic IP CTS notwithstanding its simultaneous launch of an inquiry on IP CTS service quality, and declined to delay such authorization pending further study.⁹¹

29. We similarly reject arguments based on the erroneous assumption that fully automatic versions of IP CTS must be found equivalent or superior to CA-assisted IP CTS in order to be granted certification.⁹² An applicant must show that it will “meet or exceed” the applicable minimum TRS standards,⁹³ not the performance of another IP CTS offering.⁹⁴ Indeed, most applicants for CA-assisted IP CTS have not made any quantitative performance claims regarding, e.g., accuracy or caption delay.⁹⁵ And in any event, the National Test Lab results indicate that InnoCaption’s fully automatic service matches up well against CA-assisted alternatives.⁹⁶

30. Curiously, the same commenters that criticize InnoCaption’s consumer ratings as unscientific also cite those ratings as evidence that its fully automatic service is inferior to the CA

⁸⁶ 2018 ASR Declaratory Ruling, 33 FCC Rcd at 5829, para. 52.

⁸⁷ 2018 ASR Declaratory Ruling, 33 FCC Rcd at 5828-29, para. 51 (finding that “improvements in accuracy, coupled with ASR’s advantages in speed and privacy, have made ASR a viable alternative to the use of human relay intermediaries for [Captioned Telephone Service (CTS)] and IP CTS”); *see also MachineGenius*, 35 FCC Rcd at 4576, para. 18; *Clarity*, 35 FCC Rcd at 5643, para. 18.

⁸⁸ *See, e.g.*, NTL July 2020 Test Report.

⁸⁹ *See* CaptionCall Comments at 5-6; Clear2Connect Comments at 2-3; Consumer Groups and Accessibility Researchers Comments at 2-3; Hamilton Comments at 2.

⁹⁰ CaptionCall Comments at 3-5; Hamilton Comments at 2.

⁹¹ *MachineGenius*, 35 FCC Rcd at 4578, paras. 21-22; *see also Clarity*, 35 FCC Rcd at 5644, paras. 21-22; 2018 ASR Declaratory Ruling, 33 FCC Rcd at 5834, para. 63 (“Furthermore, while we are seeking more information about ASR technology in the FNPRM portion of this item, we do not agree that an ASR provider cannot be certified until we conduct ‘further study’ of such data.”).

⁹² CaptionCall Comments at 11 (contending that fully automatic IP CTS must match “CA quality”).

⁹³ 47 CFR § 64.606(b)(2)(i).

⁹⁴ *MachineGenius*, 35 FCC Rcd at 4576, para. 18; *Clarity*, 35 FCC Rcd at 5643, para. 18.

⁹⁵ *MachineGenius*, 35 FCC Rcd at 4576-77, para. 19; *Clarity*, 35 FCC Rcd at 5643-44, para. 19.

⁹⁶ NTL July 2020 Test Report at 2-4. These test results also appear to render moot CaptionCall’s argument that certification must be based on “testing that is ‘objective and generalizable.’” CaptionCall Comments at 8-9. As we noted in *MachineGenius* and *Clarity*, however, applicants for certification to provide fully automatic IP CTS are not required to submit service-quality test results. *MachineGenius*, 35 FCC Rcd at 4575-76, para. 17; *Clarity*, 35 FCC Rcd at 5642-43, para. 17.

version.⁹⁷ Indeed, some commenters go so far as to claim that, because initial beta test results indicated that “only” 74% of participating users were as enthusiastic about InnoCaption’s fully automatic service as the CA-assisted version, those consumers should not even be allowed to choose the fully automatic version.⁹⁸ The argument that TRS consumers should not be allowed to choose a particular service unless it is shown to be preferred by all consumers to any alternative is fundamentally at odds with the Commission’s longstanding policy favoring competition and consumer choice in TRS—as well as the statutory mandate to support improved technology.⁹⁹ In the *2018 ASR Declaratory Ruling*, the Commission expressly found that functional equivalence would *not* be harmed by the introduction of fully automatic IP CTS, because consumers “will continue to be able to select an IP CTS provider based on the overall quality of service each provider offers by means of the available methods.”¹⁰⁰ More broadly, the Commission has consistently found that competition among providers offering different versions of TRS using various technologies and configurations assists in ensuring that functionally equivalent service is provided in accordance with minimum standards.¹⁰¹ And in any case, the record does include evidence that InnoCaption’s fully automatic version is actually *superior* to its CA-assisted version in terms of accuracy, speed of answer, and caption delay. In short, we agree with InnoCaption that its approach—to let consumers trial both captioning modes and determine for themselves when and in what contexts they prefer to use one mode or the other—is fully consistent with longstanding Commission policy favoring consumer choice in TRS so long as each service meets our mandatory minimum standards.

⁹⁷ CaptionCall Comments at 9-10 (arguing that, because twice as many ASR calls (26%) as CA calls (14%) received less than four stars in initial beta testing, the rating results “suggest that the ASR feature fails to satisfy the mandatory minimum standards”); ClearCaptions *Ex Parte* at 2; Hamilton Comments at 3-4 (contending that the results of InnoCaption’s five-star rating system demonstrate that ASR is an inferior service to CA-assisted IP CTS).

⁹⁸ See Hamilton Comments at 3-4 (arguing that InnoCaption’s proposed approach should not be permitted because it is an admission that “ASR, standing alone is not a functional equivalent service”); see also *id.* at 8; CaptionCall Comments at 10 (contending that InnoCaption’s approach “impermissibly shifts the burden of ensuring functionally equivalent service onto consumers”); ClearCaptions *Ex Parte* at 2. For its part, CaptionCall argues that the Commission should require InnoCaption to submit its plans for outreach and customer education “to teach its users about when ASR is and is not likely to match service quality” so that customers understand when to switch between the two captioning modes. CaptionCall Comments at 12. While CaptionCall may conclude that its customers, who “are generally older and may suffer from other disabilities” (*id.* at 11) would benefit from such specific instruction, InnoCaption, which describes its user base as “largely working age and technologically savvy” (May 5 InnoCaption Update at 2), prefers a different approach, which as noted above is fully consistent with Commission policy favoring consumer choice.

⁹⁹ See 47 U.S.C. § 225(d)(2); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Internet-based Captioned Telephone Services*, CG Docket No. 031-23, Declaratory Ruling, 22 FCC Rcd 379, 390, para. 25 (2006) (anticipating competition among IP CTS providers to “enhance consumer choice, service quality, and available features”).

¹⁰⁰ *2018 ASR Declaratory Ruling*, 33 FCC Rcd at 5829, para. 52. Indeed, the Commission cited the precise hybrid approach now proposed by InnoCaption as one of several possible ways in which ASR might be integrated into IP CTS. *Id.* at 5833, para. 61 (“As an alternative to using ASR to generate all captions for a call, IP CTS providers have suggested ‘hybrid’ methods that would allow consumers or providers to switch back and forth between CA-assisted captioning and a fully automated speech engine, as needed on a call. As one such option, a call might begin with captions generated by ASR as the ‘default’ setting, and give the IP CTS user the opportunity to press a button to switch to a CA at any point during the call if he or she needs additional communications assistance.”).

¹⁰¹ See *Sorenson Communications, LLC v. FCC*, 897 F.3d 214, 228-29 (D.C. Cir. 2018) (“competition promotes efficiency by preventing subpar service from a monopolist who has no fear of losing customers; *i.e.*, it promotes compliance with the service quality required by the mandatory minimum standards”); *2007 IP CTS Declaratory Ruling*, 22 FCC Rcd at 389, para. 24 (IP CTS should not be under the control of a single company).

31. Hamilton argues that the Commission “should not allow providers to migrate to inferior forms of IP CTS simply as an economical way of reducing costs and thus realizing greater profits.”¹⁰² First, we reject Hamilton’s characterization of ASR as an inferior service. Second, InnoCaption has stated that it intends to continue to fully support its CART CA service and that it is offering the ASR alternative to allow users to decide which form of relay services works best for their needs.¹⁰³ Third, the Commission has statutory obligations to ensure that relay services are efficient and to encourage the use of improved technology.¹⁰⁴

32. Although not specific to InnoCaption’s amendment, we address briefly here a letter filed by RAZ Mobility objecting to further Commission grants of certification for fully automatic IP CTS, absent a showing that such approval is in the public interest.¹⁰⁵ According to RAZ Mobility, Google’s recently introduced Live Caption Service for Android will caption voice and video calls on Pixel smartphones, at no additional charge to consumers—and at no cost to the TRS Fund.¹⁰⁶ RAZ Mobility contends that, given the availability of Live Caption Service, Fund support of what it characterizes as inferior captioning services is wasteful. While the introduction of potentially self-sustaining telephone captioning services is a welcome development, general policy concerns such as those raised by RAZ Mobility must be addressed, as appropriate, in a Commission rulemaking or other proceeding of general applicability. The Commission has previously determined that fully automatic IP CTS is eligible for Fund compensation and has authorized the Bureau “to review and approve applications for certification to provide [such service] when the Bureau determines that an applicant is able to provide IP CTS in accordance with the Commission’s mandatory minimum TRS standards designed to ensure functional equivalency.”¹⁰⁷ We lack authority to refrain from granting certification to a qualified applicant based on policy concerns about the impact on competing service providers or the comparative value of each service.¹⁰⁸

IV. REQUEST FOR WAIVER

33. We dismiss InnoCaption’s request for a waiver of section 64.604(a)(3)(vii) of the Commission’s rules, which requires a CA to alert a TRS user to the presence of a recorded message and interactive menu on the called party’s line through a hot key on the CA’s terminal that sends a text to the TRS user.¹⁰⁹ InnoCaption states that it is not technologically feasible for its ASR offering to alert the TRS user to the presence of a recorded message or IVR system.¹¹⁰ In *MachineGenius*, we decided that that section 64.604(a)(3)(vii) is not applicable to ASR offerings because the rule refers to IVRs and TTY (text telephone service).¹¹¹ The rule was adopted in 2000 when the only form of relay service was TTY, and the rule was needed at that time to address the communications barriers that IVRs pose for users of TTY-

¹⁰² Hamilton Comments at 5 (citing InnoCaption Amendment at 4).

¹⁰³ InnoCaption Reply.

¹⁰⁴ See *2018 ASR Declaratory Ruling*, 33 FCC Rcd at 5832, para. 59; 47 U.S.C. § 225(b)(1), (d)(2).

¹⁰⁵ See RAZ Mobility November 20 Letter.

¹⁰⁶ See *id.*; see also RAZ Mobility September 14 Letter.

¹⁰⁷ *2018 ASR Declaratory Ruling*, 33 FCC Rcd at 5832, para. 60.

¹⁰⁸ See 47 CFR § 64.606(b)(2) (“[T]he Commission shall certify . . . that the Internet-based TRS provider is eligible for compensation from the Interstate TRS Fund if the Commission determines that the certification documentation: (i) Establishes that the provision of Internet-based TRS will meet or exceed all non-waived operational, technical, and functional minimum standards contained in §64.604; (ii) Establishes that the Internet-based TRS provider makes available adequate procedures and remedies for ensuring compliance with the requirements of this section . . .”).

¹⁰⁹ *Id.* § 64.604(a)(3)(vii).

¹¹⁰ InnoCaption Waiver Request at 2.

¹¹¹ *MachineGenius*, 35 FCC Rcd at 4579-80, para. 27.

based TRS.¹¹² Considering for the first time whether the rule applied to ASR-based TRS in *MachineGenius*, we concluded that “[b]ecause the rule specifically refers to CAs and TTYs, . . . it is inapplicable to ASR-based IP CTS, which does not involve the use of either CAs or TTYs, and therefore does not need to be waived.”¹¹³ Accordingly, we dismiss InnoCaption’s waiver request.

V. PROCEDURAL MATTERS

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

35. *Additional Information*. For further information regarding this item, please contact William Wallace, Disability Rights Office, Consumer and Governmental Affairs Bureau, at 202-418-2716 or by e-mail to William.Wallace@fcc.gov.

VI. ORDERING CLAUSES

36. Accordingly, IT IS ORDERED that, pursuant to section 225 of the Communications Act of 1934, as amended, 47 U.S.C. § 225, sections 0.141, 0.361, and 64.606(b)(2) of the Commission’s rules, 47 CFR §§ 0.141, 0.361, 64.606(b)(2), and the authority delegated by paragraphs 60 and 64 of the Commission’s *2018 ASR Declaratory Ruling*, the Amendment to the application of InnoCaption for certification to provide IP CTS is GRANTED as conditioned in this Memorandum Opinion and Order.

37. IT IS FURTHER ORDERED, that InnoCaption is conditionally certified to provide IP CTS, as conditioned in this Memorandum Opinion and Order.

38. IT IS FURTHER ORDERED, that InnoCaption’s Request for Waiver is DISMISSED.

39. IT IS FURTHER ORDERED that, pursuant to section 1.102(b)(1) of the Commission’s rules, 47 CFR § 1.102(b)(1), this Memorandum Opinion and Order SHALL BE EFFECTIVE upon release.

FEDERAL COMMUNICATIONS COMMISSION

Patrick Webre, Chief
Consumer and Governmental Affairs Bureau

¹¹² See *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and speech Disabilities*, CG Docket No. 98-67, Report and Order and Further Notice of Proposed Rulemaking, 15 FCC Rcd 5140, 5180, para. 92 (2000).

¹¹³ *MachineGenius*, 35 FCC Rcd at 4579-80, para 27. Because the rule does not apply, the opposition of the Consumer Groups and Accessibly Researchers to granting the waiver is moot. See Consumer Groups and Accessibility Researchers at 3-5.