In the Matter of:  
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: June 4, 2020  
Released: June 4, 2020

By the Chief, Consumer and Governmental Affairs Bureau:

I. INTRODUCTION

1. The Consumer and Governmental Affairs Bureau (Bureau) of the Federal Communications Commission (Commission) grants conditional certification to Clarity Products, LLC (Clarity), to provide Internet Protocol Captioned Telephone Service (IP CTS) using only automatic speech recognition (ASR).

2. The Commission also finds good cause to grant, in part, Clarity’s request for waiver of certain TRS Rules.

1 See Internet-based TRS Certification Application of Clarity Products, LLC, CG Docket No. 03-123 (filed June 5, 2019) https://ecfsapi.fcc.gov/file/10605061608537/Redacted%20IP%20CTS%20Certification%20Application.pdf (Clarity Application). 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)(19) (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 from the TRS Fund. Id. § 64.606.


3 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 we also are addressing the applicant’s associated waiver requests. We deem this Memorandum Opinion and Order to constitute conditional (continued….)
II. BACKGROUND

2. In June 2018, the Commission determined that the provision of IP CTS using ASR to generate captions without a communications assistant (CA) is eligible for compensation from the TRS Fund if provided in compliance with applicable TRS mandatory minimum standards. On April 24, 2019, Clarity filed an application for certification to provide ASR-only IP CTS (i.e., without any reliance on CAs) and a request for waiver of certain mandatory minimum TRS standards. Clarity’s proposed ASR-only IP CTS will be delivered via an over-the-top (OTT) application—branded CaptionMate—that will be available to download and install on iOS and Android phones and tablets or accessed via a website. Clarity will assign users a ten-digit number to send and receive calls. According to the application, captions will be produced and delivered via Session Initiation Protocol (SIP) servers and trunking.

3. On August 26, 2019, the Bureau released a Public Notice seeking comment on Clarity’s application and waiver request. Six parties filed comments and three parties filed reply comments.

(Continued from previous page) certification that Clarity is eligible for compensation from the Interstate TRS Fund in accordance with section 64.606(b)(2) of the Commission’s rules. 47 CFR § 64.606(b)(2).

4 See 2018 ASR Declaratory Ruling, 33 FCC Rcd at 5827, para. 48.

5 Clarity Application. Initially, Clarity filed only a confidential version of its application. Clarity filed a public version of the application on June 5, 2019, in which it included its request for waiver. Clarity Application at 15-19.

6 Id. at 4.

7 Id.

8 Id. at 6, 17; see also id. at 5 (confidential version); Letter from Scott D. Delacourt, Clarity, to Marlene H. Dortch, FCC, CG Docket No. 03-123 (June 2, 2020) (Clarity June 2 Ex Parte).

9 Clarity Application at 6-7.

10 Id. at 6.

11 Id. at 5-6.


13 All comments and reply comments were filed in CG Docket No. 03-123. See CaptionCall, LLC (CaptionCall) Comments (rec. Sept. 25, 2019); Clear2Connect Coalition Comments (rec. Sept. 25, 2019); Hamilton Relay, Inc. (Hamilton) Comments (rec. Sept. 25, 2019); 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 (AADD), 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), and National Technical Institute for the Deaf (NTID) Comments (rec. Sept. 25, 2019) (Consumer Groups and Accessibility Researchers Comments); Sprint Corporation (Sprint) Comments (rec. Sept. 25, 2019); Ultratec, Inc. (Ultratec) Comments (rec. Sept. 25, 2019); Consolidated Response to Comments of Clarity Products, LLC, (rec. Oct. 10, 2019) (Clarity Reply Comments); Hamilton Reply Comments (rec. Oct. 10, 2019); Ultratec Reply Comments (rec. Sept. 25, 2019).
Various consumers who participated in a beta test of Clarity’s IP CTS product also filed statements about their experiences.\textsuperscript{14}

\section*{III. Certification}

4. We find that the Clarity application facially meets the certification requirements and we conditionally grant the application to verify—based on actual operating experience—that Clarity’s provision of ASR-only IP CTS will meet or exceed the minimum TRS standards.\textsuperscript{15} In granting conditional certification, we reduce unnecessary delay in offering relay services using improved technologies.\textsuperscript{16}

5. \textit{Sufficiency of the Application}.—Clarity’s application is facially sufficient to satisfy the Commission’s certification requirements. The application provides a detailed explanation with documentary and other evidence as to how the applicant will meet all non-waived mandatory minimum standards applicable to IP CTS.\textsuperscript{17} Among other things, Clarity has sufficiently supported its claims regarding its use of ASR and the efficacy of such use in meeting the Commission’s minimum TRS standards relating to speed of answer, caption delay, accuracy, readability, verbatim transcription, privacy, and emergency call handling.\textsuperscript{18}

6. \textit{Speed of answer and caption delay}. Clarity has made a sufficient showing that with its chosen ASR technology, it will substantially exceed the minimum TRS standards relating to speed of answer and caption delay. According to the application, when a call is placed by or to a registered Clarity user, it will be routed via a SIP trunk where the audio will be collected and transcribed by a middleware application and sent to the user’s device. The middleware application uses cloud-based services and engines pursuant to various service level agreements that guarantee monthly uptime of 99.5\% to 99.9\%.\textsuperscript{19} As a result, when the call is connected, the IP CTS user will see transcriptions “almost instantaneously.”\textsuperscript{20} Based on these statements, the applicant’s explanation of its service architecture,\textsuperscript{21} and the results of performance testing, we conclude that Clarity has sufficiently supported its claims that (1) speed of answer for 99.99\% of connected calls will be less than 10 seconds, exceeding the current IP CTS standards.

\textsuperscript{14} All statements were filed in CG Docket No. 03-123. See Debra O’Rear Express Comments (rec. Sept. 23, 2019); Herbert Allen Express Comments (rec. Sept. 13, 2019); Carlos S. Monserrate Express Comments (rec. Sept. 9, 2019); Will Tinsley Express Comments (rec. Sept. 6, 2019); Melissa Graham Express Comments (rec. Sept. 6, 2019); Erica Newman Express Comments (rec. Sept. 5, 2019); Kathie Kearbey Express Comments (rec. Sept. 5, 2019); Frank Zaidle Express Comments (rec. Sept. 5, 2019); James Forstall Express Comments (rec. Sept. 4, 2019); Jonathan Gray Express Comments (rec. Sept. 4, 2019); see also Michael Compton Express Comments (rec. Sept. 6, 2019).

\textsuperscript{15} 47 CFR § 64.606(b)(2)(i).

\textsuperscript{16} 47 U.S.C. § 225(d)(2) (requiring the 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”); \textit{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”).

\textsuperscript{17} See Clarity Application at 7-15, 19-22, Appx. C (detailing how Clarity will meet application requirements); 47 CFR § 64.606(a)(2)(ii).

\textsuperscript{18} See 2018 ASR Declaratory Ruling, 33 FCC Rcd at 5834, para. 63 (noting that applicants to provide ASR-based IP CTS must support all claims regarding their use of ASR and its efficacy).

\textsuperscript{19} Clarity Application at 5, Appx. C at C-11-12 (confidential version); Clarity June 2 \textit{Ex Parte}.

\textsuperscript{20} Clarity Application at 5.

\textsuperscript{21} \textit{id.} at 5, Appendices C at C-11-12, F (confidential version).
standard, and (2) captions will be transcribed in real time and in compliance with the typing speed standard of 60 words per minute. In performance testing of CA-assisted and ASR-based IP CTS technologies by the Commission’s National Test Lab (NTL) (operated by its TRS research contractor, MITRE Corporation), Clarity’s median caption delays for various call scenarios ranged from 1.1 to 1.6 seconds, while CA-assisted providers’ average of the median caption delays were significantly longer, ranging from 4.8 to 6.9 seconds.

7. **Accuracy and readability.** Although the TRS rules do not currently provide quantitative standards 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 specifically requests summarization. According to its application, Clarity’s internal testing of its CaptionMate product shows a very high level of accuracy. In the NTL’s performance testing, Clarity’s median word error rates for various call scenarios were generally comparable to CA-assisted providers’ average word error rates for the same scenarios. Overall, Clarity outperformed the average

22 Id., Appx. C at C-9. The speed of answer standard for IP CTS requires providers to answer 85% of calls within 10 seconds, measured daily. 47 CFR § 64.604(b)(2)(ii).

23 Clarity Application, Appx. C at C-1-2; 47 CFR § 64.604(a)(1)(iii) (requiring TRS CAs to have a minimum typing speed of 60 words per minute); see also Clarity Application, Appx. D (In-House Testing Speed) (confidential version).

24 See FCC Telecommunications Relay Services Project, IP CTS Device Recurring Testing: Prospective IP CTS Provider (Clarity) Assessment at 4 (May 4, 2020), CG Docket No. 03-123 (filed June 2, 2020) (NTL May 2020 Test Report). The May 2020 Test Report includes an additional scenario that was not included in the NTL’s April 2020 test report; therefore, the test scores for CA-assisted providers are slightly different than those cited in the April report. See FCC Telecommunications Relay Services Project, IP CTS Device Recurring Testing: Prospective IP CTS Provider (MachineGenius) Assessment (April 29, 2020), CG Docket No. 03-123 (filed May 1, 2020). Currently, there is no quantitative standard for IP CTS captioning delay. However, the Commission has stated that 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, 22 FCC Rcd 379, 388-89, para. 22 & n.69 (2007) (2007 IP CTS Declaratory Ruling). In the absence of a specific quantitative standard for caption delay, 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, Clarity 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 at 388, para. 22.


26 Clarity Application at 6; see also Letter from Seymour James van den Bergh, Clarity, to Marlene H. Dortch, FCC, CG Docket No. 03-123 and 13-24, at 3, 6-7 (filed May 30, 2019) (discussing ASR accuracy and Clarity’s confidence in its product based on internal testing).

27 NTL May 2020 Test Report at 3 (showing that Clarity’s median word error rates ranged from 6.3% to 35.9%, while average CA-assisted provider word error rates ranged from 8.9% to 19.5%). Although Clarity had a relatively high percentage of errors for one of the five scenarios reflected in these ranges, similar variation has occurred with individual IP CTS providers. For example, a report of earlier testing conducted by MITRE notes that individual IP CTS providers produced word error rates as high as 40.2%. See e.g., MITRE Corporation, Internet Protocol Caption Telephone Service (IP CTS) Devices: Summary of Phase 1 Activities (2017), CG Docket Nos. 03-123 and 13-24, at 4-6 (filed Apr. 11, 2018), https://ecfsapi.fcc.gov/file/1041287298464/MITRE%20Corporation%20Summary%20of%20Phase%201.pdf.
CA-assisted providers’ word error rates on four of the five call scenarios included in the tests.\(^{28}\) In addition, in Clarity’s public beta testing of CaptionMate, the participants who filed comments on their experiences generally found the service to be accurate, fast, and useful.\(^{29}\) We also note that Clarity’s proposed service offers a unique feature to confirm the accuracy of captions—if the party whose speech is being captioned is on a mobile phone that accepts text messages, the party receiving the captions can permit the speaking party to check their accuracy during the call by sending that party a secure, one-time-use website link.\(^{30}\) Clarity also offers an opportunity for users to provide a rating and feedback at the end of every call.\(^{31}\) In sum, we conclude that there is sufficient record evidence that Clarity’s service will meet or exceed the Commission’s competence and “verbatim” requirements.\(^{32}\)

8. **Privacy.** Providers of ASR-only IP CTS are subject to the same confidentiality requirements as other TRS providers.\(^{33}\) Therefore, no IP CTS provider may allow its ASR service to retain IP CTS user call content for any purpose, either locally or in the cloud. We note that an IP CTS provider is responsible for ensuring that data is handled by its contractors in accordance with the Commission’s TRS rules. Clarity’s application establishes that its service will comply with the call confidentiality and customer proprietary network information (CPNI) rules.\(^{34}\) While noting that ASR-only IP CTS enhances call privacy by eliminating the need for a human to listen to a call,\(^{35}\) Clarity explains in detail how call content will be handled by its automated system.\(^{36}\) Audio is deleted from its servers as soon as it is transcribed, transcriptions are deleted immediately at the end of a call, and the speech engine itself discards audio and transcription as soon as it is delivered.\(^{37}\) Thus, Clarity has shown

\(^{28}\) NTL May 2020 Test Report at 3. Although there is currently no quantitative TRS standard against which Clarity’s test results can be evaluated, they provide additional support for Clarity’s claims that it will meet or exceed the Commission’s competence and verbatim transcription requirements.

\(^{29}\) See, e.g., Debra O’Rear Express Comments (rec. Sept. 23, 2019) (“very useful tool”); Herbert Allen Express Comments (rec. Sept. 13, 2019) (“I had giving up on having a cell ever again, until I found CaptionMate. . . . I love my CaptionMate!!”); Carlos S. Monserrate Express Comments (rec. Sept. 9, 2019) (“very fast and accurate”); Will Tinsley Express Comments (rec. Sept. 6, 2019) (“game changer . . . to be able to understand phone calls much better and with more confidence”); Melissa Graham Express Comments (rec. Sept. 6, 2019) (“It is fast and accurate and no more miscommunication. . . . My confidence level has tremendously improved and I love my CaptionMate.”); Kathie Kearbey Express Comments (rec. Sept. 5, 2019) (“really accurate . . . tried to steer clear of voice calls for years because of the confusion, but I am now connecting to friends who hate texting”); Frank Zaidle Express Comments (rec. Sept. 5, 2019) (“absolutely a godsend . . . allow[s] me to make calls at work and to family members”); James Forstall Express Comments (rec. Sept. 4, 2019) (“service is quite impressive . . . do not have to wait for a CA”); Jonathan Gray Express Comments (rec. Sept. 4, 2019) (“Give consumers the choice and they use the product that works best for them.”).

\(^{30}\) See Clarity Application at 5-6; Clarity Reply Comments at 12.

\(^{31}\) Clarity Application at 5-6.

\(^{32}\) As noted below, conversion from conditional to full certification will depend on the Bureau’s assessment of Clarity’s actual performance, which may include further testing of Clarity’s service as actually provided.

\(^{33}\) 2018 ASR Declaratory Ruling, 33 FCC Rcd at 5832, para. 60 (clarifying that the rules prohibiting TRS providers from disclosing the content of a relayed conversation or keeping records of content beyond the duration of a call apply to ASR-based IP CTS).

\(^{34}\) See Clarity Application, Appx. C at C-2-3, C-81-95 Appx. E at E-1 (confidential version).

\(^{35}\) See id. at 6.

\(^{36}\) Id., Appx. C at C-2-3 (confidential version); Id., Appx. E at E-1 (confidential version); Clarity June 2 Ex Parte (stating that Clarity has disabled data logging on its speech-to-text API to prohibit storing and using the audio or transcription generated during a call.).

\(^{37}\) See Clarity Reply Comments at 7-8.
that its ASR service is secure and that neither Clarity nor its ASR vendor will retain call content beyond the duration of a call for any purpose.

9. **Emergency Call Handling.** Clarity establishes that its ASR-only IP CTS product will be capable of handling emergency calls in accordance with applicable Commission rules.\(^{38}\) According to Clarity, it will accept and handle emergency calls, access a commercially available database to determine an appropriate Public Safety Answering Point, and relay the call to that entity.\(^{39}\) Clarity also states that users of its IP CTS product will be required to either allow access to location information on mobile devices or acknowledge that the mobile device’s location will not be used for such purposes and default to the Registered Location.\(^{40}\)

10. In addition, Clarity provides a detailed description of its complaint procedures, confirmation that it will file annual compliance reports demonstrating continued compliance with the TRS rules, and its CEO’s certification as to the accuracy and completeness of the information provided.\(^{41}\)

11. In sum, the documents and information provided in its application facially establish that Clarity will meet or exceed the non-waived operational, technical, and functional mandatory minimum standards and has developed sufficient procedures and remedies for ensuring compliance with the applicable TRS rules.\(^{42}\)

12. **Conditional Certification.**—Although Clarity’s application is facially sufficient, we grant certification on a conditional basis, pending further verification of Clarity’s compliance with the Commission’s minimum TRS standards. Because ASR-only IP CTS is a new method for the provision of this service, we believe the best course is to collect additional information, through observing Clarity’s product in actual operation, to confirm that this service will meet or exceed the minimum TRS standards.\(^{43}\)

13. To assist the Bureau in its final determination of Clarity’s eligibility, we require quarterly reports of consumer complaints and inquiries 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

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\(^{38}\) Clarity Application, Appx. C at C-48-53.


\(^{40}\) Clarity Application, Appx. C at C-48-49; 47 CFR § 9.14(b)(2)(ii). “Registered Location” is “[t]he most recent information obtained by a provider of . . . telecommunications relay services (TRS) . . . that identifies the physical location of an end user.” 47 CFR § 9.3.

\(^{41}\) See 47 CFR § 64.606(a)(2); Clarity Application at 7-15, 19-22, Appx. C (detailing how Clarity will meet application requirements).

\(^{42}\) See 47 CFR § 64.606(b)(2).

\(^{43}\) See 2011 Internet-based TRS Certification Order, 26 FCC Red 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); CaptionCall Comments at 5 (“An ASR-only service that performs well during a single demonstration under perfect conditions may not perform well when handling thousands of calls, and hundreds of thousands of minutes, week after week.”); Consumer Groups and Academic Researchers Comments at 8 (asserting that ASR-only providers need to provide additional substantive evidence and data about the operations of their services to demonstrate functional equivalency).
complaints that providers must file annually with the Commission.\textsuperscript{44} The first report shall be due October 1, 2020, and shall cover the period from the commencement of service through August 31, 2020.\textsuperscript{45} Each subsequent report shall be filed on the first day of each calendar quarter and shall cover the 3-month period that begins after the preceding 3-month period. For example, the second report shall be due January 4, 2021, and shall cover the period from September 1, 2020 through November 30, 2020. Clarity shall continue to file reports on a quarterly schedule until it has submitted four reports, or until a Bureau or Commission action granting or denying full certification, whichever occurs earlier.\textsuperscript{46}

14. Pending a decision on full certification, the Bureau may request additional information in order to complete our review of Clarity’s application,\textsuperscript{47} such as the results and protocols for performance tests conducted by Clarity or independent third parties.\textsuperscript{48} We also require Clarity to report promptly any changes in the information previously provided to the Commission in its application and supplemental filings, including, for example, any changes in service agreements and suppliers, procedures for registering and screening prospective users, or the manner in which Clarity provides service.\textsuperscript{49}

15. Pursuant to this grant of conditional certification, Clarity may provide Fund-supported IP CTS in the manner described in its application, for a period not to exceed five years, pending a final determination of Clarity’s qualifications. This conditional certification is issued without prejudice to such final determination, which is dependent on verification of the information provided in Clarity’s application 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 Clarity’s premises and request additional documentation relating to Clarity’s provision of 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 Clarity is in compliance with applicable Commission rules and orders and is qualified to receive compensation from the Fund for the provision of IP CTS. If, at any time during the period in which Clarity is operating pursuant to this conditional certification, the Commission determines that Clarity 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

\textsuperscript{44} 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 ASR-only IP CTS is providing functionally equivalent service).

\textsuperscript{45} Clarity’s first report shall specify the date of commencement of service. In the event that Clarity does not initiate service by August 31, the filed report shall so state.

\textsuperscript{46} After such time, Clarity must continue to file annual consumer complaint logs, in accordance with Commission rules. 47 CFR § 64.604(c)(1).

\textsuperscript{47} See, e.g., InnoCaption Conditional Certification Notice, 29 FCC Rcd at 5110 (conditioning a provider’s certification on submission of additional information).

\textsuperscript{48} 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 5106 (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 latency and accuracy of captions, may be helpful in the overall evaluation of this application for the purpose of deciding whether to grant full certification. This could include, for example, additional testing of CaptionMate’s captioning accuracy in noisy environments. See NTL May 2020 Test Report at 12-16 (indicating that CaptionMate test results included a median word error rate of 35.9% for the “Noise Cancelling” scenario).

\textsuperscript{49} See InnoCaption Conditional Certification Notice, 29 FCC Rcd at 5110 (requiring the provider to promptly update the information in its application, pending final certification).
abuse, the Commission will take appropriate action, which may include the denial of Clarity’s application. In the event of such denial, Clarity’s conditional certification will automatically terminate thirty-five (35) days after such denial.\textsuperscript{50}

16. \textit{Preventing Misuse}.—We remind Clarity 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 in-person transcription services, such as Communication Access Realtime Translation (CART).\textsuperscript{51} Further, although our rules do not prohibit Clarity from providing transcription for both sides of a call or enabling a user to share the call transcript with the other call participant,\textsuperscript{52} 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.\textsuperscript{53} We also remind Clarity that its marketing of this service must conform with the Commission’s rules.\textsuperscript{54}

17. \textit{Response to Comments}.—We disagree with several arguments in the record that would subject Clarity to new obligations not contemplated by our rules. For example, we disagree with the broad assertion of some parties that Clarity’s application lacks sufficient evidence or is too vague and conclusory to establish that it will meet the mandatory minimum standards.\textsuperscript{55} As discussed above, Clarity has provided a large amount of detail regarding its proposed service, which is comparable to the degree of detail provided by other TRS certification applicants, and which, as discussed above, is sufficient to support a conditional grant of its application.\textsuperscript{56} And we reject the suggestion that the 2018 ASR Declaratory Ruling requires an ASR applicant to submit certain service-quality test results with its application, something that no provider of CA-assisted IP CTS has had to do prior to certification. In the 2018 ASR Declaratory Ruling, the Commission cited test results as one example of the documentation an applicant for ASR certification might provide—it did not mandate such a submission.\textsuperscript{57} In any event, Clarity provided internal testing results with its application and submitted its IP CTS product for independent testing by the Commission’s NTL. What is more, the NTL testing supports Clarity’s claim

\textsuperscript{50} \textit{See iTRS Certification Order}, 26 FCC Rcd at 10914-15, para. 37.

\textsuperscript{51} 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. \textit{See InnoCaption Conditional Certification Notice}, 29 FCC Rcd at 5110; \textit{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).

\textsuperscript{52} \textit{See} Clarity Application at 5-6.

\textsuperscript{53} \textit{See} 47 CFR § 64.604(a)(2)(i). There is a limited exception applicable only to speech-to-speech services.

\textsuperscript{54} \textit{See, e.g.,} 47 CFR § 64.604(c)(8), (c)(11), (c)(13). The Commission has noted that the ease and convenience of using IP CTS, while facilitating its use by people who need it for effective communication, also create a risk that IP CTS will be used when it is not needed. \textit{See 2018 ASR Declaratory Ruling}, 33 FCC Rcd at 5805, para. 9.

\textsuperscript{55} \textit{See} CaptionCall Comments at 25-30; Consumer Groups and Accessibility Researchers Comments at 12-14. We also anticipate that allowing Clarity to provide ASR-only IP CTS on a conditional basis will yield further data to demonstrate whether or not Clarity’s ASR-only IP CTS product operates in a functionally equivalent manner.

\textsuperscript{56} \textit{Supra} paras. 5-9.

\textsuperscript{57} \textit{2018 ASR Declaratory Ruling}, 33 FCC Rcd at 5834-35, para. 63. CaptionCall incorrectly infers that the Commission “directed applicants” to submit such information. CaptionCall Comments at 4. If the Commission had intended to require the submission of test results, it would have so stated.
that its IP CTS offering will improve service for IP CTS users—indeed, the testing shows that Clarity’s captioning will be faster than and its accuracy will be generally comparable to what is available today. 58

18. Nor do the Commission’s rules require ASR applicants to show that their service will be “comparable” in some unspecified fashion to currently available CA-assisted IP CTS, as CaptionCall suggests. 59 Notably, the Commission has already found 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.” 60 In other words, the Commission has already found 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. 61 And notably, the Commission has never required an IP CTS provider to demonstrate “comparability” with preexisting CTS offerings (either traditional or IP-based). Instead, an applicant must show that it will “meet or exceed” all applicable minimum standards—which Clarity has done here. 62 In any event, as discussed above, performance test results for Clarity are generally comparable to—and for caption delay, better than—those for CA-assisted providers.

19. Further, we reject CaptionCall’s argument that we cannot grant Clarity’s application because, as a general matter, ASR technologies sometimes “may generate inaccurate captions” and “do not work equally well for all individuals” or call environments. 63 As a preliminary matter, we note that the Commission’s minimum TRS standards do not mandate perfect service quality in any material respect. 64 More specifically, the Commission has never ruled that IP CTS providers must achieve 100% captioning accuracy (or any specific accuracy level) on every call, and no applicant for certification has claimed to be able to attain that level consistently. In fact, most applicants for CA-assisted IP CTS

58 NTL May 2020 Test Report at 3-4.

59 See CaptionCall Comments at 4 (claiming that “[g]iven the current state of ASR, . . . it is unclear if ASR-only providers are able to generate captions that are ‘at least comparable to currently available CA-assisted IP CTS’”).

60 2018 ASR Declaratory Ruling, 33 FCC Rcd at 5828, para. 51.

61 Id. at 5827-28, paras. 49-50.

62 See 47 CFR § 64.606(b)(2)(i).

63 See CaptionCall Comments at 8-9; see also id., Appx. A at 9-17. We note that the “types of calls” requirement cited by CaptionCall, CaptionCall Comments at 8-9, 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. See 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).

64 For example, the Commission’s speed-of-answer standards allow call-answering delays of up to 10 seconds for IP CTS and most other forms of TRS, and up to 120 seconds for VRS. See 47 CFR § 64.604(a)(3). As the Commission has noted, the statutory goal of making functionally equivalent TRS available, which is qualified by the criteria “to the extent possible” and “in the most efficient manner” (47 U.S.C. § 225(b)(1)) requires “periodic reassessment” of service and performance standards in light of “[t]he ever-increasing availability of new services and the development of new technologies.” 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 Rcd 5140, 5144, para. 4 (2000) (2000 TRS Order). We also note that, with IP CTS, as with VRS, the Commission has relied on competition among providers to help ensure high quality service. See 2007 IP CTS Declaratory Ruling, 22 FCC Rcd at 390, para. 25; see also Sorenson Commsns, LLC v. FCC, 897 F.3d 214, 227-28 (D.C. Cir. 2018) (noting that the Commission has used competition among VRS providers as “a technique that can help ensure compliance with some of the service-quality requirements outlined in the mandatory minimum standards,” as well as a competitive incentive to improve VRS offerings).
certification have made no quantitative claims regarding captioning accuracy.\(^\text{65}\) Indeed, if we were to apply to all IP CTS providers a criterion of 100% accuracy, or require a provider to ensure the same level of accuracy on all calls, it could mean that none is qualified to provide service, since past performance test results show significant variation in the accuracy of captions provided by CA-assisted IP CTS providers for different calls.\(^\text{66}\)  

20. We similarly reject arguments that Clarity has failed to provide sufficient information regarding confidentiality and emergency call handling.\(^\text{67}\) All TRS providers must ensure that call content is not retained by either the provider or a third party for any purpose beyond the duration of a call—an obligation that Clarity’s application shows it can and will meet by preventing any retention of call content by its own servers or by its ASR vendor.\(^\text{68}\) Similarly, Clarity provided detailed information on how it will determine callers’ locations, route 911 calls to the appropriate PSAP, and otherwise comply with emergency call-handling obligations.\(^\text{69}\) Further, we disagree with incumbent providers that ASR-only applicants bear a higher burden than other applicants in this regard—nothing in our rules or the 2018 ASR Declaratory Ruling suggests as much.

21. We reject some commenters’ requests that action on ASR applications be deferred until after the Commission adopts more specific or quantifiable performance standards.\(^\text{70}\) The 2018 ASR Declaratory Ruling authorized the Bureau to approve ASR applications and provided specific guidance on how the Bureau should evaluate certification applications. In the same document, the Commission launched a notice of inquiry on how to establish objective, quantifiable, and measurable performance goals and service quality metrics for the IP CTS program.\(^\text{71}\) Accordingly, it is clear that the Commission did not intend the Bureau to postpone action on ASR applications until the completion of both the initial inquiry and a subsequent rulemaking proceeding on IP CTS performance measures.

\(^{65}\) See, e.g., Sorenson Communications, Inc., Internet-Based TRS Certification Application, CG Docket No. 10-51, at 3, 4 (filed Dec. 2, 2011), https://ecfsapi.fcc.gov/file/7021749097.pdf (claiming only that its CAs are “sufficiently skilled” in required competencies and are generally prohibited from intentionally altering the content of conversations). Although one prior applicant did claim to be able to achieve a 95% accuracy level, the Bureau’s conditional grant of that application did not state or imply that even a 95% accuracy level—or any specific metric—is currently required by the Commission’s minimum TRS standards. See InnoCaption Conditional Certification Notice, 29 FCC Rcd at 5107. In the absence of a quantitative standard of accuracy, among other metrics, the Commission has launched an inquiry into appropriate metrics for IP CTS. See 2018 ASR Declaratory Ruling, 33 FCC Rcd at 5871, para. 165-66; see also Recommendation of the FCC Disability Advisory Committee, Relay and Equipment Distribution Subcommittee, Internet Protocol Captioned Telephone Relay Service Metrics (adopted Oct. 3, 2018), https://ecfsapi.fcc.gov/file/10122598307482/DOC-354522A1.pdf (stating that metrics are “needed” to ensure functional equivalence and that a “high level of accuracy” is necessary).  

\(^{66}\) See, e.g., NTL May 2020 Test Report at 3; MITRE Phase 1 Summary at 23-29.  

\(^{67}\) CaptionCall Comments at 29; Consumer Groups and Accessibility Researchers Comments at 13-14.  

\(^{68}\) See Clarity Application, Appx. C at C-2-3, C-81-95, Appx. E at E-1; Clarity Reply Comments at 7-8; Clarity June 2 Ex Parte.  

\(^{69}\) Clarity Application, Appx. C at C-48-53.  

\(^{70}\) See Clear2Connect Coalition Comments at 4-5; CaptionCall Comments at 7, Appx. A at 24-27; Hamilton Comments at 8-9; Hamilton Reply Comments at 2-3; Sprint Comments at 3-7; Ultratec Comments at 11-12; see also Letter from Sandy McNally et al., Telecommunications Equipment Distribution Program Association (TEDPA), to Marlene H. Dortch, FCC, CG Docket No. 03-123, at 2 (filed Oct. 4, 2019) (TEDPA Oct. 4 Ex Parte); Letter from Sherri Collins, Arizona Commission for the Deaf and Hard of Hearing (ACDHH), to Marlene H. Dortch, FCC, CG Docket Nos. 03-123 and 05-231, at 1-2 (filed Oct. 9, 2019) (ACDHH Oct. 9 Ex Parte).  

\(^{71}\) See 2018 ASR Declaratory Ruling, 33 FCC Rcd at 5868-75, paras. 155-81.
22. We also decline to adopt a special framework for evaluating applications to provide ASR-only IP CTS.\textsuperscript{72} In approving new forms of TRS or applications to provide a relay service using a new technology or method, the Commission has consistently declined to delay implementation until it has built a specific regulatory framework for that technology,\textsuperscript{73} and it expressly declined to delay the introduction of ASR pending the adoption of such a framework.\textsuperscript{74}

23. Finally, we are unpersuaded that it is necessary to set an ASR-specific compensation rate before authorizing Clarity to provide service.\textsuperscript{75} In an ongoing rulemaking proceeding, the Commission is considering the appropriate compensation methodology and whether to set an ASR-only rate.\textsuperscript{76} Until the expiration of the current, generally applicable interim rate of $1.58 per minute, Clarity is eligible to receive compensation at that rate.

IV. REQUEST FOR WAIVERS

24. The Bureau grants in part and otherwise dismisses as moot the request of Clarity for partial waiver of various rules relating to CAs.\textsuperscript{77}

25. \textit{Waiver standard.} A Commission rule may be waived for “good cause shown.”\textsuperscript{78} In particular, a waiver is appropriate where the particular facts make strict compliance inconsistent with the public interest.\textsuperscript{79} In addition, we may take into account considerations of hardship, equity, or more effective implementation of overall policy on an individual basis.\textsuperscript{80} Such a waiver is appropriate if special circumstances warrant a deviation from the general rule and such deviation will serve the public interest.\textsuperscript{81}

26. \textit{Discussion.} We conclude that no waiver is needed for the requirements that CAs “alert the TRS user to the presence of a recorded message and interactive menu through a hot key on the CA’s terminal” to “send text from the CA to the consumer’s TTY indicating that a recording or interactive

\textsuperscript{72} See CaptionCall Comments at 5-13; Hamilton Comments at 5; Sprint Comments at 7-9; Ultratec Comments at 11; Ultratec Reply Comments at 5-8; Clear2Connect Comments at 6; Consumer Groups and Accessibility Researchers Comments at 2-7.

\textsuperscript{73} See, e.g., \textit{2007 IP CTS Declaratory Ruling}, 22 FCC Rcd at 391-93, paras. 29-31 (waiving or finding inapplicable various mandatory minimum standards given the nature of the service); \textit{InnoCaption Conditional Certification Notice}, 29 FCC Rcd at 5107 (granting conditional certification, subject to conditions to evaluate InnoCaption’s novel form of IP CTS service through actual operating experience).

\textsuperscript{74} \textit{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.”).

\textsuperscript{75} See Ultratec Comments at 12-13; Sprint Comments at 9-10; Hamilton Comments at 7-8; CaptionCall Comments at 5 n.18.

\textsuperscript{76} \textit{2018 ASR Declaratory Ruling}, 33 FCC Rcd at 5846-47, paras. 96-100 (seeking comment on establishing compensation rate(s) for ASR-only IP CTS).

\textsuperscript{77} Clarity Application at 15-19. We disagree with Hamilton that it was necessary for the Commission to waive or change the relevant rules through the declaratory ruling authorizing ASR-only IP CTS and that the request for waivers are too numerous and the justification too vague. Hamilton Comments at 3-5. The Bureau may address waiver requests as a part of considering a provider’s application for certification to provide IP CTS, and, as discussed below, Clarity has sufficiently justified those waivers that are actually needed for this service.

\textsuperscript{78} 47 CFR § 1.3.

\textsuperscript{79} \textit{Northeast Cellular Tel. Co. v. FCC}, 897 F.2d 1164, 1166 (D.C. Cir. 1990) (\textit{Northeast Cellular}).

\textsuperscript{80} \textit{WAIT Radio v. FCC}, 418 F.2d 1153, 1159 (D.C. Cir. 1969), \textit{cert. denied}, 409 U.S. 1027 (1972); \textit{Northeast Cellular}, 897 F.2d at 1166.

\textsuperscript{81} \textit{Northeast Cellular}, 897 F.2d at 1166.
menu has been encountered,” and that “[r]elay providers electronically capture recorded messages and retain them for the length of the call.” This provision of the Commission’s rules, adopted in 2000 when the only form of TRS was TTY-based TRS, was adopted in order to address the communications barrier that interactive menus pose for users of TTY-based TRS “because the speed at which information is provided is too fast to allow the TRS user to respond within the system response time.” The Commission has not previously addressed to what extent this rule is applicable outside the context of TTY-based TRS. Because the rule specifically refers to CAs and TTYs, however, we conclude that 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.

27. We also conclude that no waiver is needed of the requirement to provide answering machine and voice mail retrieval. In its application, Clarity indicates that it will transcribe all answering machine and voice mail messages for users who have such capabilities and will automatically send a notification to the user when such message transcriptions become available. Such transcription will satisfy this requirement and thus no waiver is required.

28. Regarding its request for waiver of the requirement to identify CAs and call centers in the call records submitted to the TRS Fund administrator for compensation purposes, Clarity explains that it has no CAs, and thus no call centers. We clarify that, when captions are provided via ASR only, an IP CTS provider can comply with these data requirements by providing an identification number for its ASR system in these fields, or by providing other ASR-identifying information as the administrator directs. Accordingly, no waiver is needed.

29. We also find no waiver is needed of the requirement that TRS providers implement a system that ensures that the provider answers incoming emergency calls before other non-emergency calls. This rule was adopted to ensure that emergency TRS calls “receive priority handling and are not


83 2000 TRS Order, 15 FCC Rcd at 5180, para. 92. As a result, the Commission explained, “TRS users are either unable to make calls that encounter interactive menus or other recorded messages or must frequently place a succession of calls to leave a message with, or access the information provided by, such systems.” Id.

84 In light of the near-simultaneous captioning that the record indicates Clarity’s ASR will achieve, we do not believe that interactive menus are likely to pose special communications barriers for users of that service. See supra para. 6.

85 47 CFR § 64.604(a)(3)(viii); Clarity Application at 16-17.

86 Clarity Application at 16.


88 47 CFR § 64.604(c)(5)(iii)(D)(2)(ii).

89 Clarity Application at 17; see also Structure and Practices of the Video Relay Service Program, CG Docket No. 10-51, Declaratory Ruling, Order and Notice of Proposed Rulemaking, 25 FCC Rcd 6012 (2010) (describing call centers as “the physical locations at which CAs receive and handle TRS calls”).

90 See 47 CFR § 64.604(c)(5)(iii)(D)(1) (“TRS providers seeking compensation from the TRS Fund shall provide the administrator with . . . information reasonably requested to determine the TRS Fund revenue requirements and payments.”).

91 Clarity Application at 17-18 (citing 47 CFR §64.605(a)(2)(ii)). This section has been recodified at 47 CFR § 9.14(b)(2)(ii).
put in a queue with all incoming calls to wait for an available CA to handle the call.\textsuperscript{92} Clarity explains that its system, which does not employ CAs, eliminates the need for a queue for answering IP CTS calls and enables all calls, including emergency calls, to be connected and captioned immediately.\textsuperscript{93} We find that Clarity’s commitment to immediately connect and provide captions for emergency calls meets the requirements of this rule because there will be no delay in connecting and captioning emergency calls.

30. In addition, we find that Clarity does not require an individualized waiver of section 64.605(a)(2)(iii) of the Commission’s rules.\textsuperscript{94} In the \textit{MLTS 911 and Dispatchable Location Order}, the Commission adopted direct dialing and dispatchable location rules and consolidated its existing 911 rules.\textsuperscript{95} In that proceeding, the Commission recognized that IP CTS CAs are unable to speak directly with parties or generate location information, much less provide such information to a PSAP.\textsuperscript{96} The Commission in its revised rule section made clear that the requirement to request the caller’s name or location information is only applicable to VRS or IP Relay providers.\textsuperscript{97} Accordingly, it is unnecessary to grant Clarity’s request for waiver.

31. For the requirement that the URL address through which the call was initiated be included in a provider’s reports to the TRS Fund administrator for compensation of call minutes, there is a difference between the rule as codified,\textsuperscript{98} which states that the specified call data is required from all TRS providers, and the Report and Order adopting the rule, which states that the rule applies to VRS providers.\textsuperscript{99} We do not interpret the rule as requiring IP CTS providers to submit a URL address for each call. However, to the extent a waiver is required, we grant it, because the Report and Order indicates that the URL address requirement was intended to apply only to VRS providers.

32. To the extent necessary, we grant Clarity’s request for waiver of the requirement for a consumer’s written self-certification to state that “[t]he consumer understands that the captioning on captioned telephone service is provided by a live communications assistant who listens to the other party on the line and provides the text on the captioned phone.”\textsuperscript{100} This statement, which is simply incorrect as applied to Clarity, would provide misinformation to consumers. As the Commission has observed in the context of potential analogous professional attestations, that “portion of the attestation is only required to the extent that captions are produced in [that] manner and not exclusively through a non-CA assisted automatic speech recognition engine.”\textsuperscript{101}

\textsuperscript{92} \textit{Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; E911 Requirements for IP-Enabled Service Providers}, Report and Order, 23 FCC Rcd 5255, 5266, para. 17 (2008).

\textsuperscript{93} Clarity Application at 17-18.

\textsuperscript{94} Id.

\textsuperscript{95} \textit{See Implementing Kari’s Law and Section 506 of RAY BAUM’S Act; Inquiry Concerning 911 Access, Routing, and Location in Enterprise Communications Systems; Amending the Definition of Interconnected VoIP Service in Section 9.3 of the Commission’s Rules}, PS Docket Nos. 18-261 and 17-239, GN Docket No. 11-117, Report and Order, 34 FCC Rcd 6607 (2019) (\textit{MLTS 911 and Dispatchable Location Order}).

\textsuperscript{96} \textit{MLTS 911 and Dispatchable Location Order}, 34 FCC Rcd at 6688-89, para. 212.

\textsuperscript{97} See 47 CFR § 9.14(b)(2)(iii), (c)(2)(ii).

\textsuperscript{98} Clarity Application at 17; 47 CFR § 64.604(c)(5)(iii)(D)(2)(x).


\textsuperscript{100} Clarity Application at 19; 47 CFR § 64.611(j)(1)(v).

\textsuperscript{101} \textit{2018 ASR Declaratory Ruling}, 33 FCC Rcd at 5861-62, para. 133 n.366.
V. PROCEDURAL MATTERS

33. 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) or 202-418-0432 (TTY).

34. Additional Information. For further information regarding this item, please contact Michael Scott, Disability Rights Office, Consumer and Governmental Affairs Bureau, at 202-418-1264 or by e-mail to Michael.Scott@fcc.gov.

VI. ORDERING CLAUSES

35. Accordingly, IT IS ORDERED that, pursuant to sections 1, 2, 4(i), 4(j), and 225 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 154(i), 154(j), 225, sections 0.141, 0.361, 1.3, and 64.606(b)(2) of the Commission’s rules, 47 CFR §§ 0.141, 0.361, 1.3, 64.606(b)(2), and the authority delegated by paragraph 60 of the Commission’s 2018 ASR Declaratory Ruling, the application of Clarity Products, LLC, for certification to provide IP CTS, is GRANTED, as conditioned in this Memorandum Opinion and Order.

36. IT IS FURTHERED ORDERED, that Clarity Products, LLC, is conditionally certified to provide IP CTS, as conditioned in this Memorandum Opinion and Order.

37. IT IS FURTHER ORDERED, that the Clarity Products, LLC Request for Waiver is GRANTED IN PART and DISMISSED IN PART, subject to the conditions herein.

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

FEDERAL COMMUNICATIONS COMMISSION

Patrick Webre, Chief
Consumer and Governmental Affairs Bureau