

FCC FACT SHEET*

**TRS Fund Compensation for Internet Protocol Captioned Telephone Service
and Performance Measures for Telephone Captioning**
Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking
CG Docket Nos. 13-24 and 03-123

Background: Captioned Telephone Service (CTS) and Internet Protocol Captioned Telephone Service (IP CTS) enable individuals with hearing loss to read captions and use their residual hearing to understand a telephone conversation. These services are funded through the FCC’s Telecommunications Relay Services (TRS) Fund. To ensure that high-quality telephone captioning service is provided in the most efficient manner, without imposing unnecessary burdens on TRS Fund contributors, the *Report and Order* would complete the phased adjustment of compensation rates for IP CTS, begun in 2018, to bring IP CTS expenditures into line with the actual costs of providing the service. The *Further Notice of Proposed Rulemaking* would propose quantitative measures and testing methods to better evaluate the performance of IP CTS and CTS providers—and of the overall telephone captioning program—against the Commission’s standard of “functional equivalence” to voice communications.

What the Report and Order Would Do:

- Establish a target cost-based compensation rate of \$1.30 per minute to compensate IP CTS providers for the average cost of providing service plus a reasonable operating margin.
- Transition from the current \$1.58 rate to the \$1.30 cost-based rate in a two-step process (\$1.42 for the remainder of Fund Year 2020-21, and \$1.30 for Fund Year 2021-22), saving TRS Fund contributors approximately \$200 million over the next 19 months.
- Make the first step of the rate reduction effective Dec. 1, 2020. Extending the current rate is not warranted, as average per-minute costs have declined, not increased, during the COVID pandemic.
- To allow a reasonable opportunity for all providers to operate successfully at a cost-based rate while increasing their efficiency, apply these compensation rates in a technologically neutral manner to all forms of IP CTS.

What the Order on Reconsideration Would Do:

- Deny the petition of Sprint Corporation to reconsider the interim compensation rates for TRS Fund Years 2018-19 and 2019-20, which saved TRS Fund contributors more than \$350 million.

What the Further Notice of Proposed Rulemaking Would Do:

- Propose to adopt measurable standards for telephone captioning delay and accuracy and seek comment on appropriate metrics.
- Propose guidelines for testing telephone captioning services against performance standards.
- Seek comment on the appropriate entity for carrying out performance measurements.

* This document is being released as part of a “permit-but-disclose” proceeding. Any presentations or views on the subject expressed to the Commission or its staff, including by email, must be filed in CG Docket Nos. 13-24 and 03-123, which may be accessed via the Electronic Comment Filing System (<https://www.fcc.gov/ecfs/>). Before filing, participants should familiarize themselves with the Commission’s *ex parte* rules, including the general prohibition on presentations (written and oral) on matters listed on the Sunshine Agenda, which is typically released a week prior to the Commission’s meeting. See 47 CFR § 1.1200 *et seq.*

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

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

REPORT AND ORDER, ORDER ON RECONSIDERATION, AND FURTHER NOTICE OF
PROPOSED RULEMAKING*

Adopted: []

Released: []

Comment Date: [30 Days after Date of Publication in the Federal Register]

Reply Comment Date: [60 Days after Date of Publication in the Federal Register]

By the Commission:

I. INTRODUCTION

1. The Commission is committed to ensuring that high-quality, functionally equivalent telephone captioning service is made available in the most efficient manner to individuals who are deaf, hard of hearing, or deafblind, or who have speech disabilities. Internet Protocol Captioned Telephone Service (IP CTS) is a form of telecommunications relay service (TRS) that allows individuals with hearing loss to both read captions and use their residual hearing to understand a telephone conversation. In 2018, the Commission took initial steps to bring TRS Fund expenditures for IP CTS into line with its actual costs and to develop precise measurements of the quality of telephone captioning.

2. Today, we continue the work of improving the efficiency and quality of IP CTS and other telephone captioning services. In the Report and Order, we set compensation rates through June 30, 2021, to complete the process of bringing expenditures into line with the current reasonable costs of service, which we expect will save approximately \$200 million for the Telecommunications Relay Service Fund (TRS Fund) over that period. In the Order on Reconsideration, we deny Sprint Corporation’s request to

* This document has been circulated for tentative consideration by the Commission at its September 2020 open meeting. The issues referenced in this document and the Commission’s ultimate resolution of those issues remain under consideration and subject to change. This document does not constitute any official action by the Commission. However, the Chairman has determined that, in the interest of promoting the public’s ability to understand the nature and scope of issues under consideration, the public interest would be served by making this document publicly available. The FCC’s ex parte rules apply, and presentations are subject to “permit-but-disclose” ex parte rules. See, e.g., 47 CFR §§ 1.1200(a), 1.1206. Participants in this proceeding should familiarize themselves with the Commission’s ex parte rules, including the general prohibition on presentations (written and oral) on matters listed on the Sunshine Agenda, which is typically released a week prior to the Commission’s meeting. See 47 CFR §§ 1.1200(a), 1.1203.

overturn the interim compensation rates set in 2018, which have already saved the TRS Fund more than \$350 million. And in the Further Notice of Proposed Rulemaking, we propose, for the first time, to establish measurable standards for caption delay and accuracy—two key elements of effective telephone captioning—as well as rules on how to test the quality of telephone captioning services.

II. BACKGROUND

3. Under section 225 of the Communications Act of 1934, as amended, the Commission must ensure that TRS—telephone service for individuals who are deaf, hard of hearing, or deafblind, or who have speech disabilities that is “functionally equivalent” to voice service—is made available to eligible users “to the extent possible and in the most efficient manner.”¹ One form of TRS, IP CTS, delivers captions for ongoing telephone conversations to individuals with hearing loss, so that they can use the captions and their residual hearing to understand what the other party is saying.² Twelve years after its introduction, IP CTS is by far the most widely used form of TRS—usage having grown from 2.4 million minutes in 2009 to 511.6 million minutes in 2019.³ Like other forms of TRS, IP CTS is paid for by telecommunications and voice over Internet Protocol (VoIP) service providers’ contributions to the Commission-administered TRS Fund.⁴ As demand for IP CTS has grown, the Commission has taken steps to improve both the efficiency and the quality of this service.

4. In its June 2018 Report and Order (*2018 Order*), the Commission determined that TRS Fund payments to the companies providing IP CTS were greatly in excess of actual costs.⁵ Under the Multistate Average Rate Structure (MARS) methodology then in effect, the provider compensation rate for IP CTS had drifted ever higher, to levels far above providers’ average per-minute costs, and the gap between TRS Fund payments and provider costs was growing wider each year.⁶ Specifically, the Commission determined that average IP CTS costs were between \$1.38 and \$1.44 per minute, well below the \$1.9467 rate set for the 2017-18 Fund Year under the MARS methodology.⁷ The Commission calculated costs, as it does with several other TRS programs, based on the weighted average of each

¹ 47 U.S.C. § 225(b)(1).

² See 47 CFR § 64.601(a)(19) (definition of IP CTS).

³ 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, Declaratory Ruling, Further Notice of Proposed Rulemaking, and Notice of Inquiry, 33 FCC Rcd 5800, 5809, Table 1 (2018) (*2018 Order*, *2018 Declaratory Ruling*, *2018 Further Notice*, or *2018 Notice of Inquiry*) (showing IP CTS minutes in 2009); *infra* Table 1 (showing IP CTS minutes in 2019).

⁴ See 47 CFR § 64.604(c)(5)(ii), (iii). In 2019, the Commission amended its rules to expand the TRS Fund contribution base for IP CTS to include intrastate as well as interstate end-user revenues. *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, 34 FCC Rcd 11265, 11268-70, paras. 9, 12 (*IP CTS Contribution Base Order*). However, the industry revenues available to fund TRS are declining over time. See Rolka Loube, *Interstate Telecommunications Relay Services Fund Payment Formula and Fund Size Estimate Supplemental Comment*, CG Docket Nos. 03-123 and 10-51, Supp. Exh. 3 (filed June 5, 2020), <https://ecfsapi.fcc.gov/file/10605033505315/Updated%202020%20Exhibits%20%20and%20%20203.pdf> (2020 TRS Rate Report Supplement) (detailing the continued decline of the interstate TRS contribution base to TRS Fund year 2020-21).

⁵ *2018 Order*, 33 FCC Rcd at 5809-10, paras. 17-18

⁶ *2018 Order*, 33 FCC Rcd at 5809-10, paras. 17-18.

⁷ *2018 Order*, 33 FCC Rcd at 5813-14, para. 23.

provider's per-minute allowable expenses—plus a reasonable operating margin expressed as a percentage of total expenses.⁸

5. Concluding that immediate steps were needed to narrow the widening gap between rates and costs, the Commission terminated use of the MARS methodology.⁹ To set interim compensation rates for IP CTS providers for the 2018-19 and 2019-20 TRS Fund Years, pending adoption of a replacement compensation methodology, the Commission employed essentially the same methodology that it uses to set compensation rates for other Internet-based relay services.¹⁰ To allow existing IP CTS providers—and in particular, those with higher than average costs—a reasonable opportunity to continue offering IP CTS while improving their efficiency during the two-year interim period, the Commission reduced the IP CTS compensation rate by 10% annually—or more than \$0.36 over two years—from \$1.9467 per minute for 2017-18 to \$1.75 for 2018-19, and then to \$1.58 for 2019-20, thus setting TRS Fund payments to providers on a “glide path” toward a cost-based level.¹¹ In a Further Notice of Proposed Rulemaking (*2018 Further Notice*), the Commission sought comment on (among other things) establishing a new TRS Fund compensation methodology for IP CTS and setting provider compensation for the period after June 30, 2020.¹²

⁸ *2018 Order*, 33 FCC Rcd at 5813-14, para. 23.

⁹ *2018 Order*, 33 FCC Rcd at 5810, para. 18.

¹⁰ *2018 Order*, 33 FCC Rcd at 5813-14, para. 23; *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 Order, 32 FCC Rcd 5891, 5927-28, para. 69 (2017) (*2017 VRS Compensation Order*) (describing methodology for determining a cost-based VRS compensation rate); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Structure and Practices of the Video Relay Service Program*, CG Docket Nos. 03-123 and 10-51, Order, 34 FCC Rcd 5171, 5174-77, paras. 8-14 (CGB 2019) (*2019 TRS Rate Order*) (describing methodology for setting IP Relay compensation rate). Prior to 2007, the Commission also used the average cost method to set compensation for all forms of interstate TRS. *See Telecommunications Relay Services, and the Americans with Disabilities Act of 1990*, CC Docket No. 90-571, Third Report and Order, 8 FCC Rcd 5300, 5304-05, paras. 23-30 (1993) (*1993 TRS Order*). In 2007, the Commission switched to the MARS methodology as a more efficient means of setting compensation for interstate calls that use forms of TRS offered through state TRS programs (for which the state programs set intrastate compensation rates). *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CG Docket No. 03-123, Report and Order and Declaratory Ruling, 22 FCC Rcd 20140, 20151-61, paras. 16-37 (2007) (*2007 TRS Rate Methodology Order*).

¹¹ *2018 Order*, 33 FCC Rcd at 5814-16, paras. 24-26.

¹² *2018 Further Notice*, 33 FCC Rcd at 5836-47, paras. 68-100. The due dates for comments and reply comments on the *2018 Further Notice* were September 17, 2018, and October 16, 2018, respectively. In response to the *2018 Further Notice*, the Commission received 12 comments and seven reply comments on compensation issues. *See* CaptionCall, LLC (CaptionCall) Comments at 59-93, Appendices C, D; ClearCaptions, LLC (ClearCaptions) Comments at 2-23; Colorado Public Utilities Commission (CoPUC) Comments at 9; Florida Deaf Service Center Association (Florida DSCA) Comments at 2; Hamilton Relay, Inc. (Hamilton) Comments at 1-15; 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 and Hard of Hearing Consumer Advocacy Network (DHHCAN), Deaf/Hard of Hearing Technology Rehabilitation Engineering Research Center (DHH-RERC), Rehabilitation Engineering Research Center on Inclusive ICT (IT-RERC) (Consumer Groups and Accessibility Researchers) Comments at 29-30; ITTA – The Voice of America’s Broadband Providers (ITTA) Comments at 8-17; Kansas Corporation Commission (KCC) Comments at 9-12; MezmoCorp (InnoCaption) Comments at 2-4; National Association of Regulatory Utility Commissioners (NARUC) Comments at 17-18; Sprint Corporation (Sprint) Comments at 8-21; Telecommunications Equipment Distribution Program Association (TEDPA) Comments at 2; ClearCaptions Reply Comments at 2-6; Consumer Groups and Accessibility Researchers Reply Comments at 14-15; Hamilton Reply Comment at 5-14; InnoCaption Reply Comments at 1-3; Sprint Reply

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6. One IP CTS provider, Sprint, filed a petition for reconsideration of the Commission's decision.¹³ Sprint argues that in setting the interim compensation rates at \$1.75 and \$1.58, the Commission relied on a stale record, did not consider all the costs of providing IP CTS, acted prematurely in light of the potential adoption of new, higher-cost service standards, and failed to consider the impact of rate reductions on IP CTS providers' ability to innovate and provide high-quality service.¹⁴

7. On May 29, 2020, after the onset of the COVID-19 pandemic, the Consumer and Governmental Affairs Bureau (Bureau) granted a *sua sponte* waiver of the June 30, 2020, expiration of the \$1.58 rate, extending its application through September 30, 2020. The Bureau granted this extension to allow additional time for the TRS Fund administrator to determine whether the COVID-19 pandemic has had a significant effect on IP CTS costs and demand, and, if so, to enable the Commission to take account of such impact in setting IP CTS compensation going forward.¹⁵

8. In a Declaratory Ruling accompanying the *2018 Order* and *2018 Further Notice*, the Commission authorized the introduction of fully automatic IP CTS, based on automatic speech recognition technology, which makes possible dramatic reductions in IP CTS costs while maintaining or improving service quality.¹⁶ Subsequently, CGB granted conditional certification to two applicants for the provision of fully automatic IP CTS.¹⁷ In the *2018 Further Notice*, the Commission sought comment on whether (and at what levels) to set separate compensation rates for CA-assisted and fully automatic IP CTS calls.¹⁸

9. Finally, in a Notice of Inquiry (*2018 Notice of Inquiry*) accompanying the *2018 Order*, *Declaratory Ruling*, and *Further Notice*, the Commission sought comment on developing performance measurement methods and metrics to maintain high standards of service quality for IP CTS.¹⁹ The *2018*

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Comments at 5-9; Ultratec, Inc. (Ultratec) Reply Comments at 2-9, 20. Parties have also submitted various *ex parte* filings concerning the compensation methodology issue.

¹³ See Sprint Petition for Reconsideration, CG Docket Nos. 03-123 and 13-24 (filed July 27, 2018) <https://ecfsapi.fcc.gov/file/107272931103590/Sprint%20Petition%20for%20Reconsideration%20REDACTED%20VERSION%20filed%20072718.pdf> (Sprint Reconsideration Petition).

¹⁴ *Id.* The Commission sought comment on Sprint's petition. *Consumer and Governmental Affairs Bureau Seeks Comment on Sprint Petitions Regarding the Report and Order and Declaratory Ruling on Internet Protocol Captioned Telephone Service*, CG Docket Nos. 03-123 and 13-24, Public Notice, 33 FCC Rcd 8019 (CGB 2018). The due dates for comments and reply comments were September 7, 2018, and September 17, 2018, respectively. Two comments were filed. See CaptionCall Reconsideration Comments at 2, 13-17 (asserting the Commission should reconsider only the interim rate for TRS Fund year 2019-20); Hamilton Reconsideration Comments at 3-8.

¹⁵ See *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Structure and Practices of the Video Relay Service Program*, CG Docket Nos. 03-123 and 10-51, Order, 35 FCC Rcd 5469, 5470, para. 3 (CGB 2020) (*IP CTS Compensation Extension Order*).

¹⁶ *2018 Declaratory Ruling*, 33 FCC Rcd at 5827-36, paras. 48-66. Sprint filed a separate petition for reconsideration requesting that the Commission revisit aspects of the Declaratory Ruling on fully automatic IP CTS. This item does not address Sprint's petition for reconsideration of the Declaratory Ruling.

¹⁷ *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CG Docket No. 03-123, Memorandum Opinion and Order, 35 FCC Rcd 4568 (CGB 2020) (*MachineGenius Certification Order*); *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 (CGB 2020) (*Clarity Certification Order*).

¹⁸ *2018 Further Notice*, 33 FCC Rcd at 5846-47, paras. 96-100.

¹⁹ *2018 Notice of Inquiry*, 33 FCC Rcd at 5868-75, paras. 155-181. In response to the *2018 Notice of Inquiry*, seven comments and four reply comments were filed. The due dates for comments and reply comments on the *2018 Notice of Inquiry* were October 16, 2018 and November 15, 2018, respectively. See CaptionCall NOI Comments; Consumer Groups and Accessibility Researchers NOI Comments; Florida DSCA NOI Comments; Florida

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Notice of Inquiry responded to a Government Accountability Office (GAO) report recommending that the Commission establish specific performance measures to determine if, in an objective, quantifiable way, TRS is fulfilling its statutory purpose.²⁰ The *2018 Notice of Inquiry* stated an expectation that, in addition to enabling the Commission to track the progress and success of the IP CTS program, objective performance measures would “provide valuable empirical evidence” supporting “rules for effective implementation and oversight of the IP CTS program,” and providing consumers “with the information they need to make informed choices in their selection of provider services.”²¹

III. REPORT AND ORDER ON IP CTS COMPENSATION

10. As in the *2018 Order*, the Commission today sets IP CTS compensation for a two-year period, maintaining the same methodology adopted in 2018.²² While the interim steps taken by the Commission in 2018 helped to bring compensation rates closer to a cost-based target, they did not actually reach that target. In addition, notwithstanding the COVID pandemic, average costs (plus a reasonable operating margin) have declined further since 2018, from approximately \$1.41 to \$1.30 per minute.²³ Therefore, to reduce the burden on TRS Fund contributors (which affects rates charged to all telephone users) and provide IP CTS in the most efficient manner, we complete the adjustment of IP CTS compensation to the level of current reasonable costs.²⁴

11. However, to permit further opportunity for less efficient providers to improve their efficiency in order to continue participating in the provision of IP CTS, and to ensure that functionally equivalent IP CTS remains available to customers of such providers during this transition, we provide a modest extension of the “glide path” to cost-based compensation.²⁵ Continuing the approximately 10% annual rate reductions initiated in 2018, we reduce the rate from \$1.58 to \$1.42 per minute for the remainder of the 2020-21 Fund Year and reach the average cost plus operating margin, \$1.30 per minute, in the 2021-22 Fund Year. In setting this target cost-based level, we use the same weighted-average cost methodology that the Commission has relied upon in setting interim compensation rates for IP CTS²⁶ and (with certain variations) compensation rates for VRS and IP Relay.

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Telecommunications Relay, Inc. (FTRI) NOI Comments; Hamilton NOI Comments; MachineGenius, Inc. (MachineGenius) NOI Comments; Ultratec NOI Comments; CaptionCall NOI Reply Comments; Consumer Groups and Accessibility Researchers NOI Reply Comments; Hamilton NOI Reply Comments; Sprint NOI Reply Comments.

²⁰ GAO, Report to Hon Jeff Sessions, U.S. Senate, Telecommunications Relay Service: FCC Should Strengthen Its Management of Program to Assist Persons with Hearing or Speech Disabilities, GAO-15-409 (Apr. 2015), <http://gao.gov/assets/670/669916.pdf> (GAO Report).

²¹ *2018 Notice of Inquiry*, 33 FCC Rcd at 5870, paras. 161.

²² See *2018 Order*, 33 FCC Rcd at 5824, para. 17; see also *2018 Further Notice*, 33 FCC Rcd at 5836-37, para. 70 (proposing to set compensation for a multi-year period).

²³ See *2018 Order*, 33 FCC Rcd at 5813-14, para. 23 (finding that average IP CTS costs were between \$1.38 and \$1.44, a range for which the midpoint (representing a 10% operating margin) is \$1.41; *infra* Table 1 (showing that average IP CTS costs, including a 10% operating margin, are \$1.2485 for 2019 and \$1.3612 (projected) for 2020, or \$1.30 for the two years combined).

²⁴ See ITTA Comments at 5, 7-8; NARUC Comments at 16 (“The FCC should assure that IP-CTS rates move towards cost-based compensation.”); see also *id.* at 18.

²⁵ *2018 Further Notice*, 33 FCC Rcd at 5843, para. 87 (seeking comment on whether to “extend the interim-rate ‘glide path’”).

²⁶ See ITTA Comments at 14-15 (supporting use of weighted average of historical and projected costs in setting IP CTS compensation).

12. We apply these compensation rates on a technologically neutral basis to all forms of IP CTS and all IP CTS providers. We conclude that a tiered rate structure is unsuited to the current IP CTS environment, and we defer consideration of whether and how to set a separate compensation rate for fully automatic IP CTS. We also defer consideration of alternatives to cost-based compensation rates, such as a reverse-auction approach, until it becomes clearer how the introduction of fully automatic captioning methods will affect provider cost structures. For similar reasons, we defer consideration of whether to apply price-cap-like adjustments to the compensation rate (other than for reimbursement of exogenous costs).

A. Average Cost Methodology

13. Our primary task in this Report and Order is to move TRS Fund compensation for IP CTS further along the path begun in 2018—bringing the Fund’s expenditures for this service into line with actual service costs. Our first step in this task is to determine the average cost of service. The Commission has broad discretion in choosing compensation methodologies and setting compensation rates within the parameters established by section 225 of the Communications Act.²⁷ In order to determine a cost-based level of IP CTS compensation for the next rate period, we employ the same methodology used in 2018 to set interim IP CTS rates—setting a rate based on the weighted average of all providers’ projected and historical costs, as reported for the current and immediately preceding calendar years, respectively.²⁸ For the following reasons, continued use of this cost-based methodology in the near term will advance the efficiency mandate of section 225 and permit service quality improvements in functionally equivalent service to users without unduly burdening providers.

14. *First*, through more than 25 years of experience using an average-cost methodology to set TRS compensation, the Commission has developed a consistent approach to determining the reasonable costs for TRS, which can be applied without imposing undue administrative burdens on either providers or the Commission.²⁹ Although any ratemaking method is subject to imprecision, provider cost data, which is subject to audit, has been reasonably reliable and consistent. Further, at this time the record does not indicate a reliable alternative that we are confident would produce more accurate results.³⁰ And, as discussed in more detail below, the Commission’s determinations regarding allowability of costs are solidly reasoned and have been upheld on judicial review.³¹ *Second*, average-cost-based compensation,

²⁷ See *IP CTS Contribution Base Order*, 34 FCC Rcd at 11270, para. 13 (detailing the Commission’s broad authority under section 225 to establish regulations, including cost recovery); see also *Sorenson Communications v. FCC*, 897 F.3d 214, 223 (D.C. Cir. 2018) (*Sorenson 2018*) (courts are particularly deferential in reviewing ratemaking orders because agency ratemaking is far from an exact science and involves policy determinations in which the agency is acknowledged to have expertise); *id.* at 227-28 (in carrying out section 225, Congress instructed the FCC to balance several different factors without instructing the FCC how to prioritize the various factors).

²⁸ Under this weighted-average method, the allowable expenses reported by all IP CTS providers for calendar years 2019 (historical expenses) and 2020 (projected expenses) are totaled and the allowed operating margin (determined as a percentage of expenses) is added to total expenses. The resulting total is divided by total historical (for 2019) and projected (2020) compensable minutes of demand for IP CTS for those two calendar years, to yield an average cost per minute (including operating margin). This average cost per minute is called a “weighted” average because it gives more weight to the per-minute cost incurred by providers with relatively high demand and less weight to the per-minute cost incurred by providers with relatively low demand.

²⁹ *2018 Order*, 33 FCC Rcd at 5813-14, para. 23; see also *2017 VRS Compensation Order*, 32 FCC Rcd at 5927-28, para. 69 (describing methodology for determining a cost-based VRS compensation rate); *1993 TRS Order*, 8 FCC Rcd at 5304-05, paras. 23-30 (describing average-cost method of determining TRS compensation rate).

³⁰ See *infra* paras. 41-48.

³¹ See, e.g., *Sorenson Communications v. FCC*, 659 F.3d 1035, 1043 (10th Cir. 2011) (*Sorenson 2011*) (“The Commission has sensibly adopted an approach that compensates only the reasonable costs of providing access to VRS, by limiting compensation to certain ‘allowable costs.’”); *id.* at 1047 (“Particularly given this consistent position on allowable costs, the Commission provided a sufficient explanation for declining to change the categories

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especially when applied for more than one year, provides substantial incentives and opportunities for individual TRS providers to increase their efficiency and capture the resulting profits. Such incentives and opportunities are especially strong in the current circumstances. According to the TRS Fund administrator's analysis of average costs over the last six years, IP CTS costs have continuously declined³²—as one would expect in an industry characterized by significant technological innovation, steady accumulation of management experience and expertise, and progress in realizing economies of scale.³³ And the declining cost trend is likely to continue or accelerate with the introduction of fully automatic IP CTS as an option for consumers.³⁴

15. *Third*, maintaining the same compensation methodology employed two years ago provides a measure of transitional stability at a time of technological change.³⁵ We do not yet have sufficient experience with fully automatic IP CTS to be able to take account of this potentially game-changing technology in the design of a new compensation methodology. Further, given the likelihood that established approaches to the provision of IP CTS may be replaced over time with less costly technology, it is possible that some providers, facing uncertainty about the scale and stability of future demand for their services, could exit before comparable services that maximize the advantages of newer technology are readily available to all segments of the telephone captioning market.³⁶ By providing a relatively predictable path, we can enable legacy services to remain available until the advantages of the newer technology are more fully realized.

16. In setting compensation for the next two years, therefore, we will rely on the same average-cost approach we have applied over the last two years. With the introduction of fully automatic IP CTS using advanced ASR, IP CTS cost structures may change substantially by the end of the next rate period. As more providers begin to offer this alternative, and data becomes available on the actual costs of providing fully automatic IP CTS, the Commission will be able to make future compensation decisions that address the impact of this new technology, including the selection of a new methodology if such is warranted.

B. Allowable Costs and Operating Margin

17. *Allowable cost categories.* We apply to IP CTS, with only one exception,³⁷ the same allowable-cost rules used to determine TRS Fund support of other forms of Internet-based TRS. For well over a decade, the Commission has consistently defined allowable TRS costs as a provider's reasonable

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of allowed costs during the interim period.”) (citations omitted); *Sorenson Communications v. FCC*, 765 F.3d 37, 45 (D.C. Cir. 2014) (*Sorenson 2014*) (“Sorenson’s challenge to the compensable expenses is precluded by our sister circuit’s holding”).

³² See *infra* Table 1. The trend of declining per-minute costs appears to have continued in 2020 to date, despite the challenges providers have faced due to the COVID pandemic. See Rolka Loube, Memorandum on the Impact of Covid-19 on IP CTS Provider Costs and Demand, CG Docket Nos. 03-123 and 13-24 (filed Sept. 8, 2020) (September 2020 COVID-19 Report).

³³ See *2018 Order*, 33 FCC Rcd at 5809, Table 1 (showing the growth in IP CTS minutes from 2009 through 2018).

³⁴ See *2018 Declaratory Ruling*, 33 FCC Rcd at 5828, para. 50 (authorizing fully automatic IP CTS in part because it would allow a substantial reduction in IP CTS operating costs).

³⁵ See *2018 IP CTS Declaratory Ruling*, 33 FCC Rcd at 5827-36, paras. 48-66 (authorizing the provision of fully automatic IP CTS); *MachineGenius Certification Order*, 35 FCC Rcd 4568 (granting conditional certification to an applicant to provide fully automatic IP CTS); *Clarity Certification Order*, 35 FCC Rcd 5635 (granting conditional certification to a second applicant to provide fully automatic IP CTS).

³⁶ See CaptionCall Comments at 82 (arguing that “new entrants [offering fully automatic IP CTS] will likely take time to scale, and may not be able to handle all types of calls”).

³⁷ As discussed below, at this time we continue to allow recovery of outreach costs, which are disallowed for VRS and IP Relay.

costs directly attributable to the provision of TRS.³⁸ In this Report and Order, we adhere to well-settled rulings on the allowability of specific categories of TRS costs, including, e.g., disallowance of costs attributable to allocated overhead and the provision and maintenance of end-user devices.³⁹ The record provides no support for treating IP CTS differently from other forms of TRS with respect to these cost categories.

18. Providers' objections to the continued use of provider-reported costs to determine compensation, which are almost entirely theoretical,⁴⁰ repeat objections previously raised and resolved in this and numerous other rulemakings, without offering new arguments or any persuasive reason for treating IP CTS differently from other services under these longstanding rules.⁴¹ For example, Hamilton repeats its argument from 2017 that "because the FCC has never determined what costs are reasonable or allowable in connection with IP CTS, there are almost certainly wide disparities in the various approaches that IP CTS providers take in submitting their costs."⁴² With the exception of outreach, the Commission's rules on allowability of costs apply across the board to all forms of Internet-based TRS and are clearly stated not only in the Commission's published decisions but in the annual cost reporting instructions provided by the Fund administrator.⁴³ Further, Hamilton's argument that any costs for which a Part 32

³⁸ See *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking, 19 FCC Rcd 12475, 12544, para. 182 & n.520 (2004) (*2004 TRS Order*); *2007 TRS Rate Methodology Order*, 22 FCC Rcd at 20168-69, para. 74.

³⁹ *2004 TRS Order*, 19 FCC Rcd at 12547-48, paras. 189-90; *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Declaratory Ruling and Further Notice of Proposed Rulemaking, 21 FCC Rcd 5442, 5448, 5457-58, paras. 15, 38 (2006) (*2006 Declaratory Ruling*); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Memorandum Opinion and Order, 21 FCC Rcd 8063, 8071, para. 17 (2006); *2007 TRS Rate Methodology Order*, 22 FCC Rcd at 20168-71, paras. 73-82; see also *See Structure and Practices of the Video Relay Service Program, Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order and Further Notice of Proposed Rulemaking, 28 FCC Rcd 8618, 8696-97, paras. 192-94 (2013) (*2013 VRS Reform Order*); *2017 VRS Compensation Order*, 32 FCC Rcd at 5895-903, paras. 10-22. Such exclusions have been upheld repeatedly on judicial review. See *Sorenson* 2011, 659 F.3d at 1046-47; *Sorenson* 2014, 765 F.3d at 44.

⁴⁰ See, e.g., Hamilton Comments at 13-15 n. 42 (repeating 2017 argument that "because the FCC has never determined what costs are reasonable or allowable in connection with IP CTS, there are almost certainly wide disparities in the various approaches that IP CTS providers take in submitting their costs"). In fact, with few exceptions the Commission's rules and rulings on allowability of costs are applicable to TRS in general, not limited a specific relay service. See *2007 TRS Rate Methodology Order*, 22 FCC Rcd at 20168-71, paras. 73-82 (providing guidance on allowable cost categories applicable to all forms of TRS); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals for Hearing and Speech Disabilities*, CG Docket No. 03-123, Further Notice of Proposed Rulemaking, 21 FCC Rcd 8379, 8393, para. 32 (2006) (*2006 TRS FNPRM*) (noting that TRS Fund administrator's data collection form sets forth cost categories applicable to all forms of TRS). As the Commission stated in the 2018 Report and Order, providers have failed to identify any such disparities in approach that can fairly be attributed to lack of guidance from the Commission as to the allowability of costs, and most of the IP CTS providers participating in this proceeding have ample experience in calculating and submitting costs for other forms of TRS and thus are presumably aware of the guidance provided by the Commission's numerous past decisions in this area. *2018 Order*, 33 FCC Rcd at 5820, para. 33 n.118.

⁴¹ Sprint Comments at 18-19 (stating that the Commission should allow TRS Fund recovery of the costs of providing and installing IP CTS equipment for users at no charge); Hamilton Comments at 11, 13-15 (asserting generally that the Commission must allow recovery for categories of costs it has excluded with respect to other forms of TRS).

⁴² Hamilton Comments at 13-15 n. 42.

account exists should be allowable incorrectly assumes that any costs that are recoverable in rates charged by carriers must automatically be recoverable by TRS providers.⁴⁴

19. *Marketing Expenses.* Although the use of TRS Fund resources to support marketing of IP CTS may raise legitimate concerns,⁴⁵ at this time we will continue to allow recovery of IP CTS marketing expenses (which are also recoverable for other forms of TRS). The nature and extent of the marketing conducted by IP CTS providers, as well as the associated costs,⁴⁶ may change significantly as more providers offer fully automatic IP CTS. We direct the Fund administrator to conduct an analysis and report to CGB on the trend of TRS Fund expenditures in support of IP CTS marketing, the specific activities for which they are used, and the impact of such activities on registration for and usage of IP CTS, to enable the Commission to revisit the allowability of such costs, if appropriate, at a later time.

20. *Outreach Expenses.* Similarly, as responsible stewardship requires continued monitoring of TRS Fund expenditures for provider-led outreach, we direct the Fund administrator to study and report

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⁴³ Rolka Loube's annual cost reporting form for Internet-based TRS providers includes a template for reporting providers' expenses in various categories, which is the same for all forms of Internet-based TRS and changes relatively little from year to year. The current reporting categories for annual expenses are (A) "Annual Recurring Fixed/Semi-Variable Expenses" (including rent, utilities, building maintenance, property tax, leased furniture, and leased office equipment); (B) "Annual Recurring Variable Expenses" (i.e., direct operating expenses, including salaries and benefits for CAs and other relay center employees, telecommunications expenses, billing expenses, and relay center expenses); (C) "Annual Administrative Expenses" (finance/accounting, legal/regulatory, engineering, research and development, operations support, human resources, billing, contract management, risk management, and other corporate overhead); (D) "Annual Depreciation/Amortization Associated with Capital Investment" (furniture and fixtures, telecommunications equipment, leasehold, software, other capitalized expenditures); (E) "Other Expenses" (advertising, marketing, outreach, sub-contractor, license fees, software expenses, customer premises equipment expenses, and "other expenses not previously reported"). See Rolka Loube, Interstate Telecommunications Relay Services Fund Payment Formula and Fund Size Estimate, CG Docket Nos. 03-123 and 10-51, Appx. B at 6-13 (filed May 1, 2020), <https://ecfsapi.fcc.gov/file/105013048227177/2020%20Annual%20TRS%20Fund%20Report.pdf> (2020 TRS Rate Report). The existence of a category for "other expenses not previously reported" ensures that reasonable costs attributable to the provision of TRS will not be disallowed by default, merely because they do not seem to fit into any of the form's reporting categories. Rolka Loube's instructions for providers, in addition to providing guidance on how to fit provider's operating expenses into these reporting categories, also identifies categories of costs for which the Commission has specifically *disallowed* recovery from the TRS Fund, with citations to the relevant Commission decisions. 2020 TRS Rate Report, Appx. B at 2-3. Disallowed expenses include, for example, indirect overhead costs; executive compensation for persons who do not directly support the provision of TRS; financial transaction costs or fees unrelated to the provision of relay service, such as costs and fees relating to a change in ownership; expenses for hardware and software used by the consumer, including for its distribution, marketing, or installation; profit or tax allowances; certain expenses associated with the provision of telephone numbers; and E911 charges imposed on TRS providers under a state or local E911 funding mechanism. See 2020 TRS Rate Report, Appx. B at 2-3.

⁴⁴ Hamilton Comments at 13-14. Further, the existence of a Part 32 account for a cost category does not automatically mean that all costs in that category are recoverable, even by a carrier. For example, Part 32 specifies accounts for customer premises equipment (CPE), even though telephone companies have been prohibited from recovering CPE costs in tariffed rates since 1983. See 47 CFR §§ 32.6311 (Station apparatus expense), 32.6341 (Large private branch exchange expense), 32.6362 (Other terminal equipment expense).

⁴⁵ See ITTA Comments at 15-16; 2006 TRS FNPRM, 21 FCC Rcd at 8394-95, para. 36 (tentatively concluding that "branded" marketing is inappropriate for compensation from the Fund, and that the Fund should not be used to promote any particular provider's service over the service of competing providers, or to encourage consumers to switch providers").

⁴⁶ IP CTS marketing expenses, currently average about \$.08 per minute, or approximately 6% of total expenses reported by providers. 2020 TRS Rate Report, Exh. 1-3.

to CGB on the trend, activities, and impact of provider-led IP CTS outreach.⁴⁷ However, we do not find it necessary to prohibit or cap TRS Fund recovery of IP CTS outreach costs at this time. Provider outreach for IP CTS likely serves a reasonable purpose, by educating potential IP CTS users and their families about the nature of the service.⁴⁸ Further, this differs from general outreach intended to raise public awareness about how TRS works and why members of the public should accept TRS calls, which the Commission in 2013 found was better conducted by a national TRS Fund contractor than by individual providers (and for which VRS and IP Relay providers are no longer compensated by the TRS Fund).⁴⁹ We recognize that such outreach to potential users is not always easy to distinguish from branded marketing⁵⁰ and, as a result, may raise some of the same issues as marketing costs, regarding the appropriateness of supporting such activities with TRS Fund resources. Accordingly, as noted above, we will continue to monitor the trend of IP CTS outreach as well as marketing costs, to enable the Commission to revisit their allowability, if appropriate, at a later time.⁵¹

21. *Subcontractor Expenses.* We defer action on the alternatives proposed in the *2018 Further Notice* for enabling the Commission to ascertain the reasonableness of providers' payments to subcontractors.⁵² In the *2018 Order*, the Commission expressed concern about the difficulty of ascertaining the reasonableness of providers' expenses for services obtained by subcontractors, which may include the provision of call centers, CA staffing, and CA workstations and software, as well as the licensing of intellectual property, but which often are not reported in sufficient detail to determine how much of the reported costs are attributable to these various activities.⁵³ Therefore, the Commission amended its rules to expressly require "IP CTS providers that contract for the supply of services used in the provision of TRS" to "include information about payments under such contracts, classified according to the substantive cost categories specified by the administrator," and "to the extent that a third party's provision of services covers more than one cost category," to "provide an explanation of how the provider determined or calculated the portion of contractual payments attributable to each cost category."⁵⁴ In the

⁴⁷ See ITTA Comments at 15 (raising general concerns about the potential for waste, fraud, and abuse).

⁴⁸ We agree with Consumer Groups on the importance of outreach to ensure eligible individuals as well as those who may become eligible in the future can learn about the service. Consumer Groups Comments at 29.

⁴⁹ *2013 VRS Reform Order*, 28 FCC Rcd at 8634-36, paras. 31-32. The National Outreach Program, established pursuant to the *2013 VRS Reform Order* to replace the outreach conducted by VRS and IP Relay providers, focuses primarily on educating hearing individuals about TRS. See *2019 TRS Rate Order*, 34 FCC Rcd at 5179, para. 17.

⁵⁰ See ITTA Comments at 15; Florida DSCA Comments at 2; Letter from Cristina O. Duarte, InnoCaption, to Marlene H. Dortch, FCC, CG Docket Nos. 13-24 and 03-123, at 1-2 (filed Nov. 9, 2018) (explaining that marketing and outreach are not mutually exclusive activities, and both should be supported); see also Consumer Group Comments at 29 (asserting the Commission should scrutinize reported costs from competitive advertising and ensure outreach costs are legitimate).

⁵¹ Currently, outreach expenses reported by IP CTS providers average less than \$.04 per minute. 2020 TRS Rate Report, Exh. 1-3.

⁵² See *2018 Further Notice*, 33 FCC Rcd at 5838, para. 73. Currently, approximately 44% of total provider expenses for IP CTS are reported in the "Other" category, which includes primarily sub-contracted services and license fees. 2020 TRS Rate Report at 16, Exh. 1-3.

⁵³ See *2018 Order*, 33 FCC Rcd at 5822, para. 36. Unlike in VRS, IP CTS providers are not prohibited from obtaining fundamental elements of the service, such as call centers and CA services, from subcontractors. Cf. 47 CFR § 604(c)(5)(iii)(N) (prohibiting VRS providers from subcontracting to uncertified entities for the provision of call center services).

⁵⁴ *2018 Order*, 33 FCC Rcd at 5881, Appx. B (amending 47 CFR § 64.604(c)(5)(iii)(D)(I)). To the extent that the administrator reasonably deems necessary, providers shall submit additional detail on such contractor expenses, including but not limited to complete copies of such contracts and related correspondence or other records and information relevant to determining the nature of the services provided and the allocation of the costs of such services to cost categories. *Id.*

2018 Further Notice, the Commission noted that “a more effective way to review and audit such costs may be to collect information from the subcontractors themselves.”⁵⁵ The Commission sought comment on whether to require a subcontractor whose fees exceed a certain percentage of a provider’s expenses to file its own cost report breaking down the fees into appropriate cost categories, and alternatively whether to require any subcontractor offering what amounts to a “turnkey” relay service to apply for certification as an IP CTS provider on its own account.⁵⁶

22. At this time, the record is limited on these issues and thus insufficient to support adopting either of these remedies.⁵⁷ We note, however, that the amended rule requiring IP CTS providers to report and, if necessary, break down their contract payments under the TRS Fund administrator’s substantive cost categories—i.e., *not* as undifferentiated “subcontractor payments” reported as part of the “Other” category—became effective February 19, 2020.⁵⁸ We remind providers of their obligations under this amended rule.⁵⁹

23. *R&D Costs and Licensing Fees.* To the extent that a TRS provider incurs costs to develop or acquire intellectual property that is needed to provide TRS in accordance with the Commission’s minimum standards, the Commission has long permitted the inclusion of such expenses in the costs subject to TRS Fund recovery.⁶⁰ Thus, a provider’s reasonable research and development (R&D) costs may be recovered from the TRS Fund, but only to the extent of the actual expenses incurred,⁶¹ and only if such expenditures are necessary to develop technology that enables the provider to offer service meeting the Commission’s minimum TRS standards.⁶² Subject to the same limitations, reasonable licensing fees paid to a supplier of externally developed technology are allowable. We recognize that potentially excessive costs could be imposed on TRS Fund contributors if a single

⁵⁵ 2018 Further Notice, 33 FCC Rcd at 5838, para. 73.

⁵⁶ 2018 Further Notice, 33 FCC Rcd at 5838, para. 73.

⁵⁷ Some parties oppose requiring subcontractors to seek certification or independently file cost information, suggesting that current TRS providers should be allowed to choose whether to self-provision or subcontract components and technologies used to provide IP CTS and should bear the burden of meeting the Commission’s reporting requirements. See Ultratec Reply Comments at 17-20; KCC Comments at 9. Others offer general support for requiring that subcontractor expenses be well documented and uniformly reported, suggesting that the TRS Fund administrator amend the TRS provider cost report form and instructions to achieve that goal. See ClearCaptions Comments at 5-6; Florida DSCA Comments at 1.

⁵⁸ FCC, *IP CTS Modernization and Reform; IP CTS Improvements and Program Management*, 85 Fed. Reg. 9392 (Feb. 19, 2020).

⁵⁹ To the extent that providers lack sufficient information from their suppliers to enable them to make a definitive allocation of contract payments among multiple expense categories, there are a number of techniques available for estimating such allocations. See, e.g., Letter from Brent Lutes, the Brattle Group, to Marlene H. Dortch, FCC, CG Docket Nos. 03-123 and 13-24, Attach. at 7-10 (filed June 17, 2019) (Brattle Group June 2019 *Ex Parte*) (confidential) (analyzing Hamilton’s payments to a subcontractor). The rule requires that an explanation be provided to support how such allocations are made.

⁶⁰ See 2018 Further Notice, 33 FCC Rcd at 5839, para. 76. Reasonable R&D costs are only disallowed to the extent that they exceed what is necessary to meet minimum TRS standards. 2017 VRS Compensation Order, 32 FCC Rcd at 5896, para. 11; 2013 VRS Reform Order, 28 FCC Rcd at 8629, para. 21 (same); 2004 TRS Order, 19 FCC Rcd at 12547-48, paras. 189-90. Cf. Sprint Comments at 18-19 (advocating for allowability of “[r]easonable research and development and intellectual property-related costs, including license fees and technology platform updates”); Hamilton Comments at 11; ClearCaptions Comments at 7 (asserting research and development costs to advance IP CTS technologies should be allowable expenses and licensing fees should not be allowable at the expense of research and development).

⁶¹ 2017 VRS Compensation Order, 32 FCC Rcd at 5902, para. 21; 2018 Order, 33 FCC Rcd at 5821, para. 35.

⁶² See 2018 Further Notice, 33 FCC Rcd at 5839, para. 76.

company possessed a monopoly of essential intellectual property rights and was also permitted to “hold all others hostage to its fee demands.”⁶³ However, neither of these conditions appears to be present at this time.⁶⁴ Further, the current record does not provide a basis for us to find that any of the amounts currently paid by TRS providers to an unaffiliated entity for technology licensing are in excess of a reasonable amount.⁶⁵ However, we will continue to monitor such expenses and may revisit the question of intellectual property payments to unaffiliated entities at a later time.

24. We are unpersuaded by CaptionCall’s elaboration of its 2018 argument that license fees representing the imputed *value* of the intellectual property developed by CaptionCall should be recoverable from the TRS Fund. The Commission’s cost-of-service methodologies, whether applied to TRS or to tariffed common carrier services, have been designed to allow service providers to recover reasonable *costs* incurred to provide service, but a TRS provider is not entitled to treat as a *cost* the imputed *value* of technology it develops. Such value-based recovery is inconsistent with the entire history of cost-of-service regulation as conducted by the Commission,⁶⁶ and we find no reason to depart from precedent in order to permit such value-based recovery in this case. The value of such investments may be recovered as profit, to the extent permitted by the allowed operating margin, but treating such value as a cost is simply inconsistent with cost-based compensation.

25. Similarly straightforward application of longstanding Commission rules to the record in this proceeding precludes TRS Fund recovery of the “license fees” that CaptionCall allegedly has paid to an affiliate, Sorenson IP Holdings, LLC, for technology now owned by the affiliate.⁶⁷ Of fundamental importance is the fact that, according to CaptionCall, the technology at issue was developed by *CaptionCall itself* over a period of years, and ownership of the technology was transferred to the affiliate

⁶³ ITTA Comments at 16.

⁶⁴ In 2007, when authorizing TRS Fund support of IP CTS, the Commission noted that Ultratec, the original proponent of the service, held some relevant intellectual property. The Commission stated an expectation that “this will not be a service under the control of one vendor or provider” and conditioned its approval of Fund support for IP CTS “on Ultratec’s representation that it will continue to license its captioned telephone technologies, including technologies relating to IP CTS, at reasonable rates.” *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, 389, para. 24 (2007) (*2007 IP CTS Declaratory Ruling*). We note that at least one IP CTS provider currently claims to be offering the service without paying any license fees, reasonable or otherwise, to Ultratec, a fact that suggests Ultratec is not, at present, successfully asserting a monopoly of essential intellectual property, much less holding providers “hostage to its demands.” See CaptionCall Comments at 89 (asserting Ultratec licenses its intellectual property to Sprint and Hamilton and is unwilling to license its technology to CaptionCall); *id.* at 90-91 (detailing the development of its intellectual property for IP CTS).

⁶⁵ The only analysis of subcontractor payments submitted in the record concludes that, to the extent the amount of intellectual property fees included in such payments can be estimated, such payments are not excessive. See Brattle Group June 2019 *Ex Parte* at 9-10 (confidential).

⁶⁶ For example, to enable a provider to recover its investment in physical property, the Commission has allowed a reasonable return on investment—but based on the *cost* incurred to develop or acquire such property, not the *value* of the property. See *American Telephone & Telegraph Co. and the Associated Bell System Companies Charges for Interstate and Foreign Communication Service; American Telephone & Telegraph Co. Charges, Practices, Classifications, and Regulations for and in Connection with Teletypewriter Exchange Service*, Docket Nos. 16258, 15011, Interim Decision and Order, 9 F.C.C.2d 30, 51-54, paras. 62-74 (1967); *American Telephone and Telegraph Company, and the Associated Bell System Companies, Charges for Interstate Telephone Service; AT&T Transmittal Nos. 10989, 11027*, Docket No. 19219, Decision and Order, 38 F.C.C.2d 213, 226-27, paras. 40-41 (1972); *American Telephone & Telegraph Co., Charges for Interstate Telephone Service, AT&T Transmittal No. 12241*, Docket No. 20376, Decision, 57 F.C.C.2d 960, 960-61, para. 2 (1976).

⁶⁷ CaptionCall Comments at 91.

in 2017 for reasons of “security, monetization, efficiency, and tax.”⁶⁸ Because the “license fee” represented as paid to this affiliate is in essence a payment by CaptionCall *for the use of its own technology*—rather than for use of technology developed by the affiliate or anyone else—we must conclude that the transaction created by CaptionCall’s accountants is not a genuine transfer of anything of value. Accordingly, such a “license fee payment,” regardless of the amount, cannot be allowed as a compensable cost. Further, even if we were to consider the “license fee” as part of a genuine transaction between affiliates, application of the Commission’s affiliate transaction rule⁶⁹ would not result in any allowable “license fee” in these circumstances. Under the affiliate transaction rule, adopted to prevent inappropriate accounting practices and limit the potential for self-dealing by carriers under rate regulation, a payment by CaptionCall to its affiliate for licensing CaptionCall’s technology back to itself must be booked at the lower of fair market value and the affiliate’s net book cost, unless the affiliate sells at least 25% of the asset to third parties.⁷⁰ To determine the affiliate’s net book cost, we would need to know the amount, if any, that the affiliate originally paid CaptionCall for transferring ownership of CaptionCall’s technology to the affiliate.⁷¹ CaptionCall seems to acknowledge, however, that no such payment was made, or even booked for accounting reasons.⁷²

⁶⁸ CaptionCall Comments at 90-91. CaptionCall has provided some additional details regarding the accounting transactions on which its claim for “license fee” recovery is based. According to CaptionCall, for tax purposes a consultant, Deloitte Tax LLP, was then asked to develop an estimate of the value of the intellectual property and a value-based license fee. CaptionCall Comments at 91. Subsequently, Sorenson IP Holdings entered into a license agreement with CaptionCall’s parent company, which in turn entered into a license agreement with CaptionCall. *Id.* As discussed in the text, the Commission’s determination is not dependent on accuracy of CaptionCall’s expert’s valuation of CaptionCall’s intellectual property.

⁶⁹ See 47 CFR § 32.27.

⁷⁰ 47 CFR § 32.27(b), (d). CaptionCall does not claim that Sorenson IP Holdings licenses at least 25% of the intellectual property to third parties. The Part 32 rules are applicable to TRS providers. *1993 TRS Order*, 8 FCC Rcd at 5304-06 (stating that for purposes of cost recovery by TRS providers, “existing accounting and separations rules should be adequate to deal with the provision of interstate TRS by subject service providers,” including those “who would not otherwise be subject to part 32 of the rules”); *id.* at 5307 (adopting rule requiring TRS providers to “provide the administrator with . . . total TRS operating expenses and total TRS investment in general accordance with Part 32 of the Communications Act”); 47 CFR § 64.604(c)(5)(iii)(D)(1). Although CaptionCall suggests that the affiliate transaction rule should not apply because the licensing arrangement was “a business decision made *irrespective of the rate-setting technology that the Commission might adopt at some future date*,” CaptionCall was aware in 2017 that the Commission was considering adoption of a new compensation methodology that could involve cost-based determination of rates. *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, 12477-79, paras. 120-124 (*2013 IP CTS FNPRM*) (seeking comment on alternative cost recovery methodologies for IP CTS including a cost-based weighted average). Indeed, for several years the TRS Fund administrator had been requesting that CaptionCall and other IP CTS providers submit cost reports in accordance with the Commission’s accounting rules. *2018 Order*, 33 FCC Rcd at 5811-12, para. 21. And Sorenson’s VRS affiliate, which also transferred its IP assets to Sorenson’s IP affiliate in the same transaction, CaptionCall Comments at 90-91, had been subject to compensation based on cost for several years. *2017 VRS Compensation Order*, 32 FCC Rcd at 5927-28, para. 69 (describing methodology for determining a cost-based VRS compensation rate).

⁷¹ Based on CaptionCall’s description of the facts, in which CaptionCall, not its affiliate, developed the technology in question, the affiliate’s net book cost would be based on the costs, if any, incurred by the affiliate, not “CaptionCall’s engineering expenses.” CaptionCall Comments at 92.

⁷² CaptionCall Comments at 93 n.324 (“When companies are under common control, there is typically not a ‘purchase price’ because any transaction would not be arms-length and, even if there was, the value of [the] transaction would be eliminated in consolidation of financial statements.”). This appears to confirm further that the

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26. Contrary to CaptionCall's claim,⁷³ our application of longstanding cost-recovery rules and policies treats similarly situated providers alike,⁷⁴ and avoids creating artificial incentives for the purchase of technology from external sources over the internal development of technology. Subject to the overall limitation that technology must be directed at the provision of service that meets minimum TRS standards, providers that purchase technology externally are entitled to recover their reasonable costs of purchasing such technology, and providers that develop TRS technology internally are entitled to recover their reasonable R&D costs incurred in developing such technology. Allowing additional, value-based recovery by a provider choosing internal development would result in double recovery of the same investment.⁷⁵ Moreover, while encouraging the development of IP CTS technology by multiple sources may well advance the goals of section 225,⁷⁶ the compensation methodology we adopt does exactly that. A provider that can reduce its costs by developing technology internally (or by purchasing technology externally, if that turns out to be a more efficient choice) is not penalized⁷⁷ but rewarded, by incurring lower costs while collecting compensation at the same rate as its rivals.

27. *Operating Margin.* Because IP CTS remains at present a labor-intensive industry in which communications assistants play a major role, we adopt our proposal that the compensation rate for IP CTS, like the rates for VRS and IP Relay,⁷⁸ include an allowed operating margin, in lieu of the return

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entire "license fee" transaction created by CaptionCall is an accounting fiction that should not be credited by the Commission as a genuine reportable expense.

⁷³ See CaptionCall Comments at 88 (arguing that treating CaptionCall's licensing fees allegedly paid to itself differently from those paid by other providers to third parties "would not only be arbitrary and capricious but also would create a disincentive to invest in the development of new IP").

⁷⁴ We also note that, even though the application of our allowable-cost rules may be different with regard to the specific costs reported by each provider, the overall impact is spread over all providers, because under this Report and Order, as in the past, TRS compensation is based on a weighted average of all allowable provider costs.

⁷⁵ Stating that it "developed some but not all of the intellectual property used to support its IP CTS operations years prior to CaptionCall's offering the service and seeking compensation from the TRS Fund," CaptionCall argues that, "[e]ven if such investment could be recovered as an allowable submitted R&D cost under the Commission's proposed rate-setting methodology, that would be true only for current providers' *future* costs, not any costs CaptionCall previously incurred to develop its IP." CaptionCall Comments at 90 n.317. CaptionCall does not actually claim, however, that it has been unable to recover such costs in the TRS Fund compensation it has received in the course of providing IP CTS for the last nine years under the MARS methodology. CaptionCall Comments at 90. Given the evidence that for much of that period, the IP CTS compensation rate greatly exceeded average costs, such a claim seems implausible on its face, unless CaptionCall was substantially less efficient than the average provider. See *infra* Table 1. CaptionCall also speculates that *prospective* IP CTS providers would be deterred from investing in R&D, because their R&D costs incurred prior to offering Fund-supported service could not be recovered. We note, however, that the Commission's policy allowing recovery of a reasonable operating margin by providers of Internet-based TRS, including IP CTS, does provide an opportunity (which previously went unrecognized by rate-of-return compensation methodologies) for providers who have made such prior investments via R&D in TRS technology to earn a reasonable return on such investment.

⁷⁶ See CaptionCall Comments at 89-90 (arguing that CaptionCall's investment in IP development, as an alternative to licensing Ultratec's intellectual property, "advances the goals of TRS," and citing 47 U.S.C. § 225(d)(2)).

⁷⁷ Cf. Letter from Rebekah Goodheart, Counsel to CaptionCall, to Marlene H. Dortch, FCC, CG Docket Nos. 13-24 and 03-123, Appx. C (Declaration of Christopher A. Velluro) (filed Sept. 19, 2019) (CaptionCall Sept. 19, 2019 *Ex Parte*) (claiming that not allowing a vertically integrated innovator to earn returns on its own technology, but only through research and development costs, will distort the market and create less incentive to innovate).

⁷⁸ 2017 VRS Compensation Order, 32 FCC Rcd at 5903-05, paras. 24-26; 2019 TRS Rate Order, 34 FCC Rcd at 5176, paras. 11-12.

on plant investment previously allowed.⁷⁹ By allowing providers a reasonable margin over expenses, which is not tied to the relatively low capital investment in physical plant that is needed for the provision of IP CTS, this will help ensure sufficient investment in the provision of this service.⁸⁰ We find it reasonable to set a percentage operating margin within the same “zone of reasonableness” that applies to VRS providers.⁸¹ In the *2017 VRS Compensation Order*, after reviewing operating margins for companies in various analogous service sectors,⁸² the Commission found a zone of reasonableness for VRS between 7.6% to 12.35%. Given the similarities between VRS and IP CTS,⁸³ including that the bulk of costs for both are attributable to labor rather than capital,⁸⁴ we conclude that this zone of reasonableness is also appropriate at this time for setting IP CTS rates.

28. For purposes of establishing a cost-based IP CTS rate for the next rate period, we set the operating margin at 10%—the approximate midpoint of the zone of reasonableness described above.⁸⁵ We conclude that assigning an operating margin at the midpoint of the zone is warranted and is ample to ensure providers a reasonable profit, for three reasons. First, there are material differences between IP CTS and IP Relay—to which the Bureau assigned an allowed operating margin at the high end of the same zone of reasonableness.⁸⁶ Unlike IP Relay, which has not recently experienced significant growth, IP CTS demand has grown at a substantial rate for many years, as shown in Table 1, suggesting that the risks associated with investing in this service may be lower overall than for IP Relay.⁸⁷ Second, in extending the “glide path” for bringing IP CTS compensation to the level of costs, as discussed further below, we are necessarily extending the opportunity, which has been available to providers for several

⁷⁹ See CaptionCall Comments at 10 (agreeing that an operating-margin approach is appropriate). No party opposes the use of an allowed operating margin.

⁸⁰ See, e.g., Sorenson 2017 TRS Rate Report Comments at 4.

⁸¹ See *2018 Further Notice*, 33 FCC Rcd at 5841-42, para. 82 (seeking comment on whether a different zone of reasonableness or different operating margin approach should apply to IP CTS); *2017 VRS Compensation Order*, 32 FCC Rcd at 5903-05, paras. 24-26; see also CaptionCall Comments at 10 (agreeing that the zone of reasonableness should be the same as for VRS). No party contends that a different zone of reasonableness should apply to IP CTS.

⁸² *2017 VRS Compensation Order*, 32 FCC Rcd at 5903-05, paras. 24-26 (providing an exhaustive analysis of this issue). The Commission found that quarterly pre-tax operating margins for non-legal professional, scientific, and technical Services averaged 4.6% in the 2013-16 period and that operating margins for a subsector including translation and interpretation services averaged 7.4% in the 2013-16 period. The *2017 VRS Compensation Order* also cited surveys of government contractors conducted by Grant Thornton LLP, conducted between 2009 and 2015, in which the majority of respondents consistently reported profit rates before interest and taxes between 1% and 10%, with the median profit rate in the neighborhood of 6%. Finally, the Commission also considered information submitted by Sorenson regarding operating margins in the information technology consulting sector. See *id.*

⁸³ See *2017 VRS Compensation Order*, 32 FCC Rcd at 5904, para. 25.

⁸⁴ As the Commission found with respect to VRS, *id.*, currently a large portion of IP CTS costs are labor costs, primarily salaries and benefits for CAs. See 2020 TRS Rate Report, Exh. 1-3 (showing average 2019 costs of \$0.2566 for “CA Related” and \$0.5004 for “Other” expenses, which, as explained above, include CA labor costs that are folded into fees paid by certain providers to their subcontractors); see also, e.g., Hamilton 2013 FNPRM Comments at 5 (arguing that IP CTS costs are predominantly CA-related expenses).

⁸⁵ Although the Fund administrator does not recommend a specific operating margin for IP CTS in the 2020 TRS Rate Report, the administrator assumes a 10% operating margin for purposes of illustrating the effects of the current \$1.58 rate. 2020 TRS Rate Report at 15-16.

⁸⁶ *2019 TRS Rate Order*, 34 FCC Rcd at 5176, paras. 11-12.

⁸⁷ *2019 TRS Rate Order*, 34 FCC Rcd at 5176, para. 12. From 2013 to 2019, the annual growth rate for IP CTS minutes averaged approximately 45 percent annually.

years, to collect profits in excess of whatever margin is allowed.⁸⁸ Third, the introduction of fully automatic IP CTS with advanced ASR technology, either as a complete substitute or a complement for CA-assisted IP CTS, is providing an unusually large opportunity for providers to reduce their costs and thereby increase further their opportunities for profit at relatively lower risk.⁸⁹ These considerations could justify setting an operating margin for IP CTS in the lower portion of the zone of reasonableness. At this time, however, we conservatively conclude that an operating margin of 10%, in the middle of the zone of reasonableness, is appropriate for IP CTS, while recognizing that the Commission may choose to revisit the issue of operating margin at the end of the two-year rate period we adopt in this Report and Order.

Table 1⁹⁰

Calendar Year	IP CTS Minutes	Compensation Rate	Average Costs (Plus 10% Operating Margin)
2013	83,391,085	\$1.7877	\$2.1760
2014	122,837,131	\$1.8205	\$1.8621
2015	193,039,200	\$1.8895	\$1.6213
2016	267,164,769	\$1.9058	\$1.3961
2017	362,379,714	\$1.9467	\$1.3548
2018	464,083,134	\$1.7500	\$1.3367
2019	511,594,990	\$1.5800	\$1.2485
2020			(proj.) \$1.3612

29. *Averaging of Historical and Projected Costs.* We continue the practice (adopted in 2010 for VRS, and in 2018, for IP CTS) of averaging historical and projected costs to arrive at a cost-based rate. Although projected costs can more accurately reflect current conditions, provider cost projections often have proved unreliable,⁹¹ and the current record provides no evidence to indicate that exclusive reliance on such projections would produce better results in the future. For example, *projected* 2018 expenses (i.e., exclusive of operating margin and return on investment) averaged \$1.2794 (as projected in February 2017) and \$1.3172 (as projected in February 2018), while *actual* 2018 costs (as reported in February 2020) were \$1.2120.⁹² Similarly, projected 2019 costs were \$1.3084 (as projected in February

⁸⁸ See ITTA Comments at 8-12 (pointing out the high operating margins available to the average IP CTS provider during the two-year “glide path” initiated by the *2018 Order*).

⁸⁹ See, e.g., Letter from Cristina O. Duarte, InnoCaption, to Marlene H. Dortch, FCC, CG Docket Nos. 13-24 and 03-123, Attach. at 11 (filed Mar. 2, 2020) (proposing an initial rate of \$1.20 for fully automatic IP CTS, descending to \$0.85 over six years). If this provider’s projection of ASR costs is anything close to accurate, then offering fully automatic IP CTS at the compensation rates of \$1.42 (for 2020-21) and \$1.30 set by this R&O would be highly profitable.

⁹⁰ The historical data on demand, costs, and compensation rates shown in this table was developed by the TRS Fund administrator. See Rolka Loube, Interstate TRS Fund Payment Formula and Fund Size Estimate, CG Docket Nos. 03-123 and 10-51, Exh. 1-4 (filed Apr. 24, 2015) (2015 TRS Rate Report) (2013 data); Rolka Loube, Interstate TRS Fund Payment Formula and Fund Size Estimate, CG Docket Nos. 03-123 and 10-51, Rev. Exh. 1-3 (filed May 4, 2018) (2018 TRS Rate Report) (2014 and 2015 data); 2020 TRS Rate Report, Exh. 1-3 ((2016, 2017, 2018, 2019, and 2020 data). For periods before 2016, the cost figures in Table 1, which include a 10% operating margin, are obtained by subtracting the return on investment calculated by Rolka Loube from total cost and adding 10% to the result.

⁹¹ *2018 Order*, 33 FCC Rcd at 5813 n.75; *2018 Further Notice*, 33 FCC Rcd at 5842, para. 83.

⁹² Rolka Loube, Interstate Telecommunications Relay Service Fund, Payment Formula and Fund Size Estimate, Supplemental Submission, CG Docket Nos. 03-123 and 10-51, Rev. Exh. 1-3 (filed June 2, 2017) (2017 TRS Rate Report Supplement); 2018 TRS Rate Report, Rev. Exh. 1-3; 2020 TRS Rate Report, Exh. 1-3.

2018) and \$1.2520 (as projected in February 2019), while actual 2019 costs (as reported in February 2020) were \$1.1350.⁹³ Further, in the current circumstances, with continuously declining IP CTS costs, setting compensation rates based on the average of the costs incurred in the previous year and those projected for the current year allows even providers who have higher than average costs a reasonable opportunity to recover their current allowable expenses plus an operating margin.

C. Determination of Specific Rates

30. *Calculation of a Cost-Based Rate.* Based on the above determinations, calculation of a cost-based rate is straightforward. The weighted average of provider per-minute expenses for 2019 (historical) is \$1.1350, and for 2020 (projected) is \$1.2375.⁹⁴ Adding a 10% operating margin to each of these numbers produces a per-minute cost-plus-operating-margin of \$1.2485 for 2019 and \$1.3612 for 2020.⁹⁵ The average of these two numbers is \$1.3048, which we round down to \$1.30.

31. *COVID-19 Costs.* After the outbreak of the coronavirus (COVID-19) pandemic, IP CTS providers experienced an unanticipated increase in IP CTS traffic levels and incurred additional costs in order to enable numerous communications assistants to work at home rather than at call centers.⁹⁶ To provide an opportunity to determine the impact of these developments on per-minute provider costs before the Commission set a new IP CTS compensation rate, the Bureau extended the expiration date of the current compensation rate and directed the TRS Fund administrator to request additional cost and demand data for January to June 2020 from CA-assisted IP CTS providers and file an update to the IP CTS data contained in the 2020 TRS Rate Report.⁹⁷ Based on the information submitted by the four active providers who provided the additional data requested for all periods,⁹⁸ the TRS Fund administrator reports that increased expenditures during the pandemic have been offset by increased call volumes, resulting in no net increase in per-minute costs for the reporting providers, as a group or even individually. Indeed, for calendar year 2020, average actual per-minute IP CTS costs, as updated by responding providers, were approximately 7.1% lower than the projected costs used in the TRS Fund administrator's 2020 TRS Rate Report.⁹⁹ However, this cost change is relatively small, it is unclear

⁹³ 2018 TRS Rate Report, Rev. Exh. 1-3; Rolka Loube, Interstate Telecommunications Relay Services Fund, Payment Formula and Fund Size Estimates, CG Docket Nos. 03-123 and 10-51, Exh. 1-3 (filed Apr. 30, 2019) (2019 TRS Rate Report); 2020 TRS Rate Report, Exh. 1-3.

⁹⁴ See 2020 TRS Rate Report, Exh. 1-3. The total of historical per-minute expenses for 2019, \$1.1135, is obtained by adding the amounts for each expense category (but not the assumed 10% operating margin) in the 2019 column ("[a]s reported in 2020") of the exhibit. The total of projected per-minute expenses for 2020, \$1.2375, is obtained by doing the same calculation for the 2020 column.

⁹⁵ See 2020 TRS Rate Report, Exh. 1-3.

⁹⁶ See *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Structure and Practices of the Video Relay Service Program*, CG Docket Nos. 03-123 and 10-51, Order, DA 20-570, at 2, para. 3 (CGB May 29, 2020) (*IP CTS Compensation Extension Order*).

⁹⁷ *IP CTS Compensation Extension Order* at 4, paras. 7, 10.

⁹⁸ The report does not include cost data for the two IP CTS providers that were newly authorized to provide service in 2020. Further, the report does not reflect CaptionCall cost data, because CaptionCall did not provide actual cost data for the first six months of 2020 as requested. September 2020 COVID-19 Report at 1.

⁹⁹ See September 2020 COVID-19 Report at 2; see also Letter from Tamar Finn, Counsel to ClearCaptions, to Marlene H. Dortch, FCC, CG Docket Nos. 13-24 and 03-123, Attach. at 2 (filed Aug 6, 2020) (COVID-19 call increases have made company more efficient and driven cost structure down). But see Letter from Scott R. Freiermuth, Sprint, Marlene H. Dortch, FCC, CG Docket Nos. 13-24 and 03-123, at 1-3 (filed Aug. 26, 2020 (Sprint Aug. 26, 2020 *Ex Parte*)); Letter from David A. O'Connor, Counsel to Hamilton, to Marlene H. Dortch, FCC, CG Docket Nos. 13-24 and 03-123, at 1-2 (filed July 16, 2020) (Hamilton July 16, 2020 *Ex Parte*) (arguing costs, e.g., moving CAs to home work stations and complying with new standards for cleaning call stations, are not being offset

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whether it signals any long-lasting trend, and no provider's financial position would be improved if we were to take it into account.¹⁰⁰ Therefore, while the Commission recognizes there are many unknowns associated with the pandemic, based on the recently reported COVID-related cost data indicating no net cost increases for IP CTS providers, we conclude that no adjustment is warranted to the weighted average cost data on which we rely to set compensation rates for the next two years. For the same reasons, we decline to freeze the current rate for an additional period, beyond September 30, 2020, as requested by Sprint.¹⁰¹ In the absence of *any* concrete evidence of a net cost increase, we decline to defer long-needed rate corrections based on abstract concerns about the unpredictable nature of the pandemic.

D. Rate Period and Glide Path

32. *Compensation period.* We adopt a two-year compensation cycle for IP CTS. Our balancing of the factors relevant to the duration of the compensation period is different than in 2017, when the Commission set a four-year rate period for VRS. As the Commission explained then:

[A] four-year period is long enough to offer a substantial degree of rate stability, thereby (1) giving providers' certainty regarding the future applicable rate, (2) providing an significant incentive for providers to become more efficient without incurring a penalty, and (3) mitigating any risk of creating the 'rolling average' problem previously identified by the Commission regarding TRS. On the other hand, it is short enough to allow an opportunity for the Commission to reset the rates in response to substantial cost changes or other significant developments that may occur over time.¹⁰²

In this instance, we conclude that, due to the introduction of ASR-based technology, industry cost structures are likely to change substantially in the near term, necessitating that we revisit the IP CTS compensation rate at an earlier stage in order to avoid recreating another major gap between TRS Fund expenditures and actual IP CTS costs.¹⁰³ Accordingly, we limit the rate period to two years rather than a rate period in the range of three to five years as proposed by commenters.¹⁰⁴ As we found in setting

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by compensation from increased call volumes or efficiencies). Sprint's and Hamilton's claims are not borne out by the cost data for this period submitted to Rolka Loube.

¹⁰⁰ See September 2020 COVID-19 Report at 3.

¹⁰¹ See Letter from Scott R. Freiermuth, Sprint, to Marlene H. Dortch, FCC, CG Docket Nos. 13-24 and 03-123 (filed Apr. 22, 2020); see also Hamilton July 16, 2020 *Ex Parte* (supporting Sprint's request for a rate freeze); Sprint Aug. 26, 2020 *Ex Parte* at 1-3.

¹⁰² See 2017 VRS Compensation Order, 32 FCC Rcd at 5921, para. 58 (citation omitted).

¹⁰³ In the 2018 IP CTS Declaratory Ruling, the Commission found that handling IP CTS calls with ASR only, without CA assistance, would allow a substantial reduction in IP CTS operating costs. 2018 IP CTS Declaratory Ruling, 33 FCC Rcd at 5828, para. 50. This finding, which was amply supported by the record, is consistent with the undisputed fact that CA labor costs account for a very large proportion of total IP CTS costs. See 2020 TRS Rate Report, Exh. 1-3; The Brattle Group, Economic Analysis of IP CTS Provision Costs and Rate Setting, at 5, 7 (Nov. 8, 2017) (attached to Letter from David A. O'Connor, Hamilton, to Marlene H. Dortch, FCC, CG Docket Nos. 13-24 and 03-123 (Nov. 9, 2017) (Brattle Group Nov. 2017 Report). Although some parties express skepticism regarding the likely extent of initial cost savings from fully automatic IP CTS, see, e.g., ClearCaptions Comments at 21-22, no evidence has been offered to rebut the Commission's 2018 finding. Further, one provider, InnoCaption, proposes a dramatically lower compensation rate for fully automatic IP CTS, suggesting that this provider—as well as the two new entrants that recently were granted conditional certification for fully automatic IP CTS—has confidence that the Commission's prediction of substantially lower operating costs is correct. Letter from Cristina O. Duarte, InnoCaption, to Marlene H. Dortch, FCC, CG Docket Nos. 13-24 and 03-123, Attach. at 11, (filed Mar. 2, 2020).

¹⁰⁴ See CaptionCall Comments at 68-70, Appx. C. at 29-30 (supporting a three-to-five year compensation period); The Brattle Group, Economic Considerations of IP CTS Rate Structure and Methodology, at 2, 16-17, 27 (Mar. 27, 2019) (attached to Letter from Brent Lutes, The Brattle Group, to Marlene H. Dortch, FCC, CG Docket Nos. 13-24,

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interim IP CTS compensation rates for the previous two years, setting compensation for a two-year period provides some measure of rate certainty for providers and mitigates the risk of rewarding inefficiency, discouraging innovation, and incentivizing providers to incur unnecessary costs, all of which would be proportionally greater were we to engage in annual cost-of-service rate setting.¹⁰⁵

33. *Glide Path.* Under the MARS methodology, the IP CTS compensation rate had reached a level that exceeded average per-minute provider expenses by some \$0.72, or almost 60%.¹⁰⁶ To decrease this gap, and the resulting waste of the TRS Fund, while providing an opportunity for less efficient providers to improve their efficiency and continue serving their customers, the Commission reduced the compensation rate by 10% in two successive years, bringing it to the current level of \$1.58 per minute. However, this rate is still \$.28 higher than current average cost of \$1.30 per minute.¹⁰⁷

34. Therefore, we will extend for somewhat less than a year the “glide path” initiated by the 2018 order, reducing the compensation rate by 10% in the current year and deferring to 2021-22 the further 10% reduction necessary to reach the average-cost-based \$1.30 rate.¹⁰⁸ A modest extension of the “glide path” will afford higher-cost providers an additional opportunity to adopt more efficient technologies and business methods before their compensation is reduced all the way to the average cost level.¹⁰⁹ We recognize that extending the glide path in this manner allows IP CTS providers as a group to continue earning operating margins in excess of the zone of reasonableness for the remainder of the current Fund Year.¹¹⁰ However, the alternative—a flash-cut \$.28 reduction of the rate—could place significant immediate financial pressure on those providers whose operating costs are higher than average, possibly causing them to exit the IP CTS market, with the potential for at least temporary disruption of service to customers.¹¹¹ While we do not seek to encourage inefficient competitors to remain in the market,¹¹² in a period of rapidly declining costs, we also seek to permit experienced providers of this service a fair opportunity to adjust their operations so as to successfully provide this service “in the most efficient manner.”¹¹³ In addition, allowing higher-cost providers an additional period

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10-51, and 03-123, at 16-17 (Mar. 27, 2019) (Brattle Group March 2019 Report) (asserting recalibration intervals of three to five years would be reasonable and proposing a four-year recalibrating period); ClearCaptions Comments at 18 (supporting a four-year compensation period).

¹⁰⁵ *2018 Order*, 33 FCC Rcd at 5814-15, para. 28. According to providers, annual recalculation of rates based on reported costs (1) creates uncertainty that can prevent effective business planning, and (2) can limit efficiency incentives by preventing providers from reaping the rewards of cost-reducing innovation. *See, e.g.*, CaptionCall Comments at 68-70; ClearCaptions Comments at 17; Brattle Group March 2019 Report at 15-16.

¹⁰⁶ *See 2018 Order*, 33 FCC Rcd at 5809, para. 17, Table 1 (showing the MARS-based compensation rate for each year in comparison with average provider expenses).

¹⁰⁷ *See 2020 TRS Rate Report*, Exh. 1-3.

¹⁰⁸ *2018 Order*, 33 FCC Rcd at 5814-15, para. 24 (explaining the value of a glide path to move towards cost-based compensation rate); *2018 Further Notice*, 33 FCC Rcd at 5843, para. 87 (seeking comment on the need for an extended glide path).

¹⁰⁹ Hamilton Reply at 10-11 (Commission must not cut rates without a glide path to allow providers to change their business plans and investments in response).

¹¹⁰ *See ITTA Comments* at 8-12.

¹¹¹ *See Sprint Comments* at 20 (if the Commission reduces the adopted rate, it should use a glide path to avoid disruptions in the market).

¹¹² *See ITTA Comments* at 13 (arguing that “[a]ny ‘resulting pressure on less efficient providers’” from immediately instituting an average-cost-based compensation rate “is fully in accord with the statutory directive that TRS be provided in the most efficient manner”) (quoting *2018 Further Notice*, 33 FCC Rcd at 5843, para. 88).

¹¹³ 47 U.S.C. § 225(b)(1).

to adjust to reduced compensation will help ensure that IP CTS users continue to have a choice among multiple competitors—and such quality-of-service competition in turn helps maintain all providers’ incentives to continue offering functionally equivalent service.¹¹⁴ Given that there is no single correct answer in designing a glide path, and that the exercise of administrative judgment is required,¹¹⁵ we conclude that continuing the 10% reductions strikes a reasonable balance between the need to eliminate waste and ensure the efficient expenditure of TRS funds, on the one hand, and the benefits of continuity of service and competition, on the other.¹¹⁶ Accordingly, we set the compensation rate for the remainder of the 2020-21 Fund Year at \$1.42, approximately 10% lower than \$1.58.

35. We decline to subject providers to a “true-up,” i.e., we decline to decrease further the compensation rate for the remainder of year in order to offset the five-month deferral of the new rate and ensure that their overall compensation for the Fund Year averages \$1.42.¹¹⁷ Instead, to avoid the administrative burdens and potential disruption associated with a true-up, we allow providers to retain the benefit of the five-month extension of the \$1.58, thereby mitigating further any potential adverse impact from our necessary progression to a more efficient, cost-based compensation rate.

36. In summary, to complete the glide path to the current cost-based rate, beginning with minutes of service provided on or after December 1, 2020, the current \$1.58 rate will be reduced by approximately 10%, to \$1.42, and effective July 1, 2021, that rate will be reduced approximately another 10%, to \$1.30. These changes are shown in the table below.

Table 2

Period	IP CTS Per-Minute Rate
July 1 - Nov. 30, 2020	\$1.58
Dec.1, 2020 - June 30, 2021	\$1.42
July 1, 2021 – June 30, 2022	\$1.30

37. *Price cap approach.* We conclude that it would not be beneficial to make price-cap-like adjustments to the above rates based on inflation and productivity factors.¹¹⁸ While we are confident that there will be major productivity improvements in IP CTS over the next two years, causing actual IP CTS costs to continue to decline as they have for the last seven years (even without adjusting for inflation) — and which would thereby lead to downward price-cap adjustments were we to require such adjustments, a formal price-cap-like approach would be premature until we are better able to assess the impact of ASR

¹¹⁴ *Sorenson 2018*, 897 F.3d at 222 (“[C]ompetition is a technique that can help ensure compliance with some of the service-quality requirements outlined in the mandatory minimum standards.”).

¹¹⁵ See *Sorenson 2011*, 659 F.3d at 1046 (court is “particularly deferential when reviewing ratemaking orders because ‘agency ratemaking is far from an exact science and involves policy determinations in which the agency is acknowledged to have expertise’” (quoting *Qwest Corp. v. FCC*, 258 F.3d 1191, 1206 (10th Cir. 2001) and *Sw. Bell Tel. Co. v. FCC*, 168 F.3d 1344, 1352 (D.C. Cir. 1999)).

¹¹⁶ See Florida DSCA Comments at 2 (supporting the glide path as a conservative approach that will give providers ample time to adjust to a new compensation rate). Thus, we do not agree with ITTA that extending the glide path is unnecessary. See ITTA Comments at 11-13.

¹¹⁷ See *IP CTS Compensation Extension Order* at 5, para. 11 (noting “the Commission may adopt a true-up of compensation should the Commission deem that to be necessary after adopting an IP CTS compensation methodology and rate”).

¹¹⁸ See *2018 Further Notice*, 33 FCC Rcd at 5844, para. 92 (seeking comment on use of price cap adjustments and approaches). We refer to these rate adjustments as “price-cap-like” because they fix rates independently of how the underlying costs move.

technology on IP CTS costs. Accordingly, we defer consideration of the appropriateness of a price-cap methodology for IP CTS.¹¹⁹

38. *Exogenous costs.* During this rate period, we adopt the same exogenous-cost policy that is already in place for VRS. IP CTS providers may seek compensation for well-documented exogenous costs that (1) belong to a category of costs that the Commission has deemed allowable, (2) result from new TRS requirements or other causes beyond the provider's control, (3) are new costs that were not factored into the applicable compensation rates, and (4) if unrecovered, would cause a provider's individual allowable-expenses-plus-operating margin for the current year to exceed its IP CTS revenues.¹²⁰ Allowing recovery of exogenous costs subject to these conditions will ensure that providers are able to receive compensation for unforeseeable cost increases, without increasing the disparity between Fund expenditures and individual provider costs.¹²¹ No parties oppose the allowance of exogenous cost recovery subject to these conditions.

39. *Effective Date.* We find good cause to set December 1, 2020, as the effective date for the \$1.42 per-minute compensation rate.¹²² The current rate was originally scheduled to expire June 30, 2020.¹²³ Providers have been aware of this pending expiration and Commission proposals to adopt a new compensation methodology since 2018.¹²⁴ In partial response to provider requests, to avoid unnecessary disruption to IP CTS providers' operations, and to ensure the ability of consumers to continue to place and receive IP CTS calls pending an assessment of the impact of the COVID pandemic on provider costs, the Bureau waived the June 30, 2020 expiration of the existing compensation rate and directed Rolka Loube to continue compensating IP CTS providers at that rate until September 30, 2020.¹²⁵ Relatively quick implementation of the new compensation rate is necessary to expeditiously promote the goals of the statute as laid out in the order, including ensuring the availability of IP CTS in the most efficient manner without imposing burdensome costs on TRS Fund contributors. To ensure that there is no lapse in payment of compensation to providers, we extend the Bureau's waiver of the June 30, 2020 expiration of the existing compensation rate and direct Rolka Loube to continue compensating IP CTS providers at the current \$1.58 rate for two additional months, through November 30, 2020. We also direct the Bureau to provide actual notice to known IP CTS providers by sending them a copy of this Order, which may be accomplished electronically.

¹¹⁹ Because we defer consideration of a price-cap-like methodology for IP CTS, we do not address the details of commenters' proposals for price cap adjustments at this time. *See, e.g.,* Hamilton Comments at 3-6; CaptionCall Comments at 59-77; Brattle Group March 2019 Report; Brattle Group June 2019 *Ex Parte* at 15-22 (proposing two-tiered rates with price cap methodology); Letter from Brent Lutes, The Brattle Group, to Marlene H. Dortch, FCC, CG Docket Nos. 13-24 and 03-123, Attach. (filed July 16, 2020) (proposing price-cap-like rate methodology for tiered rate structure) (Brattle Group July 2020 *Ex Parte*) (confidential).

¹²⁰ *See 2018 IP CTS Reform Order*, 33 FCC Rcd at 5845, para. 93. Such exogenous cost recovery would be subject to the same conditions adopted in allowing VRS providers to recover exogenous costs. *See 2017 VRS Compensation Order*, 32 FCC Rcd at 5918, para. 52.

¹²¹ *See ITTA Comments* at 14-15 (supporting the allowance of exogenous costs subject to conditions to equitably accommodate unforeseen cost increases while ensuring the exception does not swallow the rule); *Sprint Comments* at 21 (supporting conditioned based recovery); *ClearCaptions Comments* at 19-20 (supporting exogenous costs, subject to the conditions adopted in the *2017 VRS Compensation Order*).

¹²² *See* 5 U.S.C. § 553(d)(3) (requiring 30 days' notice to the public for implementation of a federal agency's rule unless good cause exists to shorten this period).

¹²³ *See IP CTS Compensation Extension Order* at 4, paras. 7, 10.

¹²⁴ *2018 Further Notice*, 33 FCC Rcd at 5836, para. 69.

¹²⁵ *IP CTS Compensation Extension Order* at 4, paras. 7, 10. The Bureau's waiver extending the \$1.58 rate expires September 30, 2020.

40. *ASR-only IP CTS compensation.* During this two-year compensation period, we adopt a single compensation rate applicable to all forms of IP CTS, including fully automatic IP CTS.¹²⁶ Although the *2018 Further Notice* requested comment on whether and how to establish a separate compensation rate, at this time we do not have sufficient experience with fully automatic IP CTS to accurately estimate the relevant costs.¹²⁷ Without sufficient cost information, setting a new separate rate for ASR-only would be arbitrary and inconsistent with our current, technology-neutral approach of granting all providers the same compensation rate derived from average weighted costs. Moreover, setting a lower compensation rate for fully automatic IP CTS in the absence of sufficient cost information regarding this form of the service would run the risk of creating a disincentive for providers to adopt this highly promising technology.¹²⁸

41. Further, based on current information, it may not be necessary or appropriate to have a separate compensation rate for fully automatic IP CTS in order to advance the objectives of section 225. Recent testing of the fully automatic captioning engines proposed by applicants for IP CTS certification indicates that fully automatic IP CTS can deliver captions far more quickly than IP CTS provided with communications assistants, and with comparable or greater accuracy, suggesting that fully automatic IP CTS has become a reasonably close economic substitute for traditional CA-assisted service.¹²⁹ By setting a single rate for IP CTS for the next rate period, we recognize fully automatic IP CTS as providing the same type of TRS as CA-assisted IP CTS, and we ensure that all providers have sufficient incentive to try out various approaches to integrating fully automatic captioning into their service offerings.¹³⁰ Maintaining a single rate is also administratively efficient for compensating providers that offer a hybrid service that sometimes provides fully automatic IP CTS and sometimes employs communications assistants in the delivery of captions.¹³¹ For example, providers will be able to receive compensation for calls that involve switching between the two captioning methods, pending implementation of more fine-grained reporting of such calls.

E. Objections and Alternatives to the Average-Cost Method

42. *Tiered and emergent provider rate structures.* We decline to adopt a tiered rate or emergent provider rate structure for IP CTS compensation at this time.¹³² In setting TRS Fund

¹²⁶ See *2018 IP CTS Reform Order*, 33 FCC Rcd 5845, para. 93.

¹²⁷ As noted earlier, because the Commission only recently certified applicants to provide ASR-only IP CTS, the Commission has not received detailed cost data concerning the provision of IP CTS without communications assistants, much less data over any extended period of time. *MachineGenius Certification Order*, 35 FCC Rcd 4568 (granting conditional certification to MachineGenius); *Clarity Certification Order*, 35 FCC Rcd 5635 (granting conditional certification to Clarity Products, LLC).

¹²⁸ 47 U.S.C. § 225(d)(2) (requiring the Commission to ensure its regulation do not discourage or impair the development of improved technology).

¹²⁹ *MachineGenius Certification Order*, 35 FCC Rcd at 4570-72, paras. 6-7; *Clarity Certification Order*, 35 FCC Rcd at 5637-39, paras. 6-7.

¹³⁰ See CaptionCall Comments at 81-84 (supporting a single technology-neutral IP CTS rate).

¹³¹ See CaptionCall Comments at 83-84 (asserting a single rate will avoid unnecessary regulations and administrative costs, including for compensating hybrid systems); ITTA Comments at 20 (hybrid calls should only be compensated on the basis of the CA-assisted IP CTS rate to minimize risk of waste and abuse).

¹³² See *2018 Further Notice*, 33 FCC Rcd at 5843-44, paras. 88-90. Under a *tiered* compensation structure, a TRS provider's monthly compensation payment is calculated based on the application of different rates to different portions of the compensable minutes submitted for each month of service, according to a predefined schedule of "tiers." *2017 VRS Compensation Order*, 32 FCC Rcd at 5892, para. 2. Typically, the highest rate is applied to the initial quantity of monthly minutes, from zero up to a defined maximum number, and a lower rate (or rates) is applied to additional minutes above that maximum. For example, VRS currently has a three-tier compensation structure, with Tier I applicable to the first 1 million monthly minutes, Tier II applicable to additional monthly

(continued....)

compensation, the Commission's traditional approach is to establish a single, generally applicable compensation rate based on average provider costs. This approach greatly simplifies the rate-setting process and creates an incentive for providers to increase their efficiency.¹³³ In setting compensation for VRS, the Commission has deviated from this principle due to a number of specific circumstances that the Commission found were threatening the viability of competition among VRS providers, including "long-term dominance of the VRS market by a single provider, major and growing disparities in [individual] providers' per-minute costs, and a history of chronic interoperability problems and related structural issues, all of which have been found to hinder smaller VRS providers' ability to compete effectively with the largest provider."¹³⁴ We are not persuaded that similar or equally compelling factors are present in the IP CTS market to an extent that would justify introducing the complexities and potential inefficiencies of a tiered rate structure or an emergent provider rate.¹³⁵ While there may be some economies of scale in IP CTS,¹³⁶ we find little evidence that such economies of scale are preventing the emergence of efficient competitors.

43. *First*, the market share of the largest provider in IP CTS is not comparable to that of the largest provider in the VRS market.¹³⁷

44. *Second*, the record shows relatively low correlation between each IP CTS provider's compensable minutes and per-minute costs, at best suggesting that some providers have not realized efficiencies in their business models that would enable them to realize inherent economies of scale.¹³⁸ Indeed, the record suggests that, unlike in the VRS context, this may be a case where, as CaptionCall

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minutes up to 2.5 million, and Tier III applicable to any monthly minutes above 2.5 million. *2017 VRS Compensation Order*, 32 FCC Rcd at 5935, Appx. A. An *emergent* rate has been applied in the VRS context to new entrants or very small VRS providers with less than a defined amount of monthly compensable minutes, in order to take account of their higher costs. *2017 VRS Compensation Order*, 32 FCC Rcd at 5917-18, paras. 49-51.

¹³³ See Letter from Angela Giancarlo, Counsel to CaptionCall, to Marlene H. Dortch, FCC, CG Docket Nos. 13-24 and 03-123, at 3 (filed Apr. 10, 2020) (if Commission does not adopt reverse auction then "[a] single rate is critical to ensure that the Commission incentivizes all providers to deliver service as efficiently as possible as well as to prevent rewarding higher-cost providers and skewing operational decisions."); The Free State Foundation, "Reforming the FCC's Internet Protocol Captioned Telephone Service Program," at 4 (Sept. 3, 2019) ("deviation from a single uniform rate discourages those above-cost providers from adopting measures to become more efficient and to reduce their costs") (*Free State Foundation Perspectives*) (attached to Letter from Randolph J. May, FSF, to Marlene H. Dortch, FCC, CG Docket Nos. 13-24 and 03-123 (filed Sept. 5, 2019)).

¹³⁴ *2018 Further Notice*, 33 FCC Rcd at 5843, para. 88 (footnotes omitted) (listing the factors considered by the Commission in 2017 when deciding to maintain a tiered compensation structure for VRS); see also *2017 VRS Compensation Order*, 32 FCC Rcd at 5906-07, paras. 28-30. Factors considered by the Commission in also adopting an emergent rate for very small VRS providers included a desire to maintain a choice of VRS providers in a highly unbalanced market, the incompleteness of VRS reforms intended to support full interoperability, the extremely wide per-minute cost differentials among VRS providers, and the potential role of smaller providers in offering service features designed for niche VRS market segments. *2018 Further Notice*, 33 FCC Rcd at 5844, para. 90; *2017 VRS Compensation Order*, 32 FCC Rcd at 5906-07, paras. 28-30.

¹³⁵ *2018 Further Notice*, 33 FCC Rcd at 5844, para. 90.

¹³⁶ See ClearCaptions Comments at 11-12; Letter from Paul C. Besozzi, ClearCaptions to Marlene H. Dortch, FCC, CG Docket Nos. 13-24 and 03-123, Exh. 2 at 10-11 (filed Nov. 7, 2018) (ClearCaptions Nov. 7, 2018 *Ex Parte*); InnoCaption Comments at 3-4; Sprint Comments at 17.

¹³⁷ Compare *2017 VRS Compensation Order*, 32 FCC Rcd at 5906-07, paras. 28-30 (citing largest VRS provider's 80% market share) with 2020 TRS Rate Report, Exh. 1-3.1 (confidential version) (showing that the largest IP CTS provider has a substantially lower market share). We therefore disagree with ClearCaptions' characterization of the IP CTS market as fundamentally unbalanced. See ClearCaptions Comments at 10.

¹³⁸ See CaptionCall Comments at 80; Brattle Group March 2019 Report at 36-37; see also 2020 TRS Rate Report, Exh. 1-3.1 (confidential version).

states, the higher costs for some IP CTS providers are attributable to business decisions concerning use of contractors as turnkey service providers, prior investments in technology and business processes, and differences in business models, rather than issues of scale.¹³⁹

45. *Third*, IP CTS's continuous record of rapid growth suggests that there are substantially greater opportunities than in the VRS context for a provider to reach efficient scale within a relatively short period of time.¹⁴⁰ This is especially the case in light of the new opportunities for small providers and new entrants to use advanced ASR technology to offer fully automatic IP CTS at greatly reduced operating cost.¹⁴¹

46. *Fourth*, we agree with CaptionCall that unlike VRS, IP CTS is not dependent on interoperability and does not have other network effects that make it difficult for new entities to enter or obtain eligible IP CTS users as customers.¹⁴² For all of these reasons, at this time we find that it is unnecessary to adopt a tiered or emergent rate structure for IP CTS.

47. *Reverse auction*. We defer consideration of whether a reverse auction would be an efficient and effective method of setting IP CTS compensation.¹⁴³ We recognize that a properly structured reverse auction could be an effective mechanism to ensure that compensation reflects market forces.¹⁴⁴ The record to date, however, does not enable us to determine whether an auction mechanism can effectively support the provision of IP CTS by multiple competitors. As we found with VRS, holding an auction to establish a compensation rate for the provision of service by multiple competitors runs the risk of producing a rate well above the average cost of providing service, or so low as to keep currently higher cost providers from continuing or new entrants from joining the market.¹⁴⁵

48. It may be that a carefully developed reverse auction—perhaps designed along the lines proposed by CaptionCall¹⁴⁶—could resolve some of these concerns or could be modified to do so. However, the development and implementation of a reverse auction would take substantial time, money

¹³⁹ CaptionCall Sept. 19, 2019 *Ex Parte*, Appx. B (Gregory L. Rosston and Andrzej Sjrzyprac Methodology for setting IP CTS rates) at 9.

¹⁴⁰ 2018 *Order*, 33 FCC Rcd at 5809, Table 1; 2020 TRS Rate Report, Exh. 1-3.1. By contrast, VRS appears to be a relatively mature market with much lower year-on-year growth in total demand. Compare 2020 TRS Rate Report, Exh. 2 with 2019 TRS Rate Report, Exh. 2, 2018 TRS Rate Report, Exh. 2, and 2017 TRS Rate Report Supplement, Rev. Exh. 2 (showing modest changes to projected VRS demand). *But see*, ClearCaptions Nov. 7, 2018 *Ex Parte*, Exh. 2 at 10 (stating that, like IP CTS, VRS is a “developing market”).

¹⁴¹ *See* ITTA Comments at 20; 2018 *IP CTS Declaratory Ruling*, 33 FCC Rcd at 5828, para. 50; *MachineGenius Certification Order*; *Clarity Certification Order*.

¹⁴² *See* CaptionCall Comments at 80.

¹⁴³ *See* 2018 *Further Notice*, 33 FCC Rcd at 5845-46, para. 95 (seeking comment on use of reverse auction for setting IP CTS compensation).

¹⁴⁴ *See* CaptionCall Comments at 73; Free State Foundation Perspectives at 6-7.

¹⁴⁵ 2017 *VRS Compensation Order*, 32 FCC Rcd at 5914, para. 46 & n.133; *cf.* ClearCaptions Nov. 7, 2018 *Ex Parte*, Exh. 2 at 7-9 (illustrating how reverse auction could lead to greater market concentration); Letter from David A. O'Connor, Counsel to Hamilton Relay, to Marlene H. Dortch, FCC, CG Docket Nos. 13-24 and 03-123, Attach. at 19-21 (filed Mar. 6, 2020) (claiming reverse auction would lead to higher rates than tiered rate proposal).

¹⁴⁶ *See* CaptionCall Comments at 73-77, Appx. D (Reverse Auction Proposal for Setting IP CTS Rates); Letter from Rebekah P. Goodheart, CaptionCall to Marlene H. Dortch, FCC, CG Docket Nos. 03-123 and 13-24 (filed Aug. 13, 2019) (CaptionCall Aug. 13, 2019 *Ex Parte*) (discussing the Reverse Auction Proposal for Setting IP CTS Rates); CaptionCall Sept. 19, 2019 *Ex Parte*, Appx. B (Gregory L. Rosston and Andrzej Sjrzyprac Methodology for setting IP CTS rates) at 30-41 (responding to criticisms of the auction proposal). *But see* Letter from Russell M. Blau, Counsel to ClearCaptions, to Marlene H. Dortch, FCC, CG Docket Nos. 13-24 and 03-123, Attach. at 1-2 (filed July 26, 2019) (detailing reasons why reverse auction is inappropriate for IP CTS).

and effort, with no assurance that the benefits would exceed the costs. Implementation of such an auction in the current environment also raises questions for which informed answers are not yet available. Specifically, the type of auction proposed by CaptionCall would accommodate only a limited number of post-auction competitors, and thus would require the Commission to weigh carefully the costs and benefits of imposing such limits on IP CTS competition and consumer choice. For example, what is the minimum number of post-auction IP CTS competitors that would be necessary to maintain adequate service quality and innovation incentives consistent with the functional equivalence, efficiency, availability, and other goals of Section 225?¹⁴⁷

49. These challenges are compounded by the recent introduction of fully automated IP CTS, with major consequences for IP CTS cost structure, the details of which are not yet well understood. We believe it would be a waste of Commission resources to undertake a major change in methodology at this time, before we are in a position to assess the impact of those changes. We do not yet have sufficient experience with fully automatic IP CTS to be able to predict accurately the extent to which it will be adopted by consumers in the near term, to assess the likely effect of such adoption on average IP CTS costs, and to design an alternative compensation methodology that can take this potentially game-changing technology into account. We conclude that there is a need for further development of data on the costs and performance of fully automatic IP CTS, before the Commission can make an informed determination whether, how, and when to adopt a reverse auction methodology.

50. *Proposals to maintain a higher rate.* We reject proposals by some IP CTS providers to set the IP CTS rate at higher levels than the average of providers' allowable costs. CaptionCall's proposed initial rate of \$1.75 is based on an incorrect cost analysis that includes non-allowable licensing costs, as explained above.¹⁴⁸ CaptionCall's alternative argument, that setting a higher rate is necessary to ensure all IP CTS providers are able to stay in the market and continue to make capital investments in innovation and efficiency,¹⁴⁹ is likewise unpersuasive.¹⁵⁰ Especially with the emergence of fully automatic technology as a service option, there are reasonable opportunities for higher-than-average-cost providers to reduce costs by adopting more efficient captioning technologies and business practices without reducing the consumers' opportunities to receive functionally equivalent service.¹⁵¹ Further, the Commission is charged with ensuring the availability of a high-quality captioning service, not ensuring that all existing providers remain in the market.

51. Hamilton's proposal for an initial rate no lower than \$1.7630 reflects the IP CTS rate for the 2011-12 TRS Fund year (which Hamilton asserts was the last year in which neither the Commission

¹⁴⁷ See Letter from Michael J. Strecker, ClearCaptions, Dixie Ziegler, Hamilton, Scott R. Freiermuth, Sprint, and Cristina Duarte, InnoCaption (Joint Providers) to Marlene H. Dortch, FCC, CG Docket Nos. 03-123 and 13-24, at 3 (filed Feb. 20, 2020) (Joint Provider Feb. 20, 2020 *Ex Parte*); ClearCaptions Nov. 7, 2018 *Ex Parte*, Exh. B; Brattle Group Mar. 2019 Report at 47.

¹⁴⁸ See CaptionCall Comments at 64-68; *see also supra* paras. 29-31 (rejecting CaptionCall's claim for self-paid license fees as recoverable expense).

¹⁴⁹ See CaptionCall Comments at 64-65; *see also* Brattle Group March 2019 Report at 18-19 (arguing there is potential for market disruption if the rate is set below \$1.763).

¹⁵⁰ Unlike the typical regulated-rate context, in which the consumers of a tariffed service are billed for the service at the approved rate, in TRS the service is paid for by TRS Fund contributors and the consumer is billed nothing. In this context, which lacks the key element of market pricing, devising "market-based" pricing mechanisms is far more challenging, as there is no market-checking mechanism to guard against the effects of setting provider compensation too high.

¹⁵¹ See 47 U.S.C. § 225(a)(3), (b)(1) (including functionally equivalent service in the definition of TRS and mandating the Commission to ensure the availability of TRS "to the extent possible and in the most efficient manner").

nor any party challenged the MARS rate for IP CTS as unreasonable)¹⁵² and thus disregards the record evidence of current IP CTS costs. Whatever rate may have been reasonable almost a decade ago, Rolka Loube's data analysis shows that average IP CTS provider costs have dropped by some 37% since then.¹⁵³ While current provider cost reports may be subject to imprecision, they are certainly more accurate than a 10-year old compensation rate based on a proxy that is no longer applicable.¹⁵⁴

52. *IP CTS provider cost transparency.* The Commission declines to require public disclosure of IP CTS providers' costs, as requested by Consumer Groups and Academic Researchers.¹⁵⁵ Such a step would require a rule amendment that is beyond the scope of this proceeding.¹⁵⁶

IV. ORDER ON RECONSIDERATION

53. We deny Sprint's petition to reconsider the adoption of interim IP CTS rates for Fund years 2018-19 and 2019-20. Sprint's petition relies on arguments that were previously raised with and

¹⁵² See Hamilton Comments at 4-5. Hamilton suggests the rate should be adjusted for inflation to reflect 2018 dollars (the year of its comments). *Id.* at 4-5; see also Brattle Group March 2019 Report at 18-19 (proposing \$1.763 as the lower bound for an initial price cap rate).

¹⁵³ See *supra* Table 1 (showing per-minute costs of \$1.2485 in 2019 and \$1.3612 (projected) in 2020, for an average of approximately \$1.30); 2018 Order, 33 FCC Rcd at 5810, para. 18 (showing per-minute expenses of \$2.0581 in 2011 and \$1.6938 in 2012, which, with a 10% operating margin added, are \$2.2639 and \$1.8632, for an average of approximately \$2.06). The difference between \$2.06 and \$1.30 is a percentage drop of 37%. For the same reasons, we disagree with the Brattle Group's assertion that the 2017-2018 IP CTS rate of \$1.9467 is an appropriate starting point for the IP CTS rate. See Brattle Group March 2019 Report at 18 (proposing a starting point for the IP CTS rate under a price cap methodology).

¹⁵⁴ In arguing for this alternative, the Brattle Group cites the Bureau's 2013 IP Relay decision as an example to illustrate that "a particular regulated accounting of costs may not, in fact, account for the entirety of provision costs," and that "once a regulated market is damaged by missteps in the ratemaking process, it is challenging to repair that market." Brattle Group March 2019 Report at 2, 16-17, 27. That decision was effectively reversed by the Bureau within 18 months. See *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CG Docket No. 03-123, Order, 28 FCC Rcd 9219, 9223-24, para. 15 (CGB 2013) (reducing the base compensation rate for IP Relay to \$1.0147); *Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CG Docket No. 03-123, Order, 29 FCC Rcd 16273, 16275-78, paras. 5-12 (CGB 2014) (increasing the IP Relay base compensation rate). Further, there are a number of other differentiating factors in the cited IP Relay example. The 2013 and 2014 IP Relay decisions were made during a very troubled time for that service, when the user registration practices of three of the five IP Relay providers were under investigation by the Enforcement Bureau. 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, Further Notice of Proposed Rulemaking, and Order, 34 FCC Rcd 691, 697-98, para. 15 n.43 (2019) (describing the investigations). After four of the five IP Relay providers exited the market, demand for the service declined by 75%, suggesting that a very high percentage of previously registered IP Relay users may have been ineligible for the service. *Id.* During this tumultuous period, because the composition of the provider group changing dramatically, average reported costs also fluctuated. However, there is no evidence that provider costs were incorrectly analyzed. By contrast, the decline in average IP CTS costs has been continuous for the last six years (see *supra* Table 1), and without a major change in the composition of the providers serving the market—providing greater assurance that the change in average costs accurately reflects a real underlying trend.

¹⁵⁵ Consumer Groups and Academics Reply Comments at 15.

¹⁵⁶ See 47 CFR § 64.604(c)(5)(iii)(I) (generally requiring the TRS Fund administrator to keep all data confidential). The Commission last considered this issue in 2007. 2007 TRS Rate Methodology Order, 22 FCC Rcd at 20173, para. 88. Noting that the interest in transparency must be balanced against the providers' interest in the confidentiality of their financial and business planning data, the Commission determined that individual TRS providers' cost and demand data should remain confidential. *Id.*

fully addressed by the Commission,¹⁵⁷ and none of its arguments identifies any material error, omission, or reason warranting reconsideration.¹⁵⁸

54. First, in contending that the Commission impermissibly adopted interim rates based on a stale record, without seeking additional comment to update the record,¹⁵⁹ Sprint expressly acknowledges that parties raised this concern and that the Commission responded to their arguments.¹⁶⁰ Sprint also fails to show material error, omission, or reason warranting reconsideration.¹⁶¹ Mere disagreement with the Commission's procedural or substantive decisions is not sufficient, and Sprint does not dispute that the interim rates were set based on current, publicly available cost data, on which the parties had an opportunity to comment.¹⁶² Sprint does not point to any specific flaw, other than its alleged staleness, in the record on which the Commission based its compensation decision. Further, the Commission sought and received numerous additional comments and submissions from interested parties on the compensation issue in the years following the Commission's 2013 Further Notice of Proposed Rulemaking,¹⁶³ and relied on up-to-date provider cost data in determining that the MARS methodology was no longer useful and in setting interim cost-based rates.¹⁶⁴

55. Sprint's second argument, that the interim rates cause unwarranted economic harm to IP CTS providers by failing to reflect the reasonable cost of providing IP CTS,¹⁶⁵ was also previously raised with and addressed by the Commission.¹⁶⁶ Sprint presents no new evidence of economic harm, instead repeating arguments that the Commission considered and rejected in the *2018 Order*, regarding the allowability of various cost categories.¹⁶⁷ The Commission discussed in detail the factors bearing on the reasonableness of provider costs, including the allowability of various kinds of expenses and the allowable operating margin.¹⁶⁸ In addition, the Commission set the interim rates substantially *higher* than average cost in order to limit the initial impact of necessary rate reductions on IP CTS providers.¹⁶⁹

¹⁵⁷ 47 CFR § 1.429(l)(3) (petitions for reconsideration that rely on arguments that have been fully considered and rejected by the Commission in the same proceeding "plainly do not warrant consideration by the Commission").

¹⁵⁸ 47 CFR § 1.429(l)(1).

¹⁵⁹ Sprint Reconsideration Petition at 4.

¹⁶⁰ Sprint Reconsideration Petition at 4-5.

¹⁶¹ See *2018 Order*, 33 FCC Rcd at 5809-13, paras. 17-22.

¹⁶² *2018 Order*, 33 FCC Rcd at 5811-13, paras. 21-22.

¹⁶³ *2013 IP CTS FNPRM*, 28 FCC Rcd at 13472-89, paras. 111-53.

¹⁶⁴ *2018 Order*, 33 FCC Rcd at 5811-12, para. 21.

¹⁶⁵ Sprint Reconsideration Petition at 7; see also CaptionCall Reconsideration Comments at 14-15.

¹⁶⁶ Sprint Reconsideration Petition at 7-10.

¹⁶⁷ Sprint Reconsideration Petition at 2, 6-10.

¹⁶⁸ *2018 Order*, 33 FCC Rcd at 5819-22, paras. 33-35.

¹⁶⁹ *2018 Order*, 33 FCC Rcd at 5813-16, paras. 23-26. In commenting on Sprint's petition, CaptionCall questions whether the Commission had a reasoned basis to set the second-year interim rate at \$1.58, suggesting that the second 10% rate reduction was arbitrary and reliant on unexplained similarities between VRS and IP CTS without consideration of the differences between the services. CaptionCall Reconsideration Comments at 15-16. First, in adopting the same zone of reasonableness as VRS for determining an appropriate operating margin for IP CTS, the Commission correctly noted both forms of TRS rely on CAs and as such are labor intensive industries. *2018 Order*, 33 FCC Rcd at 5813-14, para. 23. Second, in looking at the "analogous context of VRS" (i.e., whether or not to immediately reduce the rate to the weighted average cost of providing the service), the Commission found the rationale for using a glide path versus a flash-cut reduction to cost-based rates, including avoiding disruption to the market and potential negative consequences for consumers, as applied in the VRS context, was similarly warranted

(continued....)

While Sprint may believe the Commission should have analyzed the cost data differently than it did, Sprint's contrary opinion is not a material error, omission, or reason for reconsideration.

56. Sprint's third argument, that the Commission should have delayed action on rates pending the outcome of the *2018 Notice of Inquiry* on service quality standards, also fails to identify a material error, omission, or reason warranting reconsideration.¹⁷⁰ Rather, Sprint's argument rests on pure speculation about the possibility that the *2018 Notice of Inquiry* could eventually lead to the imposition of new, more onerous standards that providers would be unable to meet without incurring higher costs.¹⁷¹ In any event, no new service quality standards became effective—or were even proposed by the Commission—during the period covered by the interim rates.¹⁷²

57. Finally, in arguing that the interim rates will preclude IP CTS providers from offering high-quality service, investing in innovation, or competing effectively,¹⁷³ Sprint again fails to explain what aspect of these issues the Commission did not fully consider or to otherwise identify a material error, omission, or reason for reconsideration. The Commission fully considered the potential impact of reducing the compensation rate on service quality, investment in innovation, the ability of providers to obtain funding, and competition, and the Commission implemented steps to mitigate these potential effects.¹⁷⁴ The Commission provided a glide path to reduce the rates over a two year period and set both interim rates well above the average cost-based rate, which it calculated with the inclusion of a reasonable operating margin for providing IP CTS.¹⁷⁵ The Commission also took action to allow all providers the opportunity to implement ASR-only IP CTS, a far less costly alternative to CA-assisted IP CTS.¹⁷⁶ Sprint does not present any new arguments that explain why providers would be unable to offer high quality service, invest, or compete while receiving a rate well above the average cost to provide IP CTS. In addition, during the last two years, the potential adverse consequences alleged by Sprint have not come to pass. No provider has left the IP CTS market or indicated it is failing to provide functionally equivalent service; the record does not indicate a general reduction in service quality; current providers continue to

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for IP CTS. *See 2018 Order*, 33 FCC Rcd at 5814-15, para. 24. Neither of those assessments require an analysis of all the similarities or differences between VRS and IP CTS for the Commission to fully consider the issue.

¹⁷⁰ Sprint Reconsideration Petition at 10-11. The Commission disagreed with calls to refresh the record or consider other matters, including service quality standards, before terminating reliance on the MARS rate methodology and adopting interim rates. Finding the MARS methodology ineffective in aligning rates with costs, the growing gaps between the MARS and cost-based methodologies, the continued increase in IP CTS minutes, and the shrinking contribution base for the TRS Fund, the Commission determined it was important to act without delay to bring provider compensation more in line with reported provider costs. *2018 Order*, 33 FCC Rcd 5810-11, paras. 19-20.

¹⁷¹ Sprint Reconsideration Petition at 10-11; Hamilton Reconsideration Comments at 3. We note that a notice of inquiry does not propose rules for the Commission's consideration, it only starts a record on a particular topic, so that the Commission may receive the perspective of interested parties. *See* 47 CFR § 1.430 (the procedures and practices of rulemaking proceedings "govern proceedings commenced by issuing a 'Notice of Inquiry' *except that such proceedings do not result in the adoption of rules*") (emphasis added).

¹⁷² Service standards are proposed in the Further Notice of Proposed Rulemaking accompanying this Order on Reconsideration. We also note that the Commission has many options at its disposal to ensure providers are reasonably compensated for the cost of meeting specific service quality standards. For example, in the accompanying Report and Order, the Commission adopts exogenous cost recovery rules that permit providers to request additional compensation for costs incurred to comply with new rules, if such compensation is necessary to permit the provider to recover its costs and a reasonable operating margin.

¹⁷³ Sprint Reconsideration Petition at 11-17; *see also* CaptionCall Reconsideration Comments at 16-17; Hamilton Reconsideration Comments at 4-7.

¹⁷⁴ *2018 Order*, 33 FCC Rcd at 5817-19, paras. 28-32.

¹⁷⁵ *2018 Order*, 33 FCC Rcd at 5817-19, paras. 23-25, 28-32.

¹⁷⁶ *2018 Order*, 33 FCC Rcd at 5827, para. 48.

invest in new technologies, such as ASR; and the Commission recently certified two new IP CTS providers who use ASR technology, thereby increasing competition and consumer choice.¹⁷⁷

V. FURTHER NOTICE OF PROPOSED RULEMAKING

58. To enable the Commission to better evaluate the efficacy of the IP CTS and CTS programs and the performance of individual service providers, we propose to amend the Commission's rules to provide for robust, efficient, objective, and quantifiable measurement of the quality of service offered by each provider and by the telephone caption service program as a whole.¹⁷⁸

59. For several years, the Commission has contracted with a Federally Funded Research and Development Center to conduct research on testing and measurement of TRS performance through a National Test Lab.¹⁷⁹ Before issuing the *2018 Notice of Inquiry*, the Commission also sought input from the Disability Advisory Committee, a committee of interested stakeholders formed pursuant to the Federal Advisory Committee Act to provide advice and recommendations to the Commission on a wide array of accessibility issues. In 2016, the Commission received recommendations on criteria, metrics, and

¹⁷⁷ See *MachineGenius Certification Order*; *Clarity Certification Order*; see also Amendment to Application of InnoCaption for Certification as a Provider of IP Captioned Telephone Services, CG Docket Nos. 03-123 and 13-24, (filed Mar. 13, 2020), https://ecfsapi.fcc.gov/file/10313420020708/FINAL_Amendment%20to%20InnoCaption%20Application_%2003.13.2020.pdf.

¹⁷⁸ In this Further Notice of Proposed Rulemaking (Further Notice), we use the term “telephone captioning service(s)” and “caption service(s)” as umbrella terms that include both state-program CTS and IP CTS. This Further Notice builds on the record developed from the *2018 Notice of Inquiry*. *2018 Notice of Inquiry*, 33 FCC Rcd at 5868-5875, paras. 155-181). A similar notice of inquiry addressing VRS was issued in 2017. See *Structure and Practices of the Video Relay Service Program*, Report and Order, Notice of Inquiry, Further Notice of Proposed Rulemaking, and Order, 32 FCC Rcd 2436, 2464-69, paras. 61-79 (2017) (*2017 VRS Notice of Inquiry*). These notices of inquiry responded in part to a 2015 report by the Government Accountability Office (GAO), which recommended that the Commission develop specific performance measures to determine, in an objective, quantifiable way, whether TRS is fulfilling its statutory purpose. GAO, Report to Hon. Jeff Sessions, U.S. Senate, Telecommunications Relay Service: FCC Should Strengthen Its Management of Program to Assist Persons with Hearing or Speech Disabilities, GAO-15-409 (Apr. 2015), <https://www.gao.gov/products/gao-15-409>.

¹⁷⁹ 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) – Summary of Phase 2 Usability Testing Results at i-ii (2016), CG Docket Nos. 03-123 and 13-24 (filed by CGB, Apr. 11, 2018), <https://ecfsapi.fcc.gov/file/10411287298464/MITRE%20Corporation%20Summary%20of%20Phase%202.pdf> (IP CTS Phase 2 Testing Summary); CMS Alliance to Modernize Healthcare, Internet Protocol Caption Telephone Service (IP CTS) Devices: Summary of Phase 1 Activities (2017), CG Docket Nos. 03-123 and 13-24, at 10 (posted April 11, 2018) (MITRE Phase 1 Summary). In its *2018 Declaratory Ruling* authorizing fully automatic IP CTS, as well as the subsequent certification of two providers of fully automatic IP CTS, the Commission relied in significant part on performance testing and analysis conducted by the National Test Lab. See *2018 IP CTS Declaratory Ruling*, 33 FCC Rcd at 5827-28, paras. 49, 51; *MachineGenius Certification Order*; *Clarity Certification Order*; National Test Lab, FCC TRS Project, IP CTS Device Recurring Testing: Prospective IP CTS Provider (Clarity) Assessment (2020), <https://ecfsapi.fcc.gov/file/106021506728862/FCC%20TRS%20Project%20Prospective%20IP%20CTS%20Provider%20Assessment%20Clarity.pdf>; National Test Lab, FCC TRS Project, IP CTS Device Recurring Testing: Prospective IP CTS Provider (MachineGenius) Assessment (2020), <https://ecfsapi.fcc.gov/file/1050198540603/FCC%20TRS%20Project%20Prospective%20IP%20CTS%20Provider%20Assessment.pdf>.

measurements methods for assessing the quality of IP CTS.¹⁸⁰ In 2017, the Disability Advisory Committee expanded upon its initial recommendations.¹⁸¹ In 2018, following the release of the Notice of Inquiry, the Disability Advisory Committee provided further guidance on criteria, metrics, and measurements methods for assessing the quality of IP CTS.¹⁸²

60. Drawing from the results of the National Test Lab's research, the Disability Advisory Committee's recommendations, and comments and submissions by captioning service providers, consumer groups, and other parties, we propose to amend the minimum TRS standards applicable to IP CTS and CTS to provide quantifiable, measurable benchmarks for caption delay and accuracy. We seek comment on whether we should modify any other minimum TRS standards to provide more specific service-quality standards for CTS and IP CTS. We also propose to amend our rules to define how testing and measurement should be conducted to gauge provider performance in relation to these standards and to measure progress by the telephone caption service program as a whole toward achieving statutory goals. In addition, we seek comment on whether such performance assessment is best carried out by the Commission, by individual providers, or by an entity selected and overseen by all providers. More generally, we seek comment on whether our proposals will advance the relevant statutory objectives, or "performance goals"— technological currency, and efficiency,¹⁸³ and the overarching statutory goal of "functional equivalence."¹⁸⁴

A. Adding CTS/IP CTS Metrics to Minimum TRS Standards

61. In the *2018 IP CTS Notice of Inquiry*, the Commission sought comment on establishing metrics for IP CTS service quality in the following areas: (1) transcription accuracy; (2) transcription synchronicity, i.e., caption delay;¹⁸⁵ (3) transcription speed; (4) speed of answer; (5) dropped or

¹⁸⁰ See Recommendation of the FCC Disability Advisory Committee, IP CTS Quality Standards, CG Docket Nos. 03-123 and 13-24 (filed Sept. 23, 2016), https://apps.fcc.gov/edocs_public/attachmatch/DOC-341497A1.pdf (Disability Advisory Committee Sept. 2016 Recommendation).

¹⁸¹ Recommendation of the FCC Disability Advisory Committee, Methods for Assessing the Quality of IP Captioned Telephone Service (IPCTS) (adopted Oct. 16, 2017), <https://www.fcc.gov/file/13125/download> (Disability Advisory Committee Oct. 2017 Recommendation)

¹⁸² Recommendation of the FCC Disability Advisory Committee, Internet Protocol Captioned Telephone Relay Service Metrics, CG Docket Nos. 03-123 and 13-24 (filed Oct. 3, 2018), <https://ecfsapi.fcc.gov/file/10122598307482/DOC-354522A1.pdf> (Disability Advisory Committee Oct. 2018 Recommendation).

¹⁸³ See 47 U.S.C. § 225(a)(3), (b)(1), (d)(2).

¹⁸⁴ Section 225 defines TRS as "telephone transmission services that provide the ability for an individual who is deaf, hard of hearing, deaf-blind, or who has a speech disability to engage in communication by wire or radio with one or more individuals, in a manner that is *functionally equivalent* to the ability of a hearing individual who does not have a speech disability to communicate using voice communication services by wire or radio." 47 U.S.C. § 225(a)(3) (emphasis added); see also *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, 4657, para. 2 (1991) ("The intent of Title IV of the ADA is to further the Act's goal of universal service by providing to individuals with hearing or speech disabilities telephone services that are functionally equivalent to those provided to individuals without hearing or speech disabilities."); *2018 Order*, 33 FCC Rcd at 5802, para. 3 (The Commission "must ensure the provision of TRS for persons who are deaf, hard of hearing, deaf-blind, or have speech disabilities that is functionally equivalent to the provision of voice communication services used by persons without disabilities."). We note that commenters on the *2018 Notice of Inquiry* unanimously recognized this as a primary goal of the TRS program.

¹⁸⁵ "Caption delay" and "transcription synchronicity" refer to the same concept. Both terms were used by commenters on the *2018 Notice of Inquiry*. In this Further Notice we use the more reader-friendly term "caption delay."

disconnected calls; (6) service outages; and (7) usage data.¹⁸⁶ Below, we propose to amend the Commission's rules to specify and quantify the application of minimum TRS standards to CTS/IP CTS in two areas: caption delay and caption accuracy. Commenters generally support the adoption of performance metrics in these two areas.¹⁸⁷

62. *Caption Delay.* We propose to adopt a minimum standard for caption delay. Unlike other forms of TRS, telephone caption service “offers consumers the benefit of operating more like conventional voice telephone service, with ... the nearly simultaneous delivery of the actual voice of the called party and written text of what the called party has said.”¹⁸⁸ As the Commission has explained, for the service to work as intended, captions must be delivered “fast enough so that they keep up with the speed of the other party’s speech.”¹⁸⁹ While some delay was deemed necessary when all IP CTS calls were handled by CAs, the Commission has recognized that excessive delay is inconsistent with functional equivalence. “[I]f captions are not keeping up with the speech . . . at some point the provider is no longer offering relay service and the call is not compensable.”¹⁹⁰ However, the current TRS rules do not specify *how much* caption delay is acceptable.¹⁹¹

63. We propose the following definition of caption delay, which is based on MITRE’s current practice in its testing of IP CTS providers and also draws from the Joint Providers Recommendations and the Disability Advisory Committee’s and MITRE’s prior recommendations:

Caption delay is the difference in time (in seconds) between when a word can be heard in the audio and when that word appears in the stream of captions on the caption user’s primary display.¹⁹²

¹⁸⁶ 2018 Notice of Inquiry, 33 FCC Rcd at 5871-74, paras. 164-176.

¹⁸⁷ See CaptionCall NOI Comments at 7-12; Hamilton NOI Comments at 6-8; MachineGenius NOI Comments at 8-12; Ultratec NOI Comments at 8-9; Sprint NOI Comments at 7-10; see also Joint Providers Recommendations at 3-6 (outlining proposed definitions and assessments for accuracy and synchronicity); Disability Advisory Committee Oct. 2018 Recommendation at 2 (supporting metrics for all areas proposed in the 2018 Notice of Inquiry).

¹⁸⁸ *Telecommunications Relay Services, and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CC Docket No. 98-67, Declaratory Ruling, 18 FCC Rcd 16121, 16127, para. 16 (2003) (2003 CTS Declaratory Ruling).

¹⁸⁹ 2007 IP CTS Declaratory Ruling, 22 FCC Rcd at 388-89, para. 22 & n.69.

¹⁹⁰ 2007 IP CTS Declaratory Ruling, 22 FCC Rcd at 388-89, para. 22 & n.69; see also 2018 Notice of Inquiry, 33 FCC Rcd at 5872, para. 168. Commenters, as well as MITRE and the Disability Advisory Committee, agree that caption delay should be included as a metric for IP CTS testing. See CMS Alliance to Modernize Healthcare, Internet Protocol Caption Telephone Service (IP CTS) Devices: Summary of Phase 1 Activities (2017), CG Docket Nos.03-123 and 13-24, at 10 (filed by CGB, April 11, 2018) (IP CTS Phase 1 Summary); Disability Advisory Committee Sept. 2016 Recommendation at 2-3; Disability Advisory Committee Oct. 2017 Recommendation at 2; Disability Advisory Committee Oct. 2018 Recommendation at 2-4; CaptionCall NOI Comments at 10-11; Hamilton NOI Comments at 7; MachineGenius NOI Comments at 12; Ultratec NOI Comments at 9; Sprint NOI Reply Comments at 6-9; Consumer Groups and Academic Researchers NOI Reply Comments at 5.

¹⁹¹ The TRS rules do require a minimum “typing speed” for CAs of 60 words per minute, which has been found applicable to caption service. 47 CFR § 64.604(a)(iii); 2007 IP CTS Declaratory Ruling, 22 FCC Rcd at 388-89, para. 22 n.69.

¹⁹² Cf. Letter from Dixie Ziegler, Hamilton Relay, Inc., Scott Freiermuth, Sprint Corporation, Bruce Peterson, CaptionCall, LLC, Cristina Duarte, Mezmo Corporation (dba InnoCaption), Michael Strecker, ClearCaptions, LLC, to Marlene H. Dortch, FCC, CG Docket Nos. 12-24 and 03-123, Attach. at 6 (filed August 21, 2018) (Joint Providers Recommendations); see also CaptionCall NOI Comments at 11; Hamilton NOI Comments at 7; Sprint NOI Reply Comments at 7. The Disability Advisory Committee and MITRE previously proposed to define caption delay as the time elapsed from when the IP CTS user hears the other party’s voice on a caption phone to when captions of that speech are displayed on the phone’s screen. See 2018 Notice of Inquiry, 33 FCC Rcd at 5872, para.

(continued....)

We seek comment on how to specify more precisely what is meant by “when [a captioned word] appears” in the transcript or stream of captions. Should such “appearance” be defined as the *initial* “appearance” of the word (i.e., prior to any correction that may be provided subsequently), or its “final displayed appearance” (i.e., so that the caption delay includes any time involved in providing a corrected version of the word)? Would measuring caption delay based on the initial appearance of a word provide an undesirable incentive for providers to prematurely deliver inaccurate captions? Conversely, would measuring caption delay based on the final displayed appearance provide an undesirable *disincentive* to correct mistakes in previously delivered captions?

64. The record reflects that caption delay may vary over the course of a call.¹⁹³ For example, delay may start out to be minimal at the beginning of a call, but then increase through the duration of the call, especially if the content of the call becomes more complicated. Therefore, we propose that testing procedures should ensure that caption delay measurements for any service include measurements taken from various segments in the duration of captioned calls.¹⁹⁴ We seek comment on the above proposals and their costs and benefits. Should caption delays during a single test call be averaged together, with each test call given a score, and the score for each test call given equal weight in the overall average? Or should caption delay be averaged on some other basis, e.g., total delays divided by the total number of minutes tested? Should “seconds” be measured to the nearest tenth of second or some other measure? Also, what Internet speed(s) should be used to measure caption delay? Should delay be measured at more than one Internet speed?

65. Finally, we seek comment on setting the applicable metric, i.e., the maximum average caption delay that should be allowed by our minimum TRS standards. We note that testing of fully automatic telephone captioning indicates it is capable of delivering captions within one or two seconds, on average.¹⁹⁵ How many seconds of delay should be considered the maximum acceptable delay for any form of captioning, in light of the capabilities of current technology, the expectations of caption consumers, and the impact of delay on a user’s ability to carry on a natural telephone conversation? Should our minimum standards specify other limits on caption delay, in addition to the maximum average delay?

66. *Accuracy.* The TRS rules relating to the accuracy of text-based TRS were adopted before the Commission authorized any form of captioned telephone service. By their literal terms, the rules address the qualifications and behavior of TRS CAs, requiring that CAs’ typing, grammar, and spelling be “competent” and that CAs transcribe all conversations “verbatim,” with no intentional alteration of content unless a user specifically requests summarization.¹⁹⁶ However, the Commission applies these rules to CTS and IP CTS, even though most CTS and IP CTS providers rely on automatic captioning to supplement or replace captioning by CAs.¹⁹⁷

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168 (citing MITRE Phrase 1 Summary at 6); *see also* Disability Advisory Committee Sept. 2016 Recommendations at 2.

¹⁹³ *See* Joint Providers Recommendations at 6; CaptionCall NOI Comments at 10-11; Hamilton NOI Comments at 7.

¹⁹⁴ Joint Providers Recommendations at 6.

¹⁹⁵ *See* *MachineGenius Order*, 35 FCC Rcd at 4570-71, para. 6; *Clarity Order*, 35 FCC Rcd at 5637-38, para. 6; *see also* MITRE Phase I Summary at 10-11.

¹⁹⁶ 47 CFR § 64.604(a)(1)(ii), (2)(ii).

¹⁹⁷ *See* 2003 *CTS Declaratory Ruling*, 18 FCC Rcd at 16134-35, paras. 37-39; 2018 *ASR Declaratory Ruling*, 33 FCC Rcd at 5832, para. 60; *see also* *MachineGenius Certification Order*, 35 FCC Rcd at 4571-72, para.7; *Clarity Certification Order*, 35 FCC Rcd at 5638-39, para. 7.

67. We propose to amend these rules to provide more specific standards and metrics for the accuracy of telephone captioning, including fully automatic IP CTS.¹⁹⁸ Concurring with several commenters on the *2018 IP CTS Notice of Inquiry*, we propose to combine accuracy with completeness in a single metric, “Word Error Rate,” which is likely to be easier to administer.¹⁹⁹ Word Error Rate is comprised of individual counts of words that are incorrectly inserted, deleted, or substituted in the captions delivered to the caller.

68. For purposes of measuring compliance with the standard, we seek comment on the following definition of Word Error Rate, which is based on MITRE’s current practice, while drawing language from the Joint Providers Recommendations:

The Word Error Rate for a captioned telephone conversation is (i) the number of word substitutions, omissions, and insertions in the captions divided by (ii) the total number of words in the voice communications being captioned. Accuracy shall be assessed for a caption as delivered to the caption user’s device within the minimum TRS standard for caption delay. A substitution error occurs when a spoken word is replaced with another word, an omission error involves the omission of a spoken word, and an insertion error consists of the addition of a word that has not been spoken.²⁰⁰

69. We seek comment on this proposal and its costs and benefits. To implement this definition of Word Error Rate, should we define what constitutes a “word”? For example, should interjected sounds such as “umm” and “ah” or garbled speech count as words?²⁰¹ If a speaker uses a regional dialect or foreign phrase that has no standard English spelling, can there be an error in transcription? We also seek comment on whether to insert a qualifier in the above definition to limit the word errors that are counted to “major errors,” which the Joint Providers Recommendations define as errors that significantly alter, obscure, or reverse the meaning of the original speech.²⁰² Does this definition provide a consistent, repeatable determination of what constitutes a “major” error, and if not, can it be modified to do so? Would limiting counted errors to major errors produce materially different results in the overall assessment of CTS/IP CTS providers? More specifically, would any improvements from counting only major errors be sufficient to justify (1) the additional costs and burdens involved in classifying errors as major or minor and (2) the greater likelihood of disputes over which errors count as major errors?

¹⁹⁸ The 2017 and 2018 Disability Advisory Committee recommendations encourage the Commission to determine quantitative standards for accuracy and completeness for all IP CTS providers. Disability Advisory Committee Oct. 2017 Recommendation at 2; Disability Advisory Committee Oct. 2018 Recommendation at 2, 4.

¹⁹⁹ See CaptionCall NOI Comments at 8 n.2; MachineGenius NOI Comments at 11.

²⁰⁰ See Communication from MITRE to CGB staff (May 15, 2020) (MITRE May 15, 2020 Communication) (Word Error Rate is “[t]he percentage of insertions, substitutions, and deletions in the call transcript, as compared to the reference transcript....Average [Word Error Rate] is the average across all calls.”); see also Joint Providers Recommendations at 3-4; CaptionCall NOI Comments at 7-8 (supporting the Joint Providers Recommendations definition and stating that it is consistent with the Disability Advisory Committee September 2016 recommendations); Hamilton NOI Comments at 6-7; MachineGenius NOI Comments at 9; Sprint NOI Reply Comments at 7. MITRE notes that it formerly used “accuracy” as the metric, and accuracy is the complement of accuracy. MITRE May 15, 2020 Communication; see also MITRE Phase 1 Summary at 4 (defining transcription accuracy as “The percentage of words from the conversation (the IP CTS transcription) that are correctly transcribed on the Device under Test (DUT) screen”).

²⁰¹ Cf. IP CTS Phase I Summary at 4-5 (rules for assessing transcribed files).

²⁰² See Joint Providers Recommendations at 4 (“Major errors are any incorrect words that significantly alter, obscure, or reverse the meaning of the original text.”).

70. Alternatively, if a distinction is needed between major and minor errors, should “minor errors” (i.e., word substitutions (such as misspellings), deletions, or insertions that do not alter or obscure the meaning of the original speech) still be counted but given less weight than major errors? For example, even though minor errors may not prevent a user from understanding the gist of a conversation, they still may be a distraction and force the IP CTS user to work harder to decipher the captions. Or should the standard we adopt be based on a combination of two measurements, one that is limited to major errors and one that takes all errors—including substitutions, deletions, and insertions whether major or minor—into account?

71. The *2018 Notice of Inquiry* also sought comment on whether readability (a concept that includes correct capitalization and punctuation) should be included in the Word Error Rate standard.²⁰³ Should readability be included, and if so, how should it be measured?²⁰⁴

72. We also seek comment on the maximum Word Error Rate that should be specified for caption service in our minimum TRS standards, and how this standard should apply to variable call conditions. Should we set the accuracy standard based on the expectations of users and the impact of inaccuracies on a user’s ability to carry on a natural telephone conversation, and if so, how should these be determined? Alternatively, in order to set an initial standard as expeditiously as possible, should the Commission initially set the maximum permitted Word Error Rate based on the current performance of IP CTS providers, as recommended by the Disability Advisory Committee, and subsequently reset the standard based on measures of user expectations and understanding, as suggested above?²⁰⁵ If a current-performance-based approach is initially used, should the maximum level be set based on the Word Error Rate achieved by the average provider, or at some other defined value on the spectrum of baseline accuracy measurements? Should a different standard be applied to calls with poor audio quality? How would such a determination be made?

73. *Speed of Answer*. Commission rules currently provide a well-defined metric for speed of answer, which is that 85 percent of all captioned telephone calls be answered within ten seconds of a user’s initiation of contact with the captioning center and the start of captioning, measured daily.²⁰⁶ The rules currently require TRS providers themselves to measure speed of answer and to submit speed-of-answer data for every call in their monthly call detail reports.

74. We seek comment on whether to strengthen the applicable speed-of-answer standard for telephone captions. With fully automatic captioning, for example, an IP CTS provider can begin delivering captioning almost instantaneously upon receiving notice that a registered user is making a call for which captioning is desired. Would it be reasonable to require all providers to meet a standard that approximates what is feasible with fully automatic captioning? For example, even though a provider may

²⁰³ *2018 Notice of Inquiry*, 33 FCC Rcd at 5871, para. 166.

²⁰⁴ Joint Providers suggest that errors involving uppercase/lowercase and punctuation, as well as some spelling errors and other errors, should not be counted as errors. Joint Providers Recommendations at 4-5; *see also* MachineGenius NOI Comments at 9-10; Sprint NOI Reply Comments at 7. Others suggest that these variations may affect transcription readability, which may have an effect on the user’s experience and comprehension of the captions. *See* Letter from John T. Nakahata, Counsel to CaptionCall, LLC and Sorenson, to Marlene H. Dortch, FCC, CG Docket Nos. 03-123, 13-24, Attach. 2 at 5 (filed Nov. 28, 2017) (Sorenson Nov. 28, 2017 *Ex Parte*) (explaining that correct punctuation and capitalization reduce the cognitive load required to read captions, and that punctuation may affect the meaning of the text, such as the difference in meaning suggested by a question mark or a period). MachineGenius proposes an “understandability” metric to account for the impact that factors not included in the accuracy metric has on the user experience. MachineGenius NOI Comments at 10.

²⁰⁵ *See* Disability Advisory Committee Oct. 2018 Recommendation at 3; *see also* CaptionCall NOI Comments at 16-17 (advocating for baseline testing before setting performance standards for accuracy and latency).

²⁰⁶ 47 CFR § 64.604(b)(2)(ii).

find it desirable, for other reasons, to continue using CAs for some or most calls, could fully automatic captioning be used as a stopgap measure for calls for which a CA is not immediately available?²⁰⁷

75. *Other Standards.* For the other categories discussed in the *2018 Notice of Inquiry*, the response to the proposed metrics is mixed, with some supporting and others opposing adoption of additional metrics.²⁰⁸ For two of the categories discussed in the *2018 Notice of Inquiry*, we tentatively conclude that no rule amendments are needed to quantify such standards for application to IP CTS. In the CTS/IP CTS context, measurements of transcription speed do not appear to add significant value to measurements of caption delay,²⁰⁹ and we do not see usage data as constituting a distinct substantive standard of service quality. We seek comment on these tentative conclusions. If we adopt a caption delay standard, as proposed, should we also amend the rule on CA typing speed to make clear that it no longer applies to CTS and IP CTS?

76. We seek further comment on whether our minimum TRS standards should be modified to provide more specific and quantified performance standards for service outages and for dropped or disconnected calls.²¹⁰ Some commenters recommended against adding a standard for service outages because the Commission's rules already require reporting of service outages,²¹¹ while others did not object.²¹² Similarly, commenters differed on whether dropped or disconnected calls are even relevant to

²⁰⁷ As one example, during the COVID emergency, which has sharply limited providers' ability to fully staff their call centers with CAs, the availability of fully automatic captioning could have enabled CTS and IP CTS providers to continue meeting the speed-of-answer standard, obviating the need for an emergency waiver of that standard. 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) (granting emergency waivers of certain TRS rules, including the speed-of-answer standard for CTS and IP CTS); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Structure and Practices of the Video Relay Service Program*, CG Docket Nos. 03-123 and 10-51, Order, 35 FCC Rcd 4894 (CGB 2020) (extending 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) (further extending 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, DA 20-946 (CGB Aug. 26, 2020) (further extending COVID-19 waivers).

²⁰⁸ For example, some commenters urge the Commission to conduct or sponsor further research to develop IP CTS performance metrics for additional categories. Consumer Groups and Accessibility Researchers NOI Comments at 4-5; see also Disability Advisory Committee Oct. 2018 Recommendation at 2-3. On the other hand, Sprint urges the Commission not to adopt proposed metrics other than for accuracy and synchronicity. Sprint NOI Reply Comments at 9-10.

²⁰⁹ 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 10 (posted April 11, 2018) (MITRE Phase 1 Summary) (definition and measurement of caption delay).

²¹⁰ Commission rules require all Internet-based TRS providers to notify the Commission in the event of an unplanned service outage of any duration or a voluntary service interruption of less than 30 minutes, and to seek advance approval for voluntary interruptions of longer duration. 47 CFR § 64.606(h)(3); see *id.* § 64.604(b)(4)(ii) (requiring TRS to have "redundancy features functionally equivalent to the equipment in normal central offices, including uninterruptible power for emergency use"). However, no limit on the number or frequency of service outages is specified. And the TRS rules currently do not include a minimum standard for dropped or disconnected calls.

²¹¹ See CaptionCall Comments at 13-14 (Commission's rules already cover service outages to ensure reliable and resilient service; another metric would be redundant and unnecessary); Sprint Reply Comments at 9-10 (Commission does not need another service outage metric).

²¹² See Hamilton Comments at 10.

certain forms of IP CTS.²¹³ If we adopt standards for service outages and dropped or disconnected calls, how should they be measured and what should be the minimum metric for compliance? Should we direct the Consumer and Governmental Affairs Bureau to conduct rulemakings or otherwise determine more granular metrics for caption delay, accuracy, or other TRS standards?

B. Testing and Measurement Methodologies

77. We propose that the methodologies used to assess provider performance shall produce objective, quantifiable, repeatable, and verifiable service quality measurements. We also propose that such methodologies be technologically neutral and not designed to favor any particular service provider.²¹⁴ However, to the extent a provider's service is designed to work only with a particular device (such as a proprietary phone or a smartphone), we propose that the testing of that provider's service be tested when used with that device.

78. Drawing from the Joint Provider Recommendations and recommendations by the DAC, we propose the following additional guidelines for service quality testing:

- (1) Sample size (i.e., the number of test calls) should be calculated to provide reliable and accurate information;
- (2) Test calls should mimic the proper use of the service (e.g., both parties to a call should not be in the same room);
- (3) Test calls should follow the structure of a natural telephone conversation;
- (4) Test calls should not be detectable as "test calls" by CAs (e.g., test calls should not start with a loud dual-tone multi-frequency tone followed by live conversation);
- (5) Testing should be designed to evaluate service performance over a range of telephone audio conditions (e.g., static, distortion, inaudible or unintelligible conversation, and background noises), accents, and dialects that are likely to be encountered by CTS and IP CTS users.²¹⁵

We seek comment on these proposed guidelines. Do they appropriately balance the benefits of precision and fairness with the need for efficient methods of measurement? Should the Commission adopt these guidelines as recommended or mandatory? Should test calls include conversations in languages other

²¹³ Compare Ultratec Comments at 10 (dropped or disconnected calls are relevant only to app-based, web-based, or VoIP-based IP CTS, because in two-line IP CTS the CA does not sit between the caller and called party) with Hamilton Comments at 10 (dropped or disconnected calls is not applicable when the TRS user and provider are connected over the Internet).

²¹⁴ Joint Providers Recommendations at 6-10. CaptionCall and Hamilton support adopting Joint Providers Recommendations' proposed methodology. See CaptionCall NOI Comments at 13-15; Hamilton NOI Comments at 5-6. The Disability Advisory Committee also recommends the adoption of performance standards regardless of the platform or technology used. See Disability Advisory Committee Oct. 2018 Recommendation at 2.

²¹⁵ See *infra* Appx. B (proposed section 64.604(a)(4)(iii)). Joint Providers Recommendations at 7; see also Disability Advisory Committee Oct. 2017 Recommendation at 1-3. The Disability Advisory Committee also recommends that test plans be subject to peer review to facilitate compliance with the Data Quality Act. Disability Advisory Committee Oct. 2017 Recommendation at 1. The Commission is committed to the quality, objectivity, utility, and integrity of the information it releases and as required by the Data Quality Act, maintains Information Quality Guidelines that provide guidance to staff and information to the public on the Commission's policy and procedures for reviewing and substantiating the quality of information before it is disseminated to the public. See *FCC Updates Information Quality Guidelines in Accordance with Data Quality Act*, Public Notice, 34 FCC Rcd 6376 (OMD OEA 2019).

than English?²¹⁶ Are there additional guidelines we should consider for testing the quality of service provided to IP CTS users with hearing loss and low vision or who are deafblind?²¹⁷

79. We also seek comment on how tests and measurements for caption delay and accuracy should be conducted, and how to specify the sample size and frequency of such testing. Should we direct the Consumer and Governmental Affairs Bureau to conduct rulemakings or otherwise make more granular determinations on how to conduct performance testing and measurement in relation to caption delay, accuracy, or other TRS standards?

80. We also seek comment on what specific consequences should result if testing shows that a provider is failing to meet the minimum standard for caption delay or accuracy.²¹⁸ For example, if test results conducted in accordance with applicable methodological guidelines indicate that a provider is not meeting the Commission's minimum standard for caption delay or accuracy, should the service be retested on a weekly basis, with compensation withheld until such time as testing shows the problem with caption delay or accuracy has been fixed?²¹⁹ Alternatively, should the provider be given some period of time to rectify the problem, with withholding to begin if the problem cannot be rectified within that time period? As another alternative, should we formalize a compliance ladder approach, similar to the one used for closed captioning quality problems, which would be triggered whenever testing shows that a provider did not meet an applicable service quality standard?²²⁰

²¹⁶ IP CTS providers are not required to offer captions for conversations that use languages other than English, but if they choose to do so, such captioning is compensable if it meets the applicable minimum standards. *See Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Waivers of iTRS Mandatory Minimum Standards*, 29 FCC Rcd 10697, 10722-23, paras. 58-59 (2014).

²¹⁷ *See* Disability Advisory Committee Oct. 2018 Recommendation at 2 (recognizing that service quality recommendations should be inclusive of the needs of IP CTS users who are deafblind); Disability Advisory Committee Oct. 2017 Recommendation at 3 (recommending that future IP CTS testing include the impact of Braille equipment); Disability Advisory Committee Sept. 2016 Recommendation at 3 (suggesting different standards for delay may need to be established depending on the consumer, such as individuals with hearing loss and low vision).

²¹⁸ As with any of the Commission's minimum TRS standards, test results or other evidence indicating that a provider fails to meet the minimum standards for caption delay are relevant to Commission proceedings on certification or recertification of an Internet-based TRS provider or suspension or revocation of an existing certification. *See* 47 CFR § 64.606(b)(2)(i) (for certification of an Internet-based service provider, the applicant's documentation must establish "that the provision of Internet-based TRS will meet or exceed all non-waived operational, technical, and functional minimum standards contained in §64.604"); *id.* § 64.606(e)(2) ("The Commission may, on its own motion, require a certified Internet-based TRS provider to submit documentation demonstrating ongoing compliance with the Commission's minimum standards if, for example, the Commission receives evidence that a certified Internet-based TRS provider may not be in compliance with the minimum standards."); *id.* § 64.606(g) ("Internet-based TRS providers certified under this section shall file with the Commission, on an annual basis, a report demonstrating that they are in compliance with §64.604."); *see also MachineGenius Certification Order*, 35 FCC Rcd 4568 (conditionally certifying applicant to provide IP CTS after reviewing, among other things, test results for caption delay and caption accuracy); *Clarity Order*, 35 FCC Rcd 5635 (same). Of course, such evidence could also be relevant to an enforcement investigation regarding a potential violation of the relevant minimum standard.

²¹⁹ *See generally* 47 CFR § 64.604(c)(5)(iii)(E)(4) ("The TRS Fund administrator shall make payments only to eligible TRS providers operating pursuant to the mandatory minimum standards as required in this section."). For speed of answer, providers are required to measure and report compliance data for each day of service and are not compensated for any day on which the speed of answer standard is not met. 47 CFR § 64.604(c)(5)(D).

²²⁰ *See* 47 CFR § 79.1(g)(9) (providing opportunities for remedying failures to comply with closed-caption quality requirements prior to any additional enforcement actions).

C. Responsibilities for Measuring Service Quality

81. We tentatively conclude that to obtain authoritative assessments of IP CTS providers' performance in relation to caption quality and caption accuracy, it would not be practicable to rely on provider self-measurement and reporting (e.g., as in speed-of-answer compliance). As discussed above, measurement of provider performance in these areas raises more complicated methodological issues than those involved in speed-of-answer reporting, such that effective oversight of the testing undertaken by individual providers would impose undue administrative burdens on both providers and the Commission. We seek comment on this tentative conclusion.²²¹

82. We also seek comment on whether authoritative testing and measurement of caption delay and accuracy would be most effectively and reliably performed by the Commission or by an entity selected and supervised by the providers themselves, through some type of joint undertaking. We note that the latter option is supported by five of the currently certified providers, who indicate that they are in the process of jointly engaging with a testing organization.²²² As noted above, the performance assessments produced by this entity could have significant consequences for a provider, including determinations of a provider's qualifications for certification and recertification or eligibility for payment of TRS Fund compensation. Could a provider-sponsored entity conduct such assessments in a manner that is objective and unbiased? How should the Commission ensure that such an entity remains unbiased and independent of improper influence by any TRS provider or group of providers?

83. We seek comment on whether an entity designated to conduct performance testing should be authorized to conduct testing and measurement in additional areas other than caption delay and accuracy. To ensure that any entity designated to conduct performance testing has the ability to conduct sufficient testing and collect sufficient data to develop reliable performance assessments, should we require that IP CTS providers submit user devices, software, and other material or information needed for testing, as well as provider-generated testing protocols and results, to such an entity upon reasonable request?

84. We propose that the results of testing and measurement of CTS and IP CTS providers' performance, both in the aggregate and for individual providers, be made available to the public on a regular basis, in reports on the Commission's website. We seek comment on this proposal and the frequency of such reports. We also seek comment on whether to mandate a system or procedure for CTS and IP CTS users to rate the quality and performance of captioning services, on a call-by-call or other appropriate basis, with publication of average ratings for each provider, and how such a system or

²²¹ See CaptionCall NOI Comments at 9 n.28. Several commenters support performance measurement by an independent entity. See CaptionCall NOI Comments at 15 (supporting independent and objective third party testing to supplement to self-testing by providers); Consumer Groups and Accessibility Researchers NOI Reply Comments at 9-11 (advocating that a third party should measure provider quality); MachineGenius NOI Comments at 7 ("Testing procedures should be performed by an independent [third] party or parties, though certain tests and data gathering may appropriately be performed by the providers themselves."); Ultratec NOI Comments at 10-12 ("Ultratec agrees with the Commission that it is appropriate for neutral and independent third parties to conduct evaluations of the compliance of providers with any performance measures that the Commission ultimately adopts."). The Disability Advisory Committee also supports the use of independent third-party testing. See Disability Advisory Committee Oct. 2018 Recommendation at 3; Disability Advisory Committee Sept. 2016 Recommendation at 3.

²²² In an *ex parte* submission, the Joint Providers outlined a testing program in which they would employ an independent party to collect data on IP CTS performance metrics and that funding for the testing would be provided by the Joint Providers. See Letter from Dixie Ziegler, Hamilton Relay, Cristina Duarte, Mezmo Corp. d/b/a InnoCaption, Michael Strecker, ClearCaptions, Bruce Peterson, CaptionCall, Scott R. Freiermuth, Sprint, and Kevin Colwell, Ultratec, to Marlene H. Dortch, FCC, CG Docket Nos. 13-24 and 03-123, at 4 (filed Sept. 20, 2019) (Joint Providers 2019 *Ex Parte*).

procedure can be most effectively implemented and overseen.²²³ Many consumer rating services (such as Amazon and Yelp) use a one-to-five star rating system. Would a five-star rating system provide sufficient granularity for meaningful user ratings of IP CTS providers? Should the rating system have more specific quality or usability ratings, such as on a scale of one to ten? For those users who choose to rate their TRS calls, should we allow them the choice to identify themselves or should the ratings be strictly anonymous?

85. If testing of providers is conducted by a third party, how should we ensure that providers (and their ASR technologies) respond to test calls as they would to any call, i.e., how should we ensure that tests are conducted so that the provider does not know its service is being tested? Should we require that scripts used to conduct test calls not be given or identified to a TRS providers or applicants prior to the execution of the tests?²²⁴ For similar reasons, should we amend our rules to authorize the completion of test calls by registered CTS/IP CTS users via connections to providers' platforms, without disclosure to providers of the nature of the call, and with payment of TRS Fund compensation for such calls in the same manner as any TRS call? We seek comment on whether waivers of Commission rules are necessary and appropriate for this purpose, and more generally whether any rule provisions need to be waived to allow for effective testing and measurement of CTS/IP CTS.

86. We seek comment on the above proposals and their costs and benefits, and the beliefs and assumptions stated above.

VI. PROCEDURAL ISSUES

87. *Final Regulatory Flexibility Analysis.* As required by the Regulatory Flexibility Act of 1980, as amended (RFA),²²⁵ the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) relating to this Report and Order. The FRFA is set forth in Appendix C.

88. *Initial Regulatory Flexibility Analysis.* As required by the RFA, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities of the policies and rules addressed in this document).²²⁶ The IRFA is set forth in Appendix D. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the Further Notice. The Commission will send a copy of the Further Notice, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.²²⁷ In addition, the Further Notice and IRFA (or summaries thereof) will be published in the *Federal Register*.²²⁸

89. *Congressional Review Act.* The Commission will submit this draft Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking to the Administrator of the Office of Information and Regulatory Affairs, Office of Management and Budget, for concurrence as to whether this rule is "major" or "non-major" under the Congressional Review Act, 5 U.S.C. § 804(2). The Commission will send a copy of this Report and Order, Order on Reconsideration, and Further Notice of

²²³ Consumer Groups and Academic Researchers NOI Comments at 8; Consumer Groups and Academic Researchers NOI Reply Comments at 11-12 (noting that "user feedback provides qualitative commentary that considers the relationship between quality categories and the user's perception of service quality"); Disability Advisory Committee Oct. 2017 Recommendation at 3 (recommending development of a way for consumers to provide feedback on service quality beyond consumer complaints to the Commission). MachineGenius also supports a user rating system to supplement third-party testing. MachineGenius NOI Comments at 7.

²²⁴ See Joint Providers Recommendations at 7.

²²⁵ 5 U.S.C. § 601 *et seq.*

²²⁶ Pub. L. No. 104-13, 109 Stat 163 (1995) (codified at 44 U.S.C. §§ 3501-3520).

²²⁷ See 5 U.S.C. § 603(a).

²²⁸ *Id.*

Proposed Rulemaking to Congress and the Government Accountability Office pursuant to 5 U.S.C. § 801(a)(1)(A).

90. *Paperwork Reduction Act Analysis – Report and Order.* The Report and Order does not contain new or modified information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA).²²⁹ In addition, therefore, it does not contain any new or modified information collection burden for small business concerns with fewer than 25 employees, pursuant to the Small Business Paperwork Relief Act of 2002.²³⁰

91. *Paperwork Reduction Act Analysis – Further Notice.* The Further Notice seeks comment on proposed rule amendments that may result in new or modified information collection requirements. If the Commission adopts any new or modified information collection requirements, the Commission will publish another notice in the *Federal Register* inviting the public to comment on the requirements, as required by the PRA.²³¹ In addition, pursuant to the Small Business Paperwork Relief Act of 2002, we seek specific comment on how we might further reduce the information collection burden for small business concerns with fewer than 25 employees.²³²

92. *Comments.* Pursuant to sections 1.415 and 1.419 of the Commission's rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). See FCC, Electronic Filing of Documents in Rulemaking Proceedings, 63 Fed. Reg. 24121 (May 1, 1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <https://www.fcc.gov/ecfs/filings>.
- Paper Filers:
 - Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.
 - Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.
 - All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to Secretary's Office at 9050 Junction Drive, Annapolis Junction, MD 20701. The filing hours are 8:00 a.m. to 4:00 p.m., Monday through Friday. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
 - Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.
 - U.S. Postal Service first-class, Express, and Priority mail may be addressed to 445 Twelfth Street, SW, Washington, DC 20554.

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

²²⁹ Pub. L. No. 104-13, 109 Stat 163 (1995) (codified at 44 U.S.C. §§ 3501-3520).

²³⁰ Pub. L. No. 107-198, 116 Stat. 729 (2002); 44 U.S.C. § 3506(c)(4).

²³¹ 44 U.S.C. §§ 3501-3520.

²³² *Id.* § 3506(c)(4).

94. *Ex Parte Rules.* The proceeding this Further Notice initiates shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules.²³³ Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter’s written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with section 1.1206(b). In proceedings governed by section 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission’s *ex parte* rules.

VII. ORDERING CLAUSES

95. Accordingly, IT IS ORDERED that, pursuant to sections 1, 2, and 225 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 225, the foregoing Report and Order and Further Notice of Proposed Rulemaking ARE ADOPTED.

96. IT IS FURTHER ORDERED that this Report and Order SHALL BE EFFECTIVE December 1, 2020, and that the Consumer and Governmental Affairs Bureau send a copy of this Order on the day of release to each certified IP CTS provider.

97. IT IS FURTHER ORDERED that the application of the pre-existing \$1.58 compensation rate for IP CTS be extended through November 30, 2020.

98. IT IS FURTHER ORDERED that Sprint’s Petition for Reconsideration of the interim rates adopted in the 2018 Order IS DENIED.

99. IT IS FURTHER ORDERED that the Commission SHALL SEND a copy of the Report and Order and Further Notice of Proposed Rulemaking in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act, 5 U.S.C. § 801(a)(1)(A).

100. IT IS FURTHER ORDERED that the Commission’s Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of the Report and Order and Further Notice of Proposed Rulemaking including the Final Regulatory Flexibility Analysis and the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

²³³ 47 CFR § 1.1200 *et seq.*

APPENDIX A**List of Commenting Parties****FURTHER NOTICE OF PROPOSED RULEMAKING****Comments:**

American Speech-Language-Hearing Association (ASHA)
CaptionCall, LLC
ClearCaptions, LLC
California Public Utilities Commission
Hamilton Relay, Inc.
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 and Hard of Hearing Consumer Advocacy Network (DHHCAN), Deaf/Hard of Hearing Technology Rehabilitation Engineering Research Center (DHH-RERC), Rehabilitation Engineering Research Center on Inclusive ICT (IT-RERC) (Consumer Groups and Accessibility Researchers)
Florida Deaf Service Center Association (Florida DSCA)
Florida Telecommunications Relay, Inc.
IDT Telecom
Illinois Telecommunications Access Corporation
International Hearing Society
ITTA – The Voice of America’s Broadband Providers
Kansas Corporation Commission
MezmoCorp d/b/a InnoCaption
Missouri Assistive Technology
National Association for State Relay Administration
National Association of Regulatory Utility Commissioners (NARUC)
Nebraska Public Service Commission
Pennsylvania Public Utility Commission
Public Service Commission of Utah
RAZ Mobility
Sprint Corporation
State of New Mexico Commission for Deaf and Hard of Hearing
Telecommunications Equipment Distribution Program Association (TEDPA)
Teltex, Inc.

Reply Comments:

CaptionCall
ClearCaptions
Connecticut Public Utilities Regulatory Authority
Consumer Groups and Accessibility Researchers
Hamilton Relay
IDT Telecom
InnoCaption
NARUC
Pennsylvania Public Utility Commission
Sprint Corporation
TEDPA
Ultratec, Inc.

NOTICE OF INQUIRY

Comments:

CaptionCall, LLC
Consumer Groups and Accessibility Researchers
Hamilton Relay
MachineGenius, Inc.
Florida DSCA
Florida Telecommunications Relay, Inc.
Ultratec

Reply Comments:

CaptionCall
Consumer Groups and Accessibility Researchers
Hamilton Relay
Sprint Corporation

APPENDIX B**Proposed Rules**

The Federal Communications Commission proposes to amend Title 47 of the Code of Federal Regulations as follows:

Part 64 - MISCELLANEOUS RULES RELATING TO COMMON CARRIERS

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

Authority: [insert authority section]

2. Amend section 64.604 by revising paragraph (a)(4) to read as follows:

§ 64.604 Mandatory minimum standards.

(a) ***

(4) *Additional Operational Standards for Captioned Telephone Service and IP CTS.* Providers of captioned telephone service and IP CTS shall meet or exceed service quality standards for caption delay and accuracy.

(i) *Caption delay.* Caption delay is the difference in time (in seconds) between when a word can be heard in the audio and when that word appears in the stream of captions on the caption user's primary display. Average caption delay shall be no greater than [X.X] seconds.

(ii) *Caption accuracy.* The accuracy of a captioned telephone conversation shall be measured as the Word Error Rate, with a lower Word Error Rate indicating a higher degree of accuracy. The Word Error Rate for a captioned telephone conversation is (A) the number of word substitutions, omissions, and insertions in the captions divided by (B) the total number of words in the voice communications being captioned. Accuracy shall be assessed for a caption as delivered to the caption user's device within the minimum TRS standard for caption delay. A substitution error occurs when a spoken word is replaced with another word, an omission error involves the omission of a spoken word, and an insertion error consists of the addition of a word that has not been spoken. The average Word Error Rate shall be no more than [XX.X%].

(iii) *Testing methodologies and procedures for caption delay and accuracy.*

(A) Sample size should be calculated to provide reliable and statistically significant information.

(B) Test calls should mimic the proper use of the service.

(C) Test calls should follow the structure of a natural telephone conversation.

(D) Test calls should not be detectable as "test calls" by CAs.

(E) Testing should be designed to evaluate service performance over a range of telephone audio conditions, accents, and dialects that are likely to be encountered by CTS and IP CTS users.

APPENDIX C

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980,¹ as amended (RFA), the Commission incorporated an Initial Regulatory Flexibility Analysis (IRFA) into the Further Notice of Proposed Rulemaking.² The Commission sought written public comment on the proposals in the *2018 Further Notice*, including comment on the IRFA.³ No comments were received in response to the IRFA. This Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.⁴ A copy of the Report and Order, and FRFA (or summaries thereof) will also be published in the Federal Register.⁵

A. Need For, and Objectives of, the Rules

2. The Report and Order adopts Telecommunications Relay Services (TRS) Fund compensation rates to support the provision of Internet Protocol Captioned Telephone Service (IP CTS) for the remainder of Fund Year 2020-21 (November 1, 2020, through June 30, 2021) and for Fund Year 2021-22 (July 1, 2021, through June 30, 2022). These rates are applicable to all forms of IP CTS, including fully automatic IP CTS, and to all providers that are or may become certified by the Commission to offer IP CTS in accordance with its rules.⁶ The compensation rates are set using a cost-of-service methodology based on an average of providers' actual and projected costs and are designed to continue the reduction of the IP CTS compensation rate by approximately 10% each year, so that by the second year, compensation is at the level of average cost (\$1.30 per minute). Thus, the compensation rate for Fund Year 2020-21 is \$1.42 per minute (10% below the current \$1.58 rate) and the compensation rate for Fund Year 2021-22 is \$1.30 per minute (8.5% below the first year \$1.42 rate).

3. This approach is needed to continue the reduction of IP CTS provider compensation along a glide path to where it is more closely aligned with the actual costs of providing this service, as determined based on historical and projected cost data reported to the TRS Fund administrator by IP CTS providers. Maintaining this cost-based approach ensures that providers are compensated for the average reasonable cost of providing service, reduces unnecessary burdens on TRS Fund contributors and indirectly on their subscribers, and increases the assurance that IP CTS is made available in the most efficient manner. To permit a further opportunity for less efficient providers to improve their efficiency and to ensure that functionally equivalent IP CTS remains available to all eligible consumers, the Commission continues for a short period the phased reduction of the compensation rate on a "glide path" by approximately 10% annually, so that compensation is reduced to the level of average cost by the second year.

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

4. No comments were filed in response to the IRFA.

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

² *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, 5875, para. 183 (2018) (*2018 Further Notice*).

³ *Id.* at 5875, 5890-94, para. 183, Appx. E.

⁴ See 5 U.S.C. § 604.

⁵ See *id.* § 604(b).

⁶ See 47 CFR § 64.606(a)(2)-(3), (b)(2).

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

5. Pursuant to the Small Business Jobs Act of 2010, which amended the RFA, the Commission is required to respond to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration (SBA), and to provide a detailed statement of any change made to the proposed rules as a result of those comments.⁷ The Chief Counsel did not file any comments in response to the proposed rules in this proceeding.

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

6. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the rule changes.⁸ The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”⁹ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.¹⁰ A “small business concern” is one that: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.¹¹

7. The rules adopted in the Report and Order will affect obligations of IP CTS providers. These services can be included within the broad economic category of All Other Telecommunications. There are currently seven providers of CTS and IP CTS: CaptionCall, LLC; ClearCaptions, LLC; Mezmo Corporation d/b/a InnoCaption; Hamilton Relay, Inc.; T-Mobile USA, Inc., through its subsidiary Sprint Communications Company L.P.; Machine Genius, Inc.; and Clarity Products, LLC.

8. *All Other Telecommunications.* “All Other Telecommunications” is defined as follows: This U.S. industry is comprised of establishments that are primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems. Establishments providing Internet services or Voice over Internet Protocol (VoIP) services via client-supplied telecommunications connections are also included in this industry.¹² The SBA has developed a small business size standard for “All Other Telecommunications,” which consists of all such firms with gross annual receipts of \$32.5 million or less.¹³ For this category, census data for 2012 show that there were 1,442 firms that operated for the entire year. Of these firms, a total of 1,400 had gross annual

⁷ 5 U.S.C. § 604(a)(3).

⁸ *Id.* § 603(b)(3).

⁹ *Id.* § 601(6).

¹⁰ *Id.* § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). The statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.” *Id.*

¹¹ 15 U.S.C. § 632.

¹² <http://www.census.gov/cgi-bin/sssd/naics/naicsrch>.

¹³ 13 CFR § 121.201; NAICS Code 517919.

receipts of less than \$25 million.¹⁴ Thus, a majority of “All Other Telecommunications” firms potentially affected by the rules adopted can be considered small.

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

9. In maintaining cost-based rates, the Commission will continue to require IP CTS providers to file annual cost and demand data reports with the TRS Fund administrator.¹⁵ There is no additional burden on IP CTS providers to file these reports. The Commission does not make any changes to the cost categories reported by providers. The Commission has received approval to require the collection of such information pursuant to the Paperwork Reduction Act of 1995 (PRA).¹⁶

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

10. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.¹⁷

11. The rates set by the Commission compensate providers for the average reasonable cost of providing service, reduce unnecessary burdens on TRS Fund contributors—and, indirectly, on their subscribers—and ensure that IP CTS is available to all eligible users to the extent possible and in the most efficient manner.¹⁸ Adopting a single, generally applicable compensation rate for each rate period treats all providers equally while minimizing significant impact on small entities. Under this technology-neutral approach, small-business providers of IP CTS are afforded wide flexibility to reduce costs and increase efficiency during the rate period, e.g., by making greater use of automatic speech recognition (ASR) technology, while continuing to obtain TRS Fund support at the same rate. In addition, the phased, “glide path” reduction of compensation to the average cost level provides additional flexibility for small-business providers to make efficiency adjustments over time. The Commission considered various alternative compensation methodologies, including an auction and a tiered structure of varying compensation rates, and finds that, at this time, to reduce the burden on TRS Fund contributors (which affects rates charged to all telephone users) and to fairly compensate the IP CTS providers, a cost-based rate best fulfills the statutory obligation to ensure the availability of functionally equivalent service in the most efficient manner.¹⁹

G. Report to Congress

12. The Commission will send a copy of the Report and Order, including this FRFA, in a report to Congress and the Government Accountability Office pursuant to the Congressional Review

¹⁴

http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ4&prodType=table.

¹⁵ See 47 CFR § 64.604(c)(5)(iii)(D)(1); *2018 Further Notice*, 33 FCC Rcd at 5822-23, paras. 36-37.

¹⁶ Pub. L. No. 104-13, 109 Stat. 163 (1995) (codified at 44 U.S.C. §§ 3501-3520).

¹⁷ 5 U.S.C. § 603(b).

¹⁸ See 47 U.S.C. § 225(b)(1).

¹⁹ See 47 U.S.C. § 225(a)(3), (b)(1).

Act.²⁰ In addition, the Commission will send a copy of the Report and Order, including this FRFA, to the Chief Counsel for Advocacy of the Small Business Administration.

H. Federal Rules Which Duplicate, Overlap, or Conflict With, the Commission's Proposals

13. None.

²⁰ See 5 U.S.C. § 801(a)(1)(A).

APPENDIX D

Initial Regulatory Flexibility Analysis

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

A. Need For, and Objectives of, the Proposed Rules

2. In the FNPRM and Appendix B, the Commission proposes to amend its rules to provide for robust, efficient, objective, and quantifiable measurement of the quality of service offered by Captioned Telephone Service (CTS)⁴ and Internet Protocol Captioned Telephone Service (IP CTS)⁵ providers, both individually and by the telephone caption service program as a whole. This measurement program will enable the Commission to better evaluate the efficacy of the IP CTS and CTS programs and the performance of individual service providers.

3. The proposed rules are needed to ensure that IP CTS performance can be evaluated in relation to the statutory goals of functional equivalence, technological currency, and efficiency.⁶

4. The Commission proposes to amend the TRS rules applicable to CTS and IP CTS to provide quantifiable, measurable benchmarks for caption delay and accuracy. The Commission seeks comment how to define and measure caption delay (the time delay between when a word is spoken in a telephone conversation and when that word appears in the stream of captions on the caption user's display screen) and on setting the applicable metric, i.e., the maximum average caption delay allowed by the Commission's rules. For accuracy, the Commission seeks comment on defining and measuring the "Word Error Rate," i.e., "(i) the number of word substitutions, omissions, and insertions in the captions divided by (ii) the total number of words in the voice communications being captioned," and on setting the maximum allowable Word Error Rate.

5. The Commission proposes to amend its rules to define how testing and measurement should be conducted to gauge provider performance in relation to these standards and to measure progress by the telephone caption service program as a whole toward achieving statutory goals. The Commission proposes that testing methodologies be technologically neutral and not designed to favor any particular

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

² See 5 U.S.C. § 603(a).

³ See *id.*

⁴ The term "CTS" refers to a form of telephone captioning, offered through state TRS programs, that uses a special telephone with a text display. CTS permits the user to both listen to what is said over the telephone and simultaneously read captions of what the other party is saying. See *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Speech and Hearing Disabilities*, CC Docket No. 98-67, Declaratory Ruling, 18 FCC Rcd 16121 (2003).

⁵ IP CTS permits an individual who can speak but who has difficulty hearing over the telephone to use a telephone and a display device to simultaneously listen to the other party and read Internet-delivered captions of what the other party is saying. 47 CFR § 64.601(a)(22).

⁶ See 47 U.S.C. § 225(a)(3), (b)(1), (d)(2).

service provider. Further, the Commission asks what the consequences should be if a provider does not meet the standards adopted for caption delay and accuracy, such as retesting at certain intervals or placement on a compliance plan. The FNPRM also seeks comment on whether to modify any other IP CTS standards, such as the speed-of-error standard, or adopt additional metrics and measurements, e.g., for service outages and dropped or disconnected calls.

6. Tentatively concluding that it should not rely on self-measurements of caption delay and accuracy by individual CTS and IP CTS providers, the Commission seeks comment on whether such performance assessment is best carried out by the Commission (either directly or through contractors) or by an entity collectively selected and overseen by IP CTS providers. The Commission seeks comment on how to ensure that any entity designated to conduct authoritative testing and measurement of CTS and IP CTS provider performance is independent and unbiased. The Commission also proposes to publish the results of such quality-of-service measurements once rules are adopted and testing is conducted, so that consumers can make more informed decisions in selecting a captioning provider.

B. Legal Basis

7. The authority for this proposed rulemaking is contained in sections 1, 2, and 225 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 225.

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

8. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the proposed rules and policies, if adopted.⁷ The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”⁸ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.⁹ A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.¹⁰

9. The rule changes proposed in the FNPRM will affect obligations of CTS and IP CTS providers. These services can be included within the broad economic category of All Other Telecommunications. There are currently seven providers of CTS and IP CTS: CaptionCall, LLC; ClearCaptions, LLC; Mezmo Corporation d/b/a InnoCaption; Hamilton Relay, Inc.; T-Mobile USA, Inc., through its subsidiary Sprint Communications Company L.P.; Machine Genius, Inc.; and Clarity Products, LLC.

10. *All Other Telecommunications.* “All Other Telecommunications” is defined as follows: This U.S. industry is comprised of establishments that are primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems. Establishments providing Internet services or VoIP services via client-supplied telecommunications

⁷ 5 U.S.C. § 603(b)(3).

⁸ *Id.* § 601(6).

⁹ *Id.* § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.”

¹⁰ 15 U.S.C. § 632.

connections are also included in this industry.¹¹ The SBA has developed a small business size standard for “All Other Telecommunications,” which consists of all such firms with gross annual receipts of \$35 million or less.¹² For this category, census data for 2012 show that there were 1,442 firms that operated for the entire year. Of these firms, a total of 1,400 had gross annual receipts of less than \$35 million.¹³ Thus, a majority of “All Other Telecommunications” firms potentially affected by the rules adopted can be considered small.

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

11. All CTS and IP CTS providers would be required to meet or exceed any quantitative performance standards adopted by the Commission for caption delay, accuracy, or other aspects of provider performance. Because the Commission tentatively concludes that provider self-measurement and reporting is not a practicable approach to assessing caption delay and accuracy, no specific reporting or recordkeeping requirements are proposed. However, the Commission asks whether providers should be required to submit user devices, software, and other material or information needed for testing, as well as provider-generated testing protocols and results, upon request, if the Commission authorizes a third-party entity to conduct the testing and measurement. Such requirements, if adopted, may involve some additional recordkeeping and reporting.

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

12. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.¹⁴

13. Only CTS and IP CTS providers certified to receive compensation from the TRS Fund would be subject to the testing and measurement requirements, if the rules are adopted. The purpose of the proposed testing regime is to provide the Commission and consumers of relay services with performance data on all CTS and IP CTS providers so that the Commission can assess the efficacy of the providers, and so that consumers can make informed decisions regarding their choices of providers. The Commission’s proposals limit unnecessary regulation of small entities by focusing on assessment of caption delay and caption accuracy—the two metrics that interested parties generally designate as most important to captioning service quality. Opting some providers out of the program, or limiting the extent of testing for some providers, is not proposed because it would prevent the availability of comprehensive performance information to the Commission and consumers.

14. In addition, the FNPRM seeks comment from all interested parties. Small entities are encouraged to bring to the Commission’s attention any specific concerns they may have with the proposals outlined in the FNPRM. The Commission expects to consider the economic impact on small

¹¹ <http://www.census.gov/cgi-bin/sssd/naics/naicsrch>.

¹² 13 CFR § 121.201; NAICS Code 517919.

¹³

http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ4&prodType=table.

¹⁴ 5 U.S.C. § 603(b).

entities, as identified in comments filed in response to the FNPRM, in reaching its final conclusions and taking action in this proceeding.

F. Federal Rules Which Duplicate, Overlap, or Conflict With, the Commission's Proposals

15. None.