

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

In the Matter of
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 No. 10-51
CG Docket No. 03-123

REPORT AND ORDER AND ORDER

Adopted: July 6, 2017

Released: July 6, 2017

By the Commission:

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I. INTRODUCTION

1. In this Report and Order, we adopt a four-year provider compensation plan for video relay service (VRS), effective from July 1, 2017, through June 30, 2021. We also amend our rules to permit server-based routing of VRS and point-to-point video calls and provide continuing authority for the TRS Fund administrator to continue to request funding for research and development. Finally, we delete those portions of our rules providing for a neutral video communications service platform. In the Order, we reinstate the effectiveness of the VRS Interoperability Profile.

II. BACKGROUND

2. Under the Commission's TRS rules, VRS is supported entirely by the Interstate TRS Fund (TRS Fund) and VRS providers are paid compensation for their provision of VRS in accordance with formulas generally designed to compensate providers for the "reasonable costs" of providing VRS.¹ In 2007, the Commission adopted a tiered rate structure for compensating VRS providers.² The Commission chose this tiered structure in order to reflect the per-minute cost differentials between small, mid-level, and large VRS providers and "to ensure that, in furtherance of promoting competition, the newer providers will cover their costs, and the larger and more established providers are not overcompensated due to economies of scale."³ Under the tiered rate structure, a VRS provider's monthly compensation payment is calculated based on the application of different rates to specified "tiers" of minutes. The highest rate is applied to an initial tier of minutes up to a defined maximum number, a lower rate is applied to the next tier, again up to a second defined maximum number of minutes, and a still lower rate is applied to any minutes in excess of the second maximum. Under the tiered rate structure adopted in 2007, the highest compensation rate applied to a VRS provider's first 250,000 monthly minutes of service, the second highest rate applied to the provider's second 250,000 monthly minutes, and the lowest rate applied to any monthly minutes in excess of 500,000.

3. Subsequent to the 2007 order, the Commission determined that compensation rates for all the rate tiers were substantially in excess of VRS providers' actual costs.⁴ To partially address these discrepancies, in 2010, the Commission substantially reduced the compensation rates for all three tiers.⁵ In the *2013 VRS Reform Order*, the Commission ordered further reductions in VRS compensation rates, while also planning the implementation of a number of structural reforms to improve efficiency, prevent waste, fraud, and abuse, and promote competition in VRS. To assist VRS providers in adjusting to the new rate reductions, the Commission provided for a transitional four-year (2013-17) "glide-path" in which compensation rates were incrementally adjusted every six months.⁶

4. The Commission also modified the tiered VRS compensation rate structure for that four-year period. To encourage the provision of VRS "in the most efficient manner," the Commission decided

¹ 47 CFR § 64.604(c)(5)(iii)(E)(I).

² *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order and Declaratory Ruling, 22 FCC Rcd 20140 (2007) (*2007 TRS Rate Methodology Order*).

³ *Id.* at 20163, para. 53.

⁴ *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Order, 25 FCC Rcd 8689, 8692, 8694-95, paras. 6, 10 (2010) (*2010 TRS Rate Order*).

⁵ *Id.* at 8697, para. 15.

⁶ *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, 8703-04, para. 212 (2013) (*2013 VRS Reform Order*).

that the gap between the highest and lowest tiered rates should be reduced over time.⁷ At the same time, however, the Commission expanded the boundaries of the rate tiers, to give smaller VRS providers “a reasonable opportunity to improve the efficiency of their operations and to reach the optimum scale to compete effectively after the implementation of structural reforms.”⁸ The modified tier structure comprised an initial tier (Tier I) for a provider’s first 500,000 monthly minutes, a second tier (Tier II) for a provider’s second 500,000 monthly minutes, and a third tier (Tier III) for any monthly minutes in excess of 1,000,000. The rate plan began with compensation rates set at \$5.98 per minute for Tier I and \$4.82 per minute for Tiers II and III. From those levels, the rates for Tiers I and III were adjusted incrementally downward every six months. The Tier II rate remained at \$4.82 per minute for the first three years of the plan, and began to be adjusted downward in the fourth year.

5. Further, the gap between the highest and lowest-priced tiers was to be reduced over time.⁹ The Commission predicted that eventually it would be in a position to eliminate the tiered rate structure and to move to a unitary compensation rate for all minutes, based on the expectation that structural reforms, such as effective interoperability and portability standards and the establishment of a neutral entity to provide a routing platform supporting small VRS providers, would “address many of the issues that have made it difficult for small providers to operate efficiently.”¹⁰ More specifically, anticipating that such structural reforms would result in a “more competition-friendly environment” for small providers,¹¹ the Commission provided, for the interim period, a tiered rate structure and rate levels that it hoped would “balance, during the transition to structural reforms, the competing concerns of (1) maintaining sufficient incentives for smaller providers to improve the efficiency of their operations, and (2) ensuring that smaller providers have a reasonable opportunity to compete effectively during the transition and to achieve or maintain the necessary scale to compete effectively after structural reforms are implemented.”¹² The Commission also expected that the procurement and availability of a neutral communications platform would allow existing and new entrants to more readily compete for the provision of various elements of VRS and would facilitate the development of a more market-based compensation methodology.¹³

6. In 2015, the six certified VRS providers urged the Commission to temporarily “freeze” the scheduled compensation rate reductions.¹⁴ On March 1, 2016, the Commission adopted a limited “freeze” of the compensation rates for the smallest VRS providers—those handling 500,000 or fewer monthly minutes.¹⁵ To allow those providers additional time to “reach the optimum scale to compete

⁷ *Id.* at 8697, para. 198.

⁸ *Id.* at 8704, para. 214. A tiered compensation rate structure allows providers to earn a higher compensation rate on the initial minutes of service provided each month. As a result, smaller providers receive more compensation per minute, on average, than larger providers.

⁹ *Id.* at 8698, 8704-05, para. 200 & Table 2.

¹⁰ *Id.* at 8697, para. 198; *see also id.* at 8698, paras. 199-200.

¹¹ *Id.* at 8698, para. 200.

¹² *Id.* at 8699, para. 204.

¹³ *Id.* at 8706, paras. 216-17. Relevant to this point, with the neutral communications platform, call routing functions and other relatively fixed cost components of VRS would be transferred to a neutral entity that would make such functions available to multiple VRS providers, enabling them to save costs and focus on competitive provision of the core communications assistant (CA) function of VRS. *Id.* at 8698-99, para. 199.

¹⁴ Joint Proposal of all Six VRS Providers for Improving Functional Equivalence and Stabilizing Rates at 7 (filed Mar. 30, 2015), <https://ecfsapi.fcc.gov/file/60001041878.pdf>.

¹⁵ *See Structure and Practices of the Video Relay Services Program et al.*, Report and Order, 31 FCC Rcd 2339 (2016) (*VRS Partial Rate Freeze Order*); *see also Structure and Practices of the Video Relay Service*;

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effectively,” the Commission temporarily held the compensation rate at \$5.29 per minute for such providers.¹⁶ Further rate reductions for these providers resumed as of November 1, 2016. As a result of this modification, the applicable VRS rates as of June 30, 2017, at the end of the four-year VRS Reform Order rate plan, are:

- For providers with less than 500,000 monthly minutes – \$4.82 per minute;
- For other providers –
 - Tier I (first 500,000 monthly minutes), \$4.06;
 - Tier II (second 500,000 monthly minutes), \$4.06;
 - Tier III (monthly minutes exceeding 1 million), \$3.49.

7. On January 31, 2017, Convo Communications, LLC (Convo), Purple Communications, Inc. (Purple), CSDVRS, LLC d/b/a ZVRS (ZVRS), and ASL Services Holdings, LLC dba GlobalVRS (GlobalVRS) (collectively, the Non-Dominant Providers) submitted a joint VRS compensation proposal to the Commission to govern the next four years, beginning retroactively on January 1, 2017.¹⁷ Arguing that, because VRS market shares are so unequally distributed among providers, it would be inequitable and ruinous to maintain or reduce the compensation rates applicable to them, the providers proposed a four-year VRS rate plan with the following per-minute rates: \$5.29 for providers with 500,000 or fewer monthly minutes (Emergent rate); \$4.82 for other providers’ first 1,000,000 VRS minutes (Tier I); \$4.35 for a provider’s monthly minutes between 1,000,001 and 2,500,000 (Tier II); and \$2.83 for a provider’s monthly minutes in excess of 2,500,000 (Tier III).¹⁸

8. In a further notice of proposed rulemaking released in March 2017, the Commission proposed a new four-year compensation plan.¹⁹ Recognizing that the structural reforms initiated in 2013 have been slow to arrive, that VRS providers’ market shares had changed little since then, and that smaller providers had per-minute costs substantially higher than those of the dominant, low-cost provider, we proposed to maintain the tiered compensation rate structure, while modifying it to expand the number of minutes allocated to each tier. Applying a tiered structure for the next four years, we suggested, would best balance the need to maintain a multi-provider VRS market, reflect providers’ differing cost structures, and provide compensation rate stability, while minimizing the cost burden on TRS Fund contributors.²⁰ We sought comment on this proposal and on the following ranges of possible rate levels

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Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, Further Notice of Proposed Rulemaking, 30 FCC Rcd 12973 (2015) (*2015 VRS FNPRM*).

¹⁶ *VRS Partial Rate Freeze Order*, 31 FCC Rcd at 2343-2345, paras. 10-12.

¹⁷ See Letter from Paul C. Besozzi and Benjamin D. Tarbell, Counsel to Purple, to Marlene H. Dortch, Secretary, FCC, at 1 (filed Jan. 31, 2017) (2017 Non-Dominant Providers Proposal). This proposal also requests that the Commission implement a number of service improvement measures proposed in the *2015 VRS FNPRM* and issue a notice of inquiry regarding appropriate VRS service quality metrics.

¹⁸ *Id.* at 8-10.

¹⁹ 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, Notice of Inquiry, Further Notice of Proposed Rulemaking and Order, 32 FCC Rcd 2436, 2473, para. 88 (*2017 VRS Improvements Order* when referring to the Report and Order, *2017 VRS Improvements NOI* when referring to the Notice of Inquiry, and *Further Notice* when referring to the Further Notice of Proposed Rulemaking).

²⁰ *Id.*

for each rate period and tier: for the initial period, an Emergent rate of \$4.82 to \$5.29, a Tier I rate of \$4.06 to \$4.82, a Tier II rate of \$3.49 to \$4.35, and a Tier III rate of \$2.83 to \$3.49; and for the final period, an Emergent rate of \$4.06 to \$5.29, a Tier I rate of \$3.49 to \$4.82, a Tier II rate of \$3.08 to \$4.35, and a Tier III rate of \$2.63 to \$3.49.²¹

9. In addition, the Commission sought expedited comment on a number of specific rule changes unrelated to compensation: amending the TRS Numbering Directory rule to allow server-based routing; authorizing the TRS Fund administrator to annually request an allocation of the TRS Fund budget for FCC-supervised research and development; and eliminating TRS rule provisions relating to an inactive Commission plan to establish a neutral video communications service platform.²²

III. REPORT AND ORDER

A. VRS Compensation

1. Allowable Cost Categories

10. In the *Further Notice*, the Commission stated its intention not to reopen questions concerning the categories of expenses that should be considered allowable costs for VRS compensation.²³ Nevertheless, various parties commenting in this proceeding urge that the Commission re-open the matter of allowing costs associated with customer premise equipment (CPE),²⁴ numbering,²⁵ outreach,²⁶ and research and development (R&D).²⁷ In addition, Sorenson raises new concerns about allowing compensation for imputed intellectual property.²⁸ As a threshold matter, these issues are beyond the scope of the rulemaking, as clearly explained in the *Further Notice*. Further, as explained below, the Commission has previously considered and disallowed compensation for each of these categories, except

²¹ *Id.* at 2474, para. 94.

²² We note that after the issuance of the *Further Notice*, the D.C. Circuit vacated and remanded certain provisions of the 2015 *ICS Order*. See *Global Tel*Link v. FCC*, No. 15-1461, 2017 WL 2540899 (D.C. Cir. 2017); *Rates for Interstate Inmate Calling Services*, Second Report and Order and Third Further Notice of Proposed Rulemaking, 30 FCC Rcd 12763 (2015). In light of this decision, Sorenson Communications, Inc. (Sorenson) urged the Commission to clarify that its conclusions regarding the provision of TRS to correctional facilities still stand. Letter from Rebekah P. Goodheart, Counsel to Sorenson, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 10-51 and 03-123, at 2 (filed June 19, 2017). We confirm that the Commission's rule prohibiting CAs from "disclosing the content of any relayed conversation" and "from keeping records of the content of any conversation beyond the duration of the call" is not applicable to the call recording and monitoring often implemented as security measures associated with ICS because any recording performed in the completion of ICS is performed by the ICS provider, not the VRS provider. See 47 CFR § 64.604(a)(2); 2015 *ICS Order*, 30 FCC Rcd at 12875, n.809.

²³ See *Further Notice*, 32 FCC Rcd at 2476, n.242.

²⁴ Sorenson Comments at 21, 29-35; Telecommunications for the Deaf and Hard of Hearing, Inc., National Association of the Deaf, Deaf and Hard of Hearing Consumer Advocacy Network, Hearing Loss Association of America, Association of Late-Deafened Adults, Inc., Cerebral Palsy and Deaf Organization, Deaf Seniors of America, and California Coalition of Agencies Serving the Deaf and Hard of Hearing (collectively, Consumer Groups) Comments at 2-3; Video Relay Services Consumer Association (VRSCA) Comments at 2-3. Convo, however, strongly opposes allowing recovery of CPE costs from the TRS Fund. Convo Comments at 14-15; Convo Reply Comments at 2-3 (suggesting that the provision of free videophones wastes the TRS Fund and has led to a distortion in the VRS marketplace).

²⁵ Sorenson Comments at 28.

²⁶ *Id.* at 21, 35.

²⁷ *Id.* at 30-35, 75; Consumer Groups Comments at 2-3; VRSCA Comments at 3-4.

²⁸ Sorenson Comments at 25-27.

intellectual property (which is raised for the first time in this proceeding and addressed below), and these determinations, whenever challenged, have been upheld by the courts.²⁹

11. *Numbering, Outreach, and Research and Development.* In 2008, the Commission specifically disallowed TRS Fund compensation for certain numbering-related costs because, historically, they have been borne by hearing users and are not attributable to the use of relay to facilitate a call.³⁰ In 2013, based on its concerns regarding the effectiveness of VRS providers outreach efforts, the Commission directed the establishment of a coordinated nationwide outreach program and disallowed recovery from the TRS Fund of providers' outreach expenses.³¹ This outreach program was launched in September 2015 through a contract designating the MITRE Corporation as the Commission's National Outreach Program coordinator, and in the future will have the assistance and guidance of the Commission's Consumer Affairs and Outreach Division of the Consumer and Governmental Affairs Bureau (CGB). In 2004, the Commission also disallowed recovery from the TRS Fund of research and development expenses "related to VRS enhancements that go beyond the applicable TRS mandatory minimum standards," explaining that the Commission's mandatory minimum standards define the level of functionality that TRS providers must provide, and that the TRS Fund was not intended to be "a source of funding for the development of TRS services, features, and enhancements that, although perhaps desirable, are not necessary for the provision of functionally equivalent TRS service."³² In 2013, while authorizing Commission-directed research and development on improving the efficiency, availability, and functional equivalence of TRS,³³ the Commission reaffirmed the disallowance of TRS Fund support for individual provider research beyond meeting mandatory minimum standards, pointing out the inefficiency and waste inherent in such an approach, under which "R&D funding could . . . be unlimited and multiple providers would be able to expend R&D funds on similar or identical enhancements and would not share the results with existing or potential competitors."³⁴ To the extent that courts of appeals have considered challenges to these cost categories, they have been upheld.³⁵

²⁹ See generally *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.'"); see also *id.* at 1047 ("The Commission has been consistent in its view that providers may only recover the reasonable costs of providing a level of service that complies with the minimum standards for VRS. Particularly given this consistent position on allowable costs, the Commission provided a sufficient explanation for declining to change the categories 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").

³⁰ *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities et al.*, Second Report and Order and Order on Reconsideration, 24 FCC Rcd 791, 812-16, paras. 46-54 (2008) (*Second Internet-Based TRS Numbering Order*). The Commission concluded that the following costs were not compensable: (1) costs associated with an Internet-based TRS consumer's acquisition of a ten-digit geographic telephone number; (2) costs associated with an Internet-based TRS consumer's acquisition and usage of a toll-free telephone number; and (3) any E911 charges that may be imposed on Interstate TRS providers under a state or local E911 funding mechanism. *Id.* at 813, para. 47.

³¹ *2013 VRS Reform Order*, 28 FCC Rcd at 8634-35, 8696, paras. 31, 192.

³² *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, 12547-48, paras. 189-90 (2004) (*2004 TRS Order*); *2013 VRS Reform Order*, 28 FCC Rcd at 8629, para. 21.

³³ *2013 VRS Reform Order*, 28 FCC Rcd at 8630, para. 22.

³⁴ *Id.* at 8629, para. 21.

³⁵ See *Sorenson 2011*, 659 F.3d at 1046-47; *Sorenson 2014*, 765 F.3d at 44 (holding that a challenge to the compensable expenses is precluded by the *Sorenson 2011* holding).

12. *Customer Premise Equipment.* In addition to the above disallowances, the Commission long ago decided that costs attributable to a TRS (including VRS) user’s relay hardware and software, including installation, maintenance, and testing, are not compensable from the TRS Fund.³⁶ In 2006, the Commission ruled that “Section 225 focuses on the provision of relay *service*,” explaining that “this is apparent from the plain language of Section 225, which is directed at ‘services’ that carriers must offer in their service areas that enable communication between persons who use a TTY or other non-voice terminal device and an individual who does not use such device.”³⁷ Costs associated with CPE are not part of a provider’s expenses in making relay *services* available; rather they must be incurred by consumers to receive these services—to the same extent that people who do not use relay services must purchase their phones. For this reason, the Commission has repeatedly reaffirmed the disallowance of VRS CPE costs,³⁸ and these determinations have been upheld twice by federal courts of appeals.³⁹

13. *No reason to reopen previously settled disallowance issues.* No party provides a compelling reason to reopen the above issues in this proceeding, especially in the absence of Administrative Procedure Act (APA) notice. Sorenson argues that the allowable cost categories issue should nonetheless be reexamined because “the relevant circumstances have changed dramatically” since 2011.⁴⁰ According to Sorenson, in 2010 and 2013, the Commission “built in a large cushion” above its allowable cost calculations and thereby “intentionally” set rates to leave “room for providers to distribute videophones without charge,” whereas “the Commission *now* asks whether it should set rates determined by the current list of allowable costs *in order to prevent providers from supplying equipment*.”⁴¹ We do not agree with Sorenson’s characterizations, nor do we see any material difference across the three proceedings. In all three cases, the Commission’s overall focus regarding the compensation levels has been to decrease the gap between provider compensation and provider costs,⁴² while using as a reference

³⁶ *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, 5447, 5457-58, paras. 15, 38 (2006) (*2006 Declaratory Ruling*).

³⁷ *Id.* at 5457-58, para. 38 & n.129 (footnotes omitted); *see also id.* at 5457, para. 38, nn.132 (noting that non-voice CPE devices such as TTYs had been available since the 1960s and that relay service was developed to enable people possessing such devices to communicate with voice users), 133 (noting that when section 225 was enacted, CPE was not a component of voice telephone services offered over the PSTN).

³⁸ *See, e.g., 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) (“Compensable expenses . . . do not include expenses for customer premises equipment—whether for the equipment itself, equipment distribution, or installation of the equipment or any necessary software”); *2007 TRS Rate Methodology Order*, 22 FCC Rcd at 20170-71, para. 82 (“Because some providers appear to continue the practice of giving video equipment to consumers and installing it at no cost to the consumer, we also reiterate that costs attributable to relay hardware and software used by the consumer, including installation, maintenance costs, and testing are not compensable from the Fund.”) (footnotes omitted); *2013 VRS Reform Order*, 28 FCC Rcd 8618, 8696, para. 193.

³⁹ *Sorenson 2011*, 659 F.3d at 1044-45 (statute does not require that “VRS users receive free equipment and training,” only that they “pay no higher rates for calls than others pay for traditional phone services,” and exclusion of CPE costs does not undermine section 225 goal of not discouraging or impairing development of improved technology); *Sorenson 2014*, 765 F.3d at 44.

⁴⁰ Sorenson Comments at 33.

⁴¹ *Id.* at 34-35 (emphasis in original); *see also id.* at 33 (claiming “the Commission is now attempting to ‘bring[] the rate for each tier as close as possible to the marginal per-minute cost of the affected firms’” (*quoting Further Notice*, 32 FCC Rcd at 2476, para. 99)). The quoted language from the *Further Notice*, however, states a matter on which the Commission sought comment, not a proposal or statement of intent.

⁴² *See 2010 TRS Rate Order*, 25 FCC Rcd at 8695, para. 12 (declining to “perpetuate the large discrepancy between actual costs and provider compensation in the face of substantial evidence that providers are receiving far more in

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point the Fund administrator’s calculation of actual VRS provider costs based on what has consistently been, for the most part, the same set of allowable cost categories.⁴³ In other words, in this proceeding, as in the ones that preceded it, it has been the Commission’s overarching goal to bring rates closer to allowable provider costs. We note, however, that today, as in 2010 and 2013, while making progress in reducing excessive Fund expenditures, the Commission has stopped short of reducing compensation all the way down to cost.⁴⁴ Moreover, as explained above, since 2006, the Commission’s consistent policy has been to disallow recovery of user equipment costs from the TRS Fund.⁴⁵

14. *Sorenson’s arguments are unsupported by the text of section 225.* Further, even if the issues were not already settled and there was APA notice regarding them, we would not be persuaded by Sorenson’s arguments to expand allowable costs. Sorenson primarily contends that in precluding VRS providers from recovering from the TRS Fund any costs incurred to offer free video equipment to users (as well as disallowing recovery of other categories of costs, such as numbering, that are ordinarily borne by consumers), the Commission is effectively shifting costs to VRS users that exceed any comparable costs borne by voice users. Such disallowances, which Sorenson claims are further aggravated because VRS consumers must also bear the cost of broadband services needed to access VRS, Sorenson claims, violate the statutory requirement that TRS users “pay rates no greater than the rates paid for functionally equivalent voice communication.”⁴⁶

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 compensation than it costs them to provide service”); *2013 VRS Reform Order*, 28 FCC Rcd at 8704, para. 213 (designing “a ‘glide path’ toward cost-based rates”); *Further Notice*, 32 FCC Rcd at 2475, para. 94 (setting forth a range of options for the final period of a four-year rate plan, ranging from maintaining current rates to moving to cost-based rates).

⁴³ In 2010, unlike 2013 and today, recovery of provider outreach costs was allowed.

⁴⁴ Under the rate plan we adopt today, there will remain—despite Sorenson’s characterization of the Commission’s intent—a substantial “cushion” between the weighted-average VRS compensation rate over the next four years and weighted-average VRS provider costs, even if a reasonable operating margin, which exceeds the return on investment previously allowed, is included. *See* Letter from Eliot Greenwald, Deputy Chief, Disability Rights Office, CGB, FCC to Marlene Dortch, Secretary, FCC, (filed May 23, 2017) (Confidential) (2015-18 VRS Providers Cost and Demand Data Summary) (summarizing VRS industry reported cost and demand data filed in April 2017 and provided to the Commission staff by Rolka Loube); *infra* para. 64. An earlier summary of cost and demand data, based on data reported in 2016, was previously filed by CGB. *See* Letter from Eliot Greenwald, Deputy Chief, Disability Rights Office, CGB, FCC to Marlene Dortch, Secretary, FCC, (filed April 25, 2017) (Confidential) (2014-16 VRS Providers Cost and Demand Data Summary).

⁴⁵ Further, since 2013 it has been the Commission’s policy to make it possible for consumers to access VRS with off-the-shelf devices as an alternative to costly, proprietary devices distributed by VRS providers. *See infra* para. 18. Nonetheless, as in the past, we do not dictate how any individual provider uses any excess of compensation over its costs, i.e., whether it is used to continue offering users free equipment or for other purposes, such as making payments to investors. *See Sorenson 2014*, 765 F.3d at 49 (noting that the petitioner “was saddled with the debt it had incurred to finance a leveraged buyout”).

⁴⁶ Sorenson Comments at 3-4 (*citing* 47 U.S.C. § 225(d)(1)(D)). Sorenson argues that, because a VRS consumer must purchase a broadband connection in order to access VRS, the consumer incurs greater costs than those incurred by a voice communications user and that, accordingly, the Commission must ensure that all such additional costs related to accessing VRS are recoverable from the TRS Fund. Sorenson Comments at 4, 6, 14; Sorenson Reply Comments at 8-9. In this regard, Sorenson compares the cost of voice telephone service at approximately \$32 month to broadband service at approximately \$84 month. Sorenson also compares the cost of a voice phone with a videophone, suggesting that the latter would cost between \$600 and \$1,500 at retail. Sorenson Comments at 5. Sorenson also argues that there would be violations of the statutory requirements that the Commission ensure the availability of TRS and that its TRS regulations not discourage or impair the development of improved technology. *Id.* at 2 (*citing* 47 U.S.C. §§ 225(b)(1), (d)(2)). The same statutory arguments were presented to and rejected by the 10th Circuit. *See Sorenson 2011*, 659 F.3d at 1045 (“[U]sers must pay for their own broadband internet connections

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15. Sorenson is incorrect in suggesting that equalizing all VRS-related costs to a voice telephone user's costs is part of the Commission's mandate under section 225. Congressional intent to equalize either network access rates or equipment costs for TRS and voice service users is not evident in either the text of this narrowly drawn provision or its surrounding *context or its legislative history*. In 1990, the year of the section 225's enactment, all TRS calls took place between individuals who used TTYs and voice users.⁴⁷ But the high costs of TTY service rates and equipment were matters of public awareness and were being addressed through state and federal action outside the relay requirements contained in the Americans with Disabilities Act (ADA), which were codified as section 255.⁴⁸ Regarding service costs, the plain text of this section demonstrates that it solely was intended to prevent relay users from incurring the added costs of routing TRS calls through remote relay centers that lie outside the geographical locations of the parties to a relay call, and nothing more.⁴⁹ Sorenson's argument disregards the purpose evident from the text of the referenced provision, which is limited to *rates for telephone services* "with respect to such factors as the duration of the call, the time of day, and the distance from point of origination to point of termination."⁵⁰

16. Indeed, Congress had knowledge about, and ample opportunity to direct the Commission to equalize telephone service costs for TTY users at the time of section 225's enactment, yet it specifically chose not to do so. The Baudot technology used by TTYs in 1990, the year of the section's passage, transmitted conversation at approximately 60 words per minute. As a result, calls using TTYs took approximately three to four times longer than voice conversations, which flowed at a speed of 165 words per minute.⁵¹ The length of such calls was compounded by extra time needed for ASL users to convert their conversation into English, which has a different grammatical structure and syntax. As a consequence, it was not unusual for monthly phone bills of TTY users to run into the hundreds of dollars.⁵² Given the considerable disparity in billing rates between TTY and voice telephone users, during the years leading up to the passage of section 225, consumers had been urging both state governments and the Commission to require lower toll rates for long distance calls made by TTY users.⁵³ While some of these efforts were successful at the state level,⁵⁴ the Senate, in its report accompanying passage of the

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in order to use VRS. Sorenson of course may provide free phones to its VRS users, but nothing in the statute requires it to be compensated for that expense.”).

⁴⁷ At the time, TTYs were commonly known as TDDs, or telecommunication devices for the deaf. *See, e.g.*, S. Rep. No. 116, 101st Cong., 1st Sess. at 78 (1989).

⁴⁸ *See generally* Pub. L. No. 101-336, 104 Stat. 327, 366-69 (July 26, 1990), codified at 47 U.S.C. § 225.

⁴⁹ The impact of this provision on the telephone bills of TRS users was greater at the time of its passage, when it was more common for telephone companies to bill higher rates for interlata or toll calls than for local calls. The relevant section 225 provision was intended to ensure that the same charges would be applied for two calls comparable in time and length, even if one was made directly between two hearing individuals only blocks apart, and the other was made indirectly through TRS between the same distances, but routed through a relay center outside of what would have been that call's direct path. In other words, it was designed to prevent TRS users from incurring toll charges for the relay leg of the call. *See* 47 U.S.C. § 225(d)(1)(D).

⁵⁰ S. Rep. No. 116, 101st Cong., 1st Sess. at 82.

⁵¹ Karen Peltz Strauss, *A New Civil Right: Telecommunications Equality for Deaf and Hard of Hearing Americans* 13-14 (2006) (*citing* testimony given by Elaine Gardner, National Center for Law and the Deaf to the Rhode Island Division of Public Utilities and Carriers (May 6, 1980)).

⁵² *Id.* at 14.

⁵³ *Id.* at 16-17.

⁵⁴ For example, by 1980, nine states, namely Connecticut, Delaware, Idaho, New York, Maryland, North Carolina, Pennsylvania, Tennessee and Utah, had implemented TTY rate reductions. *Id.* at 25 (*citing The Issue is Communication-TDD Toll Rates*, NCLD Newsletter, March 1980, at 3-4). AT&T also reduced its daytime charges

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section to which Sorenson alludes, made clear that “[a]lthough the Committee commends states that have chosen to implement a discount, this section is *not intended to mandate a rate discount* with respect to call duration.”⁵⁵ Accordingly, the discrepancy between the higher service costs for a broadband connection needed to achieve access to VRS and the costs of telephone service incurred by voice users was not a matter intended to be addressed by section 225.

17. Similarly, at the time of the ADA’s enactment, it was quite evident that the cost of end user equipment needed to complete TRS calls would be significantly greater than the equipment costs incurred by voice telephone users. In the mid-1980s, the average cost for a TTY was \$600-\$1000, a prohibitive amount for many individuals with low incomes.⁵⁶ Again, however, there is simply no indication in section 225 or its legislative history of an intent by Congress to require the Commission to use the TRS Fund or any other mechanism to equalize such equipment costs. Rather, Congress had attempted to address this concern through federal legislation enacted in 1982, which paved the way for states to develop local programs that would distribute TTYs and other specialized customer premises equipment (SCPE) to low income and other eligible individuals with disabilities.⁵⁷

18. We are also unpersuaded by Sorenson’s argument that the disallowance of end user equipment costs from compensable expenses discourages the development of improved technology.⁵⁸ Rather, we agree with Convo that compensation to providers for the provision of free equipment *runs counter* to promoting the use of new mobile and other technologies that are available for use with VRS.⁵⁹ Over the past few years, the Commission has undertaken extensive efforts to expand the availability of interoperable off-the-shelf IP-enabled devices for VRS use, so that individuals who use these services can reduce their dependence on VRS equipment specifically designed for a particular provider’s network.⁶⁰

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for TTY calls by 35 percent and its evening and weekend calls by 60 percent. *Id.* (citing AT&T Supplemental Comments, *Telecommunications Services for the Deaf and Hearing Impaired*, CC Docket No. 78-50, at 4-6 (filed May 5, 1980)).

⁵⁵ S. Rep. No. 116, 101st Cong., 1st Sess., at 82, referencing 47 U.S.C. § 225(d)(1)(D) (emphasis added).

⁵⁶ Strauss, *supra* note 51 at 14 (citing Potomac Telecom Inc., *A Short History of Telecommunications Devices for the Deaf* at 4 (1985)). Further, we note that the cost for a TTY in the mid-1980s, once adjusted for inflation, was much higher than the cost Sorenson attributes to videophones at retail. *See* https://www.bls.gov/data/inflation_calculator.htm.

⁵⁷ In 1982, Congress enacted the Telecommunications for the Disabled Act of 1982, Pub. L. No. 97-410, 94 Stat. 2043 (1982), codified at 47 U.S.C. 610, which explicitly allowed local telephone companies to continue subsidizing the costs of providing SCPE with funds received for telephone services, notwithstanding a prohibition on such cross-subsidization between fees received for telephone services and standard voice telephone equipment. Strauss, *supra* note 51 at 34. Pursuant to this statutory provision and its implementation by the Commission, *see* 47 CFR § 64.607, state equipment distribution programs acquired funding to distribute free specialized devices, such as TTYs, to their residents, and by the time that section 225 was enacted, approximately half the states had begun to implement equipment distribution programs for this purpose. Strauss, *supra* note 51 at 50. In light of these state-driven efforts, the Commission rejected requests by the National Association of the Deaf to establish federal subsidies or other provisions to ensure the availability of TTYs and other SCPE. *See id.* at 45 (citing *Access to Telecommunications Equipment by the Hearing Impaired and other Disabled Persons*, Memorandum Opinion and Order, CC Docket No. 83-427, FCC 84-382 (August 13, 1984)). Most states continue to have free equipment distribution programs for the residents of their states. *See generally* www.tedpa.org.

⁵⁸ Sorenson Comments at 16-17 (citing 47 U.S.C. § 225(d)(2)).

⁵⁹ Convo Comments at 14-15; Convo Reply Comments at 2-3 (also suggesting that the provision of free videophones has led to a distortion in the VRS marketplace, allowing Sorenson to gain a dominant position, and is an unnecessary waste of TRS funds).

⁶⁰ *See, e.g., 2013 VRS Reform Order*, 28 FCC Rcd at 8640, 8646, para. 41 & n.144; *see also Second Internet-Based TRS Numbering Order*, 24 FCC Rcd at 819-20, para. 63. The Commission’s efforts to enable VRS consumers to

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Indeed, providers already increasingly run their own software on off-the-shelf mobile devices, tablets, desktop PCs and laptops, reducing the need for specialized, stand-alone VRS equipment that has kept deaf and hard of hearing users in closed video conferencing systems for far too long.⁶¹ This past year, CGB adopted an order on delegated authority that will incorporate into our rules interoperability standards that are predominantly the same as those used for the most common VoIP and video commercial (non-VRS) applications, improving the opportunity for third parties to build off-the-shelf software for VRS users.⁶² Additionally, by requiring, in that order, that all providers support a common standard for relay user equipment (in addition to their own proprietary standards), we have made it possible for the software developed according to such standard to work on all provider networks, thus making it more attractive for third parties to develop VRS software.⁶³ Rather than discouraging the development of improved technology, these actions demonstrate a concerted effort by the Commission to further section 225's mandate to encourage the use of new and innovative technology.⁶⁴

19. Finally, by not authorizing recovery of the costs of VRS CPE, we avoid offering preferential subsidies to certain VRS providers (i.e., those who rely on the free provision of expensive, dedicated videophones and other equipment to attract and retain VRS consumers for their branded services) to the exclusion of others, as well as avoid encouraging providers to engage in free CPE giveaways as incentives to use their services. We believe that if VRS providers are to compete for customers, it is preferable for such competition to take place with respect to the quality of their services—which was the intended purpose of section 225—not the equipment they can afford to distribute. For all of the above reasons, we find no basis for departing from Commission precedent, and therefore again decline to allow use of TRS funds to support VRS providers' equipment costs.

20. *Intellectual Property.* In this proceeding, Sorenson claims that it should be entitled to compensation for the imputed value of its intellectual property used in providing VRS, because such property has a commensurate value to costs incurred by other TRS providers for licensing third-party intellectual property to provide TRS, which, according to Sorenson, are allowable costs.⁶⁵ For the following reasons, we conclude that a provider that develops its own intellectual property is not entitled to have the imputed value of that property included in allowable costs.

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acquire off-the-shelf equipment for their VRS needs are consistent with the Commission's efforts to enable individuals with disabilities who rely on text, to make the transition from specialized TTYs to real-time text, which will be deployed in off-the-shelf mobile devices. *See Transition from TTY to Real-Time Text Technology; Petition for Rulemaking to Update the Commission's Rules for Access to Support the Transition from TTY to Real-Time Text Technology and Petition for Waiver of the Rules Requiring Support for TTY Technology*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 13568 (2016) (*RTT Order*).

⁶¹ *See, e.g.*, Convo Comments at 6 (discussing Convo's videophone software for mobile devices). Although Sorenson argues that its branded, dedicated equipment offers a better user experience and is therefore necessary for functional equivalent communications, "[a]n entity cannot determine for itself that it is going to provide something different than or beyond the Commission's rules, and still expect compensation from the Fund." *2006 Declaratory Ruling*, 21 FCC Rcd at 5457-58, para. 39 (2006).

⁶² *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, 32 FCC Rcd 687 (CGB 2017) (*2017 VRS Interoperability Order*).

⁶³ *Id.* at 691, para. 11.

⁶⁴ 47 U.S.C. § 225(d)(2); *see also 2013 VRS Reform Order*, 28 FCC Rcd at 8640, 8646, para. 41 & n.144.

⁶⁵ Sorenson Comments at 25; Letter from John T. Nakahata, Counsel to Sorenson Communications, LLC, to Marlene H. Dortch, Secretary, FCC, at 2-3 (filed May 18, 2017) (Sorenson May 18 *Ex Parte*). As an example, Sorenson notes that two providers of IP CTS license technology from a third-party patent holder, and that these license fees appear to be reported by the providers as allowable costs. Sorenson Comments at 25.

21. First, the Commission has not previously allowed compensation for the imputed value of TRS providers' property, whether tangible or intangible, and we see no reason to do so under a methodology that is based on compensating providers for their actual expenses.⁶⁶ Second, as noted above, to the extent that a provider engages in R&D to develop VRS technologies whose purpose is to meet the Commission's mandatory minimum standards, it is already permitted to recover those expenses from the TRS Fund.⁶⁷ To also compensate a provider for the imputed value of such technology would be duplicative at best.⁶⁸ Third, we find unconvincing Sorenson's analogy between costs incurred by a TRS provider to license technology from third parties and the imputation of a licensing fee to be "paid" by a TRS provider to itself. The Commission's cost-of-service methodology appropriately assesses the cost of VRS based on provider's *actual* expenses, not hypothetical expenses that a provider might have incurred had it chosen to purchase technology from third parties. When a VRS provider chooses to develop its own VRS technologies rather than license them from others, it is reasonable to assume that the provider decided that such self-provisioning would enable it to provide service more effectively and at lower cost. It is likewise reasonable and appropriate for the Commission to assess a provider's costs based on its actual expenditures rather than hypothetical, more costly expenditures that it might have made but chose not to.⁶⁹

⁶⁶ Further, any attempt to value intellectual property would necessarily be speculative and highly inexact, especially in the absence of evidence based on arm's length marketplace transactions involving such property. Sorenson's proffered valuation of its own intellectual property, which it requests remain confidential in its entirety, is not based on actual marketplace transactions involving VRS intellectual property relating to VRS or to communications devices for the deaf and hard of hearing. *See* Sorenson Comments, Exh. 1 at 5.

⁶⁷ If a provider cannot seek recovery for its R&D costs, it is because the type of intellectual property being developed is not necessary to meet the TRS mandatory minimum standards. *See supra* para. 11.

⁶⁸ Regarding its own intellectual property, Sorenson's valuation exhibit indicates that in developing such intellectual property, Sorenson incurred many millions of dollars in engineering costs. *See* Sorenson Comments, Exh. 1 at 4. To the extent such expenses were allowable, as R&D or otherwise, we presume that Sorenson reported them in its annual cost submissions.

⁶⁹ Explaining that "[t]he intellectual property used by Sorenson for VRS is actually held by a separate subsidiary, Sorenson IP Holdings, LLC," Sorenson argues that including its valuation in allowable costs "would be analogous to how regulated telephone companies reflect the costs of goods or services acquired from an affiliate." Sorenson May 18 *Ex Parte* at 2-3; *see also* Letter from John T. Nakahata, Counsel to Sorenson Communications, LLC, to Marlene H. Dortch, Secretary, FCC, at 2 (filed July 3, 2017) (Sorenson July 3 *Ex Parte*) ("It appears the Commission may also be considering ignoring costs for intellectual property held by an affiliate, inexplicably inconsistent with the Commission's rules for determining a rate-of-return ILEC's revenue requirement."). Sorenson, however, does not claim that it actually entered into a transaction with its affiliate to license any of that intellectual property. Even had it done so, the fees associated with such an inter-company transfer would not automatically become allowable expenses, especially in the absence of evidence of a *bona fide* transaction. To be allowable, expenses must be "reasonable." For example, according to Sorenson's exhibit, the intellectual property for which Sorenson seeks to recover a valuation was developed by the certificated VRS provider itself, Sorenson Communications, not Sorenson IP Holdings. *See supra* note 68; Sorenson Comments, Exh. 1 at 4. Thus, if Sorenson were to claim that its intellectual property was actually "acquired from an affiliate," it would have to explain how the affiliate came into possession of such intellectual property, and why it is reasonable for the affiliate to assess a fee for the use of such property on the entity that developed it in the first place. Further, the Part 32 rule cited by Sorenson permits such imputation only at the lower of fair market value and net book cost, unless the affiliate sells at least 25% of the service to third parties. 47 CFR § 32.27(b), (d). In this instance, Sorenson's expert concludes that Sorenson's cost to develop the intellectual property is less than its fair market value. Sorenson Comments, Exh. 1 at 4, 6-7. Therefore, even assuming that Sorenson's affiliate had legitimately come into possession of the intellectual property, the appropriate valuation, under the rule cited by Sorenson, for a transfer of such property from the affiliate to the VRS provider would be net book cost, which in turn would be based on Sorenson's engineering expenses. *See* Sorenson Comments, Exh. 1 at 4. As mentioned in the previous footnote, to the extent such expenses are allowable,

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22. In effect, Sorenson's argument for recovery of the imputed value of a TRS provider's intellectual property appears to be a way of arguing that providers should be able to gain additional profit for what they have invested in R&D. Although the Commission allows providers to recover their reasonable expenses of providing TRS, in prior decisions it has disallowed claims for "profit" in excess of a reasonable allowance for the cost of raising capital (which is based on a prescribed return on carrier's *expenditures* for plant, and not on the imputed value of such plant).⁷⁰ Although in the section following we modify the method of estimating capital costs by adopting an "operating margin" approach that will allow providers greater opportunity to recover such costs, we do not thereby authorize providers to recover additional "markup" or profit that goes beyond such reasonable allowance. To the extent that Sorenson believes it is entitled to extra profit based on the value of its intellectual property, it must collect such profit from the entities, if any, to whom it licenses such intellectual property, through the normal licensing process.

2. Capital Cost Recovery / Operating Margin

23. *Replacing return on investment with operating margin.* In the *Further Notice*, in light of VRS providers' concerns about the adequacy of the 11.25% allowed return on plant investment for capital cost recovery in an industry with very little plant investment, the Commission proposed replacing the current rate-of-return approach to capital cost recovery with an operating margin approach (allowing recovery of a specified percentage of allowable expenses), within the range of 7.12-9.75% (pre-tax).⁷¹ To the extent parties commented on this issue, they agreed that, in general, an operating margin allowance is preferable to a rate-of-return allowance.⁷² As discussed below, in light of the relatively low level of plant investment required for VRS, we conclude that an operating-margin approach, if based on a reasonable estimate of an appropriate margin, is better suited to compensating VRS providers for capital costs.

24. *Setting an allowed operating margin.* There is wide variation among average operating margins of different industry sectors, as well as between operating margins for particular companies and time periods. The record offers limited guidance on setting an appropriate operating margin. In its comments, Sorenson provides a list of adjusted EBITDA margins for 20 "leading publicly traded information technology consulting companies," which Sorenson states is based on data reported by Bloomberg on U.S.-listed public companies with a market cap of at least \$1 billion and with 100% of their revenue derived from "IT Services."⁷³ Sorenson notes that the unweighted average margin for the companies on this list is 15.9% (The median of the listed margins is somewhat lower—12.35%). Sorenson argues that, for the purpose of measuring the cost of capital for VRS providers, the 15.9% average EBITDA margin for the list of IT consulting companies it has selected is more reasonable than the 7.12-9.75% range suggested in the FNPRM.⁷⁴

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we presume that Sorenson has already reported them in its annual cost submissions and therefore they have already been given appropriate consideration in setting VRS compensation rates.

⁷⁰ See *2004 TRS Order*, 19 FCC Rcd at 12542-45, paras. 177-82.

⁷¹ This proposed range was derived from the Commission's order finding a zone of reasonableness of 7.12%-9.75% for rates of return for telephone companies. See *Connect America Fund et al.*, Report and Order, Order and Order on Reconsideration, and Further Notice of Proposed Rulemaking, 31 FCC Rcd 3087, 3172, para. 228 (2016).

⁷² Sorenson Comments at 36-39.

⁷³ *Id.* at 37; see also *id.*, Att. B (listing each company and its adjusted EBITDA margin for fiscal year 2016 as reported by Bloomberg).

⁷⁴ As noted above, this proposed range was derived from the Commission's order finding a zone of reasonableness of 7.12%-9.75% for rates of return for telephone companies. Sorenson contends reliance on that order would be arbitrary and capricious, claiming that average cost of capital for telephone companies has no relationship to setting an operating margin for VRS providers. See *id.* at 37-38. As discussed below, because the operating margin we

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25. We conclude that consideration of operating margins earned in analogous industries, as Sorenson suggests, may be a reasonable approach to setting an allowed operating margin for VRS providers. We are not persuaded, however, that the IT consulting companies listed by Sorenson are sufficiently analogous to VRS providers so that their operating margins can serve as a reasonable proxy. There are a number of obvious differences between the IT consulting sector and the VRS sector, including the extent to which these sectors rely on advanced technology. While VRS certainly makes use of advanced technology, the bulk of VRS costs are labor costs, primarily salaries and benefits for interpreters, who need not be highly skilled in technology. Census data show that typical margins for companies in a number of other professional service sectors, including the interpretation services sector, are substantially lower than the 15.9% number cited by Sorenson. Indeed, the Census Bureau's survey of public companies' financial data for NAICS 541, defined as "Professional, Scientific, and Technical Services," but excluding legal, shows that average quarterly pre-tax operating margins for this industry sector between 2013 and 2016 ranged from 1.8% (in 1Q2016) to 7.9% (in 2Q2013), averaging 4.6% in the 2013-16 period as a whole and 3.2% in 2016 (the most recent year and the one for which Sorenson cites its 15.9% figure).⁷⁵ For NAICS 5419, a subsector that includes translation and interpretation services but excludes various less analogous industry segments such as accounting, architectural and engineering, and computer systems design services, the average operating margin for the public firms included in the Census Bureau's survey ranged from 3.9% to 12.2% for the 2013-16 period and averaged 7.4% in the 2013-16 period as a whole and 7.6% in 2016.⁷⁶ Government contractors are another category that may reasonably be viewed as analogous to VRS providers in that they are paid by the government for providing services mandated by law or otherwise closely supervised by a government entity. In five surveys of government contractors by Grant Thornton, conducted between 2009 and 2015, 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%.⁷⁷

26. Selecting an operating margin from among this wealth of data regarding arguably analogous industry sectors is not subject to precise determination. We note, however, that for 2016 (or 2015, in the case of government contractors, as that was the most recent year surveyed),⁷⁸ none of the

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adopt herein is not based on the proposal to use the range of reasonableness for telephone company rates of return, we do not need to address Sorenson's arbitrary and capricious argument.

⁷⁵ See U.S. Census Bureau, Quarterly Financial Report, <https://www.census.gov/econ/qfr/historic.html> (last visited June 27, 2017) (U.S. Census QFRs). Data for a particular quarter can be retrieved on this web page by selecting an appropriate quarterly release at "Historical QFR Publication Financial Tables" under the heading "Historical QFR Publication Tables." For example, data for all four quarters of 2016, as well as the first quarter of 2017, are available from the release for 2017, Quarter 1, at: <https://www2.census.gov/econ/qfr/xls/qfr17q1f.xls>. Because quarterly results can be revised over time, in compiling this information we used, for each quarter, the most recent available release that included information on that quarter. Within each release, quarterly operating margins for NAICS 541 were obtained from Table 89.0, "Income Statement for Corporations in NAICS Professional and Technical Services Sector (except Legal Services), and Professional and Technical Services Industry Group 5415, Total Assets \$50 Million and Over." Operating margins were derived for each quarter by dividing line 11, "Net income (loss) from operations, by the difference between line 11 and line 7, "Net sales, receipts, and operating revenues."

⁷⁶ See U.S. Census QFRs. Within each release, quarterly operating margins for NAICS 5419 were obtained from Table 91.0, "Income Statement for Corporations in All Other NAICS Professional and Technical Services Industry Groups (except Legal Services), Total Assets \$50 Million and Over."

⁷⁷ See Grant Thornton LLP, Grant Thornton's 2015 Government Contractor Survey, p. 8 & Fig. 7 (2015), <https://www.grantthornton.com/~media/content-page-files/public-sector/pdfs/surveys/2015/Gov-Contractor-Survey.ashx>.

⁷⁸ For 2015, the most recent year in the Grant Thornton government contractor survey, 52% of the government contractors surveyed reported profit margins below 6%. *Id.*

industry sector surveys described above, other than the one cited by Sorenson, had average operating margins greater than 7.6%, and that even the high technology firms cited by Sorenson have a median operating margin of only 12.35%. Based on the current record, and in light of the considerations discussed above, as well as our statutory mandate to ensure that VRS is made available “to the extent possible, and in the most efficient manner,”⁷⁹ we conclude that the range of 7.6% to 12.35% represents the “zone of reasonableness” of an allowable operating margin for VRS providers. Although we believe it would strike a reasonable balance, if a more specific ruling were necessary, to select an allowed operating margin of 10%, which is approximately midway between these two figures,⁸⁰ it is unnecessary at this time to select a specific number within this zone because the tiered rates we set today will allow all VRS providers to recover their compensable expenses (i.e., the average of historical 2016 expenses and projected 2017 expenses) plus a reasonable operating margin.⁸¹

3. Compensation Rate Structure

27. *Discussion.* Over the last four years, the Commission has had an opportunity to observe the results of its 2013 structural reform and rate initiatives, including the effects on provider incentives, to the extent those can be discerned. As noted, the 2013 plan provided for reducing the rate gap between highest- and lowest-priced tiers, with the ultimate expectation that the tiered rate structure eventually would be replaced by a unitary compensation rate for all minutes, which would be set either directly or by proxy based on competitive bidding. This expectation was, in turn, based on the assumption that structural reforms, such as effective interoperability and portability standards and the establishment of a neutral routing platform would generate a “more competition-friendly environment” for small providers. There was also an expectation that, pending the completion of such structural reforms, the temporary continuation of a tiered rate structure would both encourage improvements in efficiency and ensure that smaller providers “have a reasonable opportunity to compete effectively during the transition and to achieve or maintain the necessary scale to compete effectively after structural reforms are implemented.”⁸²

28. The record confirms that, as suggested in the *Further Notice*, most of these underlying expectations and assumptions have not been borne out by experience. First, a number of the Commission’s expectations regarding the pace and content of structural reforms have proven to be overly optimistic. Improved interoperability standards were not incorporated into the Commission’s rules until this year,⁸³ and some aspects of equipment portability, which was expected to improve the

⁷⁹ 47 U.S.C. § 225(b)(1).

⁸⁰ See generally *Sorenson 2011*, 659 F.3d at 243-44 (explaining that “[c]ourts have previously upheld ratemaking methodologies that relied on the average or midpoint of two sets of numbers,” and holding that it was reasonable for the Commission to set the VRS compensation rate at the midpoint between the existing rate and the actual costs determined by the TRS Fund administrator).

⁸¹ See 2015-18 VRS Providers Cost and Demand Data Summary. For purposes of evaluating rates against per-minute costs, we are using the average of each provider’s historical 2016 allowable expenses and minutes and projected 2017 allowable expenses and minutes, as recent experience shows that such an average, combining the historical and projected data submitted to Rolka for the current and previous calendar years, provides the most accurate estimates of the actual results for the following Fund Year. See *infra* para. 69.

⁸² *2013 VRS Reform Order*, 28 FCC Rcd at 8699, para. 204.

⁸³ Although the Commission has incorporated VRS interoperability standards into its rules, such rules have not yet become effective, and the standards have yet to be fully implemented and subject to effective testing. See *infra* Part III.B.1 (amending the Commission’s TRS rules to allow server-based routing). *2017 VRS Interoperability Order*, 32 FCC Rcd 687; *2017 VRS Improvements Order*, 32 FCC Rcd at 2488-89, paras. 136-38 (staying the deadline for providers to comply with the VRS Provider Interoperability Profile standard until the Commission amends its rules to address the call routing protocol issue). Even Sorenson, which generally claims that interoperability barriers to competition have finally been eliminated, Sorenson Comments at 59, recognizes that some interoperability issues

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competitiveness of the VRS market by facilitating consumers' use of inexpensive, off-the-shelf devices, have yet to secure consensus from the VRS industry.⁸⁴ Further, the neutral video communications platform, which the *2013 VRS Reform Order* envisioned as a key element in enabling small providers to compete effectively, proved to be impracticable.⁸⁵ These developments disprove the Commission's original assumption that structural reforms would be far enough advanced to enable the elimination of tiered rates and the introduction of a market-based methodology upon the expiration of the 2013 compensation plan.

29. Second, provider cost reports overall do not show the major improvements in smaller providers' efficiency that the Commission assumed were possible. With the "glide path" reductions in VRS compensation rates, providers have been under pressure to improve efficiency, and the record indicates that certain providers have taken significant measures to do so.⁸⁶ The weighted average of historical per-minute costs reported by VRS providers has declined from 2013 to 2016; however, the decline has been relatively modest, compared to the period from 2009 to 2012, when average per-minute costs declined by more than \$1.00 per minute.⁸⁷ Thus, while it appears that providers have achieved some efficiency improvements, other factors, such as the lack of full interoperability, may have limited their success. As a result, the Commission's expectation that smaller VRS providers would be able to make substantial improvements in efficiency within the past four-year period was not fulfilled.

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persist, e.g., with respect to some of GlobalVRS' endpoints and mobile endpoints for which implementation of SIP and resolution of the server-based routing issue will be integral. *See* Sorenson Comments at 58-59; *see also* 2017 Non-Dominant Providers Proposal at 7-8.

⁸⁴ *2017 VRS Interoperability Order*, 32 FCC Rcd at 691, para. 10; Petition of Sorenson Communications, LLC for Partial Reconsideration, or in the Alternative, Suspension of the RUE Implementation Deadline, CG Docket Nos. 10-51 and 03-123 (filed May 30, 2017) (seeking reconsideration of the Commission's adoption of the Relay User Equipment Profile standard).

⁸⁵ *See infra* Part III.B.3.

⁸⁶ For example, ZVRS Holding Company (ZVRS Holding) recently acquired Purple's VRS operations, and there is some indication that this may eventually increase the efficiency of the merged service provider. *See* Letter from Gregory Hlibok, Chief Legal Officer, ZVRS, to Marlene H. Dortch, FCC Secretary, at 4 (filed June 6, 2017) (ZVRS June 6 *Ex Parte*) (stating that "[c]ost savings from the integration work will not be realized in the immediate future, but should position the Companies for success over the longer term").

⁸⁷ *See VRS Reform Order*, 28 FCC Rcd at 8694 n.497. For 2013, based on the most recently updated information, the average reported per-minute allowable expense per provider was about *****BEGIN HIGHLY CONFIDENTIAL***** *****END HIGHLY CONFIDENTIAL*****. This number was previously reported by Rolka Loube as about \$2.83. *See* Rolka Loube, Interstate TRS Fund Payment Formula and Fund Size Estimate, CG Docket Nos. 03-123, 10-51 at 23, Table 3 (filed Apr. 24, 2015) (2015 TRS Rate Filing) (for 2013, Total Cost (\$3.0880) minus Return on Investment (\$0.0417) minus Outreach (\$0.2142) = \$2.8321). ZVRS recently submitted corrected cost data for ZVRS and Purple for 2013 and 2014, reflecting asserted mistakes in allocated costs between the marketing and outreach categories. *See* Letter from Gregory Hlibok, Chief Legal Officer, ZVRS, to Marlene H. Dortch, FCC Secretary (filed June 23, 2017) (ZVRS June 23 *Ex Parte*). The revised average for 2013 reflects this corrected cost information. For 2016, the average reported per-minute allowable expense per provider was about \$2.76. *See* Rolka Loube Associates LLC, Interstate Telecommunications Relay Services Fund Payment Formula and Fund Size Estimate, CG Docket Nos. 03-123 and 10-51, at 38, Table 5 (filed May 2, 2017) (2017 TRS Filing) (for 2016, Total Cost excluding Outreach & CPE (\$2.7937) minus Return on Investment (\$0.0355) = \$2.7582). *****BEGIN HIGHLY CONFIDENTIAL*****

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30. Third, updated VRS demand data confirm that the VRS market structure is largely unchanged since 2013, when “Sorenson provide[d] about 80% of the VRS minutes logged every month, and its two principal competitors each provide[d] another five to ten percent.”⁸⁸ Since then, the two cited competitors of Sorenson have merged, but it is too early to predict how that merger will affect the viability of competition in the VRS market (other than reducing the total number of competitors from five to four).⁸⁹ What is clear, however, is that competitors have not made significant inroads into Sorenson’s market share, and no VRS provider has been able to grow significantly so as to achieve “the necessary scale to compete effectively.”

31. As a consequence of these developments, there remain vast differences in the per-minute costs of VRS providers, which roughly track the vastly different market shares of each current provider.⁹⁰ As long as such lopsided cost structures persist, it seems highly unlikely that any of the non-dominant providers can compete successfully to gain market share vis-à-vis the largest, least-cost provider. In the face of these unfulfilled expectations and assumptions, we must choose from a number of alternative courses to take. One possible course would be to seek to maximize efficiency by transitioning to a single rate set at the level of the allowable costs of the lowest-cost provider, or alternatively, at the level of the average allowable costs for the VRS industry. This approach would reduce the cost burden on the TRS Fund, at least in the short term, but, given the current disparate cost structures in the VRS market, also would be likely to eliminate all VRS competition.⁹¹ The Commission has consistently sought to encourage and preserve the availability of a competitive choice for VRS users, because it ensures a range of service offerings analogous to that afforded voice service users and because it provides a competitive incentive to improve VRS offerings.⁹² Further, the continuing presence of such competitive offerings is likely to encourage the lowest-cost provider to maintain higher standards of service quality than if it faced no competition. Thus, if we were to allow VRS competition to be extinguished, for the sake of increasing the efficiency of VRS, we would risk depriving users of functionally equivalent VRS. Because we believe that, in the current circumstances, the benefits of such a rate reduction, through increased efficiency, are not worth the risks to functional equivalence associated with eliminating competitive choice, we did not propose this course as an alternative, and no party advocates it.

32. A second alternative, favored by Sorenson, would be to transition to a single rate set at the cost level of some higher-cost provider—most likely the next-lowest-cost provider.⁹³ Due to the

⁸⁸ *Sorenson 2014*, 765 F.3d at 42.

⁸⁹ This is particularly so because those two companies continue to operate separately, with their own staffs, call centers, assets and costs, and will do so until integration is complete, which the FCC has recognized could take until 2020. See *Purple Communications, Inc. et al.*, Order and Consent Decree, 32 FCC Rcd 1608, 1615, para. 9 (2017) (*Purple Consent Decree*) (allowing Purple and ZVRS to offer VRS under their existing brands for no more than 3 years); ZVRS June 6 *Ex Parte* at 4.

⁹⁰ See 2015-18 VRS Providers Cost and Demand Data Summary.

⁹¹ Given the substantial per-minute cost advantage of one provider, and the minimal changes in efficiency and market share that its competitors have achieved to date, there does not appear to be any realistic possibility in the near future that any VRS provider could successfully operate if compensated at a rate equal to the lowest-cost provider’s per-minute costs.

⁹² *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order and Further Notice of Proposed Rulemaking, 15 FCC Rcd 5140, 5157, para. 36 (2000) (*2000 TRS Order*); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order and Order on Reconsideration, 20 FCC Rcd 20577, 20588, 20590-592, paras. 21, 26, 29 (2005) (*2005 TRS Order*); *2007 TRS Rate Methodology Order*, 22 FCC Rcd at 20169, para. 77; *2013 VRS Reform Order*, 28 FCC Rcd at 8643, para. 50.

⁹³ Sorenson Comments at 17-18, 49-62; Sorenson Reply Comments at 17-29. Sorenson suggests that such a rate could be reached through a number of methods—e.g., either cost-of-service regulation or a competitive bidding

(continued....)

current imbalance among VRS providers' cost structures, however, this method would be likely to result in greatly increased TRS Fund expenditures, because the most efficient provider—with the overwhelming bulk of minutes—would be compensated at a rate far in excess of its actual costs.⁹⁴ Such inefficient use of TRS Fund resources is not permitted by section 225 if there is a more efficient method of ensuring the availability of functionally equivalent service.⁹⁵ In addition, by generating an extremely uneven set of operating margins—huge windfall profits for one provider and minimally sufficient margins or actual operating losses for the others, taking this approach seems likely to doom any prospect of the VRS market evolving to a more competitive structure.⁹⁶ Indeed, adopting this approach, as a practical matter, would inevitably eliminate two of the four existing VRS competitors. A single rate could not be set high enough to allow a third provider to remain in the market without raising TRS Fund expenditures and allowing the windfall profits for lower-cost providers to achieve astronomical levels.⁹⁷

33. For these reasons, we conclude that the alternative proposed in the Further Notice—maintaining a tiered rate structure for the next four years—is the best available alternative at present.⁹⁸ Compared with any practicable single-rate approach, as further explained below, we conclude that a tiered rate approach is most likely to ensure that functionally equivalent VRS remains available and is provided in the most efficient manner with respect to TRS Fund resources.

34. First, the application of tiered rates rather than a single rate will help ensure that there continue to be competitive options for VRS users, an objective that takes on special importance at this time, in light of the recent attrition in the VRS market. Although there were six owned providers at the

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approach such as a reverse auction. Sorenson Comments at 62-70. The latter method is discussed *infra* para. 43. Under either approach, however, the result would be essentially the same—compensating all providers at the relevant costs of a less efficient provider.

⁹⁴ Sorenson urges the Commission to adopt a single rate no lower than \$3.73 per minute. Sorenson Comments at 6-7, 40-41. Based on the updated provider cost data, however, this rate would not enable any other VRS provider to earn a reasonable operating margin. See 2015-18 VRS Providers Cost and Demand Data Summary. If a single rate were to be established, a more realistic number would be in the neighborhood of \$4.29 per minute. However, based on the average industry minutes for 2016 and 2017, *see id.* $((128,262,113 + 129,789,547) / 2 = 129,025,820)$, a single rate at this level would cost the TRS Fund about \$554 million $(\$4.29 * 129,025,820 = \$553,520,768)$ next year, an approximately 17% increase over the Fund expenditures at current rates, which would total about \$473 million. (This projection of a year's compensation at current rates is calculated based on each provider's average of 2016 and 2017 minutes, *see id.*, assuming (for providers with more than 6,000,000 minutes) that each provider's minutes up to 12,000,000 are Tier I minutes, minutes between 12,000,001 and 30,000,000 are Tier II minutes, and minutes over 30,000,000 are Tier III minutes.) At a single rate of \$4.29, the \$554 million compensation would allow the industry as a whole a margin of more than 50% over allowable expenses (which average \$364,882,329 for 2016 and 2017, *see id.*), and Sorenson's margin would be much higher than 50%.

⁹⁵ 47 U.S.C. §§ 225(b)(1) (requiring that TRS be made available to the extent possible and in the most efficient manner).

⁹⁶ See Convo Comments at 12-14; ZVRS Holding, ZVRS, and Purple, Reply Comments at 18-19 (ZVRS/Purple Reply Comments); GlobalVRS Reply Comments at 1-2.

⁹⁷ See 2015-18 VRS Providers Cost and Demand Data Summary. An idea of the resulting level of expenditures can be obtained by multiplying total industry minutes for 2016-17 by the total expenses of either the highest cost or next-highest cost providers and adding 10% (as an illustrative operating margin) to the total.

⁹⁸ This approach is supported by the all the VRS providers except Sorenson. See Non-Dominant Provider Comments at 1-2 (asserting that maintaining a tiered rate structure will promote competition and stability by allowing all VRS providers to ensure continued operations, make investment decisions, and focus on improving service quality pending further VRS reforms); *see also id.* at 5-9; ZVRS/Purple Reply Comments at 12-17, 21-22.

time of the *2013 VRS Reform Order*, this number has since been reduced to four.⁹⁹ The presence of multiple competitors, even if less efficient than the lowest-cost provider, may enhance functional equivalence by ensuring that VRS users have a choice among diverse service offerings.¹⁰⁰ Further attrition, which would be inevitable if we set a single rate at any realistic level,¹⁰¹ would further limit the ability of consumers to select providers based on service quality and features, and would make the continuing availability of *any* competitive choice less certain, eroding the Commission's ability to ensure the availability of functionally equivalent service. In these circumstances, to the extent that a tiered rate structure is more effective than a single rate in preventing further erosion of the competitiveness of the VRS environment, it may be justifiable on that ground alone, even if overall efficiency would be somewhat reduced.¹⁰²

35. Moreover, and contrary to Sorenson's contention,¹⁰³ the record indicates that, at this time, a tiered rate structure is actually *more* likely than Sorenson's single-rate proposal to *improve* the efficiency with which the TRS Fund supports VRS. Given the major disparities in service provider size and cost structure, tiered rates enable the Commission to reduce waste of TRS Fund resources by limiting compensation that is excessive in relation to a provider's actual costs. Thus, we are not persuaded by Sorenson's argument that a tiered rate structure, by allowing payment of a higher effective compensation rate to less efficient VRS providers, necessarily contravenes the mandate that VRS be available in the most efficient manner.¹⁰⁴ While our mandate is for the Commission to ensure the availability of VRS in the most efficient manner,¹⁰⁵ we must measure such efficiency by comparing the *overall* expenditures from the TRS Fund we have established for that purpose, with the *overall* results achieved by such

⁹⁹ See ZVRS, Press Release, ZVRS Acquires Purple Communications to Better Serve Customers, Deaf Community (Feb. 15, 2017), <https://zvrs-nuqatulszrfjf.netdna-ssl.com/wp-content/uploads/2017/02/Z-and-Purple-Press-Release-2.pdf>. Purple and ZVRS will continue to offer VRS under their existing brands as wholly owned companies of ZVRS Holding until the businesses are integrated, which the companies have committed to complete within three years. See *Purple Consent Decree*, 32 FCC Rcd at 1615, para. 9. United States Telecom Association's (USTelecom) erroneous claim that "there are currently at least ten companies that provide VRS to the disability community" appears to be based on information regarding the total number of VRS, IP Relay, and IP CTS providers. USTelecom Reply Comments at 4-5 & n.12.

¹⁰⁰ Even Sorenson occasionally acknowledges the benefits of maintaining a choice of VRS providers for consumers. See, e.g., Sorenson Comments at 64 n.159 (applauding the Commission's abandonment of a proposed auction methodology that "would have limited consumer choice"). Nonetheless, Sorenson advocates a unitary rate that would allow only two of the current competitors, at most, to remain in the VRS market. See *id.* at 40-41 (advocating a rate of \$4.19, or in the alternative, \$3.73).

¹⁰¹ See *supra* note 95.

¹⁰² In a recent *ex parte* filing that seemingly contradicts some of the assertions in its comments, Sorenson has contended that efficiency considerations should *not* override the need to ensure the availability of functionally equivalent VRS. See Letter from Christopher Wright, Counsel to Sorenson, to Marlene H. Dortch, Secretary, FCC (filed June 13, 2017) (endorsing attached submission by Professor Samuel R. Bagenstos and stating: "the Commission *must* ensure that functional equivalent services are available to the extent possible. If there are alternative means to fulfill that requirement, the Commission should choose the most efficient alternative." (emphasis original)). As explained in the text following this footnote, it is not a given that a tiered rate structure will cause VRS to be made available less efficiently.

¹⁰³ See Sorenson Comments at 51-52 (citing *2013 VRS Reform Order*, 28 FCC Rcd at 8698, para. 198; *Structure and Practices of the Video Relay Service Program et al.*, Further Notice of Proposed Rulemaking, 26 FCC Rcd 17367, 17418, para. 141 (2011)).

¹⁰⁴ Sorenson Comments at 51.

¹⁰⁵ 47 U.S.C. § 225(b)(1).

expenditures in terms of TRS availability and functional equivalence. As explained elsewhere,¹⁰⁶ Sorenson's proposed single rate fails this test of efficiency because it would cost the TRS Fund more in overall compensation than the tiered rate structure we adopt today. Thus, Sorenson's argument boils down to arguing that the Commission must pay all providers the same rate, even if that is not the most efficient way to provide VRS.

36. Further, the Commission must consider the value users get for the compensation paid to providers, and may take into consideration the extent to which the participation of less efficient providers produces other benefits in the way of improved services for consumers. In this regard, on numerous occasions, the Commission has made clear that there are benefits in supporting less efficient providers that meet the needs of niche populations, including people who are deaf-blind or speak Spanish, enabling the entrance of new companies that can introduce technological innovations into the VRS program, and ensuring that consumers with hearing and speech disabilities can select among multiple VRS providers—just as voice telephone users do.¹⁰⁷ Stated otherwise, while we are obligated to ensure the efficiency of the VRS program, we cannot sacrifice functional equivalency in doing so. Moreover, it is our statutory obligation not to merely seek a short-term savings in an accounting sense; rather we must consider the consequences of our actions in the long run. By supporting the continued participation of multiple providers, a tiered rate structure can help to prevent the VRS marketplace from devolving into a monopoly environment, thereby providing the Commission with much needed flexibility to consider other approaches that may improve efficiency. For example, one option the Commission may want to consider in the future is a reverse auction, in which multiple providers bid for offering service at the most efficient levels;¹⁰⁸ but such an approach would not be feasible if all providers except one have been driven out of the market. More specifically, a tiered rate structure allows us to set rates that permit each provider an opportunity to recover its reasonable costs of providing VRS, without overcompensating those providers who have lower actual costs because, for example, they have reached a more efficient scale of operations.

37. In summary, in the current environment setting a single rate would force the Commission to choose between setting a lower level that is likely to force competitors out of the market, and a higher level that wastes Fund resources while producing major windfall profits for the lowest-cost VRS provider.¹⁰⁹ By contrast, under a tiered rate structure the Commission can ensure greater efficiency without sacrificing competition, by tailoring compensation rates more closely to the costs of those competitors falling within each tier.¹¹⁰

¹⁰⁶ See *supra* para. 32.

¹⁰⁷ See *infra* note 154.

¹⁰⁸ See *infra* para. 46.

¹⁰⁹ See *supra* paras. 31-32; *Further Notice*, 32 FCC Rcd at 2473, para. 87-88; see also Harold Furchtgott-Roth, Expert Report, prepared at the request of ZVRS, at 15, para. 33 (filed Apr. 24, 2017), <https://ecfsapi.fcc.gov/file/10425047672322/m0401417%20-%20FINAL%204%2024%2017.pdf> (Furchtgott-Roth Expert Report) (noting the Commission's challenge in setting a compensation rate for firms of different sizes); Harold Furchtgott-Roth, Expert Report Reply, prepared at the request of ZVRS at 5, para. 5d (May 4, 2017), [https://ecfsapi.fcc.gov/file/1050498694270/m0501417%20-%205.4.2017%20\(as-filed\).pdf](https://ecfsapi.fcc.gov/file/1050498694270/m0501417%20-%205.4.2017%20(as-filed).pdf) (Furchtgott-Roth Expert Report Reply) (opining that "[m]oving to a single rate in the current VRS market, which is not competitive, would likely produce one of two undesirable outcomes"—either setting the rate too low, which would induce all providers to reduce the quality of service and drive some providers out of the market, or setting it too high, which would preserve all providers but would unnecessarily enrich some of them).

¹¹⁰ Another possible approach to achieving a similar result could be to set individual rates for each provider, based on the provider's individual costs. There may be both advantages and disadvantages to this approach, compared to a tiered rate structure. This alternative, however, was not raised in the *Further Notice* and is not advocated by any party. Therefore, we do not consider it at this time.

38. We also do not agree with Sorenson's contention that tiered rate structures necessarily detract from providers' incentives to grow and increase their efficiency. As to growth incentives, while there could theoretically be a risk that a provider would "put the brakes on" its growth as it approached a tier boundary,¹¹¹ a review of each providers' compensable minutes over the last few years does not suggest that providers' growth rates have been affected as their minutes approach a tier boundary. Most providers have increased their minutes since 2013, and those instances where minutes have decreased are not associated with a provider's demand approaching a tier boundary.¹¹² Moreover, to the extent there is such a risk of generating perverse incentives, we believe it can be effectively addressed by ensuring that tier boundaries are wide enough to cover a provider's likely growth during the life of the rate plan.¹¹³ As to efficiency incentives, Sorenson does not provide any persuasive explanation as to why a tiered rate structure inherently would deter a VRS provider from taking steps to improve its efficiency. Regardless of the rate structure, because rates are being set for a period of several years, providers will have an incentive to reduce unnecessary costs so they can increase profits and minimize losses.¹¹⁴

39. Further, we disagree with Sorenson's characterization of a tiered rate structure as one that allows "competitors offering services in the same geographic areas to charge different rates" and "sets different rates for providers serving the same market."¹¹⁵ The tiers set under this structure are *not* provider-specific. Rather, each tier is equally applicable to any provider's minutes that fall within that tier. Accordingly, under the tier structure we adopt today, the provider with both relatively large and relatively small volumes of minutes are each compensated at the higher (Tier I) rate for their first 1 million minutes, at a lower (Tier II) rate for additional minutes between 1,000,000 and 2,500,000, and at the lowest (Tier III) rate for any minutes over 2,500,000.

40. In addition, we reject Sorenson's argument that the application of different rates to different rate tiers should not be permitted because "[e]conomics teaches that a competitive market will generate a single market-clearing price, based, when providers' costs vary, on the costs of the second-lowest cost provider."¹¹⁶ There is no VRS market "price." VRS providers currently do not charge users any price for the service provided. Rather, VRS providers receive only compensation payments from the TRS Fund, at per-minutes rates set by the Commission. As ZVRS's expert explains, "[t]he price signals necessary for a competitive market are entirely absent from the VRS market."¹¹⁷ Therefore, it is of little

¹¹¹ This might occur, for example, if the rate applicable to the next tier was lower than the provider's marginal cost of providing additional minutes of service.

¹¹² See 2014-16 VRS Providers Cost and Demand Data Summary; 2015-18 VRS Providers Cost and Demand Data Summary.

¹¹³ This concern would be greater if the Commission attempted to set the rate for each tier at the expected marginal cost of providing an additional minute of service for that tier. However, although the disparities in per-minute costs among providers of different sizes and the existence of some relatively fixed costs of participation suggest that the marginal costs faced by every provider are below their average costs, we cannot determine the magnitude by which marginal costs fall below average costs. As such, we continue to take a conservative approach and map rates onto average costs. Even though doing so is likely to be somewhat over-compensatory, we believe that cost of taking this approach is preferable to the cost of setting a rate too low and deterring a provider from competing for additional minutes of use.

¹¹⁴ In the *Further Notice*, we asked whether the compensation rate could be used to limit providers' incentives to engage in disruptive and wasteful marketing practices. *Further Notice*, 32 FCC Rcd at 2477, para. 99. We find that, to the extent that tiered rates bring the rate applicable to a marginal minute of traffic closer to a provider's marginal cost of providing that minute, this structure can be helpful in limiting such incentives.

¹¹⁵ Letter from John T. Nakahata, Counsel to Sorenson, to Marlene H. Dortch, Secretary, FCC, at 1, 3 (filed June 28, 2017) (Sorenson June 28 *Ex Parte*).

¹¹⁶ *Id.* at 3.

¹¹⁷ Furchtgott-Roth Expert Report at 8, para. 18(a).

relevance that the Commission has not relied on tiered rate structures when setting rates for markets where users *do* pay directly for the services they receive.¹¹⁸ We also disagree with Sorenson's claim that "lagged rate-of-return" regulation does not provide a significant incentive to improve a provider's efficiency. By setting compensation rates that remain constant for a four-year period, as we do here, we ensure that providers can retain any additional income they may be able to generate through efficiency improvements, rather than losing such income by having their rates reset in relation to cost the following year.¹¹⁹

41. We also decline Sorenson's suggestion that we adopt, at this time, a plan for transitioning from tiered rates to a single rate structure.¹²⁰ As discussed, the anticipated developments that the Commission thought would eliminate any need for tiered rates have not materialized. Not only have structural reforms been delayed and reduced in scope, but expected gains in individual provider efficiency have not occurred, the largest VRS provider's current market share remains approximately the same, and there continue to be wide disparities among providers' cost structures.¹²¹ Thus, for the reasons discussed above, our experience to date does not provide sufficient confidence that transitioning to a single rate structure would be consistent with preserving the benefits of competition and ensuring the availability of VRS in the most efficient manner. With additional time, this situation may change. The full implementation of competition-promoting interoperability and portability standards, as well as the introduction of some new reforms in other areas, may offer greater opportunities for providers to compete more effectively with one another. Additionally, the Commission is currently gathering comment on service quality metrics, which, when defined, measured, and published, will enhance VRS competition by enabling consumers to make more informed decisions in their selection of their VRS providers.¹²² At a later time, we can revisit the compensation rate structure issue as appropriate in light of such developments. At this time, however, mandating a transition to a single rate is unwarranted.

42. Further, it is also possible that, despite our best efforts to improve competitive conditions, VRS provider market shares and cost structures remains unbalanced.¹²³ As ZVRS's expert consultant points out, because this service is paid for entirely by the TRS Fund rather than by individual customers,

¹¹⁸ See Sorenson June 28 *Ex Parte* at 4-6.

¹¹⁹ The passage Sorenson cites from an earlier Commission decision does not state that regulatory lag produces no efficiency incentives. It merely states a preference for a price cap approach over a regulatory lag approach in the context of Title II tariff regulation, because a regulatory lag approach does not provide for a downward productivity rate adjustment and because it would be "unworkable given the existing requirements of the Communications Act." See *Policy and Rules Concerning Rates for Dominant Carriers*, Second Report and Order, FCC 90-314, 5 FCC Rcd 6786, 6791, para. 40 (1990). Because TRS is regulated under section 225, rather than the tariff provisions of Title II, it is not subject to the same legal limitations cited in that decision. As to the productivity adjustment, while we do not rule out incorporating such an adjustment in the future, we do not believe it is needed at present. See *infra* para. 45.

¹²⁰ Sorenson Comments at 42 ("If the Commission moves forward with a multi-year tier-based system, it should commit to using that as a glide path toward initializing a multiyear price cap regime" with "a unified rate of no less than \$4.19.").

¹²¹ See 2014-16 VRS Providers Cost and Demand Data Summary; 2015-18 VRS Providers Cost and Demand Data Summary. For example, based on the most recent reported data, *****BEGIN HIGHLY CONFIDENTIAL*****

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¹²² See *2017 VRS Improvements Order*, 32 FCC Rcd at 2464-68, paras. 61-77.

¹²³ As noted above, market shares have changed little since 2013, despite apparent improvements in interoperability. See *supra* para. 30.

“[t]he price signals necessary for a competitive market are entirely absent from the VRS market,”¹²⁴ and this may pose more limitations than previously supposed on providers’ ability to achieve efficiencies with low market share, as well as on customers’ ability to choose the optimal service for their needs.¹²⁵ In addition, barriers to entry and effective competition, such as network effects, knowledge and expertise, first mover advantages, and brand loyalty, may inhibit effective competition despite the Commission’s efforts to promote it. Moreover, VRS providers, by regulation, must accept all customers regardless of cost, meet minimum service standards, and comply with numerous other requirements.¹²⁶ According to ZVRS’s expert, “[t]he large fixed cost of regulation imposes substantial burdens on smaller firms . . . and disproportionately disadvantage the smaller VRS providers that lack the advantages of scale available to the largest provider.”¹²⁷ We expect to carefully evaluate the evolving VRS environment to assess whether such barriers, to the extent they exist, are capable of being overcome.

43. In summary, in light of the identified benefits associated with retaining the rate tiers, we will retain a tiered rate structure at this time. We will revisit the VRS compensation rate structure as necessary, in light of future developments.

4. Alternative approaches

44. In the *Further Notice*, at Sorenson’s suggestion, we sought comment on a number of alternative approaches to setting VRS rates including reliance on price caps, market-price benchmarks, a reverse auction, and direct provision of VRS by common carriers.¹²⁸ For the reasons specified below, as well as those discussed above, we conclude that such alternative approaches should not be adopted at this time.

45. *Price caps.* We agree with the Non-Dominant Providers that it is premature, at best, to commit to a price cap approach that involves setting an initial, single rate based on, for example, the costs of a “reasonably efficient provider.”¹²⁹ As explained above, setting a single rate at any level that permits more than one provider to remain in the market would provide windfall profits to the lowest-cost provider, and the wasteful costs that such windfall profits would impose on the TRS Fund would be extremely high given the disparate cost structures of the current providers. Such costs will be imposed regardless of whether the single rate is set under a traditional cost-of-service methodology or as the “initializing” rate to kick off a price cap plan. Further, we do not perceive any way in which price caps could significantly ameliorate the competition and inefficiency disadvantages we have identified above that lead us to reject a single-rate approach. We also note that the multi-year, tiered transition plan we adopt will provide many of the same benefits as a price cap, such as predictability in rates and incentives to become more efficient. In addition, given that the weighted average of provider’s historical costs has declined measurably over the last four years,¹³⁰ we do not believe that the use of such indices is necessary at this time to ensure that VRS providers can continue to recover their reasonable allowable costs, including a reasonable operating margin, over the next four years.¹³¹ As we approach the end of the 2017-

¹²⁴ Furchtgott-Roth Expert Report at 8, para. 18(a).

¹²⁵ See *id.* at 8-9, paras. 18, 19.

¹²⁶ See generally 47 CFR §§ 64.604-64.636, 64.5101-64.5111.

¹²⁷ Furchtgott-Roth Expert Report at 9, para. 18(f).

¹²⁸ *Further Notice*, 32 FCC Red at 2477-79, paras. 103-06.

¹²⁹ See Non-Dominant Providers Comments at 11-12; ZVRS/Purple Reply Comments at 19-20. Sorenson also does not suggest immediate implementation of price caps, but urges the Commission to consider, as one alternative, transitioning to a price cap system. Sorenson Comments at 42.

¹³⁰ See *supra* para. 29.

2021 rate plan, there will be another opportunity to examine whether a price cap approach should be adopted in conjunction with whatever rate structure approach is selected for the next plan, to maintain efficiency incentives going forward.

46. *Reverse auction.* Sorenson advocates the use of a reverse auction to set VRS rates, citing as models the auctions authorized by the Federal Energy Regulatory Commission (FERC) to set rates for supplying electricity, as well as those conducted by this Commission to allocate support for Mobility Funds and to select recipients of support under the Rural Broadband Experiments.¹³² However, the auction proposed by Sorenson differs significantly from these examples. Specifically, as ZVRS's expert points out, the FERC and FCC auctions involved bidding for both price and quantity of the service to be supplied, while Sorenson's VRS proposal would require providers to bid a price that is not tied to a specific quantity (i.e., the provider would not know the number of minutes they would serve at their bid price).¹³³ Additionally, the FCC auctions sought selection of a single provider for each service area, rather than multiple providers as in the VRS market.¹³⁴ If a provider has no guarantee of serving a fixed number of minutes, each provider's bid will likely be based on current costs associated with the current number of minutes they provide at the time of bidding. Thus, while Sorenson argues that a reverse auction would promote competition, encourage greater efficiencies, and provide stability, it seems equally or more likely to have the opposite effect—producing a VRS rate that is either 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.¹³⁵ Sorenson's reverse auction proposal thus suffers from the same

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¹³¹ Sorenson contends that Tier III rates should be set to include an inflation factor. Specifically, Sorenson asserts that an inflation factor is needed because VRS costs are increasing, the potential for video-interpreter productivity improvements has been exhausted, and there is no basis to assume that other productivity increases or an increase in VRS demand will mitigate the effects of inflation. Sorenson June 28 *Ex Parte* at 7, 8. We disagree on the need to include an inflation factor in the compensation rates. As explained in the text, the cost trend over the last four years does not support Sorenson's claim that VRS costs are increasing, and ***** BEGIN HIGHLY**

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para. 29 & note 88. Further, in light of the uneven track record of overall accuracy for VRS providers' projections of future costs, especially for years after the current year (see *infra* para. 66), we are not persuaded by Sorenson's showing in support of its claim that a dramatic reversal of this declining-cost trend is underway. Moreover, the Tier III rate we set today, in combination with other tiered rates, will leave Sorenson ample room to earn a reasonable operating margin, even if there is some increase in its per-minute allowable expenses. See *infra* para. 62.

¹³² See Sorenson Comments at 65-68; Letter from John T. Nakahata, Counsel to Sorenson, to Marlene H. Dortch, Secretary, FCC, at 4-9 (filed Mar. 14, 2017) (Sorenson March 14 *Ex Parte*). The basics of Sorenson's proposal are as described in the *Further Notice*: the Commission would determine how many VRS providers are needed to provide sufficient competitive choices for users and then would seek bids from each potential VRS provider on the per-minute rate of compensation each will accept for the provision of VRS. Compensation would be paid to all winning providers at the highest rate bid by the winners, i.e., the rate bid by the last bidder whose bid was accepted. *Further Notice*, 32 FCC Rcd at 2478, para. 105.

¹³³ Furchtgott-Roth Expert Report at 18 (noting that the FCC auctions, which were for defined service areas, implicitly involved bidding on a quantity of service to be supplied). Thus, providers would need a sense of the scale of service to be provided, as this can directly affect the price a provider is willing to bid. Although Sorenson claims that not auctioning any quantity of minutes is beneficial because consumers would still retain their choice of providers, Sorenson Reply Comments at 6, it fails to address the objection that scale of service significantly influences price for VRS.

¹³⁴ Furchtgott-Roth Expert Report at 18.

¹³⁵ For example, in an auction with two winners, the current dominant provider would likely gain a major windfall from the selection of the second lowest bid to set the rate, while higher bidders would be unable to continue

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defects as its other single-rate proposals—it forces a choice between setting a single rate so low as to preclude effective competition and setting it so high as to provide wasteful, windfall profits to the lowest-cost provider.¹³⁶ In light of the absence of analogous models for successful implementation, and the other issues discussed above, we decline to pursue a reverse auction approach at this time. We do not rule out exploring this type of approach in the future, however, should new developments warrant revisiting it.

47. *Direct provision or procurement of VRS by common carriers.* We also find little benefit at this time in the alternative of terminating TRS Fund support for VRS and, instead, requiring common carriers to provide VRS directly or through contracts with TRS providers.¹³⁷ Based on the present record, we see no basis for concluding that this alternative would ensure the continuation of competition, minimize the cost of service for ratepayers, or bring stability to VRS rates.¹³⁸ Although Sorenson claims that common carriers and other voice service providers (who currently support the provision of VRS through their contributions to the TRS Fund) could provide VRS more efficiently on a direct basis than under the current regime, Sorenson does not offer supporting evidence. Further, the carriers themselves do not seem to agree with Sorenson. No carrier has commented favorably on Sorenson’s proposal, and a carrier trade association, USTelecom, affirmatively opposes it.¹³⁹ Accordingly, at the present time, we have no basis to conclude that direct provision of VRS would advance the mandate to provide VRS in the most efficient manner or reduce the burden on TRS Fund contributors.¹⁴⁰ Further, we agree with the Non-

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providing VRS. If more winners were allowed, additional competitors could survive, but the windfall to the lowest bidder would be even greater, because use of the third or fourth lowest bid (for example) to set the rate would result in a higher rate.

¹³⁶ Such windfall profits would not only waste TRS Fund contributions but also provide a major additional resource advantage to the recipient of such profits, with the likely result of further cementing one provider’s dominant position and preventing the emergence of more effective and sustainable VRS competition. See Non-Dominant Providers Comments at 12-13 (arguing that “an auction regime would reinforce Sorenson’s position as the dominant VRS provider, a result that is inconsistent with the Commission’s efforts to promote the availability, efficiency, and functional equivalence of VRS by enabling a diversity of providers”). Further, there is unlikely to be significant savings for the Fund from any reverse auction with more than one winner. If the auction were held among today’s competitors, and only two winners were chosen, the most probable result would be simply to eliminate the two smallest, highest-cost VRS providers. Those providers currently account for well under 3% of total VRS minutes, and their elimination would save the Fund less than \$10 million. The lowest bidder’s windfall in such an auction would undoubtedly be far greater than that amount.

¹³⁷ See *Further Notice*, 32 FCC Rcd at 2478-79, para. 106 (citing Sorenson March 14 *Ex Parte* at 12-14); see also Sorenson Reply Comments at 32.

¹³⁸ See *Further Notice*, 32 FCC Rcd at 2473, para. 88. We also note that, in the decision that initially established the TRS Fund, the Commission rejected the alternative of relying primarily on common carriers to self-fund the provision of TRS, because, among other things, the Commission agreed with commenters that this approach would “provide incentives for carriers to handle fewer relay calls, to degrade relay calling quality, to migrate relay customers to other carriers, and to restrict relay to only their presubscribed customers.” *Telecommunications Services for Individuals with Hearing and Speech Disabilities, and the Americans with Disabilities Act of 1990*, Order on Reconsideration, Second Report and Order, and Further Notice of Proposed Rulemaking, 8 FCC Rcd 1802, 1806, para. 21 (1993) (*2nd TRS Order*). While Sorenson suggests the Commission’s robust service quality rules developed since 1993 should ensure quality service is provided, it does not otherwise address how its proposal would avoid creating such incentives. Sorenson Comments at 73.

¹³⁹ USTelecom Reply Comments at 7.

¹⁴⁰ Even Sorenson itself does not appear to have full confidence in its view that carriers can provide VRS efficiently. Elsewhere in its comments, Sorenson argues that the reason that carriers themselves no longer offer VRS directly is that, beginning in 2010, the Commission reduced the VRS compensation rate (previously in excess of \$6 per minute). Sorenson Comments at 33. This suggests that the non-carriers who chose *not* to exit the market may be the more efficient VRS providers.

Dominant Providers that competition and consumer choice might not survive a transition to a direct-provision or—procurement approach. It may well be that common carriers would simply choose to work with the dominant, low-cost provider, rather than attempt to maintain provider choice for consumers.¹⁴¹

48. *Market-based pricing generally.* While other parties generally oppose Sorenson’s suggestions regarding the use of market-based methods, Sorenson not only advocates them but also argues, in effect, that the Commission has previously committed to adopting a market-based approach and therefore has an obligation to adopt such an approach.¹⁴² While the Commission in the *2013 VRS Reform FNPRM* certainly indicated a strong interest in exploring such an approach, its interest was expressed as a proposal, not a decision.¹⁴³ The Commission did not commit to adopting any market-based approach, much less one that could prove less effective than cost-based alternatives for meeting the objectives of section 225.¹⁴⁴ Moreover, for the same reasons discussed earlier regarding a single-rate approach, the market-based schemes proposed in 2013, which assumed there would be a transition to a single market-based rate, no longer appear to be as viable today as they did to the Commission at that time.¹⁴⁵ Moreover, those proposals relied on the expected availability of pricing benchmarks that would in turn result from the establishment of a neutral video communications service platform that would be developed and deployed.¹⁴⁶ As we note elsewhere in this order, this platform has not been built to date, and based on the unsuccessful initial RFP for the platform and the general lack of interest in it shown by most existing providers, the Commission has decided not to move forward with its original plan to build this platform.¹⁴⁷ Similarly, support is also lacking for the other market-oriented idea proposed by the Commission in 2013: an auction of calls to certain telephone numbers receiving a high volume of VRS calls.¹⁴⁸

¹⁴¹ Non-Dominant Providers Comments at 13; ZVRS/Purple Reply Comments at 20-21. In reply, Sorenson speculates that carriers “would likely prefer to have a choice among VRS contractors and might enter into contracts with more than one VRS provider for that reason.” Sorenson Comments at 32. Even assuming this is correct, Sorenson does not explain how a *carrier’s* preference for a choice of contractors would result in offering *consumers* a choice of providers.

¹⁴² See, e.g., Sorenson Comments at 64 (“The D.C. Circuit made clear that it expected the Commission to abandon tiered rates as a permanent solution to VRS ratemaking and adopt a market-based approach.”). Regarding its auction proposal, for example, Sorenson suggests that notwithstanding any flaws in the proposal, it is incumbent on the Commission to find a way to improve upon Sorenson’s proposal and design a more suitable auction model. See Sorenson Reply Comments at 32.

¹⁴³ See *2013 VRS Reform Order* 28 FCC Rcd at 8684, para. 188 (“As discussed in the accompanying FNPRM, we are proposing that once structural reforms are implemented, the Commission will set VRS compensation rates based largely if not entirely on competitively established pricing....”).

¹⁴⁴ See *supra* para. 46 (discussing reverse auction idea).

¹⁴⁵ See *supra* para. 28 (explaining that the anticipated developments underlying the Commission’s expectation that tiered rates could be eventually eliminated in favor of a market-based single rate have not come to pass).

¹⁴⁶ *Further Notice*, 32 FCC Rcd at 2478, para. 104; *2013 VRS Reform Order*, 28 FCC Rcd at 8707-08, para. 222.

¹⁴⁷ See *infra* paras. 74-76. In general, based on the limited response to our general inquiry regarding the possible use of pricing benchmarks (outside the reverse auction context), we conclude there is insufficient information in the record concerning the appropriate use of or potential sources for pricing benchmarks for the Commission to consider adopting such benchmarks at this time. For example, although Sorenson compares VRS rates with VRI rates in its discussion of Tier III, it argues that the Commission should not use VRI rates as a basis for setting VRS rates because the services are not comparable. See Sorenson Comments at 41-42. Further, no party supports the alternative of setting rates based on pricing benchmarks developed through the Commission’s neutral video communications platform.

¹⁴⁸ Even Sorenson agrees that the Commission “has correctly abandoned the auction methodology that it proposed in its 2013 NPRM.” Sorenson Comments at 64, n.159.

5. Tier Structure and Levels

49. *Emergent rate.* We adopt our proposal to add an emergent rate to the current tiered rate structure, effective from July 1, 2017, through June 30, 2021, applicable solely to providers that have no more than 500,000 total monthly minutes as of July 1, 2017.¹⁴⁹ Although commenters express mixed views on this approach, we conclude that a separate rate structure for such providers is appropriate for a limited period to take into account the generally much higher cost of service for very small providers,¹⁵⁰ encourage new entry into the program, and give such providers and new entrants appropriate incentives to grow.¹⁵¹ Rather than view an emergent rate as a subsidy for providers that have been unable to attract users,¹⁵² we believe that this approach recognizes the still unbalanced structure of the VRS industry, as well as the incompleteness of VRS reforms intended to enhance competition. In light of the apparently fragile current state of VRS competition and the per-minute cost differentials, we conclude it would be unwise at this time to subject two of the current four competitors to the dramatic rate reductions that would be necessary to fit them under the same tiered rate structure as the other two, much larger providers. Further, as the Commission has previously noted, smaller providers may offer service features that are designed for niche VRS market segments or that may not be available through other providers and that are helpful in meeting the specific needs of particular VRS consumers.¹⁵³ By providing an emergent rate, we can increase the likelihood that, in the near term, even if no new entrants arrive, consumers can continue to select a service provider from four competitors instead of two.¹⁵⁴ In summary, this rate is a reasonable, temporary measure to extend the window of opportunity for new entrants, as well as for existing providers whose allowable costs currently exceed the Tier I compensation rate.¹⁵⁵ In order to maintain incentives for growth and avoid subjecting emergent providers to a sudden drop in the rate applicable to all their minutes when they reach the 500,000-minute ceiling, we also provide that providers who are initially subject to the emergent rate and who then generate monthly minutes exceeding 500,000 shall continue to be compensated at the otherwise applicable emergent rate (rather than the Tier I rate) for their first 500,000 monthly minutes, until the end of the four-year rate plan, i.e., until June 30, 2021. Such providers shall be compensated at the otherwise applicable Tier I rate for monthly minutes between

¹⁴⁹ See *Further Notice*, 32 FCC Rcd at 2474, para. 92.

¹⁵⁰ See 2015-18 VRS Providers Cost and Demand Data Summary.

¹⁵¹ *Further Notice*, 32 FCC Rcd at 2474, para. 92.

¹⁵² Sorenson Comments at 50-51. In fact, there has been substantial growth in this sector. See 2014-16 VRS Providers Cost and Demand Data Summary; 2015-18 VRS Providers Cost and Demand Data Summary.

¹⁵³ For example, one of the smallest VRS providers reports that it specializes in handling VRS calls in Spanish and for people who are deaf-blind. GlobalVRS Comments at 7-8. A second small provider offers unique features geared to deaf-owned businesses. See 2015 VRS FNPRM, 30 FCC Rcd at 12981, para. 17 & n.45; Convo Comments at 5-6 (noting that it has made several advances in wireless technology, including mobile web-based videophones, video overlay, clickable phone numbers, Convo Lights Philips Hue call alert system, in-app video mail, and directories of deaf owned/operated entities built in the mobile videophone interface); see also Convo Reply Comments at 2.

¹⁵⁴ See *Further Notice*, 32 FCC Rcd at 2473-74, paras. 87-88, 92; Convo Comments at 10-11; GlobalVRS Comments at 7; GlobalVRS Reply Comments at 3 (disputing Sorenson's characterization of the small providers as seeking a subsidy, and asserting that such providers are reliant on a higher rate until the VRS market structure affords such providers a realistic opportunity to compete).

¹⁵⁵ Convo Comments at 10-11. Convo also suggests it will be multiple years before providers benefit from recent actions on interoperability and other previously adopted changes as support for the continued availability of the emergent rate in the near term. For these reasons, and in light of our goal of maintaining a multi-provider environment, we do not adopt USTelecom's suggestion that the emergent rate should be available only to new entrants (see USTelecom Reply Comments at 9). While no new entrants have materialized since 2011, the number of competitors has shrunk from six to four.

500,000 and 1 million.

50. For emergent providers, we adopt a \$5.29 per minute rate for each year of the four-year plan. This rate is advocated by the Non-Dominant Providers and recommended by the TRS Fund administrator for all four years of the plan.¹⁵⁶ We note that this rate is generally lower than the actual costs reported by emergent providers. However, to the extent that these providers have demonstrated the ability to show consistent, substantial growth over the past years, provider cost projections indicate that this rate will afford such providers a reasonable opportunity to meet their expenses and earn some profit. We expect that this opportunity should be enhanced with the implementation of provider interoperability and other competition-promoting measures, such as the development and publication of service quality metrics.

51. However, we do not intend that this rate structure continue to apply to any currently operating providers after the end of the four-year rate plan adopted in this Report and Order. Our decision here to adopt a new four-year rate plan with this particular rate structure is grounded in our experience in developments in the VRS market over the last four years. During the next four years, the provision of a special rate for emergent providers may not impose major costs on Fund contributors, but the likely benefits to consumers will also remain very limited unless these emergent companies manage to use this four-year window of opportunity to expand their market share.¹⁵⁷ Therefore, after four years, we intend that all existing providers, regardless of size, will be subject to the same rate structure (whether tiered or unitary) under the compensation scheme that then takes effect.

52. *Tiers I-III.* We also adopt the proposed tier structure, in which a provider's monthly minutes up to 1,000,000 will be included in Tier I, monthly minutes between 1,000,001 and 2,500,000 in Tier II, and all monthly minutes above 2,500,000 in Tier III, with the highest rate applicable to Tier I minutes and the lowest rate applicable to Tier III minutes.¹⁵⁸ The Non-Dominant Providers, who support the Commission's proposal, argue that economies of scale and attendant cost reductions necessary to operate at a significantly lower Tier III reimbursement rate are not achieved until a provider reaches approximately 2.5 million minutes per month.¹⁵⁹ In contrast, Sorenson repeats the assertion of its expert in the 2012-13 rulemaking that economies of scale related to "queuing efficiencies" for VRS are largely exhausted after 250,000 monthly minutes.¹⁶⁰ Sorenson, however, does not proffer any new evidence regarding scale economies, including, e.g., for administrative costs, which may take on special significance in a closely regulated environment such as VRS.¹⁶¹ As Sorenson acknowledges,

¹⁵⁶ 2017 TRS Rate Filing at 42. This rate is also recommended by the TRS Advisory Council. *Id.*; *see also* Non-Dominant Providers Comments at 8; Convo Comments at 10. Sorenson, which opposes establishing an emergent rate, does not comment on the amount of the rate. *See* Sorenson Comments at 50-51.

¹⁵⁷ *See* Convo Comments at 23 (recognizing that this opportunity is not indefinite and that we must attain sustainability at the end of a four-year period).

¹⁵⁸ *See Further Notice*, 32 FCC Rcd at 2474, paras. 90-91. We do not discount the likelihood of significant economies of scale at the 500,000 level, where the Commission set the Tier I-II boundary in 2013. However, given that we have created a separate rate for emergent providers with less than 500,000 monthly minutes, it does not seem necessary to perpetuate a separate tier for the 1st 500,000 monthly minutes of other providers.

¹⁵⁹ Non-Dominant Providers Comments at 5.

¹⁶⁰ *See* Sorenson Comments at 52-53. *****BEGIN HIGHLY CONFIDENTIAL*****

*****END HIGHLY CONFIDENTIAL*****

¹⁶¹ *See* Furchtgott-Roth Report at 9, para. 18(e) (opining that "[t]he large fixed cost of regulation imposes substantial burdens on smaller firms," and that the Commission's regulations "disproportionately disadvantage the smaller VRS providers that lack the advantages of scale available to the largest provider"). Further, even if such administrative

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administrative and marketing costs reported by smaller firms are substantially higher on a per-minute basis than those incurred by the largest firm.¹⁶² Based on real-world evidence, which consistently shows the existence of substantial disparities among the per-minute costs incurred by VRS providers, which are broadly in-line with the similarly wide disparities in their volumes of minutes, we conclude that there are likely to be substantial economies of scale in administrative costs, marketing, and other areas.¹⁶³

53. In any event, the specific theoretical contours of scale economies in the VRS industry are of limited relevance to our task. As we found in the *2013 VRS Reform Order*, regardless of whether the persistent cost differences between the largest and lowest-cost VRS provider and its smaller competitors are due to economies of scale or to other reasons, their actual existence is undisputed and must be taken into account.¹⁶⁴ Further, as we have explained above, the record indicates that the Commission's prior expectation that smaller VRS competitors could substantially improve their efficiency over the last four years has not been fulfilled. To maintain a competitive environment for the near term, therefore, our most realistic option is to set compensation rates that allow the few remaining VRS competitors an additional period of time to offer a competitive alternative to the lowest-cost provider, while reforms continue to be implemented. In this context, our primary concern is not to identify the exact extent of scale economies but to ensure that tiers reflect the disparate sizes and cost structures of current competitors.¹⁶⁵ Further, as we also recognized in 2013, significant potential harm to competition could result if the rate tier boundaries are too low and prevent smaller competitors from remaining in the market, while if we set the boundaries too high the only consequence will be that smaller, less efficient competitors may remain in

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costs are not absolutely fixed, Furchtgott-Roth's submission persuasively suggests that they are likely to increase at a substantially slower rate than variable costs that increase proportionately with traffic volume. The analysis submitted by Sorenson in 2012, which attempted to show otherwise, relied on the simplifying assumption that costs are either absolutely fixed or absolutely variable, which may have distorted its results. See Sorenson, Comments, App. A, Declaration of Michael L. Katz, paras. 41-44, 93-98, CG Docket Nos. 10-51 and 03-123 (filed Mar. 9, 2012).

¹⁶² Sorenson Comments at 55.

¹⁶³ Sorenson cites a case where one VRS provider (Company A) consistently has more minutes than another (Company B) in roughly the same size category, but also has higher costs per minute, and contends that this example rules out any conclusion that there are significant economies of scale above 1 million minutes. Sorenson Reply Comments at 19-20; see also Letter from John T. Nakahata, Counsel to Sorenson Communications, LLC, to Marlene H. Dortch, Secretary, FCC, at 2 (filed May 4, 2017) (Sorenson May 4 *Ex Parte*). We do not believe this one example permits such a conclusion, given the otherwise consistent overall pattern of relationships between volume of minutes and per-minute costs. It does not seem unusual that there could be significant differences in efficiency, due to quality of management or other non-scale factors, between two companies of relatively similar size, notwithstanding that both companies' per-minute costs are relatively closer to each other than to the cost structures of those VRS providers at the far ends of the size spectrum. Further, Sorenson's claim that the per-minute costs of Company B are closer to the per-minute costs of another, much larger provider than to the per-minute costs of Company A is not supported by the most recent cost data, which includes revisions and corrections of some companies' data. See 2015-18 VRS Providers Cost and Demand Data Summary (based on data reported as of April 2017); see also *supra* note 88 (comparing all VRS providers' reported per-minute expenses); Sorenson May 4 *Ex Parte* at 2 (citing the 2014-16 VRS Providers Cost and Demand Data Summary, based on data reported as of March 2016).

¹⁶⁴ *2013 VRS Reform Order*, 28 FCC Rcd at 8700, para. 203; see also 2014-16 VRS Providers Cost and Demand Data Summary; 2015-18 VRS Providers Cost and Demand Data Summary. The record remains inconclusive on the precise scope and economic significance of scale economies. It may very well be the case that providers achieve substantial efficiencies in some cost categories at a particular low monthly minute number threshold, while other costs may be reduced only after a provider is providing millions of VRS minutes per month. See Sorenson Comments at 52-53; Non-Dominant Providers Comments at 5.

¹⁶⁵ *2007 TRS Compensation Methodology Order*, 22 FCC Rcd at 20162-62, para. 52-53.

the market longer than would otherwise be the case, resulting in somewhat higher expenditures from the Fund.¹⁶⁶ In 2013, in the interest of maintaining for VRS consumers a choice of service providers and diverse features, we concluded that the better approach was to strike a balance in favor of setting rate tier boundaries on the high side. With the intervening attrition in the number of VRS competitors, our preference is even greater for striking a balance that emphasizes preserving competition.

54. With this in mind, we expand the Tier I boundary to 1,000,000 minutes, in order to ensure that the “emergent” providers, as well as any new entrants, as they grow large enough to leave the “emergent” category, will be subject to a rate that reflects their size and likely cost structure and that is appropriately lower than the marginal rate applicable to larger and more efficient providers. Tier I, which also applies to the first 1,000,000 minutes of each larger provider, allows us to set a rate that is high enough to ensure that each provider is able to cover its relatively fixed, less variable costs. We expand the Tier II boundary, as well, to 2,500,000 minutes, for similar reasons. Expanding the Tier II boundaries, which applies to the minutes of all providers in excess of the 1,000,000-minutes threshold and up to the 2,500,000-minutes ceiling, enables us to set a rate that is appropriately lower than the Tier I rate, but higher than the rate for Tier III, which will currently apply only to the largest provider, whose per-minute costs are far lower than any other provider’s.¹⁶⁷ The Tier II rate can thus be set low enough to ensure that providers with more than 1,000,000 minutes are not compensated far in excess of their allowable costs, but high enough to ensure that such providers have an incentive to continue providing additional minutes of service. By increasing the upper boundary of this tier, as well as Tier I, we also limit any risk of eroding a provider’s incentive to continue growing as its monthly minutes approach a tier boundary.¹⁶⁸ The lower Tier III rate, in turn, will appropriately be the marginal rate for the largest, lowest-cost

¹⁶⁶ 2013 VRS Reform Order, 28 FCC Rcd at 8700-01, para. 204.

¹⁶⁷ See 2015-18 VRS Providers Cost and Demand Data Summary. Sorenson asserts that with rate tiers, the Commission “may be arbitrarily distorting the market by providing some providers with a higher incremental rate for added minutes, which can then support higher wages for additional interpreters, while cutting the incremental rate to another provider so that it has lower incremental revenues for those same minutes, and thus cannot pay a comparable amount to another interpreter to handle the same conversation minute.” Sorenson July 3 *Ex Parte* at 2-3. Given the disparities in per-minute costs between VRS providers of disparate sizes, we believe it is reasonable to apply a tier structure that compensates all providers at the same rate for all minutes for all minutes falling within the same tier. See *supra* paras. 31, 39. While this approach results in different incremental compensation rates (as well as average compensation rates) applying to providers with substantially different cost structures, see *supra* paras. 52-53, we believe our approach is reasonable in light of (among other things): (i) our commitment to revisit the applicable rates after the four-year period; and (ii) the twin statutory goals of promoting efficiency while also ensuring functional equivalence by allowing consumers to choose from multiple VRS providers that compete based on quality of service. We also believe it is unlikely that any imperfections in the tiered rate structure and rate levels that we set for a four-year period will deter a VRS provider from taking steps to improve its efficiency, including in determining the wages it pays to video interpreters. See *supra* para. 38. Regarding interpreter compensation generally, we note that, while Sorenson has asserted that its competitors are paying interpreters above-market wages (and Sorenson’s competitors have made the same claim regarding Sorenson, Non-Dominant Providers Comments at 9), no factual evidence—only advertising come-ons using carefully qualified language—has been presented to support these claims. See, e.g., Sorenson Reply Comments at 29, Exhs. 4, 5 (submitting ZVRS advertisements stating “Choose Z and earn *potentially* \$50 an hour or more” (emphasis added) and offering a weekly \$500 bonus conditional on meeting a detailed set of performance criteria). We are unaware of any evidence in the providers’ annual reports, or elsewhere, demonstrating that interpreter salaries and benefits paid by ZVRS and Purple are significantly higher, on a per-interpreter or per-hour-of-employment basis, than those paid by Sorenson. Further, under the rates adopted herein, Sorenson is likely to continue earning higher per-minute operating margins than any of its competitors, see *infra* notes 174 & 176; therefore, we do not perceive a significant risk that Sorenson’s competitors would be able to pay wages that distort the CA labor market.

¹⁶⁸ See *supra* para. 38.

provider.¹⁶⁹

55. *Application of rate tiers to commonly owned providers.* Sorenson argues that if rate tiers are adopted, they should apply to subsidiaries of a common corporate parent on the same basis as if the two subsidiaries were consolidated.¹⁷⁰ ZVRS, which currently recently merged with Purple, however, argues that the tiered rate structure should not be applied in such a way as to force it to consolidate the two companies before it is required to do so under the terms of a consent decree it recently executed with the Enforcement Bureau, i.e., for a period of three years.¹⁷¹

56. As Sorenson points out, application of the tiered rate structure to separate entities of the same corporate parent could in fact create undesirable incentives to exploit the tier structure by creating multiple subsidiaries for the provision of VRS. We agree that the VRS compensation system should be designed, as far as possible, to avoid such perverse incentives. In this regard, we note that our rules require any entity wishing to provide VRS to first obtain certification from the Commission to do so.¹⁷² This requirement, adopted in 2011, ensures direct Commission oversight of each entity approved to provide VRS, enabling the Commission to prevent the creation of subsidiaries for the sole purpose of securing higher VRS compensation through “double-dipping” application of a tiered rate.

57. With respect to the situation now before us concerning ZVRS, however, we note that the consent decree that authorized the merger between ZVRS and Purple specifically includes language providing that the two entities will continue to operate and submit requests for compensation payments as separate VRS providers, and will be treated as separate entities for compliance purposes, for up to 36 months after the effective date (i.e., until February 15, 2020), after which they will consolidate the operations of the two VRS providers.¹⁷³ As applied here, that determination means that the two companies will be treated as separate entities for purposes of the tiered rate structure that we are adopting today until February 14, 2020, or until such time that these companies consolidate their operations. After February 14, 2020, or from the date of consolidation if it takes place earlier, these companies will be treated as a single provider for purposes of the tiered rate compensation structure. To ensure compliance with this outcome, we direct ZVRS to provide the Commission with 60 days notice prior to such consolidation.

¹⁶⁹ Rolka Loube recommends merging the proposed Tiers I and II into a single Tier I, applicable to all of a provider’s minutes up to 2,500,000. *See* 2017 TRS Rate Filing at 41-42. Rolka explains that this approach removes any incentive for ZVRS to delay the integration of its two VRS subsidiaries. *Id.*; *see also infra* paras. 55-57. We conclude that the benefits of maintaining a three-tiered rate structure, described in the text above, outweigh any adverse effects of such an incentive, especially because there is a February 15, 2020 deadline for ZVRS to consolidate the two subsidiaries. *See infra* para. 57.

¹⁷⁰ Sorenson Reply Comments at 23-24 (it would be arbitrary and capricious to allow two subsidiaries of the same corporate parent to each receive an allotment of Tier I and Tier II minutes). The TRS Fund administrator also raised concerns over the tiered rates structure incentivizing commonly-owned subsidiaries from integrating their businesses by allowing such subsidiaries to both recover Tier I rates for their first 1,000,000 minutes. *See* 2017 TRS Rate Filing at 41-42.

¹⁷¹ Letter from Gregory Hlibok, Chief Legal Officer, ZVRS Holding Company to Marlene H. Dortch, Secretary, FCC, at 1-2 (filed May 30, 2017) (ZVRS May 30 *Ex Parte*).

¹⁷² *See Structure and Practices of the Video Relay Service Program*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 5545 (2011) (prohibiting VRS companies from engaging any third party entity to provide call center functions on its behalf, unless that third party is also an eligible provider under our rules); 47 CFR 64.606; *Structure and Practices of the Video Relay Service Program*, Second Report and Order, 26 FCC Rcd 10898 (2011) (amending the Commission’s process for certifying Internet-based TRS providers).

¹⁷³ *Purple Consent Decree*, 32 FCC Rcd at 1615-16, paras. 16-17.

58. *Rate period and adjustments.* We conclude that, as with the prior rate plan, the new rate plan should be four years in duration. 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.¹⁷⁴ 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. In the *Further Notice*, we proposed that compensation rates would gradually decline over four years in increments adjusted every six months¹⁷⁵—in lieu of the one year schedule that applies to other TRS rates, following the approach taken in 2013 to minimize rate shock to providers.¹⁷⁶ Rolka Loube reports that the iTRS Advisory Council recommends annual, rather than six month rate adjustments during the next four-year rate period to maintain industry stability.¹⁷⁷ USTelecom also supports adjusting the rates for each of the tiers on an annual basis, contending that six-month intervals would be administratively burdensome for contributors to the TRS Fund.¹⁷⁸ We conclude that, given the lack of support for continuing six-month adjustments, we should adopt the administratively simpler approach of having rate adjustments occur annually over the next four-year rate period.

59. *Rate Levels.* In setting rate levels, there are a variety of rates that could reasonably be set within the ranges suggested in the *Further Notice*.¹⁷⁹ We seek to set the rates for these tiers to limit the likelihood that any provider's total compensation will be insufficient to provide a reasonable margin over its allowable expenses, and to limit the extent of any overcompensation of a provider in relation to its allowable expenses and reasonable operating margin. Further, we seek to avoid any risk of setting a rate for any tier that is either below the marginal cost of a provider subject to that tier or excessively above such marginal cost.

60. *Tier I Rate Level.* For this tier, the *Further Notice* sought comment on a range of possible rates—from \$4.06 to \$4.82 for the first year and from \$3.74 to \$4.82 for the fourth year. We conclude that the current rate level of \$4.06 per minute (in conjunction with the \$3.49 rate currently

¹⁷⁴ See 2nd TRS Order, 8 FCC Rcd at 1806, para. 25 (1993) (noting that the use of rates based on averaged provider costs, if recalculated every year, could leave some providers without adequate compensation, even if they are reasonably efficient).

¹⁷⁵ *Further Notice*, 32 FCC Rcd 2474, para. 92.

¹⁷⁶ 2013 VRS Reform Order, 28 FCC Rcd at 8703-04, para. 212.

¹⁷⁷ 2017 TRS Rate Filing at 36. As the non-dominant providers all advocate uniform rate levels for the duration of the four-year plan, they did not address this issue in their comments. Non-Dominant Providers Comments at 4-5, 8; ZVRS Comments at 1; Convo Comments at 3, 11.

¹⁷⁸ See USTelecom Reply Comments at 8.

¹⁷⁹ In an *ex parte* letter, Sorenson calls the Commission's attention to "discrepancies" between the Rolka Loube cost data cited in the *Further Notice* and the data presented by ZVRS and Purple in *ex parte* letters submitted prior to the adoption of the *Further Notice*, stating that the latter data sets "influenced the rates discussed in the [*Further Notice*]." Sorenson May 4 Ex Parte at 2-3 (citing 2014-16 VRS Providers Cost and Demand Data Summary; Letter from Gregory Hlibok, Chief Legal Officer, CSDVRS, LLC d/b/a ZVRS, to Karen Peltz Strauss, FCC, at 3 (filed Feb. 15, 2017); Letter from Paul C. Besozzi, Counsel to Purple Communications, Inc., to Karen Peltz Strauss, FCC, at 5 (filed Feb. 15, 2017)). In seeking comment on a range of possible compensation rates, in addition to the current rates and the rates proposed by the Non-Dominant Providers, the *Further Notice* specified possible rate levels based on the Rolka Loube cost data then available—not the February 2017 *ex parte* letters of ZVRS and Purple. *Further Notice*, para. 94 & nn. 234-36. Since then, updated cost data has been reported. For the rates adopted in this Report and Order, in order to calculate the likely operating margins of VRS providers, we use the updated cost and demand data reported by the providers as of April 2017 (including revised projections submitted by Sorenson for 2017). See 2015-18 VRS Providers Cost and Demand Data Summary.

applicable to a provider's minutes in excess of 1 million)—is too low to permit all providers to meet their allowable expenses and earn a reasonable operating margin.¹⁸⁰ Instead, we adopt the rate of \$4.82 per minute recommended by the Non-Dominant Providers, which will apply to all four years of the rate period.¹⁸¹ A Tier I rate at this level will allow all providers subject to it to recover their allowable expenses and earn an operating margin within the zone of reasonableness. This Tier I rate level also provides an appropriate incentive for emergent providers to grow their businesses beyond 500,000 minutes.¹⁸²

61. *Tier II.* We adopt a Tier II rate of \$3.97 per minute for all four years of the rate period. For this tier, the *Further Notice* sought comment on a range of possible rates—from \$3.49 to \$4.35 for the first year and from \$3.08 to \$4.35 for the fourth year. The \$3.97 rate we adopt is roughly in the middle of the range of Tier II options for the first year. We conclude that the \$4.35 per minute advocated by the Non-Dominant Providers¹⁸³ is higher than is necessary to allow providers to recover their allowable costs and earn a reasonable operating margin. On the other hand, the current rate level of \$3.49,¹⁸⁴ combined with the current Tier I level, is too low to permit all providers to earn a reasonable operating margin. Based on the data reported by providers, we believe applying this rate for all four years of the rate period, in conjunction with other applicable rates, will allow all providers subject to this rate to recover their allowable expenses and earn an operating margin within the zone of reasonableness we have adopted.¹⁸⁵ At \$3.97, this rate is also above the allowable expenses per minute of any provider subject to the Tier II rate, thus minimizing the risk of deterring such a provider from increasing its VRS minutes.¹⁸⁶ At the same time, the Tier II rate, is at a level that, in conjunction with other applicable rates, limits any overcompensation of providers subject to it.

62. *Tier III.* For this tier, the *Further Notice* sought comment on a range of possible rates—from \$2.83 to \$3.49 for the first year and from \$2.63 to \$3.49 for the fourth year. The Non-Dominant Providers and the TRS Fund administrator both propose a Tier III rate of \$2.83 for all four years, while Sorenson advocates a rate no lower than \$3.73. We conclude that the rate level for Tier III should be \$3.21 in the first year and \$2.63 per minute in the final year. The \$2.63 rate is higher than the average allowable expenses per minute for the current provider subject to this tier,¹⁸⁷ which means that, in conjunction with other applicable rates, it will allow providers that fall into this tier to earn an operating margin over allowable expenses that is within the zone of reasonableness we have adopted.¹⁸⁸ However,

¹⁸⁰ See 2015-18 VRS Providers Cost and Demand Data Summary.

¹⁸¹ See Non-Dominant Providers Comments at 8. Sorenson does not propose a specific rate for Tier I.

¹⁸² To the extent that emergent providers become subject to Tier I, we believe it is likely that they will have improved their efficiency to the point that they will satisfy this criterion. We believe that this is particularly likely given that we also allow emergent providers that exceed the 500,000 boundary for the emergent rate to continue receiving compensation at that rate for the first 500,000 monthly minutes, while being subject to the Tier I rate for the next 500,000 minutes.

¹⁸³ The Non-Dominant Providers advocate the application of a \$4.35 Tier II rate for all four years of the rate period. Non-Dominant Provider Comments at 8. As with Tier I, Sorenson does not propose a specific rate for Tier II.

¹⁸⁴ \$3.49 is the current Tier III rate, but this rate level also would be applicable to the restructured Tier II if current rate levels were maintained going forward.

¹⁸⁵ In addition, we believe this rate is high enough so that any provider approaching the Tier I boundary will not lose the incentive to continue growing across the boundary into Tier II.

¹⁸⁶ See *supra* note 122.

¹⁸⁷ See *supra* note 122. This calculation takes into account Sorenson's recently revised annual cost data. See 2015-18 VRS Providers Cost and Demand Data Summary.

¹⁸⁸ See 2015-18 VRS Providers Cost and Demand Data Summary.

because this rate is a substantial reduction from the current Tier III rate, we conclude that a gradual transition to reach this rate level is appropriate. Accordingly, we adopt a rate of \$3.21 per minute for Fund Year 2017-18, the first year of the rate plan period. This continues the ongoing adjustment of the Tier III rate, under the previous rate plan, under which it dropped by \$.38 per year (\$.19 every six months), as the initial rate of \$3.21 is \$.38 below the approximate average (\$3.59) of the \$3.68 and \$3.49 Tier III rates applicable during the 2016-17 Fund Year. The Tier III rate will be reduced by another \$0.38 in Fund Year 2018-19, to a rate of \$2.83 per minute. For the final two years, the Tier III rate will be \$2.63 per minute. We believe this staged transition provides more rate stability than the approach recommended by the TRS Fund administrator, which would generate approximately the same total compensation for Tier III providers by applying a \$2.83 rate to all four years of the rate plan period.¹⁸⁹

63. Although Sorenson asserts that a proper analysis of VRS costs indicates the Commission should set a single rate, or alternatively a Tier III rate,¹⁹⁰ no lower than \$3.73 per minute (even if CPE costs are excluded),¹⁹¹ we do not rely on Sorenson's analysis for several reasons. First, in computing industry average costs, Sorenson uses an average of projected costs for two years, 2017 and 2018. Our review of industry cost projections in prior TRS rate filings shows that projections for the second year out (in this case, 2018) historically have had a poor record of accuracy.¹⁹² Second, although excluding CPE expenses, Sorenson's cost calculation still includes costs that are not allowable (numbering costs and the imputed value of intellectual property), as well as a 15.9% operating margin, which is outside the zone of reasonableness we have adopted.¹⁹³ As noted above,¹⁹⁴ we conclude that an operating margin of 10%, which falls approximately midway between the 7.5% to 12.35%, would be a more reasonable operating margin for VRS providers.

64. *Aggregate effect of the rate levels adopted.* In sum, we conclude that the approach adopted here effectively balances the Commission's overarching goal of maintaining competition and consumer choice with our obligation to administer the Fund in an efficient manner. In this regard, we note that, when aggregated, were the tiered compensation rates currently in effect to be extended for four more years, assuming the present growth of this service, compensation payments from the TRS Fund to VRS providers would be expected to total (over these four years) approximately \$1,887,000,000. This

¹⁸⁹ TRS Annual Rate Filing at 43. The Non-Dominant Providers also support the adoption of a \$2.83 per minute rate for Tier III for all four years of the rate period. Non-Dominant Provider Comments at 8.

¹⁹⁰ Sorenson claims that the Tier III rate is likely to become the single rate if there is a transition from a tiered structure to a single unified rate. Sorenson Comments at 17.

¹⁹¹ *Id.* at 18; Sorenson Reply Comments at 11, 15.

¹⁹² *See infra* note 222.

¹⁹³ Sorenson Comments at 18; Sorenson Reply Comments at 11-13. In its most recent *ex parte* letter, Sorenson appears to modify its position on a sustainable rate level for Tier III, stating that "Sorenson's true costs of providing VRS . . . yield a sustainable Tier III rate of *****BEGIN HIGHLY CONFIDENTIAL*** [REDACTED] ***END HIGHLY CONFIDENTIAL***** per minute." Sorenson June 28 *Ex Parte* at 6. This rate, which appears to use Sorenson's per-minute allowable expenses (rather than industry average allowable expenses) as the starting point, remains flawed because it includes recovery of the same non-allowable costs and excessive operating margin described in the text. *Id.* n.21. Sorenson also complains that other parties' *ex parte* filings also seek rates sufficient to cover non-allowable costs. *Id.* at 3 & n.5. In this Report and Order we do not set rates based on any provider's non-allowable costs. Again, however, we have set the rates for Tiers I, II, and III such that any of the existing providers subject to these rates will be able to recover an operating margin, over allowable expenses, that is above the zone of reasonableness we have adopted. *****BEGIN HIGHLY CONFIDENTIAL*** [REDACTED] ***END HIGHLY CONFIDENTIAL***** *See* 2015-18 VRS Providers Cost and Demand Data Summary.

¹⁹⁴ *See supra* para. 26.

figure would swell to approximately \$1,925,000,000, were we to adopt the single-rate approach proposed by Sorenson at the lowest rate that Sorenson deems acceptable—\$3.73 per minute. This would not only result in an increase of about \$38 million over extending the current rates, but also would stifle competition in the VRS market by likely eliminating all but one provider.¹⁹⁵ By contrast, under the tiered rate plan adopted today, we expect that the total cost to the TRS Fund will be approximately \$1,835,000,000, which will produce a cost savings of approximately \$52 million compared to current rates, and preserve the competitive VRS environment that consumers now enjoy.

6. Other Compensation Matters

65. *Audits for providers receiving the emergent rate.* Regarding whether to condition the applicability of the emergent provider rate to a VRS provider on completion of a special audit of such provider's costs,¹⁹⁶ only GlobalVRS and Convo comment on the issue and both oppose such a special audit requirement.¹⁹⁷ We conclude that the existing, more generally applicable rules regarding audits are sufficient to address any accuracy issues regarding emergent providers' costs. Therefore, we decline to adopt a separate, mandatory audit requirement for providers receiving the emergent rate. However, we remind all current and potential VRS providers that their costs may be subject to audit at any time to assure the accuracy and integrity of TRS Fund compensation rates and payments.¹⁹⁸

66. *Exogenous costs.* In the *Further Notice*, we sought comment on what categories of costs, including costs resulting from improved services, should be recoverable as exogenous costs (*i.e.*, outside the average-cost recovery reflected in generally applicable rates).¹⁹⁹ The Non-Dominant Providers advocate recovery of exogenous costs through the process adopted by the Commission in 2007, whereby individual providers may submit documentation to justify additional reimbursement of exogenous costs.²⁰⁰ In general, we find the 2007 model for exogenous cost recovery procedurally sufficient for addressing provider requests for compensation for exogenous costs.²⁰¹ Substantively, given that the tiered rates set in this Report and Order are intended to reduce VRS compensation rates in the direction of cost-based levels that have yet to be reached, we adopt the following conditions to ensure that exogenous cost recovery does not result in increasing the disparity between Fund expenditures and actual provider costs. Providers may seek compensation for well-documented exogenous costs that (1) belong to a category of

¹⁹⁵ See *supra* para. 32. These projections of total compensation payments are developed based on the average of actual industry minutes for 2016 and projected industry minutes for 2017. 2015-18 VRS Providers Cost and Demand Data Summary. For non-emergent providers, we assume that all annual minutes up to 12,000,000 are Tier I minutes, all annual minutes between 12,000,001 and 30,000,000 are Tier II minutes, and all annual minutes over 30,000,000 are Tier III minutes.

¹⁹⁶ See *Further Notice*, 32 FCC Rcd at 2477, para. 101.

¹⁹⁷ Convo Comments at 15-16; GlobalVRS Comments at 7 n.13.

¹⁹⁸ 47 CFR § 64.604(c)(5)(iii)(D)(6).

¹⁹⁹ *Further Notice*, 32 FCC Rcd at 2477, para. 101.

²⁰⁰ Non-Dominant Provider Comments at 10-11. GlobalVRS separately recommends a similar model wherein VRS providers would submit cost estimates with support data for exogenous costs subject to: (1) costs being correlated directly to a specific Commission reform that requires a significant change in provider operations; (2) Commission established reform-specific cost reimbursement guidelines; (3) a fixed time frame for seeking reimbursement; (4) the provision of full documentation supporting each cost associated with the reform for which the provider seeks reimbursement with explanation of why cost was assumed and why no alternatives existed that would not have required company to make expenditures; (5) review of each request by the Fund Administrator; (6) an explanation for any request denials with an opportunity to appeal. GlobalVRS Comments at 8-9 n.17.

²⁰¹ See *2007 TRS Rate Methodology Order*, 22 FCC Rcd at 20168, para. 72.

costs that the Commission has deemed allowable,²⁰² (2) result from new TRS service requirements or other causes beyond the provider's control,²⁰³ (3) are new costs that were not factored into the applicable compensation rates, and (4) if unrecovered, would cause a provider's current allowable-expenses-plus-operating margin to exceed its VRS revenues.²⁰⁴

67. *Effective date.* In the *Further Notice*, we sought comment on whether to make the initial rates we adopt effective as of January 1, 2017.²⁰⁵ Non-Dominant Providers express support for this approach arguing that it will provide additional funding to help stabilize their operations.²⁰⁶ VRS compensation rates historically have been set prospectively and are normally not adjusted retrospectively unless an error has been made.²⁰⁷ In establishing the rates applicable to the current period, the Commission acted appropriately based on the record, and we are not aware of any compelling reason to reconsider those ratemaking decisions. Further, while the Commission found it necessary in 2016 to retrospectively apply an emergency rate freeze with respect to the smallest VRS providers,²⁰⁸ we do not find that a comparable emergency exists now necessitating further adjustment of rates for the same period for which they were already adjusted once on an emergency basis.²⁰⁹ Accordingly, we decline to give the

²⁰² See *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; E911 Requirements for IP-Enabled Service Providers*, Report and Order and Further Notice of Proposed Rulemaking, 23 FCC Rcd 11591, 11626-27, para. 98 (2008) (*First Internet-Based TRS Numbering Order*) (permitting recovery of certain additional exogenous costs "for which the providers generally may be reimbursed").

²⁰³ *2007 TRS Rate Methodology Order*, 22 FCC Rcd at 20160, para. 44. Under this test, contrary to GlobalVRS's assertion, costs incurred for Spanish-language interpretation would not be eligible for exogenous cost treatment because such costs have not resulted from a new regulatory requirement. See GlobalVRS Comments at 8.

²⁰⁴ This requirement is necessary, because unlike in the context where exogenous cost recovery has previously been allowed pursuant to the *2007 TRS Rate Methodology Order*, the four-year rate plan adopted in this Report and Order is not initialized with rates at cost-based levels. Rather, the initial rates are substantially *above* weighted-average allowable costs and the four-year period is intended to allow a gradual downward adjustment of rates to bring them closer to allowable costs. As a result, for some providers, exogenous cost adjustments may not be necessary to enable them to recover their reasonable costs.

²⁰⁵ *Further Notice*, 32 FCC Rcd at 2477, para. 102.

²⁰⁶ See Non-Dominant Providers Comments at 9-10. Convo separately expresses concern about the profound impact that it states the rate cuts before and after the expiration of the rate freeze have had on its operational stability, its functionality, and its ability to repay certain loans without resorting to "adverse capital restricting measures," and therefore urges making the emergent rate retroactive. Convo Comments at 12.

²⁰⁷ See, e.g., *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Structure and Practices of the Video Relay Service Program*, Order, 31 FCC Rcd 7246 (CGB 2016); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Structure and Practices of the Video Relay Service Program*, Order, 30 FCC Rcd 7063 (CGB 2015); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Structure and Practices of the Video Relay Service Program*, Order, 29 FCC Rcd 8044 (CGB 2014).

²⁰⁸ See *VRS Partial Rate Freeze Order*, 31 FCC Rcd at 2345, para. 14. In establishing rates for the next rate period, we are not faced with the same emergency situation that warranted the Commission retroactively freezing the VRS rates to previously assessed rates during the prior transition period.

²⁰⁹ Although ZVRS and Purple allege that the reduction in rates forced their companies to cut "research, development, and other procompetitive initiatives" which they claim are needed to maintain their market share, see ZVRS June 6 *Ex Parte* at 4; Letter from Gregory Hlibok, Chief Legal Officer, ZVRS, to Marlene H. Dortch, Secretary, FCC, Attach. at 4 (filed June 9, 2017), the situation presented here is not of a nature that is so urgent as to warrant a roll back in rates. Unlike the facts presented in 2016, which demonstrated an immediate risk that the smaller VRS providers might be unable to continue to provide service absent a freeze, there is no showing here that the applicable rates during for the 2016-17 Fund year precluded these companies from meeting their allowable costs to continue providing VRS, or that a roll back is necessary to enable them to continuing meeting such costs in Fund

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new rates retrospective effect back to January 1, 2017; rather, we direct that the rates we adopt today have an effective date of July 1, 2017.

68. We find good cause to set July 1, 2017, as the effective date for the rule changes adopting a new four-year rate plan in this order.²¹⁰ As explained above, the current rate plan scheduled to expire on June 30, 2017.²¹¹ Providers have been aware of this pending expiration since 2013,²¹² and have further been aware of the Commission's proposal to establish a new rate plan going forward.²¹³ To avoid unnecessary disruption to VRS providers' operations and to ensure the ability of consumers to continue to place and receive VRS calls, including, among other things calls to 911, doctors, and other important destinations, the Bureau recently acted to waive the June 30, 2017 expiration of the existing rates and directed Rolka Loube to continue compensating VRS providers at the prevailing rates, pending further action by the Commission.²¹⁴ The rates we adopt in this order have been updated to reflect the latest cost studies. Implementation of these updated rates is necessary to expeditiously promote the goals of the statute as laid out in the order, including the promotion of competitive service to ensure functionally equivalent service for people with hearing and speech disabilities. There is no reason not to follow through on our proposal in the *Further Notice* to make a seamless transition to these rates as of July 1, 2017. As we now take action to establish a new four-year rate regime, we direct Rolka Loube to compensate VRS providers at the applicable rates adopted herein for all compensable minutes of use incurred beginning July 1, 2017 (except as otherwise provided in note 217 below, with respect to certain Tier III minutes).²¹⁵ Given that minutes of use for the month of July have yet to be submitted for compensation, a true-up of compensation will be unnecessary and there will be no disruption of provider payments.²¹⁶ We also direct the Bureau to provide actual notice to known VRS providers by sending

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year 2017-18. See *VRS Partial Rate Freeze Order*, 31 FCC Rcd at 2341-42, para. 6 (citing Convo, CAAG/Star VRS, and GlobalVRS, Emergency Petition for a Temporary Nunc Pro Tunc Waiver at 3 (filed Nov. 25, 2015) (quoting Petitioners' statement that the rate reduction that was subject to the freeze would have "fundamentally undermine[d], if not jeopardize[d], the ability of the [petitioners] to continue to participate in the Commission's VRS program)."

²¹⁰ See 5 U.S.C. § 553(d) (requiring 30 days notice to the public for implementation of a federal agency's rule unless good cause exists to shorten this period).

²¹¹ See *supra* para. 6.

²¹² *2013 VRS Reform Order*, 28 FCC Rcd at 8705, para. 215.

²¹³ *Further Notice*, 32 FCC Rcd at 2473, para. 88.

²¹⁴ *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Structure and Practices of the Video Relay Service Program*, Order, DA 17-642, at para. 15-16 (CGB June 30, 2017) (*2017 TRS Rate Order*). The Bureau was clear that the waiver did not predetermine compensation rates for any particular time period or preclude a true-up of compensation. *Id.* at para. 15.

²¹⁵ Sorenson characterizes an immediate decrease to Tier III rates as a "flash-cut" that disrupts its ability to plan. See Sorenson July 3 *Ex Parte* at 3. As indicated above, in the *Further Notice* we specifically sought comment on whether to significantly decrease the Tier III rate for the initial period from \$3.49 to \$2.83 per minute. Thus, Sorenson has been on notice for over three months that a rate reduction was a distinct possibility. Furthermore, under the rate plan adopted herein for Tier III rates, the \$2.83 per minute rate for Tier III providers will not go into effect for almost one year, until July 1, 2018. Until that time, the Tier III rate decrease is substantially less (from \$3.49 per minute to \$3.21 per minute) than the alternative stated in the *FNPRM*.

²¹⁶ Nonetheless, to ensure that the release of this Report and Order after July 1 does not adversely affect any VRS provider, we will not apply the reduction in Tier III rates to any compensable minutes of use incurred between July 1 and the release date of this Report and Order. To implement this provision (given that minutes of use are compensated on a monthly basis), we direct Rolka Loube to compensate any provider with Tier III minutes in July 2017 at a rate of \$3.49 per minute for the first *X* Tier III minutes, where *X* equals the number of compensable minutes of use incurred between July 1 and the release of this Report and Order. So if a VRS provider has no Tier

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them a copy of this Order.

69. *Historical Cost vs. Projected Costs.* Although in the early years of VRS the Commission set VRS compensation rates using a methodology based on projected costs,²¹⁷ the Commission later found a substantial disparity between providers' projected costs and demand and actual costs and demand.²¹⁸ The Commission subsequently has given more prominence to consideration of actual, historical costs.²¹⁹ As we stated in the *2013 VRS Reform Order*, “[m]ulti-year rate plans . . . must have a defensible cost-based reference point from which to proceed.”²²⁰ For purposes of this Report and Order, a review of the past relationships between projected and actual costs indicates that the most reliable reference points for cost calculations when rates are set are the actual costs reported for the previous calendar year and the projected costs for the current calendar year.²²¹ The least reliable reference point is the projected costs for the year after the current year.²²² Accordingly, as a reference point for cost calculations for purposes of

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III minutes in July 2017, this provision will not affect it; if a provider has X or fewer Tier III minutes, then all such minutes will be compensated at the higher \$3.49 rate; and if a provider has more than X Tier III minutes, then it will receive \$3.49 per minute for the first X Tier III minutes and \$3.21 for all remaining Tier III minutes.

²¹⁷ See *2007 TRS Rate Methodology Order*, 22 FCC Rcd at 20160-61, para. 47.

²¹⁸ See *2010 TRS Rate Order*, 25 FCC Rcd at 8694, para. 9; see also *2013 VRS Reform Order*, 28 FCC Rcd at 8694-95, para. 189.

²¹⁹ See *2010 TRS Rate Order*, 25 FCC Rcd at 8690, para. 90 (setting rates based on averaging the current tiered rates and the TRS Fund administrator's proposed rates based on actual, historical costs); *2013 VRS Reform Order*, 28 FCC Rcd at 8696, 8703, paras. 191, 211 (setting rates using a combination of projected costs and actual, historical costs).

²²⁰ *2013 VRS Reform Order*, 28 FCC Rcd at 8695, para. 191. As an example, when permitting local exchange carriers to transition from rate-of-return to price-cap regulation the Commission generally requires the use of rate-of-return regulated rates or historical cost data as a reference point for initializing price-cap rates. *Id.* n.504 (citing *Joint Petition of Price Cap Holding Companies for Conversion of Average Schedule Affiliates to Price Cap Regulation and for Limited Waiver Relief*, Order, 27 FCC Rcd 15753 (2012)).

²²¹ For TRS ratemaking purposes, costs are reported by providers for calendar years, while rates are set for the “Fund Year,” which runs from July through June. Costs are reported in March with actual costs for the two immediately previous calendar years, and projected costs for the current calendar year and the next year out. A comparison of Rolka Loube's TRS rate filings over the last few years, summarizing provider costs for the period from 2013 to 2016, shows that, for three out of those four years, the current year's average per-minute cost was more accurately predicted by the previous year's actual average per-minute cost than by the current year's projected average per-minute cost. The projected average per-minute cost for the current year, in turn, was a more accurate predictor than the historical cost for the second previous year, which in turn was a more accurate predictor than the projected costs for the next year out. See Rolka Loube, *Interstate TRS Fund Payment Formula and Fund Size Estimate*, CG Docket Nos. 03-123, 10-51, at 19-20 (filed May 1, 2013), Rolka Loube, *Interstate TRS Fund Payment Formula and Fund Size Estimate*, CG Docket Nos. 03-123, 10-51 at 21 (filed Apr. 30, 2014); 2015 TRS Rate Filing at 23; Rolka Loube, *Interstate Telecommunications Relay Services Fund Payment Formula and Fund Size Estimate*, CG Docket Nos. 03-123, 10-51 at 27 (filed May 4, 2016); 2017 TRS Rate Filing at 38. (To ensure comparability, and to adjust for a provider's erroneous reporting of outreach and marketing costs, since corrected, this comparison is based on the “Total Cost” line of each of the tables on the cited pages of each filing, except for the 2017 TRS Rate Filing. For that filing, the numbers used in the comparison were those in the line “Total Cost” minus those in the line “Customer Premise Equipment.”)

²²² See *2013 VRS Reform Order*, 28 FCC Rcd at 8694-95, para. 189. Therefore, we do not accept Sorenson's argument that that rates should be based on the average of projected expenses for 2017 and 2018. See Sorenson Comments at 21-25.

this Report and Order we use the weighted average of each provider's actual costs and demand for 2016 and projected costs and demand for 2017.²²³

B. Other Matters

1. Server-Based Routing

70. *Background.* Under the TRS numbering rules, calls that involve multiple VRS providers are routed based on the information provided in the TRS Numbering Directory.²²⁴ Section 64.613(a) of the Commission's rules currently requires that the Uniform Resource Identifier (URI) for a VRS user's telephone number "shall contain the IP address of the user's device."²²⁵ To improve interoperability, however, the VRS Task Group of the SIP Forum completed a technical standard, the VRS Provider Interoperability Profile,²²⁶ which provides for the routing of inter-provider VRS and point-to-point video calls to a server of the terminating VRS provider rather than directly to a specific device.²²⁷ The technical standard thus specifies the use of call routing information that contains provider domain names, rather than user-specific IP addresses.²²⁸ To permit the implementation of this important interoperability technical standard,²²⁹ which has been incorporated by reference into the Commission's rules,²³⁰ it is necessary to amend the TRS Numbering Directory rule.²³¹

71. *Discussion.* All commenters support our proposal.²³² We conclude that this change will foster the implementation of interoperability, thereby enhancing functional equivalence.²³³ In addition,

²²³ We note that we have cross-checked these results against the past four years of historical cost and demand data for completeness.

²²⁴ The TRS Numbering Directory is sometimes referred to as the "iTRS database."

²²⁵ 47 CFR § 64.613(a)(2). For an IP Relay user's telephone number, by contrast, the rule specifies that the URI contain a "domain name that can be subsequently resolved to reach the user." *Id.*; see also generally *First Internet-Based TRS Numbering Order*, 23 FCC Rcd 11591; *Second Internet-Based TRS Numbering Order*, 24 FCC Rcd 791.

²²⁶ SIP Forum, US Video Relay Service (VRS) Provider Interoperability Profile, Version 15, SIP Forum Document Number: VRS US Providers Profile TWG-6-1.0 (Oct. 14, 2015) (VRS Provider Interoperability Profile), http://www.sipforum.org/component/option.com_docman/task.doc_download/gid.786/Itemid.261/; see also Letter from Richard Shockey, Chairman of the Board of Directors, SIP Forum, and Marc Robins, President and Management Director, SIP Forum, to Marlene H. Dortch, Secretary, FCC at 1 (filed Oct. 29, 2015). The VRS Task Group is described at <http://www.sipforum.org/content/view/404/291/> (last visited Feb. 17, 2017). The TRS Numbering Directory is a database that enables the routing of VRS and point-to-point video calls that originate and terminate with different VRS providers. See 47 CFR § 64.613.

²²⁷ VRS Provider Interoperability Profile § 9.1.1.

²²⁸ *Id.*

²²⁹ See generally *2013 VRS Reform Order*, 28 FCC Rcd at 8618, 8620, 8639-41, 8642-44, paras. 1, 40-44, 47-52 (strongly encouraging the Session Initiation Protocol (SIP) Forum's VRS Task Group to develop consensus technical standards to facilitate interoperability and directing Commission staff to support and participate in that process).

²³⁰ *2017 VRS Interoperability Order*, 32 FCC Rcd at 689-90, paras. 7-8.

²³¹ *Further Notice*, 32 FCC Rcd at 2480, para. 110.

²³² See, e.g., GlobalVRS Comments at 9-10 (notes that server-based routing will promote the use of "advanced off-the[-]shelf technologies that will limit any single provider from undermining competition through the use of proprietary technology"); Convo Comments at 19-20; Sorenson Comments at 75 (stating that server-based routing is essential to providing VRS in institutional environments, such as behind corporate firewalls); Consumer Groups Comments at 5.

²³³ See Convo Comments at 19-20; GlobalVRS Comments at 9; see also *Further Notice*, 32 FCC Rcd at 2480, paras. 112, 114.

allowing routing based on domain names will promote TRS regulation that “encourage[s] . . . the use of existing technology and do[es] not discourage or impair the development of improved technology,” as required by section 225(c)(2) of the Communications Act,²³⁴ and will improve the efficiency, reliability, and security of VRS and point-to-point video communications, thus advancing these important Commission objectives as well.²³⁵ We also find that server-based routing will not impair the Commission’s ability to prevent waste, fraud, and abuse in the VRS program.^{236 237}

2. Research and Development

72. We adopt our proposal in the *Further Notice* to direct the TRS Fund administrator, for the 2017-2018 TRS Fund year, and as part of future annual ratemaking proceedings, to include in proposed TRS Fund administrative costs for the Commission’s approval an appropriate amount for Commission-directed research and development (R&D).²³⁸ The Commission previously established a budget of \$3 million from the TRS Fund to be used for R&D projects to be overseen by the Commission.²³⁹ This initial amount allowed the Commission and its federal research agency partners to conduct a number of important research projects necessary to further the Commission’s multiple goals of ensuring that TRS is functionally equivalent to voice telephone services, improving the efficiency and availability of TRS, and complying with the Congressional mandate to ensure that services evolve with improvements in technology.²⁴⁰ In the *Further Notice*, the Commission asked whether it should continue to allocate such funding for future TRS Fund Years and sought comment on the specific purposes of such research and whether the benefits outweigh the costs to the TRS Fund.²⁴¹

²³⁴ 47 U.S.C. § 225(c)(2).

²³⁵ See VRSCA Comments at 3; Convo Comments at 19.

²³⁶ See Convo Comments at 19-20. Because it only allows VRS providers to use domain names in lieu of IP addresses for the *routing* of VRS calls, the proposed amendment will not affect providers’ existing obligations to provide the VRS user’s IP address as part of the *call detail* submitted for each VRS call for which compensation is requested from the TRS Fund, and to retain such information in their records for five years. 47 CFR § 64.604(c)(5)(iii)(D)(2)(v), (vi), (7). Such information is needed, for example, to ensure that compensation is not paid for calls originating from international locations. 47 CFR § 64.604(a)(7).

²³⁷ 47 CFR § 64.604(c)(5)(iii)(D)(2)(v), (vi), (7). Such information is needed, for example, to ensure that compensation is not paid for calls originating from international locations. 47 CFR § 64.604(a)(7). According to the providers, “[t]he switch from user IP addresses to provider domain names will not impair providers’ ability to determine whether a caller is in the United States. When a user places a call through his or her default provider, that provider will still know the user’s IP address, which is used to determine whether the call originates abroad. And for dial-around calls, section 9.2.2.2 of the [VRS Provider Interoperability Profile] provides that the VRS user’s default provider must communicate the user’s IP address to the dial-around provider and provides a mechanism for doing so. As a result, even after the switch to domain names, providers will still know every caller’s IP address, and there are no changes to billing instructions.” VRS Providers May 2016 *Ex Parte* at 1-2 (footnote omitted).

²³⁸ *Further Notice*, 32 FCC Rcd at 2486, para. 130.

²³⁹ *Technology Transitions et al.*, Order, Report and Order and Further Notice of Proposed Rulemaking, Report and Order, Order and Further Notice of Proposed Rulemaking, Proposal for Ongoing Data Initiative, 29 FCC Rcd 1433, 1482, para. 149 (2014) (*Technology Transitions Order*); see also *Further Notice*, 32 FCC Rcd at 2486, para. 129.

²⁴⁰ See *Technology Transitions Order*, 29 FCC Rcd at 1483, para. 150; *Further Notice*, 32 Rcd at 2486, paras. 129-30; see also 47 U.S.C. § 225(a)(3) (defining TRS as providing “functionally equivalent” telephone service for persons with hearing or speech disabilities), (d)(2) (requiring that the Commission’s regulations “do not discourage or impair the development of improved technology”).

²⁴¹ *Further Notice*, 32 Rcd at 2486, para. 130.

73. Several parties commented on this issue, with no party objecting to our proposal.²⁴² These funds will enable the Commission to ensure that TRS evolves with improvements in technology.²⁴³ Because the TRS Fund administrator previously submitted its recommended budget for the 2017-18 Fund Year²⁴⁴ without recommending a specific amount for R&D, we now allocate \$6.1 million from the TRS Fund to be used for R&D projects to be overseen by the Commission in the 2017-18 TRS Fund Year.

3. Repeal of the Neutral Video Communications Service Platform

74. We adopt our proposal to delete the rule provisions relating to the neutral video communications service platform (Neutral VRS Platform).²⁴⁵ In the *2013 VRS Reform Order* the Commission adopted rules to establish, by contract a Neutral VRS Platform that would allow a registered VRS user to use VRS access technology to make and receive VRS and point-to-point video calls through a VRS CA service provider.²⁴⁶ The Neutral VRS Platform would provide user registration and validation, authentication, authorization, ACD platform functions,²⁴⁷ routing (including emergency routing), call setup, mapping, call features (such as call forwarding and video mail), and such other features and functions not directly related to the provision of VRS CA services.²⁴⁸ Vertically integrated VRS providers would not be obligated to utilize the Neutral VRS Platform, and would be able to continue to deliver VRS over their existing platforms consistent with the Commission's rules.²⁴⁹

75. Although the Commission requested bids to build the Neutral VRS Platform, no acceptable bids were received, and the Commission canceled that procurement.²⁵⁰ In the *Further Notice*, we asked those parties supporting the original plan to build out the Neutral VRS Platform to explain why they believe the build-out is necessary and the extent to which VRS providers would utilize the Neutral VRS Platform.²⁵¹ Sorenson, which was the only party to comment, explains that it never expected the Neutral VRS platform to succeed and supports repeal.

76. Because no party has made any showing that we should request new bids for the Neutral VRS platform or otherwise expressed any interest in utilizing it, we will eliminate the rules establishing the Neutral VRS Platform and VRS CA service providers, which are the entities that would have made use of it. We therefore (i) remove sections 64.601(a)(20) and (45), 64.611(h), and 64.617; and (ii) modify

²⁴² VRSCA Comments at 3; GlobalVRS Comments at 10-11 (urging that such research funding be used to “identify advanced technological applications that contribute directly to interoperability among providers and to inform the public on how these applications can be used”); Convo Comments at 20-22 (urging greater transparency of such research, a focus on improving the quality and accuracy of interpretation, and tailoring of research projects to further the performance goals and service quality metrics that are the subject of the *2017 VRS Improvements NOI*); Consumer Groups at 6; *see also* Sorenson Comments at 11 (not objecting to the proposal).

²⁴³ *See, e.g.*, 47 U.S.C. § 225(a)(3) (defining TRS as providing “functionally equivalent” telephone service for persons with hearing or speech disabilities), (d)(2) (requiring that the Commission’s regulations “do not discourage or impair the development of improved technology”).

²⁴⁴ 2017 TRS Rate Filing.

²⁴⁵ *Further Notice*, 32 FCC Rcd at 2478, para. 104.

²⁴⁶ *2013 VRS Reform Order*, 28 FCC Rcd at 8657, para. 89; 47 CFR §§ 64.601(a)(20), (45), 64.611.

²⁴⁷ An ACD platform includes the hardware or software, or both, that comprises the essential call center function of call distribution, and that are a necessary core component of iTRS. *2013 VRS Reform Order*, 28 FCC Rcd at 8657, n.214.

²⁴⁸ *Id.*, para. 89; 47 CFR §§ 64.601(a)(20), 64.611.

²⁴⁹ *2013 VRS Reform Order*, 28 FCC Rcd at 8658, para. 92.

²⁵⁰ *Further Notice*, 32 FCC Rcd at 2478, para. 104.

²⁵¹ *Id.*

sections 64.604(b)(2)(iii), (b)(4)(iv), and (c)(5)(iii)(N)(I)(iii) and 64.606(a)(4).²⁵²

4. Technical Correction to the VRS Speed-of-Answer Rule

77. In the *2013 VRS Reform Order*, the Commission modified section 64.604(b)(2)(iii), the speed of answer rule from (a) a requirement to answer 80% of all VRS calls within 120 seconds, measured on a monthly basis, to (b) a requirement to answer 85% of all VRS calls (i) within 60 seconds, measured on a daily basis, by January 1, 2014, and (ii) within 30 seconds, measured on a daily basis, by July 1, 2014.²⁵³ The United States of the Court of Appeals for the District of Columbia Circuit vacated this aspect of the *2013 VRS Reform Order*.²⁵⁴ The court ruled that, pending further action by the Commission, its decision “will have the effect of reinstating the requirement that 80% of VRS calls be answered within 120 seconds, measured on a monthly basis.”²⁵⁵ Nevertheless, the Code of Federal Regulations has not been updated to reflect this change. We deferred consideration of whether to revise the speed-of-answer standard in the *2017 VRS Improvements Order*.²⁵⁶ However, the *2017 VRS Improvements Order* did not include an amendment to the Code of Federal Regulations, which still shows the speed-of-answer requirement as adopted in the *2013 VRS Reform Order*.²⁵⁷ We therefore amend section 64.604(b)(2)(iii) to comply with the mandate of the D.C. Circuit, and provide for a speed-of-answer requirement to answer 80% of all VRS calls within 120 seconds, measured on a monthly basis.

IV. ORDER

78. In the *2017 VRS Improvements Order*, we set aside the effectiveness of the VRS Interoperability Profile,²⁵⁸ which is one of the VRS interoperability standards that CGB adopted in the *2017 VRS Interoperability Order*.²⁵⁹ In this Order, we reinstate the effectiveness of this standard.

79. The VRS Provider Interoperability Profile, which was developed by a voluntary consensus standards organization, with input from the Commission’s staff, provides for the routing of inter-provider VRS and point-to-point video calls to a server of the terminating VRS provider that serves multiple VRS users and devices, rather than directly to a specific device.²⁶⁰ This technical standard specifies the inclusion of call routing information in the TRS Numbering Directory that contains, in addition to the call recipient’s telephone number, a VRS provider’s server domain name (server-based routing).²⁶¹ However, section 64.613(a)(2) of the Commission’s rules, as currently in effect, requires that the Uniform Resource Identifier (URI) for a VRS user’s telephone number, which is used for the routing of calls, “shall contain the IP address of the user’s device.”²⁶² As a result, section 64.613(a)(2) does not

²⁵² 47 CFR §§ 64.601(a)(20), (45), 64.604(b)(2)(iii), (b)(4)(iv), (c)(5)(iii)(N)(I)(iii), 64.606(a)(4), 64.611(h), 64.617. See Appendix B.

²⁵³ *2013 VRS Reform Order*, 28 FCC Rcd at 8671-73, paras. 135-4; 47 CFR § 64.604(b)(2)(iii).

²⁵⁴ *Sorenson 2014*, 765 F.3d 37.

²⁵⁵ *Id.* at 52.

²⁵⁶ *2017 VRS Improvements Order*, 32 FCC Rcd at 2449, para. 30.

²⁵⁷ See 47 CFR § 64.604(b)(2)(iii); *Further Notice*, 32 FCC Rcd at 2494, App. B.

²⁵⁸ *2017 VRS Improvements Order*, 32 FCC Rcd at 2489, para. 138. The Commission did not disturb the effective dates of the other interoperability standards that were also included in the *2017 VRS Interoperability Order*. *Id.*

²⁵⁹ *2017 VRS Interoperability Order*, 32 FCC Rcd at 699, App. B.

²⁶⁰ *2017 VRS Improvements Order*, 32 FCC Rcd at 2488, para. 137.

²⁶¹ VRS Provider Interoperability Profile § 9.1.1.

²⁶² 47 CFR § 64.613(a)(2).

authorize VRS providers to use server-based routing as called for by the VRS Interoperability Profile.²⁶³

80. Therefore, in the *Further Notice*, in order to resolve the apparent conflict between the VRS Interoperability Profile requirement for server-based routing and the section 64.613(a)(2) requirement to route calls based on the IP address of the user's device, we proposed to amend section 64.613(a)(2) to allow server-based routing.²⁶⁴ In addition, on our own motion, we set aside the effectiveness of the VRS Interoperability Profile, pending our consideration of the server-based routing issue.²⁶⁵

81. Now that we have amended section 64.613(a)(2) of the Commission's rules in the accompanying Report and Order to permit server-based routing,²⁶⁶ we reestablish the effectiveness of the VRS Interoperability Profile adopted in the *2017 VRS Interoperability Order*.²⁶⁷ The rules adopting the VRS Interoperability Profile will become effective 30 days after publication of a summary of the Order in the *Federal Register*. Because the compliance date for the VRS Interoperability Profile was originally set at 120 days after publication of the *2017 VRS Interoperability Order* in the *Federal Register*,²⁶⁸ we now require providers to comply with the VRS Interoperability Profile within 120 days after the date of publication of a summary of this Order in the *Federal Register*.²⁶⁹

V. PROCEDURAL ISSUES

A. Regulatory Flexibility Analysis

82. *Final Regulatory Flexibility Analysis*. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),²⁷⁰ the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) relating to this Report and Order. The FRFA is set forth in Appendix D.

B. Paperwork Reduction Act Analysis

83. This document does not contain new or modified information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. 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 2002,²⁷¹ Public Law 107-198, see 44 U.S.C. 3506(c)(4).

C. Congressional Review Act

84. The Commission will send a copy of this Report and Order and Order to Congress and the Government Accountability Office pursuant to the Congressional Review Act.

VI. ORDERING CLAUSES

85. 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, and 225, the foregoing Report and

²⁶³ *2017 VRS Improvements Order*, 32 FCC Rcd at 2488, para. 137.

²⁶⁴ *Further Notice*, 32 FCC Rcd at 2479-81, paras. 107-15.

²⁶⁵ *2017 VRS Improvements Order*, 32 FCC Rcd at 2489, para. 138.

²⁶⁶ *See supra* Part III.B.1.

²⁶⁷ *2017 VRS Interoperability Order*, 32 FCC Rcd at 690, 699, para. 8, App. B.

²⁶⁸ *Id.*

²⁶⁹ *Infra* App. B (Final Rules, amending 47 CFR § 64.621).

²⁷⁰ 5 U.S.C. § 601 *et seq.*

²⁷¹ Pub. L. No. 107-198, 116 Stat. 729 (2002); 44 U.S.C. § 3506(c)(4).

Order and Order ARE ADOPTED, and the Commission's rules are hereby AMENDED as set forth in Appendix B.

86. IT IS FURTHER ORDERED that pursuant to section 553(d)(3) of the Administrative Procedure Act, 5 U.S.C. § 553(d)(3), and sections 1.4(b)(1) and 1.427(b) of the Commission's rules, 47 CFR § 1.4(b)(1), 1.427(b), that Part III.A, VRS Compensation, of the Report and Order shall be effective on July 1, 2017, except as otherwise provided in this Report and Order, and IT IS FURTHER ORDERED that a copy of the Report and Order shall be sent by overnight mail, first class mail and certified mail, return receipt requested, to all known VRS providers.

87. IT IS FURTHER ORDERED that Part III.B of this Report and Order SHALL BE EFFECTIVE 30 days after publication of a summary in the Federal Register.

88. IT IS FURTHER ORDERED that this Order SHALL BE EFFECTIVE 30 days after publication of a summary in the Federal Register. The rules adopting the VRS Interoperability Profile will become effective 120 days after publication of a summary of the Order in the Federal Register.

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

90. 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 Order, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

VRS Compensation Rates

Tier	2017-2018 rate year (per minute rate)	2018-2019 rate year (per minute rate)	2019-2020 rate year (per minute rate)	2020-2021 rate year (per minute rate)
Emergent: less than 500,000 minutes per month)	\$5.29	\$5.29	\$5.29	\$5.29
I: 0 – 1 million minutes per month	\$4.82	\$4.82	\$4.82	\$4.82
II: 1 – 2.5 million minutes per month	\$3.97	\$3.97	\$3.97	\$3.97
III: more than 2.5 million minutes per month	\$3.21	\$2.83	\$2.63	\$2.63

APPENDIX B

Final Rules

Part 64 - MISCELLANEOUS RULES RELATING TO COMMON CARRIERS

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

Authority: 47 U.S.C. 154, 225, 254(k), 403(b)(2)(B), (c), 715, Pub. L. 104-104, 110 Stat. 56. Interpret or apply 47 U.S.C. 201, 218, 222, 225, 226, 227, 228, 254(k), 616, 620, and the Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. 112-96, unless otherwise noted.

2. Amend § 64.601 by modifying paragraphs (a)(12), (a)(14) through (a)(20), and (a)(26) through (a)(47), and removing paragraphs (a)(48) and (49) to read as follows:

§ 64.601 Definitions and provisions of general applicability.

(a) * * *

(12) *Default provider change order*. A request by an iTRS user to an iTRS provider to change the user's default provider.

* * * * *

(14) *Hearing point-to-point video user*. A hearing individual who has been assigned a ten-digit NANP number that is entered in the TRS Numbering Directory to access point-to-point service.

(15) *Interconnected VoIP service*. The term “interconnected VoIP service” has the meaning given such term under §9.3 of this chapter, as such section may be amended from time to time.

(16) *Internet-based TRS (iTRS)*. A telecommunications relay service (TRS) in which an individual with a hearing or a speech disability connects to a TRS communications assistant using an Internet Protocol-enabled device via the Internet, rather than the public switched telephone network. Except as authorized or required by the Commission, Internet-based TRS does not include the use of a text telephone (TTY) or RTT over an interconnected voice over Internet Protocol service.

(17) *Internet Protocol Captioned Telephone Service (IP CTS)*. A telecommunications relay service that permits an individual who can speak but who has difficulty hearing over the telephone to use a telephone and an Internet Protocol-enabled device via the Internet to simultaneously listen to the other party and read captions of what the other party is saying. With IP CTS, the connection carrying the captions between the relay service provider and the relay service user is via the Internet, rather than the public switched telephone network.

(18) *Internet Protocol Relay Service (IP Relay)*. A telecommunications relay service that permits an individual with a hearing or a speech disability to communicate in text using an Internet Protocol-enabled device via the Internet, rather than using a text telephone (TTY) and the public switched telephone network.

(19) *IP Relay access technology*. Any equipment, software, or other technology issued, leased, or provided by an Internet-based TRS provider that can be used to make and receive an IP Relay call.

(20) *iTRS access technology*. Any equipment, software, or other technology issued, leased, or provided by an Internet-based TRS provider that can be used to make and receive an Internet-based TRS call.

* * * * *

(26) *Point-to-point video call*. A call placed via a point-to-point video service.

(27) *Point-to-point video service*. A service that enables a user to place and receive non-relay video calls without the assistance of a CA.

(28) *Qualified interpreter*. An interpreter who is able to interpret effectively, accurately, and impartially, both receptively and expressively, using any necessary specialized vocabulary.

(29) *Real-Time Text (RTT)*. The term *real-time text* shall have the meaning set forth in §67.1 of this chapter.

(30) *Registered Internet-based TRS user*. An individual that has registered with a VRS or IP Relay provider as described in §64.611.

(31) *Registered Location*. The most recent information obtained by a VRS or IP Relay provider that identifies the physical location of an end user.

(32) *Sign language*. A language which uses manual communication and body language to convey meaning, including but not limited to American Sign Language.

(33) *Speech-to-speech relay service (STS)*. A telecommunications relay service that allows individuals with speech disabilities to communicate with voice telephone users through the use of specially trained CAs who understand the speech patterns of persons with speech disabilities and can repeat the words spoken by that person.

(34) *Speed dialing*. A TRS feature that allows a TRS user to place a call using a stored number maintained by the TRS facility. In the context of TRS, speed dialing allows a TRS user to give the CA a short-hand" name or number for the user's most frequently called telephone numbers.

(35) *Telecommunications relay services (TRS)*. Telephone transmission services that provide the ability for an individual who has a hearing or speech disability to engage in communication by wire or radio with a hearing individual in a manner that is functionally equivalent to the ability of an individual who does not have a hearing or speech disability to communicate using voice communication services by wire or radio. Such term includes services that enable two-way communication between an individual who uses a text telephone or other nonvoice terminal device and an individual who does not use such a device, speech-to-speech services, video relay services and non-English relay services. TRS supersedes the terms "dual party relay system," "message relay services," and "TDD Relay."

(36) *Text telephone (TTY)*. A machine that employs graphic communication in the transmission of coded signals through a wire or radio communication system. TTY supersedes the term "TDD" or "telecommunications device for the deaf," and TT.

(37) *Three-way calling feature*. A TRS feature that allows more than two parties to be on the telephone line at the same time with the CA.

(38) *TRS Numbering Administrator*. The neutral administrator of the TRS Numbering Directory selected based on a competitive bidding process.

(39) *TRS Numbering Directory*. The database administered by the TRS Numbering Administrator, the purpose of which is to map each registered Internet-based TRS user's NANP telephone number to his or her end device.

(40) *TRS User Registration Database*. A system of records containing TRS user identification data capable of:

(i) Receiving and processing subscriber information sufficient to identify unique TRS users and to ensure that each has a single default provider;

(ii) Assigning each VRS user a unique identifier;

(iii) Allowing VRS providers and other authorized entities to query the TRS User Registration Database to determine if a prospective user already has a default provider;

- (iv) Allowing VRS providers to indicate that a VRS user has used the service; and
- (v) Maintaining the confidentiality of proprietary data housed in the database by protecting it from theft, loss or disclosure to unauthorized persons. The purpose of this database is to ensure accurate registration and verification of VRS users and improve the efficiency of the TRS program.
- (41) *Unauthorized provider*. An iTRS provider that becomes the iTRS user's new default provider without having obtained the user's authorization verified in accordance with the procedures specified in this part.
- (42) *Unauthorized change*. A change in an iTRS user's selection of a default provider that was made without authorization verified in accordance with the verification procedures specified in this part.
- (43) *Video relay service (VRS)*. A telecommunications relay service that allows people with hearing or speech disabilities who use sign language to communicate with voice telephone users through video equipment. The video link allows the CA to view and interpret the party's signed conversation and relay the conversation back and forth with a voice caller.
- (44) *Visual privacy screen*. A screen or any other feature that is designed to prevent one party or both parties on the video leg of a VRS call from viewing the other party during a call.
- (45) *Voice carry over (VCO)*. A form of TRS where the person with the hearing disability is able to speak directly to the other end user. The CA types the response back to the person with the hearing disability. The CA does not voice the conversation. Two-line VCO is a VCO service that allows TRS users to use one telephone line for voicing and the other for receiving TTY messages. A VCO-to-TTY TRS call allows a relay conversation to take place between a VCO user and a TTY user. VCO-to-VCO allows a relay conversation to take place between two VCO users.
- (46) *VRS access technology*. Any equipment, software, or other technology issued, leased, or provided by an Internet-based TRS provider that can be used to make and receive a VRS call.
- (47) *VRS Access Technology Reference Platform*. A software product procured by or on behalf of the Commission that provides VRS functionality, including the ability to make and receive VRS and point-to-point calls, dial-around functionality, and the ability to update user registration location, and against which providers may test their own VRS access technology and platforms for compliance with the Commission's interoperability and portability rules.
- (b) For purposes of this subpart, all regulations and requirements applicable to common carriers shall also be applicable to providers of interconnected VoIP service.

3. Amend § 64.604 by modifying paragraphs (b)(2)(iii), (b)(4)(iv), and (5)(iii)(N)(I)(iii) to read as follows:

§ 64.604 Mandatory Minimum Standards.

* * * * *

(b) * * *

(2) * * *

(iii) *Speed of answer requirements for VRS providers*. VRS providers must answer 80% of all VRS calls within 120 seconds, measured on a monthly basis. VRS providers must meet the speed of answer requirements for VRS providers as measured from the time a VRS call reaches facilities operated by the VRS provider to the time when the call is answered by a CA—i.e., not when the call is put on hold, placed in a queue, or connected to an IVR system. Abandoned calls shall be included in the VRS speed of answer calculation.

* * * * *

(4) A VRS provider leasing or licensing an automatic call distribution (ACD) platform must have a written lease or license agreement. Such lease or license agreement may not include any revenue sharing agreement or compensation based upon minutes of use. In addition, if any such lease is between two eligible VRS providers, the lessee or licensee must locate the ACD platform on its own premises and must utilize its own employees to manage the ACD platform.

* * * * *

(c) * * *

(5) * * *

(iii) * * *

(N) * * *

(I) * * *

(iii) An eligible VRS provider may not contract with or otherwise authorize any third party to provide interpretation services or call center functions (including call distribution, call routing, call setup, mapping, call features, billing, and registration) on its behalf, unless that authorized third party also is an eligible provider.

* * * * *

4. Amend § 64.606 by removing paragraph (a)(4) as follows:

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

(a) * * *

(4) [Removed]

* * * * *

5. Amend § 64.611 by removing paragraph (h) as follows:

§ 64.611 Internet-based TRS registration.

* * * * *

(h) [Removed]

6. Amend § 64.613 by revising paragraph (a)(2) to read as follows:

§ 64.613 Numbering Directory for Internet-based TRS users.

(a) * * *

(2) For each record associated with a VRS user’s geographically appropriate NANP telephone number, the URI shall contain a server domain name or the IP address of the user’s device. For each record associated with an IP Relay user’s geographically appropriate NANP telephone number, the URI shall contain the user’s user name and domain name that can be subsequently resolved to reach the user.

* * * * *

7. Amend part 64 by removing § 64.617 as follows:

§ 64.617 [Removed]

8. Amend § 64.621 by revising paragraph (b)(1) to read as follows:

§ 64.621 Interoperability and Portability.

* * * * *

(b) * * *

(1) Beginning no later than one hundred twenty (120) days after [DATE OF PUBLICATION IN THE FEDERAL REGISTER], VRS providers shall ensure that their provision of VRS and video communications, including their access technology, meets the requirements of the US Video Relay Service (VRS) Provider Interoperability Profile, SIP Forum Document Number: VRS US Providers Profile TWG-6-1. (Oct. 14, 2015) (VRS Provider Interoperability Profile), <https://www.fcc.gov/files/sip-forum-vrs-us-providers-profile-twg-6-1>.

APPENDIX C**List of Commenting Parties****Comments:**

ASL Services Holdings, LLC dba GlobalVRS (GlobalVRS)

Convo Communications, LLC (Convo)

ZVRS Holding Company (ZVRS Holding), the parent of CSDVRS, LLC d/b/a ZVRS (ZVRS) and Purple Communications, Inc. (Purple) (collective, ZVRS/Purple)

ZVRS, Purple, Convo, and GlobalVRS (collectively, the Non-Dominant Providers)

Sorenson Communications, LLC (Sorenson)

Telecommunications for the Deaf and Hard of Hearing, Inc., National Association of the Deaf, Deaf and Hard of Hearing Consumer Advocacy Network, Hearing Loss Association of America, Association of Late-Deafened Adults, Inc., Cerebral Palsy and Deaf Organization, Deaf Seniors of America, and California Coalition of Agencies Serving the Deaf and Hard of Hearing (collectively, Consumer Groups)

Video Relay Services Consumer Association (VRSCA)

Harold Furchtgott-Roth on behalf of ZVRS (Furchtgott-Roth)

Reply Comments:

Convo

Furchtgott-Roth

GlobalVRS

Sorenson

United States Telecom Association (USTelecom)

ZVRS/Purple

APPENDIX D

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980 (RFA),¹ as amended, 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 *2017 VRS Improvements FNPRM*, including comment on the IRFA.³ No comments were received on the IRFA. This Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.⁴ A copy of the Report and Order and Order, and FRFA (or summaries thereof) will also be published in the Federal Register.⁵

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

2. The Report and Order and Order addresses server-based routing of video relay service (VRS) calls, and funding for Commission-directed research and development (R&D).

3. First, by amending the telecommunications relay service (TRS) rules to permit server-based routing, the Report and Order and Order expand the ways that VRS calls can be routed. Under a new interoperability standard, calls may be routed to a server of the terminating VRS provider that serves multiple VRS users and devices, rather than directly to a specific device. This new routing method uses the providers' domain names, rather than user-specific IP addresses, as is currently required.⁶

4. Second, the Commission directs the TRS Fund Administrator, as part of future annual ratemaking proceedings, to include for Commission approval proposed funding for Commission-directed R&D. Such funding is necessary to continue to meet the Commission's charge of furthering the goals of functional equivalence and efficient availability of TRS.

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

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

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

6. 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.

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 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, Notice of Inquiry, Further Notice of Proposed Rulemaking and Order, 32 FCC Rcd 2436, 2509 (2017) (*FNPRM*).

³ *FNPRM*, 32 FCC Rcd at 2509, para. 1.

⁴ See 5 U.S.C. § 604.

⁵ See *id.* § 604(b).

⁶ SIP Forum, US VRS Provider Interoperability Profile, SIP Forum Document Number: VRS US Providers Profile TWG-6-1.0, § 9.1.1 (Sept. 23, 2015) (VRS Provider Interoperability Profile), <https://www.fcc.gov/files/sip-forum-vrs-us-providers-profile-twg-6-1>; 47 CFR § 64.613(a)(2).

⁷ *Id.* § 604(a)(3).

D. Description and Estimate of the Number of Small Entities to Which the Rules Will Apply

7. 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

8. The server-based routing rule amendment adopted in the Report and Order and Order will affect obligations of VRS Providers. These services can be included within the broad economic category of All Other Telecommunications. Five providers currently receive compensation from the TRS Fund for providing VRS: ASL Services Holdings, LLC; CSDVRS, LLC; Convo Communications, LLC; Purple Communications, Inc.; and Sorenson Communications, Inc. The R&D funding will have no impact on VRS providers.

9. *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 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

10. Server-based call routing involves the use of domain names and VRS providers using this method will need to keep records of such domain names. The domain names will then be processed as call routing information, just as other call routing information is processed currently.

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.

¹⁴

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

11. The funding for R&D will have no reporting, recordkeeping or other compliance requirements.

F. 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.¹⁵

13. Server-based call routing using domain names will be available to all VRS providers, will not be burdensome, and will advance interoperability. Greater interoperability will foster competition, thereby benefitting the smaller providers. To the extent there are differences in operating costs resulting from economies of scale, those costs are reflected in the different compensation rate structures applicable to large and small VRS providers.¹⁶

14. The funding for R&D does not have any compliance or reporting requirements impacting small entities. Indeed, small entities are not covered by the rule.

15. No commenters raised other alternatives that would lessen the impact of any of these requirements on small entities vis-à-vis larger entities.

G. Report to Congress

16. The Commission will send a copy of the Report and Order and Order, including this FRFA, in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act.¹⁷ In addition, the Commission will send a copy of the Report and Order 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

17. None.

¹⁵ 5 U.S.C. § 603(b).

¹⁶ The rate structures are discussed in the accompanying Report and Order, *supra* Part III.A.5.

¹⁷ See 5 U.S.C. § 801(a)(1)(A).