

FACT SHEET*

Improving the Quality and Efficiency of Video Relay Service

Report and Order, Notice of Inquiry, Further Notice of Proposed Rulemaking, and Order
CG Docket Nos. 10-51 and 03-123

Background: For 15 years, video relay service (VRS) has enabled deaf and hard-of-hearing individuals to call friends, family members, and others using American Sign Language (ASL) and a videophone, and to have their calls interpreted from signs to voice and vice versa. As beneficial as this service has been, there is ample room for improvement. Consumers who use VRS want better interpreters for jargon-laden phone calls with doctors, lawyers, and computer help desks. They also need better information about the service quality offered by competing VRS companies so they can make an informed choice when selecting their VRS provider. In addition, it may be possible to provide VRS more efficiently by expanding the VRS work force to include home-based interpreters.

The Chairman has proposed improvements to VRS services to better ensure that deaf and hard-of-hearing individuals experience service that is functionally equivalent to voice services available to hearing individuals. He also proposes to take a number of steps to prevent waste, fraud, and abuse in the VRS program.

What the Rules Would Do:

- **Specialized Interpreters.** Authorize, on a trial basis, (1) sending legal, medical, and computer support calls to interpreters who have special skill in interpreting technical conversations, and (2) bringing in qualified deaf interpreters to help on calls from people with limited signing ability or cognitive and motor disabilities.
- **Comparison Shopping for VRS Companies.** Direct FCC staff to publish VRS providers' speed-of-response history to help consumers as they shop among providers.
- **Direct Video Calls with Hearing People.** Make video phone numbers available to hearing people who know ASL, to allow direct-dialed video calls with deaf and hard-of-hearing consumers.
- **At-Home Interpreting.** Authorize a pilot program for home-based interpreting of VRS calls.

What the Notice of Inquiry Would Do:

- **Service Quality.** Explores the development of new service quality metrics for VRS in order to help the FCC and consumers evaluate competing services.

What the Further Notice of Proposed Rulemaking Would Do:

- **Provider Compensation.** To ensure predictable compensation and responsible use of the money collected from telecom companies to support VRS, proposes a four-year plan for VRS
- **Other Fiscal Responsibility Measures.** Proposes to improve how VRS and video calls are transmitted and how VRS calls are validated in order to prevent waste, fraud, and abuse.
- **Direct Video Calls to Customer Support.** Proposes to make video phone numbers available so that deaf and hard-of-hearing VRS users can place direct-dialed video calls to business and government customer support centers.

* This document is being released as part of a "permit-but-disclose" proceeding. Any presentations or views on the subject expressed to the Commission or its staff, including by email, must be filed in both CG Docket No. 10-51 and CG Docket No. 03-123, which may be accessed via the Electronic Comment Filing System (<https://www.fcc.gov/ecfs/>).

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

In the Matter of)
Structure and Practices of the Video Relay Service) CG Docket No. 10-51
Program)
Telecommunications Relay Services and Speech-) CG Docket No. 03-123
to-Speech Services for Individuals with Hearing)
and Speech Disabilities)

REPORT AND ORDER, NOTICE OF INQUIRY, FURTHER NOTICE OF PROPOSED
RULEMAKING, AND ORDER*

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By the Commission:

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* This document has been circulated for tentative consideration by the Commission at its March open meeting. The
issues referenced in this document and the Commission’s ultimate resolution of those issues remain under
consideration and subject to change. This document does not constitute any official action by the Commission.
However, the Chairman has determined that, in the interest of promoting the public’s ability to understand the nature
and scope of issues under consideration by the Commission, the public interest would be served by making this
document publicly available. The FCC’s ex parte rules apply and presentations are subject to “permit-but-disclose”
ex parte rules. See, e.g., 47 C.F.R. §§ 1.1206, 1.1200(a). Participants in this proceeding should familiarize
themselves with the Commission’s ex parte rules.

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I. INTRODUCTION

1. When a deaf individual wants to call a friend or family member, a standard-issue telephone will not do. And so for the past 15 years, the Commission has supported video relay services (VRS), which allow deaf and hard-of-hearing individuals to call others using American Sign Language and a videophone. With this order, we take steps to further improve the quality of VRS, authorizing skills-based routing and deaf-interpreter trials and seeking comment on metrics so that VRS users can better assess the quality of VRS offerings. We also seek comment on further VRS reforms, including the next four-year rate plan and changing our technical standards for completing calls to improve interoperability.

II. REPORT AND ORDER ON VRS IMPROVEMENTS

A. Background

2. Section 225 of the Act requires the Commission to ensure the availability of telephone transmission service that enables persons who are deaf, hard of hearing, deaf-blind, or have speech disabilities to communicate by wire or radio with hearing individuals in a manner that is functionally equivalent to communication services utilized by those without such disabilities.¹ This section further requires that the Commission’s TRS regulations encourage the use of existing technology and not

¹ 47 U.S.C. § 225(a)(3), (b)(1). Congress elaborated that its overriding goal was to “bridge the gap” between people who have communications disabilities and the community at large by incorporating such individuals “into the telecommunications mainstream” and ensuring that “telephone services be provided to hearing and/or speech impaired individuals in a manner that is functionally equivalent to telephone services offered to those who do not have these impairments.” S. Rep. No. 116, 101st Cong., 1st Sess. at 78 (1989).

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discourage the development of new technology.² To achieve functional equivalency and ensure that TRS providers provide relay services that are comparable, to the greatest extent possible, to voice telephone services available to the general public, the Commission's rules contain operational, technical, and functional standards that govern the provision of TRS.³

3. In 2015, all VRS providers jointly proposed a number of measures to improve the functional equivalence of VRS.⁴ On January 31, 2017, four of these providers reaffirmed their interest in some of these proposals, including a trial of skills-based routing, compensation for deaf interpreters, the assignment of ten-digit numbers to hearing individuals, and the development of VRS service quality metrics.⁵ In this Report and Order, we approve trials for the provision of skills-based routing and deaf interpreters, and amend the Commission's rules regarding the VRS speed of answer, assignment of ten-digit numbers to hearing people and at-home VRS interpreting.

B. Trial of Skills-Based Routing

4. We authorize a voluntary trial of skills-based routing by any of the currently certified VRS providers,⁶ for calls pertaining to legal, medical, and technical computer support, to be conducted for a period of eight months under the conditions set forth below.⁷ We are persuaded that enabling consumers to have conversations relayed by interpreters skilled in the vocabulary of these subjects can contribute to achieving functional equivalence in accordance with the goals of section 225 of the Communications Act.⁸

5. In the *2015 VRS FNPRM*, the Commission sought comment on whether to conduct an eight-month trial of "skills-based routing," by which VRS providers would be permitted to route some VRS calls to communications assistants (CAs) with particular skill sets.⁹ In addition to seeking comment

² 47 U.S.C. § 225(d)(2).

³ See 47 CFR §64.604 *et seq.* These mandatory minimum standards include, among other things, requirements for the handling of all types and length of calls, call confidentiality, CA competence, mandates for certain TRS features and functionalities, and specifications for network redundancy and the speed by which TRS providers are required to answer calls.

⁴ *Structure and Practices of the Video Relay Service Program*, Further Notice of Proposed Rulemaking, 30 FCC Rcd 12973, 12986-97, paras. 29-66 (2015) (*2015 VRS FNPRM*); *see also* Joint Proposal of All Six VRS Providers for Improving Functional Equivalence and Stabilizing Rates, CG Docket Nos. 10-51, 03-123 (filed Mar. 30, 2015) (2015 Joint VRS Providers Proposal).

⁵ *See* Letter from Paul C. Besozzi, Counsel to Purple Communications, Inc., to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 10-51, 03-123 (filed Jan. 31, 2017) (2017 Joint VRS Providers Proposal).

⁶ There are currently five companies with Commission certification to receive compensation from the TRS Fund for providing VRS. We may authorize additional VRS providers to participate in the trial in the event that any new providers apply for and are granted certification before the end of the trial.

⁷ Commenters unanimously support conducting a trial of skills-based routing. *See, e.g.*, 2017 Joint VRS Providers Proposal at 11 (this feature will enable users to benefit from skill sets and knowledge that generalist interpreters might not have); 2015 VRSCA Reply Comments at 2; 2015 Convo Comments at 10.; 2015 Purple Comments at 7; 2015 CAAG Comments at 4; 2015 MARIE Center Reply Comments at 1. The providers all agree that the trial should be voluntary and have requested that it last for eight months. 2015 Joint VRS Providers Proposal at 5.

⁸ 47 U.S.C. §225(a)(3); *see also* 2015 Consumer Groups Comments at 9 (noting that for community interpreting, interpreters are regularly assigned based on their skills and experience); 2015 RID Comments at 8 (skills-based routing helps to ensure that consumer needs are met, as required by the NAD-RID Code of Professional Conduct).

⁹ *2015 VRS FNPRM*, 30 FCC Rcd at 12990, para. 43; *see also* 2015 Joint VRS Providers Proposal at 4-6. The Commission had previously declined to permit specialized routing of VRS calls other than to honor requests for a CA of a specific gender and for routing ASL-Spanish calls to CAs skilled in handling them. *Structure and Practices of the Video Relay Services Program, Telecommunications Relay Services and Speech-to-Speech Services for*

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on the overall merits of allowing skills-based routing, the Commission asked (1) which types of calls should be included in such a trial,¹⁰ (2) what types of data should be collected to assess the costs, benefits, and feasibility of this feature,¹¹ and (3) whether to exempt calls routed to specialized interpreters from compliance with the speed-of-answer and “sequential call” rules.¹² The Commission further proposed that participation in the trial be voluntary, and therefore that any costs incurred not be billable to the TRS Fund.¹³

6. We agree with commenters that skills-based routing may increase the efficiency of VRS by reducing the duration of calls and the need for duplicative calls.¹⁴ Additionally, we believe it can facilitate compliance with each provider’s obligation to ensure that its CAs can “interpret effectively [and] accurately . . . both receptively and expressively, using any necessary specialized vocabulary.”¹⁵

7. Although VRS providers recommend that providers be permitted to select their areas of specialization,¹⁶ Consumer Groups identify the three skills listed above as those most commonly needed.¹⁷ We will limit the trial to these three categories, in order to provide relatively clear-cut criteria for the types of calls that qualify and to maximize the usefulness of the data to be collected.¹⁸ VRS providers participating in the trial may offer one, two, or all three types of specialized interpretation.¹⁹ Permitting a voluntary trial will allow VRS providers to individually determine whether and how extensively to participate, depending on how skills-based routing fits into their respective budgets and business plans. We further expect that an eight-month period will be sufficient to gather data on the costs and benefits of skills-based routing, and to enable the Commission to develop informed rules and policies governing this feature if it is later authorized on a permanent basis.²⁰

Individuals with Hearing and Speech Disabilities, Report and Order and Further Notice of Proposed Rulemaking, 28 FCC Rcd 8618, 8691, para. 180 & n.470 (2013) (*2013 VRS Reform Order* and *2013 VRS Reform FNPRM*), *aff’d in part and vacated in part sub nom. Sorenson Communications, Inc. v. FCC*, 765 F.3d 37 (D.C. Cir. 2014) (*Sorenson*).

¹⁰ *2015 VRS FNPRM*, 30 FCC Rcd at 12990, 12992, paras. 43, 48.

¹¹ The Commission asked about collecting data on the quantity of calls and minutes, service quality, and the potential for fraud, waste and abuse. *2015 VRS FNPRM*, 30 FCC Rcd at 12992, para. 49.

¹² *2015 VRS FNPRM*, 30 FCC Rcd at 12992, para. 48. Regarding the “sequential call rule,” which prohibits CAs from refusing to handle a second call placed by the same caller, the Commission asked whether the rule should be inapplicable when, upon finishing a call that is routed to a specialized interpreter, the consumer requests to place another call that does not require specialized interpretation. See 47 CFR § 64.604(a)(2)(vi).

¹³ *2015 VRS FNPRM*, 30 FCC Rcd at 12992, para. 50.

¹⁴ See, e.g., 2015 Sorenson Comments at 8.

¹⁵ 47 CFR §64.604(a)(1)(iv).

¹⁶ 2015 Joint VRS Providers Proposal at 5.

¹⁷ 2015 Consumer Groups Comments at 7-9; see also *2015 VRS FNPRM*, 30 FCC Rcd at 12990, 12992, paras. 43, 48 (also highlighting these three skills).

¹⁸ As the Commission has done in other trials, see, e.g., *Numbering Policies for Modern Communications*, Notice of Proposed Rulemaking, Order and Notice of Inquiry, 28 FCC Rcd 5842, 5881, para. 98 (2013), we tailor this trial to provide a circumscribed test case to help us identify and address issues if skills-based routing is permitted on a permanent basis.

¹⁹ Consumer Groups suggest that providers should be required to offer a minimum of two skills-based options. 2015 Consumer Groups Comments at 10. To avoid discouraging any provider from participating in the trial, we do not require a minimum number of skills.

²⁰ See 2015 Sorenson Comments at 9.

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8. To allow sufficient time for the design of each provider's individual trial, we direct that the formal trial period commence August 1, 2017, and terminate March 31, 2018.²¹ Providers interested in participating in the trial must provide notification of their intent to participate to the Commission's Consumer and Governmental Affairs Bureau by June 1, 2017, including a description of the standards they will use to determine whether a particular CA may handle each type of skills-based call.²² We decline at this time to restrict the trial to a specified number of consumers, as suggested by Convo.²³ Selecting a limited subset of customers for this trial could pose technical issues and be perceived as unfair to those customers not selected.²⁴ In addition, larger-scale trials will provide the Commission with more data to aid in our assessment of a skills-based routing feature. Nor are we persuaded that larger providers will gain an undue competitive advantage from the ability to conduct a larger scale trial. Rather, all VRS providers will be able to compete based on their CAs' skills and accuracy. The results of a trial in which each provider determines the scale of its participation may also provide information about the competitive aspects of offering this feature to inform future Commission decisions about how to structure skills-based routing in the future.

9. For the duration of the trial, all participating VRS providers will be continue to be compensated at the applicable rate for compensable minutes of use whether handled by a generalist or specialist CA. Although providers generally contend that they will incur additional costs associated with the trial,²⁵ no party has quantified such projected costs.²⁶ Moreover, one provider has noted that providers cannot accurately estimate what their costs will be, and that cost data will be more reliable if it is collected after the trial.²⁷ Without knowing the extent of such expenses, we are not in a position to assess whether their compensation is justifiable in relation to the potential benefits of this feature. Accordingly, any added costs incurred to provide skills-based routing during the trial period will not be billable to the TRS Fund.²⁸

²¹ See 2015 Joint VRS Providers Proposal at 4-5 (requesting that the trial be initiated four months after the issuance of an order stabilizing rates). As participation in the trial is voluntary, we do not adopt the providers' suggestion that commencement of the trial be scheduled to coincide with the adoption of specific compensation rates.

²² Such notification may be sent by e-mail to TRSreports@fcc.gov. We note that Convo recommends that providers' plans for the trial be approved before it begins. 2015 Convo Comments at 12-14. We find it appropriate to allow providers discretion to tailor the details of providing this service to their individual circumstances so long as they adhere to the conditions set forth herein and the Commission's rules governing TRS. Accordingly, we do not require pre-approval for each provider's plan for participation in the trial.

²³ 2015 Convo Comments at 12-13 (suggesting that the number of participating users be capped at 100 for each provider).

²⁴ See 2015 Sorenson Reply Comments at 11 (arguing that limiting the number of users is unwarranted and will suppress participation in the trial).

²⁵ 2015 Sorenson Comments at 10-11 (requesting the Commission to fund the trial); see also 2017 Joint VRS Providers Proposal at 11 (four smaller VRS providers urging recovery of exogenous costs incurred as part of the trial).

²⁶ Convo suggests a cap of \$25,000 per provider for engineering costs but does not explain how it obtained that number. 2015 Convo Comments at 15.

²⁷ 2015 Purple Reply Comments at 5 (estimating costs right now "would only be speculative and potentially uninformative or inaccurate"), 7 (stating that questions of the impact of skills-based routing on provider costs and the TRS Fund should be held until the end of the trial).

²⁸ See *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking, 19 FCC Rcd 12475, 12547-48, paras. 189-190 (2004) (*2004 TRS Report & Order*); see *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, 21 FCC Rcd 8063, 8071, para. 16

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1. Rule Waivers

10. A Commission rule may be waived for “good cause shown.”²⁹ In particular, a waiver is appropriate where the particular facts make strict compliance inconsistent with the public interest.³⁰ In addition, the Commission may take into account considerations of hardship, equity, or more effective implementation of overall policy on an individual basis.³¹ Waiver of a Commission rule is therefore appropriate if special circumstances warrant a deviation from the general rule and such deviation will serve the public interest.³² As stated above, we are persuaded that skills-based routing of VRS calls may contribute to functional equivalence and increase the efficiency of VRS. We conclude that, to enable the Commission to gather data on the costs and benefits of skills-based routing, and develop informed rules governing this practice should it be authorized in the future, it will serve the public interest to conditionally waive certain TRS rules on a temporary basis, i.e., for the duration of the trial. Specifically, to the extent indicated below, we waive (1) the requirement to answer calls in the order received,³³ (2) the speed-of-answer rule,³⁴ (3) the ten-minute rule,³⁵ and (4) the sequential call rule.³⁶ With these waivers, calls routed to specialized interpreters will qualify for per-call compensation from the Fund, provided that such calls are handled in accordance with the conditions below and all non-waived mandatory minimum standards.

11. *Answer-in-the-Order-Received Waiver.* The Commission has previously explained that the requirement that TRS providers answer calls in the order received is inherent in the principle of functional equivalence.³⁷ For purposes of this eight-month trial, however, we find that a limited deviation from this principle under the conditions described herein is necessary in order to enable VRS users to effectively benefit from the availability of skills-based CAs. Specifically, waiver of this rule will allow providers, to the extent technically feasible, to give VRS users the option of selecting a specialist CA at various point in the course of processing a call, e.g., prior to initially being connected to the VRS provider, during the call set-up with the CA, or after all parties to the call have been connected—even if this entails providing a specialized CA out of the order that calls seeking other types of specialized CAs are received.³⁸ However, we stress that in authorizing this trial, the Commission does not authorize VRS

(2006) (compensable costs must be directed to providing the service in compliance with applicable non-waived mandatory minimum standards).

²⁹ 47 CFR § 1.3.

³⁰ See *Northeast Cellular Tel. Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990).

³¹ See *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969), *cert. denied*, 409 U.S. 1027 (1972); *Northeast Cellular*, 897 F.2d at 1166.

³² See *Northeast Cellular*, 897 F.2d at 1166.

³³ *FCC Clarifies that Certain TRS Marketing and Call Handling Practices are Improper*, Public Notice, 20 FCC Rcd 1471, 1473 (2005) (2005 Call Handling PN).

³⁴ 47 CFR § 64.604(b)(2)(iii).

³⁵ 47 CFR § 64.604(a)(1)(v).

³⁶ 47 CFR § 64.604(a)(3)(i).

³⁷ 2005 Call Handling PN, 20 FCC Rcd at 1473 (the practice of “selectively answer[ing] calls from preferred consumers or locations, rather than answer[ing] the calls in the order they are received . . . is inconsistent with the notion of functional equivalency”).

³⁸ For example, a caller seeking a CA with legal expertise might be served more quickly than someone else seeking a CA with medical expertise if the former CA is available sooner, even if the latter request came sooner in the queue. However, the “answer-in-the-order” rule will still apply within each subset of CA expertise, so that if two individuals both request the same type of specialized interpreting, each of their requests must be addressed in the

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providers or users to treat skills-based routing of VRS calls as a substitute for in-person or video remote interpreting when medical, legal, and computer professionals need to communicate in person with their patients and clients.³⁹

12. *Speed-of-Answer Waiver.* We also waive the speed-of-answer rule for calls routed to specialized interpreters during the eight-month duration of the skills-based routing trial.⁴⁰ We concur with commenters who maintain that providers should not be penalized for unpredictable speeds of answer that users may experience during the trial when voluntarily selecting a specialist interpreter.⁴¹ We will permit providers to give callers wait-time estimates for the provider's skills-based and generalist queues, in addition to offering callers the option of switching out of a skills-based routing queue and into the generalist queue if the caller decides that the wait for a specialized CA is too long.⁴²

13. *Ten Minute Rule Waiver.* Further, to enable providers to reserve interpreters who have specialized skills for those individuals who need them, we waive the ten-minute rule for trial participants in the circumstances described below. Our current rules require a CA to remain on a call for a minimum of ten minutes to minimize disruption to VRS users.⁴³ We recognize, however, that a CA's specialized interpreting skills may not always be needed to achieve effective communication, even if these have been requested by a caller. If it becomes apparent during a call that specialized interpretation is not needed, the call may be transferred back to a generalist CA (or the generalist queue) after (1) receiving confirmation from a supervisor that a specialist CA is unnecessary and (2) notifying the caller of the impending transfer. Doing so will allow VRS providers to preserve the scarce resources of specialist CAs and best match the unique skills of these individuals to the callers that need them.

14. *Sequential Call Rule Waiver.* Finally, we waive the "sequential call rule" in those instances in which, following a specialist call, a consumer asks the CA to place a second call that requires no specialist handling. The Commission's "sequential call rule" generally prohibits CAs from refusing to handle multiple calls in a row from the same caller.⁴⁴ Waiving this rule in these particular circumstances

order received. Nor do we waive the related prohibitions disallowing advance reservations and "call back" arrangements for VRS. *See 2005 Call Handling PN*, 20 FCC Rcd at 1473-74.

³⁹ Under Title III of the Americans with Disabilities Act, "public accommodations," including legal services and health care providers, generally must provide auxiliary aids and services, such as qualified interpreters, when necessary to ensure effective communication with individuals with disabilities. *See* 42 U.S.C. §§ 12103(1) (defining "auxiliary aids and services"), 12181(7) (defining "public accommodation"), 12182(b)(2)(A)(iii) (addressing the provision of auxiliary aids and services by public accommodations); 42 CFR §§ 36.104 (defining "qualified interpreter"), 36.303.

⁴⁰ All parties commenting on this issue agree with this approach. *See, e.g.*, 2015 Joint VRS Providers Proposal at 5; 2015 Consumer Groups Comments at 8. Calls made to generalist CAs during the trial period will remain subject to the speed-of-answer requirements.

⁴¹ *See, e.g.*, 2015 Sorenson Comments at 8-9 (stating that including these specialized calls in the speed-of-answer calculation might discourage providers from participating in the trial due to the risk of losing revenue). For example, a consumer seeking a medical-specialist CA to confer with a doctor's office may need to wait for a CA skilled in medical terminology to become available, thereby affecting speed-of-answer compliance.

⁴² *See* 2015 ASL Services Comments at 10; 2015 Convo Comments at 11 (each generally supporting this approach). 2015 Sorenson Comments at 8 (supporting the provision of wait times to consumers); *2015 VRS FNPRM*, 30 FCC Rcd at 12992, para. 48 (seeking comment on this feature).

⁴³ 47 CFR § 64.604(a)(1)(v).

⁴⁴ 47 CFR § 64.604(a)(3)(i).

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will help ensure that CAs skilled in medical, legal or technical terminology remain available for callers in need of such skills to achieve effective communication.⁴⁵

2. Data Collection

15. To evaluate the demand for and the costs and benefits of skills-based routing, we require each participating provider to submit to the Fund Administrator, with their monthly requests for compensation, the following data for each month of the trial, disaggregated by each of the three skill set categories:⁴⁶

- The number of CAs available for specialist interpreting, and the total number of hours per week that all such CAs were assigned to such function (i.e., total hours in which they were actively engaged in specialist interpreting plus total downtime associated with such interpreting);
- The percentage of active telephone numbers on the ASL side and the voice side of calls, respectively, for which a specialist interpreter was used for at least one call;
- The numbers of compensable calls and conversation minutes handled by specialist interpreters;⁴⁷
- Identification within monthly call detail reports (CDRs) of those calls routed or transferred to or from specialized CAs;⁴⁸
- For each call sent to a specialist interpreter or queue, the amount of time that elapsed between a request for a specialist interpreter and the time the interpreter joined the call—i.e., the speed of answering the caller’s request; and
- The number of calls for which a specialist interpreter was requested but not provided.⁴⁹

16. In addition to these monthly reports, we require participants to submit, no later than June 1, 2018, a final report on the trial containing the following information, disaggregated by skill set where indicated:

⁴⁵ While we leave details as to how this can be accomplished to providers, we expect that general calls following skills-based routed calls will be transferred to the generalist call queue by the specialist interpreter, after giving notice of such transfer to the caller. *See* 2015 Sorenson Comments at 8.

⁴⁶ *See* 2015 ASL Services Comments at 16; Convo Comments at 14 (both advocating monthly reports from participating providers).

⁴⁷ 2015 Consumer Groups Comments at 9; 2015 Sorenson Comments at 9.

⁴⁸ *See* 2015 ZVRS Comments at 11. Identifying skills-based calls in CDRs should not be burdensome, as CDRs currently must include the identification number for the CA handling the call. *See* 2015 ASL Services Comments at 10 (stating that skill-based calls can be easily tracked by automatic call detail records). This information will allow the Commission to compare changes in, e.g., the duration of calls routed to specific telephone numbers that may receive many calls requiring specialized handling. *See* 2015 ZVRS Comments at 12 (urging the Commission to “compare the length of specialized calls that are routed via skills-based routing against the length of similar calls that are routed to the first available CA, regardless of skill”).

⁴⁹ For example, this could occur (1) where no specialist was available at all, (2) where the caller was given a time estimate for the specialist queue and changed his or her mind, (3) where the caller was sent to the specialist queue and abandoned the queue, and (4) where the caller asked for a specialist but the nature of the call was deemed ineligible for specialist interpreting.

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- A description of the standards used to determine (1) whether a specialist interpreter was needed on a call and (2) whether a particular CA was qualified for assignment as a specialist interpreter;⁵⁰
- Detailed documentation of *incremental* costs incurred in conducting the trial, including any incremental costs associated with CA recruitment, training, and compensation, engineering and technical implementation, marketing, and administrative and management support (including oversight, evaluation and recordkeeping);⁵¹
- For providers choosing to notify callers of wait-time estimates, data on such waiting periods, as well as feedback on the benefits and disadvantages of offering this feature; and
- The percentage of requests for specialized interpreting by individuals with disabilities as compared to requests made by hearing individuals.⁵²

17. We believe that the reporting of data in each of the above categories will be critical to assessing the success of this trial. For example, this information will help determine whether skills-based routing results in more efficient calls—e.g., by shortening the length of calls. Although we do not require participating providers to submit particular studies of the accuracy of interpreting on calls subject to skills-based routing, we note that the accuracy of interpreting is likely to be an important factor in any determination of whether to allow skills-based routing on a permanent basis. Such consideration would benefit from the submission by participating providers of studies designed for objective assessment of whether and by how much the accuracy of interpreting improves when calls involving medical, legal, and computer support matters are subject to skills-based routing, with full documentation of the standards and measurement methods used.

18. We require providers to make all data collected in the trial available upon request to the TRS Fund administrator and the Commission staff.⁵³ We affirm that all personally identifiable user information gathered for the purposes of the trial shall remain confidential pursuant to the Commission's confidentiality rules.⁵⁴

19. We direct the TRS Fund administrator to consult with each of the providers participating in the trial, to formulate their individual data collection strategies—before the beginning of the trial and as needed during the trial—to ensure that the data collected addresses the categories listed above and is

⁵⁰ The report should include any changes in the standards made during the trial. *See* 2015 RID Comments at 9-10 (noting that there is a national certification for legal interpreting but none for medical and technical interpreting, and suggesting that providers submit information about how the skills of the specialist CAs are measured and assessed); 2015 MARIE Center Comments at 1 (recommending that the Commission carefully consider how skills will be assessed among CAs).

⁵¹ 2015 Sorenson Comments at 10; 2015 Convo Comments at 14-15; 2015 ASL Services Comments at 15 (noting these as likely costs during the trial).

⁵² This metric may be useful to assessing the extent to which callers requesting specialized CAs may be substituting VRS for in-person interpreting or video remote interpreting (VRI), which uses a video connection to provide access to an interpreter at a remote location when an interpreter cannot be present in person. In-person interpreting and VRI services generally are arranged in advance and paid for on a fee-for-service basis. *See* 2015 VRS FNPRM, 30 FCC Rcd at 12990, 12992, n.93, para. 49. Our understanding is that in most cases where such services are used in the legal, medical, or technical computer support context, the service is ordered by the legal, medical, or computer professional or their company and that in most cases, the professional is a hearing individual.

⁵³ *Cf.* 47 CFR § 64.604(c)(5)(iii)(D)(6).

⁵⁴ 47 CFR § 64.604(a)(2); *see* 2015 Convo Comments at 10 (raising concerns about the confidentiality of information collected during the trial).

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robust enough to provide sufficient basis for a Commission decision on whether to permit skills-based routing on a permanent basis, as well as how to address any issues that surface during the trial.⁵⁵

C. Trial of Deaf Interpreters

20. Based on the record in this proceeding, for the same eight-month trial period used for assessing skills-based routing, we conduct a voluntary trial of the provision of deaf interpreters for VRS calls under the conditions set forth below.⁵⁶ In the *2015 VRS FNPRM*, the Commission noted that some VRS users, including some children, some individuals with limited English or ASL proficiency and some persons with cognitive or motor disabilities, may need the assistance of a deaf interpreter to communicate over VRS in a functionally equivalent manner.⁵⁷ To assess the extent to which the cost of providing such additional interpreters should be considered an allowable cost for purposes of TRS Fund compensation, the Commission sought comment on the cost and benefits of providing deaf interpreters, the number of minutes that such interpreters would be needed, and the types and estimated percentage of VRS users who would benefit from the availability of deaf interpreting services.⁵⁸ In addition, the Commission asked about the appropriate qualifications for deaf interpreters, the efficiency of adding such interpreters to a call remotely, and appropriate recordkeeping and reporting requirements.⁵⁹ Regarding a possible trial of the provision of deaf interpreters, the Commission sought comment on the types of data that would be appropriate for collection during a trial.⁶⁰

21. Commenters are unanimous in their praise of deaf interpreters as a means of achieving functional equivalency and improving the efficiency of certain VRS calls.⁶¹ The 2015 Joint VRS Providers Proposal confirms that some VRS consumers require the assistance of a deaf interpreter in

⁵⁵ See generally 2015 Sorenson Reply Comments at 9 (suggesting that the Commission work with providers to develop more specific data collection criteria).

⁵⁶ See *2015 VRS FNPRM*, 30 FCC Rcd at 12992-93, paras. 51-55. The role of a deaf interpreter, or as they are sometimes known, a certified deaf interpreter (CDI), is to act as an intermediary between a hearing ASL interpreter and the deaf party to a VRS call. The deaf interpreter provides assistance in understanding the deaf caller's method of communication and in making the communications from the other parties to the call understandable to the hearing interpreter and the deaf caller.

⁵⁷ *2015 VRS FNPRM*, 30 FCC Rcd at 12992-93, para. 51; see also 2015 Consumer Groups Comments at 10 (communicating with the VRS CA alone can be difficult for VRS users who "have limited ASL skills and/or other disabilities"); 2015 Purple Comments at 9; 2015 RID Comments at 9 (deaf interpreters can benefit "'individuals with challenging features of language such as minimal language skills or idiosyncratic signing styles'"); 2015 Sorenson Comments at 13 (supporting the use of deaf interpreters to achieve functionally equivalent services for VRS users "whose age, language proficiency, or disability makes communication with a standard interpreter difficult"); 2015 ZVRS Comments at 15.

⁵⁸ *2015 VRS FNPRM*, 30 FCC Rcd at 12993, para. 52.

⁵⁹ *Id.* at 12993, para. 53.

⁶⁰ *2015 VRS FNPRM*, 30 FCC Rcd at 12993, para. 55. This includes data on the number of interpreters needed per call center, consumer satisfaction and service quality, and the potential for fraud, waste and abuse.

⁶¹ See, e.g., 2015 Consumer Groups Comments at 10 (noting that "CDIs have a shared cultural experience that enables them to more easily match any style of communication that a deaf person presents"); 2015 Convo Comments at 8-10 (referencing studies of the National Consortium of Interpreter Education Centers (NCIEC) that indicate that deaf interpreters provide a level of cultural and linguistic bridging that is not always possible when hearing interpreters work alone, and a RID paper on ensuring quality communication access by use of a certified deaf interpreter) (1997); 2015 MARIE Center Comments at 2; 2015 Purple Comments at 9; 2015 RID Comments at 9-10; 2015 Sorenson Comments at 12-16; 2015 ASL Services Comments at 16-17; 2015 VRSCA Reply Comments at 2; 2015 ZVRS Comments at 15-16; 2017 Joint VRS Providers Proposal at 2.

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addition to a hearing interpreter (on the same call) to communicate in a functionally equivalent manner.⁶² VRS providers also assert that the availability of deaf interpreters will help alleviate stress on the general interpreter pool,⁶³ and that by making VRS more efficient, the use of these interpreters could produce cost savings for the TRS Fund.⁶⁴

22. We are interested in studying these claims that deaf interpreters improve VRS efficiency and functional equivalency, but we presently lack sufficient information about the demand for, as well as the costs and benefits of, providing deaf interpreters in the VRS setting.⁶⁵ We believe that the collection of this and other data over an eight-month period will help inform the Commission about whether and how the provision of such interpreters should be included in allowable costs or otherwise subject to compensation from the TRS Fund.⁶⁶

23. Providers interested in participating in the trial should provide notification of their intent to participate to the Commission's Consumer and Governmental Affairs Bureau by June 1, 2017, including a description of the standards they will use to determine whether a deaf interpreter was needed for a call and whether a particular individual is qualified for assignment as a deaf interpreter.⁶⁷ Participating providers are requested to submit to the Fund Administrator, with their monthly requests for compensation, the following data for each month of the trial:⁶⁸

- The number of deaf interpreters utilized and the total number of hours for which all such interpreters were employed;
- The percentage of active telephone numbers on the ASL side of a call for which a deaf interpreter was added for at least one call;
- The numbers of compensable calls and conversation minutes in which deaf interpreters participated, broken down, to the extent ascertainable by the CA or provider, by whether such participation was necessary due to the user's (1) age, (2) limited English, (3) limited ASL proficiency, (4) cognitive or motor disability, or (5) other characteristics;

⁶² 2015 VRS FNPRM, 30 FCC Rcd at 12992-93, para. 51 (citing 2015 Joint VRS Providers Proposal at 6).

⁶³ 2017 Joint VRS Providers Proposal at 12; 2015 Joint VRS Providers Proposal at 6.

⁶⁴ See, e.g., 2015 Convo Comments at 9-10 (claiming that federal agencies use deaf interpreters "not only in support of effective communications, but also because they find the higher quality clearer and shorter interpreted communications as being cost effective"); 2015 ZVRS Comments at 15 (asserting that "a deaf interpreter will more quickly be able to interpret the user's conversations than will a generalist CA acting alone").

⁶⁵ For example, the record is inconsistent on the projected demand for deaf interpreters, with some commenters believing the need for this service to be "great," 2015 Sorenson Comments at 13, and others predicting that "the volume of calls requiring these specialized services is generally quite small," 2015 ZVRS Comments at 16. See, e.g., 2015 ASL Services Comments at 16 (stating they have not quantitatively tracked the need); 2015 Purple Comments at 9 (stating there is very little demand data).

⁶⁶ Most commenters support the use of a trial period to gather additional information about the use of deaf interpreters. See, e.g., 2015 Consumer Groups Comments at 11; 2015 Convo Comments at 8-10 (suggesting, among other things, an examination of the impact that the use of deaf interpreters has on the compensation rate); 2015 Purple Comments at 10; 2015 Sorenson Comments at 13; 2017 Joint VRS Providers Proposal at 12; 2015 ZVRS Reply Comments at 14. But see 2015 RID Comments at 10 (urging moving forward without a trial); 2015 Sorenson Reply Comments at 6 (urging all costs associated with the trial to be compensated).

⁶⁷ Such notification may be sent by e-mail to TRSreports@fcc.gov.

⁶⁸ See generally 2015 Convo Comments at 9; 2015 Sorenson Comments at 13; 2015 ZVRS Comments at 16 (each supporting collection of some of the data sets listed).

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- Identification within monthly call detail reports (CDRs) of those calls in which deaf interpreters participated;
- For each call on which a deaf interpreter was used, the amount of time that elapsed between a request for a deaf interpreter and the time a deaf interpreter joined the call—i.e., how quickly the provider responded to the caller’s request;
- For each call on which a deaf interpreter was used, the duration of the deaf interpreter’s presence on the call;⁶⁹ and
- The number of calls for which a deaf interpreter was requested but not provided.⁷⁰

24. In addition to these monthly reports, we request participants to submit, no later than June 1, 2018, a final report on the trial containing the following information, disaggregated by skill set where indicated:

- A description of the standards that were used to determine (1) whether a deaf interpreter was needed for a call and (2) whether a particular individual is qualified for assignment as a deaf interpreter;⁷¹ and
- Detailed documentation of *incremental* costs incurred in the use of deaf interpreters, including any incremental costs associated with interpreter recruitment, training, and compensation, engineering and technical implementation, marketing, and administrative and management support (including oversight, evaluation and recordkeeping).⁷²

25. We believe that the reporting of data in each of the above categories will be critical to assessing the success of this trial. We agree with commenters that these metrics will assist us in determining, among other things, the general availability of and appropriate service quality for deaf interpreters, an appropriate speed of answer, whether participation of deaf interpreters results in more efficient calls—e.g., by shortening the length of calls, and whether additional compensation is needed to support the provision of such interpreters.⁷³

26. We expect providers to make all data collected in the trial available upon request to the TRS Fund administrator and the Commission staff.⁷⁴ We affirm that all personally identifiable user

⁶⁹ Note that this may be a shorter period than the duration of the entire call.

⁷⁰ For example, this could occur (1) where no deaf interpreter was available at all, (2) where the caller was given a time estimate for the availability of a deaf interpreter and changed his or her mind, (3) where the caller was waiting for a deaf interpreter and abandoned the request, and (4) where the caller asked for a deaf interpreter but the nature of the call was deemed ineligible for one.

⁷¹ For example, while some commenters recommend that these interpreters be subject to the same qualification requirements as their hearing counterparts, *e.g.*, 2015 ASL Services Comments at 17-18; 2015 RID Comments at 10 (seeking to ensure that all VRS interpreters have the necessary “knowledge, skills and abilities”), others suggest that the short supply of skilled deaf interpreters would make rigid qualification requirements difficult to meet, 2015 Sorenson Comments at 14-15. The report should include any changes in the standards made during the trial.

⁷² See 2015 ASL Services Comments at 17; 2015 Sorenson Comments at 16; 2015 Convo Comments at 9; 2015 RID Comments at 10 (urging that deaf interpreters be compensated appropriately).

⁷³ See generally 2015 ZVRS Comments at 16.

⁷⁴ Cf. 47 CFR § 64.604(c)(5)(iii)(D)(6).

information gathered for the purposes of the trial will be treated as confidential pursuant to the Commission's confidentiality rules.⁷⁵

27. *Compliance with Mandatory Minimum Standards.* VRS providers employing deaf interpreters must comply with all applicable mandatory minimum standards. Because a deaf interpreter does not perform all the functions of a CA, but rather provides supplementary assistance, the participation of a deaf interpreter does not necessarily affect a provider's speed of answer or compliance with other TRS rules. Further, we leave the parameters of participation in the deaf interpreters trial largely to the discretion of individual providers. For example, it may be appropriate for a deaf interpreter to be added either prior to a call being connected or after a call has begun, i.e., if needed to facilitate effective communication on the call, and deaf interpreters may be added either on the provider's initiative or at the caller's request.⁷⁶ However, as deaf interpreters may not always be immediately available at every call center, there may be times when callers requesting a deaf interpreter must wait until one is available or when a deaf interpreter must be added remotely from an alternate call center.⁷⁷ If this occurs during the course of a call, there does not appear to be any issue regarding compliance with the answer-in-the-order-received or speed-of-answer rules, because the hearing CA already has placed the call.⁷⁸ For the same reasons discussed above regarding skills-based routing,⁷⁹ in any instance where a caller requests a deaf interpreter in advance of placing a call and is subject to additional waiting time before the call can be placed, in excess of the time needed for a hearing CA to be available, we waive the answer-in-the-order-received and speed-of-answer rules with respect to such additional waiting time, for those providers that participate in the trial and who provide timely and accurate reports containing the information specified above, on condition that the provider makes clear that there will be an additional wait and expressly offers to proceed without a deaf interpreter.⁸⁰

⁷⁵ 47 CFR § 64.604(a)(2); *see* 2015 Convo Comments at 10 (raising concerns about the confidentiality of information collected during the trial).

⁷⁶ *See* 2015 Sorenson Reply Comments at 7.

⁷⁷ 2015 Sorenson Comments at 15 (explaining that a requirement to have deaf interpreters at every location would be inefficient and may not be possible); 2015 ZVRS Comments at 16; 2015 Convo Comments at 9-10; 2015 Purple Comments at 10.

⁷⁸ *See* 2015 Sorenson Comments at 15 (stating that “[w]hen the need for a deaf interpreter is identified during the course of the call, the Commission should look only to the speed at which the call was initially answered”). Similarly, we do not anticipate any issues arising regarding the ten-minute rule or the sequential answer rule, because the hearing CA's ability to continue assisting a caller will not be affected by whether a deaf interpreter continues to be needed. *See supra* paras. 13-14.

⁷⁹ *See supra* paras. 10-12. As with skills-based routing, we are persuaded that the appropriate use of deaf interpreters on some VRS calls may contribute to functional equivalence and increase the efficiency of VRS. We conclude that, to enable the Commission to gather data on the costs and benefits of deaf interpreters and to develop informed rules governing this practice, it will serve the public interest to conditionally waive answer-in-the-order-received and speed-of-answer rules under the conditions described above, for the duration of the trial.

⁸⁰ *See* 2015 ZVRS Comments at 16. Where a deaf interpreter is not requested, but is deemed necessary by the provider or CA, the call may not be interrupted to wait for a deaf interpreter without the consumer's consent, and any delay in connecting a call due to the unavailability of a deaf interpreter will count as waiting time for speed-of-answer purposes. Of course, emergency calls to 911 services must continue to receive priority over other VRS calls, and must always be placed immediately regardless of any request or need for a deaf interpreter. *See* 2015 Convo Comments at 9.

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D. Speed of Answer

28. *Speed-of-Answer Standard.* Commission rules currently require VRS providers to answer 80 percent of all VRS calls in 120 seconds, measured on a monthly basis.⁸¹ In 2015, in response to the 2015 Joint VRS Providers Proposal and a recommendation from the Commission’s Disability Advisory Committee (DAC), the Commission proposed to strengthen the speed-of-answer rule to require that 80 percent of all VRS calls be answered in 45 seconds, measured on a monthly basis.⁸² Consumer Groups have expressed support for this proposal as a step toward their ultimate goal of achieving a standard for 85 percent of calls to be answered in 30 seconds.⁸³ Further, a survey conducted by the TRS Fund Administrator demonstrated that, from May 2014 through April 2015, VRS providers were achieving this 80/45 speed of answer.⁸⁴

29. However, providers continue to raise concerns about the costs of complying with a more stringent speed of answer in light of declining compensation rates.⁸⁵ In the 2015 Joint VRS Providers’ Proposal, all six VRS providers asked that a tightened speed-of-answer be conditioned on “immediate stabilization of the rate,” noting that “it is impossible to meet more stringent speed-of-answer requirements if rates are not commensurate with the requirement.”⁸⁶ Four of these providers reiterated this point in the 2017 Joint Providers’ Proposal.⁸⁷ The Registry of Interpreters for the Deaf (RID) similarly supports the proposed speed of answer but expresses caution about the impact it could have on the ability of communications assistants to “provide functionally equivalent interpreting services,” especially if greater burdens will be placed on existing staff instead of adding new staff.⁸⁸ Given these concerns and that new rate adjustments may occur as a result of the accompanying NPRM, we will defer consideration of whether to revise the speed-of-answer standard at this time.⁸⁹

⁸¹ 47 CFR § 64.604(b)(2)(iii) (2012). In the *2013 VRS Reform Order*, the Commission amended the VRS speed-of-answer standard, requiring a gradual decrease, starting with a requirement for VRS providers to answer 85 percent of calls in 60 seconds, measured on a daily basis, and moving to a requirement that VRS providers answer 85 percent of calls in 30 seconds, measured on a daily basis. *2013 VRS Reform Order*, 28 FCC Rcd at 8673, para. 141. However, those benchmarks were vacated by the U.S. Court of Appeals for the District of Columbia Circuit, after which the prior 80/120 speed-of-answer requirement was reinstated. *See Sorenson*, 765 F.3d at 51-52.

⁸² *Structure and Practices of the Video Relay Service Program*, Further Notice of Proposed Rulemaking, 30 FCC Rcd 12973, 12987, para. 33 (2015) (*2015 VRS FNPRM*).

⁸³ Consumer Groups Comments at 4.

⁸⁴ *2015 VRS FNPRM*, 30 FCC Rcd at 12988, para. 36.

⁸⁵ *See 2015 VRS FNPRM*, 30 FCC Rcd at 12988, para. 34; Purple Comments at 3-4 (conditioning its support for the proposed speed of answer on a rate freeze because of alleged efficiencies that would have to be created in light of declining FCC rates); Sorenson Reply Comments at 2-3 (questioning whether providers can meet the new standard if scheduled rates cuts went into effect); Consumer Groups Comments at 6 (urging higher compensation if costs increase to meet the proposed requirement).

⁸⁶ 2015 Joint VRS Providers Proposal at 2-3 (adding that unrealistic speed-of-answer requirements create a stressful work environment, which increases interpreter turnover, and lowers the quality of interpreting); *see also* 2017 Joint VRS Providers Proposal at 13.

⁸⁷ 2017 Joint VRS Providers Proposal at 13.

⁸⁸ RID Comments at 7-8 (suggesting that research and development funds be allocated to assess the impact of the proposal on effective communication); *see also* Spencer Comments at 1 (expressing concern that the lower speed of answer could increase the work load of interpreters, thereby “negatively impacting the consumer’s experience”); Video Relay Services Consumer Association (VRSCA) Reply Comments at 2 (agreeing with Consumer Groups and RID).

⁸⁹ The record also supports continuing to determine the speed of answer on a monthly basis. *2015 VRS FNPRM*, 30 FCC Rcd at 12988, para. 35. For example, Purple notes that this approach “mitigates fluctuations that could result

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30. *Publication of Speed-of-Answer Data.* Although we do not adopt a more stringent speed-of-answer standard in this Order, we continue to believe that an answering time that is faster than what is presently required will enable VRS users to experience communications in a manner that is closer to the telephone experience of hearing persons without disabilities. Indeed, the Commission has abided by a longstanding principle that the “ability of a TRS user to reach a CA prepared to place his or her call, without experiencing delays that a voice telephone user would not experience in placing a telephone call, is fundamental to the concept of ‘functional equivalence.’”⁹⁰

31. Regardless of the applicable speed-of-answer standard, providers are of course permitted to answer calls at a faster speed, and the Commission has recognized that competition among providers encourages them to improve speed-of-answer performance.⁹¹ In the *2015 VRS FNPRM*, the Commission asked whether the Commission should publish summaries of each provider’s speed-of-answer performance data, to enhance incentives to improve their performance and allow consumers to compare performance across VRS providers.⁹² The Commission further sought comment on the level of detail that would be useful for consumers regarding a provider’s speed-of-answer performance.⁹³

32. No party responding to this inquiry opposes the publication of speed-of-answer performance data, and Consumer Groups affirmatively support its release.⁹⁴ According to Consumer Groups, publication of such data would allow provider comparisons and create “an incentive-based system” that could result in improved speed-of-answer performance over time.⁹⁵ While not opposing disclosure of such data, Sorenson cautions that its publication be done “in a way consumers can understand and that makes clear that the data is only an average and not a prediction of how long it will take to answer an individual call.”⁹⁶

from periods of extended power or Internet outages, weather problems, and erratic demand patterns (spikes).” Purple Comments at 4-5 (citing 2015 Joint VRS Providers Proposal at 3); *see also* ASL Services Comments at 2-3; ZVRS Comments at 8 (explaining that having to meet a daily requirement would require providers to staff at peak levels, which in turn would increase costs and create inefficiencies); Sorenson Comments at 4 (noting that a monthly calculation allows providers to account for spikes in demand); Consumer Groups Comments at 5. We agree that because demand fluctuates, it may be counterproductive to require the target speed of answer to be obtained each day. Thus we do not revise this aspect of the speed of answer in this proceeding.

⁹⁰ *2015 VRS FNPRM*, 30 FCC Rcd at 12986, para. 32; *2013 VRS Reform Order*, 28 FCC Rcd at 8671, para. 136; *see also 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, 5165-66, para. 60 (2000) (“For a TRS user, reaching a CA to place a relay call is the equivalent of picking up a phone and getting a dial tone. Any interpretation of our rule that delays a customer’s ability to place a call through the relay center clearly compromises the functional equivalence of relay service.”), 5166, para. 63 (“Just like voice calls, TRS calls should be answered within a reasonable time period, regardless of the traffic load.”).

⁹¹ *See 2004 TRS R&O*, 19 FCC Rcd at 12523, para. 121 (noting that “competition should provide incentive for VRS providers to answer VRS calls as promptly as possible”).

⁹² *2015 VRS FNPRM*, 30 FCC Rcd at 12989, para. 40. To ensure compliance with the Commission’s speed-of-answer rule, providers are required to report data about their speed-of-answer performance in monthly call data reports submitted to the TRS Fund administrator. 47 CFR § 64.604(c)(5)(iii)(D)(3).

⁹³ *2015 VRS FNPRM*, 30 FCC Rcd at 12989, para. 40.

⁹⁴ Consumer Groups Comments at 6.

⁹⁵ Consumer Groups Comments at 6.

⁹⁶ Sorenson Comments at 7. Convo also supports transparency and thus does not oppose the publishing of summaries of speed-of-answer performance. But based on consumer inattention to published complaint logs, Convo

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33. We are persuaded that releasing the speed-of-answer data to the public would be beneficial because it will enable consumers to monitor provider performance and supply valuable information that can assist in their selection of VRS providers. We further agree with Consumer Groups that in the interest of attracting customers, publication of this data may create incentives for providers to tighten their speed-of-answer performance.⁹⁷ Accordingly, we direct the Office of the Managing Director, in coordination with the Consumer and Governmental Affairs Bureau (CGB), to publish summaries of each VRS provider's speed-of-answer data—obtained from the TRS Fund Administrator—on a semi-annual basis on the Commission's website.⁹⁸ We further direct that such information be prepared for the public in an easy-to-read format, to allow for easy comparisons of provider performance, and that the summaries be accompanied by a statement that the data shown are only averages and do not predict how long it will take for a provider to answer any individual call.⁹⁹

34. *Speed-of-Answer Calculation Methodology.* In the *2015 VRS FNPRM*, the Commission also sought comment on whether to revise the manner in which the VRS speed of answer is measured.¹⁰⁰ Currently, Commission's rules state that this measurement begins from the time a call reaches facilities operated by the provider.¹⁰¹ By way of background, in the *2005 VRS Speed-of-Answer Order*, the Commission explained that a "call is 'answered' when either a CA or an automated system responds to the incoming call and begins taking instructions from the calling party about the outbound call the calling party wishes to make."¹⁰² The *2015 VRS FNPRM* proposed to amend this rule to harmonize the VRS speed-of-answer calculation with the rule for other forms of TRS, namely, to define when a call is "answered" in terms of any answering method that results in "the caller's call immediately being placed, not put in a queue or on hold."¹⁰³ Alternatively, the Commission asked whether it would be appropriate to adopt a more specific proposal put forth by the DAC, which would base this measurement on when the caller is connected to a CA and would not allow responses by interactive voice response (IVR) systems to count as answers for speed-of-answer purposes.¹⁰⁴

35. Commenters generally agree with the DAC proposal.¹⁰⁵ As noted in the *2015 VRS FNPRM* and the *2013 VRS Reform FNPRM*, VRS users are now able to directly dial their destination number without intervention by a CA.¹⁰⁶ Given this modernized feature, which aligns the way that VRS calls are placed with TRS calls, and given record support for the approach recommended by the DAC, we amend our rules to define when VRS calls are "answered" for the purpose of the speed-of-answer

questions whether the administrative work of publishing the providers' speed of answer will lead to a measurable consumer response. Convo Comments at 16.

⁹⁷ See generally *2004 TRS R&O*, 19 FCC Rcd at 12523, para. 121.

⁹⁸ The information published shall not identify individual callers or phone numbers. Notification of the release of such information shall be made by Public Notice.

⁹⁹ See Sorenson Comments at 7.

¹⁰⁰ *2015 VRS FNPRM*, 30 FCC Rcd at 12989, para. 42.

¹⁰¹ 47 CFR § 64.604(b)(2)(iii)(B) (2015); see also Sorenson Comments at 3 (supporting the current rule).

¹⁰² *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order, 20 FCC Rcd 13165, 13176, para. 21 (2005) (*2005 VRS Speed-of-Answer Order*).

¹⁰³ *2015 VRS FNPRM*, 30 FCC Rcd at 12990, para. 42; 47 CFR § 64.604(b)(2)(ii) (2015).

¹⁰⁴ *2015 VRS FNPRM*, 30 FCC Rcd at 12990, para. 42; FCC DAC, Recommendation of the Subcommittee on Relay and Equipment Distribution, at 2 (May 7, 2015) (DAC Recommendation), https://apps.fcc.gov/edocs_public/attachmatch/DOC-334156A1.pdf.

¹⁰⁵ Sorenson Comments at 3; Convo Comments at 15-16; Consumer Groups Comments at 6-7.

¹⁰⁶ *2015 VRS FNPRM*, 30 FCC Rcd at 12996, para. 62; *2013 VRS Reform FNPRM*, 28 FCC Rcd at 8673, para. 140.

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measurement as when a call is answered by a CA—i.e., not when it is put on hold, placed in a queue, or connected to an IVR system.¹⁰⁷

36. *Exigent Circumstances.* Finally, in the 2015 VRS FNPRM, we reported on a request by providers for the Commission to adopt a self-executing exemption from the speed-of-answer standard (i.e., one that can be effective without prior Commission approval in each instance) for calls occurring as a result of specific extraordinary events beyond a provider's control.¹⁰⁸ We decline to adopt this exemption. We remind providers that the Commission's mandatory minimum standards require all TRS providers to have "redundancy features functionally equivalent to the equipment in normal central offices, including uninterruptable power for emergency use."¹⁰⁹ However, we also recognize that at times, there may be exigent circumstances that affect either multiple centers at the same time, or a single center in such an extraordinary way that meeting the speed of answer becomes extremely difficult or impossible, and warrant some flexibility by the Commission. Should this occur, providers may bring such circumstances to the attention of the Commission in the form of a waiver request, which shall be reviewed on its merits on a case-by-case basis.¹¹⁰ The waiver request shall include a description of the nature of the exigent circumstances, a discussion of what the provider is doing to mitigate the effects of such circumstances, and the average speed-of-answer calculations for the period covered by the waiver request. To ensure that any delay in addressing such requests does not unnecessarily disrupt the provision of compensation, we amend our rules to instruct the TRS Fund administrator not to withhold payment pending review of such waiver requests.¹¹¹

E. iTRS Numbers for Hearing People

37. In 2013 and again in 2015, the Commission sought comment on allowing VRS providers to assign ten-digit telephone numbers associated with the iTRS database (iTRS numbers) to hearing individuals for the purpose of point-to-point ASL video communication with registered VRS users and to enter these numbers in the TRS Numbering Directory.¹¹² The Commission previously has authorized the use of iTRS numbers for point-to-point video service between registered VRS users.¹¹³ This new feature

¹⁰⁷ See Appendix B (Final Rules, amending 47 CFR § 64.604(b)(2)(iii)(B)). Thus, the current formula for assessing compliance will be amended to explicitly state that the call must be answered by a communications assistant, as follows: [(calls unanswered and disconnected by the caller in 45 seconds or less) + (calls answered by a communications assistant in 45 seconds or less)] divided by [all calls (unanswered and answered)]. We note that the DAC recommended this revision to the formula, and it is not opposed by any party. See DAC Recommendation at 1; 2015 VRS FNPRM, 30 FCC Rcd at 12987, para. 33 (seeking comment on this formula).

¹⁰⁸ 2015 VRS FNPRM, 30 FCC Rcd at 12989, para. 41 & n.86 (citing 2015 Joint VRS Providers Proposal at 3-4 (listing, as examples, "denial-of-service attacks, Internet outages not under the VRS provider's control, periods of declared national or state emergencies covering more than 10% of a provider's interpreting capacity, [and] delays caused by the TRS-User Registration Database [] of more than 1 second")).

¹⁰⁹ 47 CFR § 64.604(b)(4).

¹¹⁰ This is consistent with the Commission's past practice permitting exemptions for acts of God and other unpredictable circumstances in other situations. E.g., *Third Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television*, Report and Order, 23 FCC Rcd. 2994, 3032, para. 78 (2007).

¹¹¹ See Appendix B (Final Rules) (47 CFR § 64.604(c)(5)(iii)(L)(6)). We expect that providers will not abuse this option, and only seek such waiver requests when absolutely essential. Should the Commission determine that such waiver requests are frivolous or lack the support of concrete evidence of the alleged exigent circumstances, it may consider initiating an enforcement action against the provider for disregard of the Commission's rules.

¹¹² 2013 VRS Reform FNPRM, 28 FCC Rcd at 8713, para. 243; 2015 VRS FNPRM, 30 FCC Rcd at 12995-97, paras. 60-66.

¹¹³ See, e.g., 2013 VRS Reform Order, 28 FCC Rcd at 8659, para. 97 & n.224 (noting that the provisioning of routing for point-to-point calls is appropriately supported by the TRS Fund); *Telecommunications Relay Services and*

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similarly would enable hearing persons who know ASL to communicate directly (via point-to-point video) with ASL users with disabilities, eliminating the need to use VRS for such calls. Among other things, the Commission sought comment on the benefits and costs of assigning iTRS numbers to hearing individuals, cost recovery, and the prevention of waste, fraud, and abuse.¹¹⁴

38. At present, only individuals who have a hearing or speech disability and are registered VRS users can obtain an iTRS number.¹¹⁵ While such users may converse directly with ASL-fluent hearing individuals over non-VRS video conferencing services, such as FaceTime or Skype, these services do not offer their callers the ease of ten-digit dialing. Consequently, VRS remains the only means by which ASL communication via ten-digit dialing can occur between hearing persons and registered VRS users.

39. Commenters unanimously support closing this gap and allowing the assignment of iTRS numbers to hearing individuals as a means of enhancing functional equivalency.¹¹⁶ For example, the Registry of Interpreters for the Deaf (RID) points out that most interpreters have strong ties to the deaf community, and that allowing these ASL-fluent individuals to connect directly with their partners, colleagues, and friends would be far superior to requiring such individuals to communicate indirectly through a relay service.¹¹⁷ We agree with commenters who state that enabling registered VRS users to communicate directly with hearing individuals who can sign not only will conserve the resources of the TRS Fund but also will allow “more natural, efficient, and effective communication” between the deaf and hearing communities.¹¹⁸ Accordingly, we amend the TRS rules to permit VRS providers to assign iTRS numbers to hearing individuals upon their request, in accordance with the rules adopted herein.¹¹⁹ VRS providers shall allow such iTRS numbers to be used only for point-to-point video communications

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, 822, para. 67 (2008) (*Second TRS Numbering Order*) (noting that “point-to-point services even more directly support” the purposes of section 225 because “they are more rapid in that they involve direct, rather than interpreted, communication,” and “they are more efficient in that they do not trigger the costs involved with interpretation or unnecessary routing . . .”).

¹¹⁴ 2015 VRS FNPRM, 30 FCC Rcd at 12995-97, paras. 60-66.

¹¹⁵ *Second TRS Numbering Order*, 24 FCC Rcd at 807, para. 34 (“only individuals with a hearing or speech disability will be eligible to obtain [iTRS] numbers”).

¹¹⁶ 2015 Consumer Groups Comments at 12-14; 2015 ASL Services Comments 19-20; 2015 Convo Comments at 17-19; 2015 ZVRS Comments at 13-15; 2015 Purple Comments at 12-13; 2015 Sorenson Comments at 11-12; 2015 VRSCA Reply Comments at 2; 2015 Spencer Comments at 3.

¹¹⁷ 2015 RID Comments at 11-12.

¹¹⁸ 2015 Consumer Groups Comments at 13-14; *see also*, 2015 Convo Comments at 17; 2015 ZVRS Comments at 14; 2015 RID Comments at 12; 2015 Sorenson Comments at 11; 2015 VRSCA Reply Comments at 2; 2015 Spencer Comments at 3; 2015 VRS FNPRM, 30 FCC Rcd at 12995 n.116 (listing multiple commenters who requested the Commission to allow such use of ten-digit numbers). Sorenson asks the Commission to first eliminate a “security hole” in the present database, claiming that the “reverse lookup” function, which allows a provider to see which iTRS numbers are associated with a particular IP address, would allow a provider to use this function to look up the iTRS numbers associated with a competitor’s server-based routing IP address to find out the phone numbers served by the competitor. 2015 Sorenson Comments at 11. Regardless of the merits of this issue, we do not believe that it needs to be addressed prior to assigning iTRS numbers to hearing individuals, as the record does not indicate that a significant competitive advantage would accrue to a provider from performing reverse lookup to identify numbers assigned to hearing individuals. In any event, our customer proprietary network information (CPNI) rules prohibit a provider from using reverse lookup information for marketing to a competitor’s customers. *See* 47 CFR §64.5105(b).

¹¹⁹ 2015 VRS FNPRM, 30 FCC Rcd at 12996, para. 62 (seeking comment on whether a mandate would be appropriate).

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and shall not allow them to be used to place or receive VRS calls. Accordingly, it will not be permissible for these numbers to be used for the purpose of contacting 911 services.¹²⁰ In order to ensure that there is no such expectation by iTRS number recipients who are hearing, we direct providers who distribute such numbers to provide a clear warning about this limitation. We further add this limitation to the certification that must be signed by all hearing iTRS number recipients below.

40. Because we are only permitting, and do not require, VRS providers to assign iTRS numbers to hearing individuals, and because such numbers may not be used to access TRS, we will not permit any costs associated with such number assignment to be included as allowable costs in provider cost data submissions to the TRS Fund administrator at this time. Thus, in VRS providers' annual cost submissions, any incremental costs for number assignment, back-office services, and the like associated with providing iTRS numbers and connectivity to hearing individuals shall be separated from any allowable costs associated with number assignment and point-to-point communications for registered VRS users.¹²¹ Such costs may be recovered from the individuals to whom such numbers are assigned. Although some providers assert that ten-digit numbering assignments to hearing people will result in additional costs,¹²² the record provides no reason to doubt that such costs are sufficiently addressed by allowing their recovery in the same manner as analogous costs for number assignment to registered VRS users.¹²³

41. To aid in the prevention of fraud, waste, and abuse, and to ensure that only residents of the United States have access to point-to-point service via iTRS numbers, we require that VRS providers obtain from each hearing applicant seeking an iTRS number the individual's full name, residential address, birth date, and a signed self-certification that:

- The individual is proficient in sign language;
- The individual understands that the iTRS number may only be used for the sole purpose of communicating—via point-to-point—over distances with registered VRS users;
- The individual understands that such iTRS number may not be used to access VRS; and
- The individual understands that calls to 911 are not supported by such iTRS number.¹²⁴

¹²⁰ Calls to 911 made using these iTRS numbers would automatically be transferred to a VRS CA. Because hearing individuals are able to call 911 directly, we see no benefit in enabling these numbers to support emergency call handling by these individuals through VRS.

¹²¹ In the *2015 VRS FNPRM*, the Commission defined “back-office services,” as “verification of the hearing person’s identity by the provider or the TRS-URD, the placement of the user in the iTRS database, and any other similar tasks necessary to the provision of this service.” *2015 VRS FNPRM*, 30 FCC Rcd at 12996, n.125. The Commission has determined that some costs relating to assignment of numbers to registered VRS users are compensable from the TRS Fund. *Second TRS Numbering Order*, 24 FCC Rcd at 813-14, paras. 47-51.

¹²² *See, e.g.*, 2015 Sorenson Comments at 11-12; Sorenson Reply Comments at 13 (indicating costs to implement numbering and safeguards); 2015 Purple Comments at 12 (noting network service costs); 2015 ASL Services Comments at 19 (noting costs to procure numbers); 2015 Convo Comments at 18; 2015 ZVRS Comments at 14.

¹²³ No providers have submitted specific estimates for or documentation of such expenses, despite the Commission’s invitation to do so. *Compare 2015 VRS FNPRM*, 30 FCC Rcd at 12996, para. 63 (inviting submission of cost data relating to iTRS number assignments to hearing individuals), *with* 2015 ASL Services Comments at 19; 2015 Purple Comments at 12-13; 2015 ZVRS Comments at 14; 2015 Sorenson Comments at 11-12; 2015 Sorenson Reply Comments at 13. Nor has any provider suggested why they cannot be recovered in the same manner as the costs for number assignment to registered VRS users.

¹²⁴ We do not agree with Sorenson that because point-to-point calls are not compensable, self-certification is unnecessary. *See* 2015 Sorenson Comments at 12. Self-certification helps the user understand the valid uses of the iTRS numbers. *See* 47 CFR § 64.611(a)(3) (self-certification rule for VRS users). However, given that iTRS

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We believe that the above requirements will help to ensure that hearing individuals receiving iTRS numbers understand the purpose of these numbers and the limits on their use. Several providers support such requirements as a means of achieving these objectives.¹²⁵

42. In addition to transmitting the above information, we require each VRS provider to deliver the following to the TRS-URD administrator:

- Each iTRS number assigned in the TRS Numbering Directory to hearing persons;
- The VRS provider's name and dates of service initiation and termination (as applicable); and
- The date on which an iTRS number was assigned to or removed from a hearing person.

43. Finally, to ensure that restrictions on the use of these numbers can be implemented and enforced, we require each default provider distributing an iTRS number to a hearing individual to notify both the TRS Numbering Directory and the TRS-URD that the individual is a hearing person who is not entitled to place or receive VRS calls.¹²⁶ Such numbers shall be coded in the TRS-URD and TRS Numbering Directory as restricted numbers that may only be used for point-to-point calls. VRS providers are prohibited from seeking compensation for any call involving an iTRS number assigned to a hearing individual.

44. We require providers to make all information collected to address the above requirements available upon request to the TRS Fund administrator and the Commission staff.¹²⁷ We affirm that all personally identifiable user information gathered for this purpose shall remain confidential pursuant to the Commission's confidentiality rules.¹²⁸

numbers distributed to hearing persons will be designated in the TRS-URD and the TRS Numbering Directory as numbers for which VRS calls are non-compensable, that such individuals must sign a self-certification on the proper use of these numbers, based on the current record we find that the certification and other requirements described above will be sufficient and do not believe additional safeguards are necessary at this time. *See* 47 CFR § 64.611(a)(4).

¹²⁵ *See* 2015 Convo Comments at 18-19 (supporting such requirements, but positing that self-certification could be dropped after implementation of the TRS-URD); 2015 Purple Comments at 13 (supporting registration); 2015 ZVRS Comments at 14; 2015 ASL Services Comments at 19.

¹²⁶ 2015 VRS FNPRM, 30 FCC Rcd at 12997, para. 66. We note that commenters generally support the adoption of procedures to ensure that hearing individuals who are assigned iTRS numbers will be prevented from making VRS calls. *See, e.g.,* 2015 Convo Comments at 18; 2015 Purple Comments at 12; 2015 Spencer Comments at 3; 2015 Sorenson Comments at 12; 2015 Sorenson Reply Comments at 13. We reject, however, Purple's proposal to require VRS providers to obtain from such individuals the iTRS number associated with a registered VRS user that the hearing person intends to call because we do not understand how obtaining this information would achieve Purple's stated objective of preventing hearing people from making point-to-point calls to each other, and find this proposal unnecessarily restrictive for people with disabilities seeking to use iTRS numbers to facilitate their telephone communication with hearing people. *See* 2015 Purple Comments at 13. We also reject the suggestion that an eligible VRS user be permitted to use a hearing person's videophone to make a VRS call if the eligible user self-certifies eligibility. *See* 2015 Sorenson Comments at 12; 2015 ASL Services Comments at 19-20; 2015 ZVRS Comments at 13. Until such time that there is a means for VRS users to log into such phones with a unique identifier that can verify their registered status, we are concerned that this practice could open up these phones to fraud and abuse. Finally, we reject a suggestion by ZVRS to allow hearing people to place 911 calls using an iTRS number. 2015 ZVRS Comments at 15. These numbers are for the sole use of hearing individuals to communicate with registered VRS users, and hearing individuals have many other options available to them for contacting 911. *See* 2015 Sorenson Reply Comments at 14 (opposing use of these numbers for 911 purposes).

¹²⁷ *Cf.* 47 CFR § 64.604(c)(5)(iii)(D)(6).

¹²⁸ 47 CFR § 64.604(a)(2).

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F. At-Home VRS Call Handling

45. In this section, we amend our rules to authorize a voluntary pilot program of at-home VRS call handling, subject to specified safeguards, for a twelve-month period, beginning November 1, 2017, and ending November 1, 2018. During this period, in any month of the program, a participating VRS provider may be compensated for minutes served by at-home CA workstations up to a maximum of *either* 30 percent of a VRS provider's total minutes for which compensation is paid in that month *or* 30 percent of the provider's average monthly minutes for the 12 months ending October 31, 2017, whichever is greater.¹²⁹ The Commission will gather data as the pilot proceeds, to inform a final determination on whether to make this program permanent. The record developed on this issue indicates that the circumstances originally supporting a prohibition against at-home workstations may have changed in the intervening years and that with the specified safeguards to protect against waste, fraud, and abuse and ensure quality services, at-home interpreting likely can improve the efficiency and effectiveness of the VRS program. We will permit any of the currently certified VRS providers to participate in this pilot, subject to Commission approval of their plans for participation and the conditions specified below.

46. *Background.* In 2011, the Commission adopted a ban on the use of at-home workstations in the provision of VRS, as one of numerous measures designed to reduce waste, fraud, and abuse in the VRS program.¹³⁰ Shortly thereafter, CSDVRS, LLC, dba ZVRS (ZVRS), petitioned the Commission to waive the ban, stating that ZVRS's at-home call handling program addressed the concerns underlying the ban.¹³¹ Subsequently, the Commission sought comment on modifying the ban, in 2013, with respect to

¹²⁹ This is a limitation on the minutes handled at-home that will be subject to compensation; however, exceeding this limit during the pilot program period will not result in penalties and forfeitures. We concur with ZVRS that at-home workstations for VRS CAs should complement rather than replace the functions performed at call centers. 2015 ZVRS Comments at 3. Further, by limited the amount of calls that can be handled to thirty percent of total monthly minutes, we are ensured that VRS providers will process at least twice as many minutes at call centers rather than at home, while leaving significant flexibility for at-home call handling throughout the night. Given the relatively high level at which this cap has been set, we expect there will be little likelihood of any provider exceeding the cap in a given month. See ZVRS Waiver Petition at 7; 2015 Consumer Groups Comments at 11-12; 2015 ASL Services Comments at 18. To provide additional flexibility for VRS providers who may be concerned about their ability to effectively monitor the use of at-home interpreting in a given month, the limit is stated as the greater of two quantities: (1) 30 percent of the total minutes for which compensation is payable in the month in question; and (2) 30 percent of the average monthly minutes for which compensation was paid to the provider in the 12 months ending October 31, 2017. This will allow an opportunity to evaluate the success of this program without significant risk to VRS providers' operations or the TRS Fund. Providers that are concerned about the possibility of having compensation withheld should plan their at-home programs carefully in this regard. In exceptional circumstances, as with speed-of-answer compliance, the Commission will entertain requests to waive the cap, if warranted by the facts presented.

¹³⁰ See *Structure and Practices of the Video Relay Services Program*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 5545, 5554-59, paras. 13-20 (2011) (*2011 VRS Call Practices Order*) (codified at 47 CFR § 64.604(b)(4)(iii)). Previously, as many as fifty companies, operating as "white label companies" under FCC-certified VRS companies, had been providing VRS with little or no direct accountability to the Commission. In addition, the Commission was concerned about whether work-from-home arrangements could meet the Commission's mandatory minimum standards on matters such as redundancy, call confidentiality, and service quality requirements. *Id.* at 5556-57, paras. 16-17. In adopting the ban, the Commission stated that it remained open to revisiting its findings, if it could determine that at-home interpreting can be accomplished in a manner that meets the TRS mandatory minimum standards and is sufficiently monitored to prevent fraudulent practices. *Id.* at 5558-59, para. 20.

¹³¹ See Petition of CSDVRS, LLC dba ZVRS for Temporary Waiver, CG Docket No. 10-51 (filed Aug. 12, 2011) (ZVRS Waiver Petition).

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allowing CAs to handle calls from at-home workstations overnight,¹³² and in 2015, with respect to permitting at-home call handling at all times of day.¹³³ The Commission also asked about the need for safeguards to ensure protection against waste, fraud and abuse and to achieve compliance with the mandatory minimum standards for VRS.¹³⁴

1. Changed Circumstances Justify At-Home Call Handling Trial

47. During the intervening years since the at-home call handling ban was established, the Commission has adopted significant reforms to protect the VRS program from waste, fraud, and abuse.¹³⁵ In addition, there have been important advances in technology, including the strengthened reliability of Internet-based networks, the advent of video platforms that allow stricter monitoring of the at-home environment, and the secure use of video communications at home and in the workplace.¹³⁶

48. In light of these changes, we believe that with current technology and experienced CAs, VRS providers likely can protect against waste, fraud, and abuse, and comply with the Commission's mandatory minimum standards while effectively handling VRS calls from CA at-home workstations.¹³⁷ This approach aligns with current practices across industry and government sectors that permit at-home communications-related work under strict confidentiality standards.¹³⁸ CA workstations, whether located in a call center or at home, can be integrated in a virtual system in which call handling protocols apply seamless capabilities and failover procedures to ensure that quality standards are met at every workstation regardless of its location.¹³⁹

49. Further, the record reflects that allowing VRS CAs to handle calls from at-home workstations offers several benefits, including increasing the pool of qualified interpreters¹⁴⁰ and protecting the safety of CAs by eliminating the need to travel during late-night hours.¹⁴¹ Additionally, at-home workstation arrangements can improve network redundancy and help providers meet speed-of-answer standards by allowing alternative locations for CAs to handle VRS calls away from call centers

¹³² 2013 VRS Reform Order, 28 FCC Rcd at 8725, para. 282,

¹³³ 2015 VRS FNPRM, 30 FCC Rcd at 12994-12995, para. 59.

¹³⁴ 2013 VRS Reform Order, 28 FCC Rcd at 8725, para. 282; 2015 VRS FNPRM, 30 FCC Rcd at 12994, para. 59.

¹³⁵ These include the prohibition against having white label providers operate call center functions, changes to the VRS certification requirements, strengthened oversight of VRS through the collection of call data records, requirements for on-site visits, improved auditing, and the imminent implementation of the TRS user registration database (TRS-URD). See, e.g., 47 CFR §§ 64.604(c)(5)(iii)(D)(4), (6), (F)(2), (N)(1), 64.606, 64.611, 64.615; 2011 VRS Call Practices Order, 26 FCC Rcd at 5574-75, 5580-84, paras. 57-61, 78-79, 84; 2011 iTRS Certification Order, 26 FCC Rcd at 10899-900, para. 3; 2013 VRS Reform Order, 28 FCC Rcd at 6847-56, paras. 68-86.

¹³⁶ See 2015 ZVRS Comments at 6-8; 2015 ZVRS Reply Comments at 6-8; 2015 Consumer Groups Comments at 12; 2015 RID Comments at 10-11; 2015 ASL Services Comments at 18-19.

¹³⁷ There is considerable support in the record for this rule change. See e.g., 2015 Consumer Groups Comments at 11-12; 2015 ZVRS Comments at 2-7; 2015 ASL Services Comments at 18. We thus disagree with those commenters who continue to doubt that the recent advances in technology and available safeguards will ensure VRS providers can meet the Commission's TRS mandatory minimum standards. 2015 Sorenson Comments at 17-19; 2015 Convo Comments at 19; 2015 Purple Comments at 11.

¹³⁸ See 2015 ZVRS Reply Comments at 6-7.

¹³⁹ See 2015 ZVRS Reply Comments at 8.

¹⁴⁰ Some interpreters who would be available for at-home interpreting may be unable to travel to a VRS provider's call centers due to lack of proximity, inadequate public transportation options, or physical limitations. See 2015 RID Comments at 11; 2015 ZVRS Comments at 4-5.

¹⁴¹ See 2015 ZVRS Comments at 5; 2015 RID Comments at 11.

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during times of inclement weather, civic emergencies, network outages, network traffic events, or other unforeseen circumstances that could affect those centers.¹⁴²

2. Safeguards for At-Home Workstations

50. To protect against waste, fraud, and abuse, guarantee call confidentiality,¹⁴³ and ensure compliance with the Commission's rules and orders governing TRS, during the trial we require VRS providers to adhere to the following safeguards for all of their at-home CA workstations.¹⁴⁴ We also expect these providers to respond as quickly as they are able to any indications that their at-home CAs or workstations may not be meeting these safeguards or any of the Commission's TRS standards.¹⁴⁵

51. *Personnel Safeguards.* Providers must ensure that CAs working from at-home workstations have the skills, experience, and knowledge to effectively handle the wide range of communications that take place over VRS. To achieve this, we require participating VRS providers to comply with the following safeguards:

- Before permitting CAs to handle calls from an at-home workstation, VRS providers must ensure that they have a level of experience, skills, and knowledge to effectively interpret from these workstations, including a thorough understanding of the Commission's mandatory minimum standards.¹⁴⁶ This can be measured, for example, by having providers conduct tests or assessments of a CA's capabilities and knowledge prior to permitting participation in the program.
- To provide a measure of added assurance that CAs working at home have sufficient experience, skills, and knowledge to work without in-person supervision, any CA permitted to work at home first must have three years of experience as a call center CA.¹⁴⁷

¹⁴² See 2015 ZVRS Comments at 4-5.

¹⁴³ The Commission rules require strict confidentiality for all relay calls to ensure a private calling experience that is functionally equivalent to the caller privacy of non-relay users. 47 C.F.R. § 64.604(a)(2); see *Telecommunications Services for Individuals with Hearing and Speech Disabilities and the Americans with Disabilities Act*, Report and Order and Request for Comments, 6 FCC Rcd 4657, 4659, para. 13 (1991); *Telecommunications Relay Services and Speech-to-Speech for Individuals with Hearing and Speech Disabilities*, Report and Order and Further Notice of Proposed Rulemaking, 15 FCC Rcd 5140, 5164, para. 54 (2000).

¹⁴⁴ Some commenters suggest relying on ZVRS's previous at-home interpreting program, as detailed in the *ZVRS Waiver Petition*, as a useful model for implementing safeguards. See 2015 Consumer Group Comments at 11-12; 2015 ASL Services Comments at 18; 2015 ZVRS Comments at 4-5. We draw on several of these practices in this order.

¹⁴⁵ Sorenson questions the extent that technical and structural safeguards can deter the potential for fraud. 2015 Sorenson Comments at 16-17. However, we agree with ZVRS that if safeguards are properly implemented and maintained, VRS providers should be able to ensure an equivalent level of oversight that it exercises in the call center environment for the purpose of deterring fraud. 2015 ZVRS Reply Comments at 5.

¹⁴⁶ See ZVRS Waiver Petition at 2.

¹⁴⁷ See ZVRS Waiver Petition at 2; 2015 Consumer Group Comments at 12 (supporting ZVRS's previous practice of allowing a CA to join the at-home program after three years of call center performance); 2015 ZVRS Reply Comments at 4; cf. 2015 ASL Services Comments at 18 (supporting a minimum pre-employment period for CAs). Although ZVRS reports that all CAs in its original at-home call handling program (prior to the Commission ban) were certified members of the Registry of Interpreters for the Deaf, given the Commission's previous finding that interpreter certification is not always an effective indicator of an interpreter's skills and expertise, we do not impose this requirement. See *2013 VRS Reform Order*, 28 FCC Rcd at 8689-90, paras. 177-78 & n. 458. ZVRS also reports that its CAs were admitted into the at-home interpreting program only after a screening process to ensure a

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- Before authorizing at-home workstations, VRS providers must establish protocols for the handling of calls from these stations (to the extent there are additional protocols that differ from those applicable to the provider's call centers) and must provide training to at-home CAs on such protocols, in addition to all applicable training that is required of CAs working from call centers.¹⁴⁸
- Before being permitted to work at home, CAs must certify to the provider in writing their understanding of and commitment to complying with the Commission's rules governing TRS, including rules governing caller confidentiality and fraud prevention.¹⁴⁹
- VRS providers must provide CAs working from at-home workstations equivalent support to that provided to their counterparts working from call centers, as needed to effectively handle calls, including, where appropriate, the opportunity to team interpret and consult with supervisors.¹⁵⁰ Supervisors located at call centers must be readily available to CAs working from home to resolve problems that may arise during a relay call, such as difficulty in understanding a VRS user's signs, the need for added support for emergency calls, and relieving a CA in the event of the CA's sudden illness.¹⁵¹
- Each provider shall establish grounds for dismissing a CA from the at-home program (i.e., for noncompliance with the Commission's at-home call handling safeguards and rules governing TRS), including a process for such termination in the event that the CA fails to adhere to these requirements.¹⁵² Such grounds and process must be put in writing and provided to each CA participating in the pilot program. CAs must certify as to their understanding of the reasons and process for such dismissal.¹⁵³

52. *Technical and Environmental Safeguards.* The home environment used to handle VRS calls must meet certain standards to ensure the provision of confidential and uninterrupted services to the same extent as the provider's call center. VRS providers must also ensure that at-home CAs are seamlessly integrated into their call routing, distribution, tracking, and support systems.¹⁵⁴ This will help ensure that VRS providers have the same level of oversight over an at-home CA workstation as a CA workstation in a call center. To achieve this and to ensure compliance with the Commission's minimum standards, we require the following safeguards:

minimum level of "proven integrity and ethical decision-making ability." ZVRS Waiver Petition at 6. We expect all VRS CAs to comport themselves in an ethical manner, regardless of their location.

¹⁴⁸ See 2015 RID Comments at 11; 2015 ASL Comments at 18.

¹⁴⁹ Fraud prevention rules include rules pertaining to privacy screens, idle calls, CA compensation and whistle blowing. See 47 CFR § 64.604(a)(6), (c)(5)(iii)(M),(N)(3). Providers must retain such documents for the duration of the pilot program, and provide them to the Commission upon request. See generally 2015 ZVRS Comments at 6 (suggesting such certifications).

¹⁵⁰ See 2015 RID Comments at 11; ASL Services Comments at 18 (supporting CA training); 2015 Consumer Groups Comments at 12 (supporting adoption of controls necessary to ensure VRS calls are handled properly and securely).

¹⁵¹ See 2011 VRS Call Practices Order, 26 FCC Rcd at 5557-58, para. 19.

¹⁵² Cf. 2015 ZVRS Waiver Petition at 6; 2015 ASL Services Comments at 18-19 (each suggesting that interpreters be removed from the at-home program for noncompliance); 2015 Consumer Groups Comments at 12.

¹⁵³ See 2015 RID Comments at 10-11 (noting the importance of establishing expectations for at-home CAs).

¹⁵⁴ See ZVRS Reply Comments at 8 (discussing call center architecture allowing for call center redundancy capabilities to apply equally to at-home workstations).

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- Each at-home workstation shall reside in a separate, secure location in the CA's home, where access is restricted solely to the CA.¹⁵⁵
- Each at-home workstation shall allow a CA to use all call-handling technology to the same extent as other CAs, including the ability to transition a non-emergency call to an emergency call, engage in virtual teaming with another CA, and allow supervisors to communicate with and oversee calls.¹⁵⁶
- VRS providers shall ensure that each at-home workstation is capable of supporting VRS in compliance with the Commission's mandatory minimum technical and emergency call handling standards,¹⁵⁷ including the provision of system redundancy, and other safeguards to the same degree as these are available at call centers, and including the ability to route VRS calls around individual CA workstations in the event they experience a network outage or other service interruption.¹⁵⁸
- Each at-home workstation shall be equipped with an effective means to prevent eavesdropping, such as white noise emitters or soundproofing, and to ensure that interruptions from noises outside the room do not adversely affect a CA's ability to interpret a call accurately and effectively.¹⁵⁹

¹⁵⁵ See 2015 ZVRS Comments at 6; 2015 Consumer Groups Comments at 12; 2015 ASL Services Comments at 18-19.

¹⁵⁶ See 2015 ZVRS Reply Comments at 8. This safeguard will address concerns raised by Convo and Sorenson that CAs working from home may be unable to handle emergency calls or fulfill quality standards that require teaming with another CA, in-person monitoring, and access to call center technology. See 2015 Convo Comments at 19; 2015 Sorenson Comments at 18. ZVRS further recommends a requirement for the at-home workspace to mimic the appearance of the VRS provider's call center in lighting and color to create a uniform VRS experience regardless of location. 2015 ZVRS Comments at 7. While creating such an environment may be helpful, we decline to require this standard as it does not appear necessary to reduce fraud or ensure that calls handled from such locations are in compliance with the Commission's mandatory minimum standards.

¹⁵⁷ See 47 CFR §§ 64.604(b), 64.605.

¹⁵⁸ See 2015 ZVRS Reply Comments at 8. We believe that these safeguards will address the concerns of some commenters about ensuring that the home environment has redundancy features, including reliable Internet services, and the ability to handle all 911 calls. See 2011 VRS Call Practices Order, 26 FCC Rcd at 5557, para. 18; 2015 Convo Comments at 19; 2015 Sorenson Comments at 17. ZVRS asserts that residential broadband service can exceed the benchmarks expected in agreements for business-level Internet service and that average latency and packet loss rates for consumer broadband service are below the levels at which the quality of video-based services, such as VRS are likely to be affected. 2015 ZVRS Reply Comments at 7-8 (citing FCC, 2015 Measuring Broadband America: Fixed Broadband Report at 17-19 (2015), <http://data.fcc.gov/download/measuring-broadband-america/2015/2015-Fixed-Measuring-Broadband-America-Report.pdf>). This responds to claims that VRS calls received on at-home workstations will lack the necessary technical resources to prevent emergency and other calls from being dropped. See 2015 Sorenson Comments at 17. However, we will not require providers to install back-up generators for each at-home workstation so long as they have other effective means of re-routing calls to operating call centers and other at-home locations in the event that one or more at-home workstations lose power. We believe that eliminating this requirement during the pilot program will reduce burdens on providers, while not adversely affecting the consumer experience. We will use the results of the pilot program to evaluate whether we are correct in this assumption.

¹⁵⁹ See 2011 VRS Call Practices Order, 26 FCC Rcd at 5557-58, para. 19; 2015 ZVRS Reply at 6 (noting that with this safeguard, the confidentiality of VRS calls will be the same regardless of whether the CA workspace is in a call center or a home office).

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- Each CA workstation must connect to the provider's network over a secure connection to ensure caller privacy.¹⁶⁰

53. *Monitoring and Oversight Obligations.* We require the following additional measures in order to appropriately monitor and oversee the at-home call handling pilot program:

- To ensure CA compliance with the enumerated safeguards, VRS providers shall inspect and approve each at-home workstation before activating a CA's workstation for use.
- The VRS provider shall assign a unique call center identification number (ID) to each VRS at-home workstation and use this call center ID to identify all minutes handled from each such workstation in its call detail records submitted monthly to the TRS Fund administrator.
- Each at-home workstation shall be equipped with monitoring technology sufficient to ensure that off-site supervision approximates the level of supervision at the provider's call center, including the ability to monitor both ends of a call, i.e., video and audio, to the same extent as is possible in a call center.¹⁶¹ Although we do not dictate the form of such monitoring, we note that commenters suggest an external camera with a view of the CA's workspace¹⁶² and tracking software that is capable of recording CA actions and producing reports that can be analyzed for anomalies.¹⁶³ To the extent that this method is used, providers shall regularly analyze such data to proactively address possible waste, fraud, and abuse.
- Each provider shall keep all records pertaining to at-home work stations, including the data produced by any at-home workstation monitoring technology, except for any data that records the content of an interpreted conversation, for a minimum of three years. At-home workstations and workstation records shall be subject to review, audit, and inspection by the Commission and the Fund administrator to the same extent as data produced from other call centers subject to the Commission's rules.¹⁶⁴
- Each provider must conduct random and unannounced inspections of at least five percent (5%) of all at-home workstations during the pilot program and report its findings as specified below. In addition, each at-home work environment may be subject to unannounced on-site inspections by the Commission.
- Each at-home workstation will be subject to audits to the same extent as other call centers subject to the Commission's rules.¹⁶⁵

3. Participation in the Pilot Program

54. Each currently certified VRS provider interested in participating in the pilot program must provide notification to the Commission of its intent to participate to CGB by September 1, 2017,

¹⁶⁰ See 2015 ZVRS Comments at 6.

¹⁶¹ See 2015 ZVRS Comments at 6-7; 2015 Consumer Groups Comments at 12; 2015 ASL Services Comments at 18; Video Relay Services Consumer Association Reply at 2 (filed Feb. 1, 2016) (2015 VRSCA Reply).

¹⁶² 2015 ZVRS Comments at 7; 2015 ASL Services Comments at 18; 2015 Consumer Groups Comments at 12 (suggesting that the alteration of one of these monitoring systems should be grounds for removing a CA from the at-home interpreting program).

¹⁶³ Monitoring technology that preserves the content of interpreted conversation should be handled in accordance with the Commission's confidentiality rules, which provide that recordings of the content of any conversation may not be retained beyond the duration of a call. See 47 CFR § 64.604(a)(2), *see also* 2015 ZVRS Comments at 6-7 (to preserve user confidentiality, such monitoring software should not record the content of interpreted conversation).

¹⁶⁴ See 47 CFR §§ 64.604(c)(5)(iii)(D)(6), (7), (E)(5), 606(a)(3).

¹⁶⁵ See 47 CFR §§ 64.604(c)(5)(iii)(D)(6), (7), (E)(5), 606(a)(3).

together with a detailed plan of how it intends to achieve compliance with the Commission's safeguards enumerated above and standards governing VRS. Per the safeguards noted above, in these plans VRS providers shall specify the following:

- A description of the screening process used to select CAs for the at-home call handling program;
- A description of specific training to be provided for at-home CAs;
- A description of the protocols and CA expectations developed for the at-home call handling program;
- A description of the grounds for dismissing a CA from the at-home program and the process for such termination in the event that the CA fails to adhere to applicable requirements;
- A description of all steps that will be taken to install a workstation in a CA's home, including evaluations that will be performed to ensure all workstations are sufficiently secure and equipped to prevent eavesdropping and outside interruptions;
- A description of the monitoring technology to be used by the provider to ensure that off-site supervision approximates the level of supervision at the provider's call center;
- An explanation of how the provider's workstations will connect to the provider's network, including how they will be integrated into the call center routing, distribution, tracking, and support systems, and how the provider will ensure system redundancy in the event of service disruptions in at-home workstations;
- A signed certification by an officer of the provider that the provider will conduct random and unannounced inspections of at least five percent (5%) of all at-home workstations during the pilot program; and
- The provider's commitment to comply with all other safeguards enumerated above and Commission rules governing TRS.

55. CGB, in consultation with the Office of the Managing Director, will approve plans that demonstrate that the provider will fully comply with the Commission's standards and safeguards. Such approval may be canceled if the provider falls out of such compliance at any time. In addition, providers may be subject to withholding, forfeitures, and penalties for noncompliant minutes handled by at-home workstations, as is the case for non-compliant minutes handled by call centers.

4. Data Collection

56. Participating providers will be required to submit to the TRS Fund administrator, with their monthly requests for compensation for minutes handled from both call centers and at-home workstations, the following data for each month of the pilot program:

- The call center ID and full street address (number, street, city, state, and zip code) for each at-home workstation and the CA ID number for each individual handling VRS calls from that workstation; and
- The location and call center IDs of call centers providing supervision for at-home workstations, plus the names of persons at such call centers responsible for oversight of these workstations.

57. In addition to these monthly reports, we require participants to submit, no later than seven months after the start of the program, a report covering the first six months of their individual pilot programs containing the following information:¹⁶⁶

- A description of the actual screening process used to select CAs for the at-home call handling program;
- Copies of training materials provided to at-home CAs;
- Copies of written protocols used for CAs working from home;
- The total number of CAs handling VRS calls from at-home workstations over the first six months of the program;
- The number of 911 calls handled by the provider's at-home workstations;
- A description and copies of any surveys or evaluations taken of CAs concerning their experience using at-home workstations and participating in an at-home call handling program;
- The total number of CAs terminated from the program;
- The total number of complaints, if any, submitted to the provider regarding its at-home call handling program or calls handled by at-home CAs.
- The total number of on-site inspections of at-home workstations conducted, along with the dates and locations of such inspections;
- A description of the monitoring technology used to monitor CAs working at home and an analysis of the experience of supervisors overseeing at-home CAs compared to overseeing CAs in a call center;
- Copies of any reports produced by tracking software and a description explaining how the provider analyzed the reports for anomalies; and
- Detailed documentation of costs incurred in the use of at-home workstations, including any costs associated with CA recruitment, training and compensation, engineering and technical set-up (including workstation set-up), and administrative and management support (including oversight, evaluation, and recording).

58. We acknowledge the concerns of some commenters about the costs that may be associated with safeguards required for at-home call handling.¹⁶⁷ However, our action today authorizes, rather than mandates, participation in the at-home pilot program. Accordingly, each VRS provider has the opportunity to assess for itself whether the costs of implementing this practice—and the requisite safeguards—outweigh its benefits. Additionally, we agree with those commenters who maintain that there may be some cost savings associated with implementing at-home interpreting.¹⁶⁸ For example,

¹⁶⁶ In light of these information reporting requirements, during the pilot program we do not require VRS providers to include redundant data pertaining to at-home call handling workstations in semi-annual call center reports and in call center change notifications under the Commission's existing rules. *See* 47 CFR § 64.604(c)(5)(iii)(N)(2).

¹⁶⁷ *See, e.g.*, 2015 Sorenson Comments at 17-18; 2015 Sorenson Reply Comments at 15-16 (suggesting that providers may be faced with the choice of implementing sub-standard safeguards or implementing significant cuts to other areas of their budgets, which could lower quality of service for VRS users); 2015 Convo Comments at 19; 2015 ASL Services Comments at 18 (at-home interpreting may not reduce operational costs and providers would incur costs to implement safeguards and operation support functions for at-home interpreting).

¹⁶⁸ *See* 2015 ZVRS Comments at 4.

(continued . . .)

ZVRS suggests that at-home call handling will allow VRS providers to reduce the number and size of call centers they lease or own, thereby reducing their facilities and utilities costs.¹⁶⁹ We are hopeful that the data we collect during the pilot program will test the accuracy of this assumption, and provide comprehensive information about the costs and benefits of allowing at-home workstations. For these reasons, and for the various reasons articulated above, we conclude that if implemented with safeguards, the benefits of a pilot at-home interpretation program may outweigh its costs and warrant lifting the prohibition against this feature for a one year period.¹⁷⁰ We will evaluate the value and effectiveness of this program at the conclusion of this period to make a determination on its continuation.

III. NOTICE OF INQUIRY ON SERVICE QUALITY METRICS FOR VRS

59. In this NOI we seek comment on establishing performance goals service quality metrics to evaluate the efficacy of the VRS program.¹⁷¹ We seek to enable the Commission to make objective determinations about the extent to which the VRS program is providing functionally equivalent communication services.¹⁷² By developing well defined measures of VRS performance, the results of which can be made transparent to the public, we also seek to enable consumers to make more informed decisions in their selection of their VRS providers and thereby to achieve a more robust competitive environment for VRS.

A. Performance Goals

60. We seek comment on appropriate performance goals for the VRS program. Section 225 requires the Commission to ensure, to the extent possible, the availability to people with disabilities of telephone services that are functionally equivalent to services used by individuals who do not need TRS.¹⁷³ We seek comment on whether establishing performance goals that align with this requirement is appropriate for VRS. We believe that the mandate for VRS to be functionally equivalent to voice telephone services requires levels of service that are equivalent to those experienced in mainstream wireless, wireline, and voice over Internet protocol (VoIP) communication calls between and among hearing persons. In this regard, we note that a policy statement submitted by various Consumer Groups in April 2011 sets forth ten core principles that the Consumer Groups maintain should define functionally equivalent TRS.¹⁷⁴ The Statement proposes to define functional equivalence generally for all forms of TRS as follows:

Persons receiving or making relay calls are able to participate equally in the entire conversation with the other party or parties and they experience the same activity, emotional context, purpose, operation,

¹⁶⁹ *Id.* See also 2015 RID Comments at 10-11 (some interpreters interested in working as CAs at-home have already invested in personal offices for their VRI work).

¹⁷⁰ See Appendix B, Final Rules.

¹⁷¹ On May 8, 2015, the Government Accountability Office (GAO) released a report entitled GAO, Report to Hon. Jeff Sessions, U.S. Senate, FCC Should Strengthen Its Management of Program to Assist Persons with Hearing or Speech Disabilities, GAO-15-409 (April 2015) (GAO Report), <http://gao.gov/assets/670/669916.pdf>. GAO recommended that the Commission develop goals along with “specific performance measures crafted around those goals” to determine if “in an objective, quantifiable way . . . TRS is fulfilling its purpose of making available functionally equivalent telecommunications services to persons with hearing and speech disabilities.” GAO Report at 20. This proceeding responds in part to the GAO Report with respect to VRS.

¹⁷² See 47 U.S.C. § 225(a)(3).

¹⁷³ 47 U.S.C. § 225(a)(3).

¹⁷⁴ Consumer Groups’ TRS Policy Statement – Functional Equivalency of Telecommunications Relay Services: Meeting the Mandate of the Americans with Disabilities Act, Attach. at 7 (filed April 12, 2011) (Consumer Groups TRS Policy Statement).

work, service, or role (function) within the call as if the call is between individuals who are not using relay services on any end of the call.¹⁷⁵

We seek comment on the extent to which this is an appropriate definition of functional equivalence for the purpose of defining performance goals and service quality metrics.

61. We also seek comment on whether other goals are appropriate for assessing the VRS program and VRS provider performance. For example, should VRS performance goals also mirror the Commission's statutory obligations to ensure that TRS is provided "in the most efficient manner" and to encourage "the use of existing technology and . . . not discourage or impair the development of improved technology?"¹⁷⁶

B. Performance Measures

62. Our goal, then, is to define measurements that will provide valuable empirical evidence to inform both the Commission's VRS policy decisions, as well as to provide consumers with the information they need to make informed choices in their selection of VRS provider services. Some of these metrics may be observed automatically, e.g., by call processing logs or adding measurement functionality to end user equipment, while others may require the evaluation by VRS users or human subject matter experts.

63. We seek comment on whether the derivation of data used to measure VRS service quality should be overseen by the TRS Fund administrator or otherwise developed through contractual or similar arrangements with independent third parties selected by the Commission. We believe that the establishment of estimates and calculations resulting from performance measures will have greater efficacy if the measurements and reports of results are conducted independently, i.e., not by the regulated entities. We also seek comment on whether to publish the metrics achieved for each provider, as it appears likely that making the results of these measurements available to the public in a standard format will aid users in their selection of VRS providers. Finally, we seek comment on the merits of developing a system by which VRS users can rate the quality and performance of VRS calls, which would be based on the metrics discussed below and shared publicly to improve competition.

64. To measure functional equivalence, we seek specific comment on whether to use the following metrics: (1) quality and accuracy of interpretation; (2) technical voice and video quality; (3) interoperability and portability; (4) percentage and frequency of dropped or disconnected calls; and (5) service outages.¹⁷⁷

65. *Quality and Accuracy of Interpretation.* The Commission's mandatory minimum standards prohibit CAs from intentionally altering a relayed conversation and further require that they "relay all conversation verbatim unless the relay user specifically requests summarization . . ."¹⁷⁸ Commission rules also require that VRS CAs be qualified to "interpret effectively, accurately, and impartially, both receptively and expressively, using any necessary specialized vocabulary."¹⁷⁹ Additionally, our rules require CAs to "possess clear and articulate voice communications" for the voice

¹⁷⁵ 2011 Consumer Groups TRS Policy Statement at 1.

¹⁷⁶ 47 U.S.C. § 225 (b)(1), (d)(2).

¹⁷⁷ We note that the Commission already has metrics by which it tracks the speed by which VRS calls are answered, and in the accompanying Report and Order, we announce our intention to publish speed-of-answer data to aid in the evaluation of VRS provider performance.

¹⁷⁸ 47 CFR §64.604(a)(2).

¹⁷⁹ 47 C.F.R. §64.604(a)(iv).

leg of the call.¹⁸⁰ Yet, consumer organizations have continued to show concern about the quality of VRS interpretation.¹⁸¹ We seek comment on how interpretation quality can be effectively measured to assess functional equivalence.¹⁸²

66. A key element of interpretation quality is accuracy, i.e., the extent to which the information conveyed by one party to a VRS call accurately matches the communication conveyed by the CA to the other parties to that call. How should accuracy be measured? What metrics and methods are currently used to evaluate VRS interpreters, e.g., for purposes of certification or evaluation during interpreter training? Are there relevant metrics and methods used by spoken language translators that could be effectively applied to evaluate the accuracy of VRS interpretation? For example, for any given call, can accuracy be measured by comparing the signs of the ASL user and words of the hearing person—as each are delivered to the CA—to the words spoken and signs made by the CA? Given that interpretation of ASL to English is often a matter of conveying concepts rather than word-for-word translation, how can an appropriate comparison between the signs produced by ASL users be effectively compared to the words relayed by the CA to produce an effective accuracy percentage? Unlike speech-to-text transcription, interpretation accuracy may be difficult to evaluate on a word-by-word basis because the grammar and word usage differ between ASL and spoken languages such as English or Spanish. How can we account for such differences in taking accuracy measurements? Are there scales similar to the voice five-step mean opinion score (MOS) metrics? MOS scores are used to rate the user-perceived quality and listening effort on a five point scale, such as “excellent-good-fair-poor-bad,” as defined in ITU-T Recommendation P.800.¹⁸³

67. Should we adjust accuracy measurements for certain kinds of calls, such as calls to 911 or calls where a skills-based or deaf interpreter is utilized? More broadly, what tools should we use to measure the accuracy of VRS calls given that measurements may be unreliable without access to both sides of the conversation? Should test calls, e.g., by independent third parties, using sample scripts, be employed to evaluate the accuracy of interpretation?¹⁸⁴ Alternatively, should independent third parties be permitted to monitor unscripted calls for the purpose of measuring interpretation quality, and under what conditions to protect privacy and confidentiality? Our rules presently prohibit providers from retaining records of the content of any conversation beyond the duration of a call.¹⁸⁵ Are there real-time or other methods that can be used to measure the accuracy of calls consistently with this prohibition? Or should an exception be permitted for purposes of ensuring call quality? For example, should we require providers to record a statistically valid sample of calls? Should we use anonymous callers to make and record call interactions for later analysis by experts? How many calls would be appropriate for either of

¹⁸⁰ 47 CFR §64.604(a)(ii).

¹⁸¹ 2015 Consumer Groups Comments (filed Dec. 9, 2015).

¹⁸² In the *2013 VRS Reform Order*, while recognizing that high quality VRS CAs are critical to the provision of high quality VRS, the Commission concluded that the record did not support the imposition of additional or modified VRS CA qualification rules at the time, and further determined that the record did not support requiring a national certification requirement for VRS CAs. *2013 VRS Reform Order*, 28 FCC Rcd at 8689, para. 177. However, the Commission stated it would monitor consumer complaints related to quality of VRS CAs and would revisit the issue if it became apparent that our current rules are insufficient to ensure the availability of qualified VRS CAs. *2013 VRS Reform Order*, 28 FCC Rcd at 8690, para. 179.

¹⁸³ ITU-T, *Methods for Subjective Determination of Speech Quality*, Recommendation P.800, 1996.

¹⁸⁴ See Zainab Alkebsi and Ed Bosson, *Consumer Perspective: VRS Quality Issues*, at 9 (delivered Sept. 14, 2016), http://media.wix.com/ugd/455e4d_00e8e2bdaf984b8c97caaf7763607c90.pptx?dn=Alkebsi%20Bosson%20September%20iTRS%20Advisory%20Council%20Presentation.pptx (presentation to Rolka Loube, recommending script testing by independent third parties).

¹⁸⁵ 47 CFR §64.604(a)(2).

these methods? How should we address the confidentiality concerns of VRS users if recordings are used in this process?

68. We also seek comment on whether and how to measure the synchronicity of interpreted communications taking place during a VRS call. Although we recognize that there is necessarily some delay during relay calls,¹⁸⁶ this delay should be kept to a minimum and that signing should begin to appear at the approximate time that the corresponding speech begins and end approximately when the speech ends. We seek comment on whether there are existing metrics, e.g., for non-ASL language interpreters, that might use for this purpose. Are there studies that indicate what kind of delay is acceptable for fluid conversation? Does the interpretation delay vary significantly among CAs such that there is a need to determine this measurement? To what extent should this metric be measured by independent third parties?

69. Are there other metrics that the Commission should use to evaluate interpreter quality and accuracy? How effectively will such metrics assess the extent to which functional equivalence is being attained and what methods can be used to measure these?

70. *Technical Voice and Video Quality.* The technical quality of video and voice transmissions, which may be affected by a number of variables, including frame rate, video resolution, audio sampling rate, and the audio and video codec, strongly influences the ability of VRS users to communicate effectively. Optimizing video clarity, for example, appears to be essential to ensuring effective communication on the video (ASL) leg of a VRS call. In addition, a provider's support for voice carry-over may be critical to some users.¹⁸⁷ Technical quality parameters may in turn depend on the type of software and hardware made available to VRS users, the Internet bandwidth available to the ASL speaker, and the service infrastructure deployed by the VRS provider. What metrics should be assigned to evaluate the technical quality of VRS as a component of functional equivalence? What are the key parameters of a VRS provider's audio and video communication service, and how should they be measured, evaluated, and published? Finally, in the future, voice-over-IP services used by VRS providers may also allow carriage of voice in high definition (HD audio). Should providers disclose whether they interconnect with their telecommunication service provider in HD audio? To what extent is this capability needed for functionally equivalent VRS communications, and what metrics can be used to measure this feature?

71. *Interoperability.* The Commission has long recognized the importance of interoperability to ensuring functional equivalence, given that voice telephone users may generally call any person without interoperability issues.¹⁸⁸ The Commission has incorporated interoperability standards into its rules and has established a means by which each provider's compliance with these standards can be measured.¹⁸⁹ To enhance the ability of the Commission and consumers to evaluate the extent of the interoperability that is achieved by VRS providers, we seek comment on the most appropriate metrics and measurement methods for quantitatively assessing interoperability. For example, is there a means of quantifying the interoperability of various types of user-visible functions, such as the connection of calls,

¹⁸⁶ In addition to the inherent time lag involved in interpretation, interpreters sometimes need to ask for clarification from either the ASL user or spoken language speaker.

¹⁸⁷ Voice carryover allows an individual who has use of his or her voice to speak directly to the other parties to a call, and have the CA sign back responses from those parties. 64 CFR § 64.601(a)(42). This is a required VRS feature. 64 CFR § 64.604(a)(3)(v).

¹⁸⁸ See, e.g., *2013 VRS Reform Order*, 28 FCC Rcd at 8641, paras. 43-44.

¹⁸⁹ *Structures 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, DA 17-76 (CGB Jan. 17, 2017) (*2017 VRS Interoperability Order*). See also 47 CFR § 64.621(a)(3); *2013 VRS Reform Order*, 28 FCC Rcd at 8646, para. 58 (requiring interoperability as a condition for receiving compensation from the Fund for calls using such technology).

video mail and address books, or technical protocol features such as call setup, codecs, system configuration, end-to-end security and registration that could fail to interoperate as a result of noncompliance.

72. *Dropped or Disconnected Calls.* We next seek comment on whether it would be appropriate to track and measure the percentage and frequency of “dropped” or disconnected VRS calls as an indicator of service quality and functional equivalence, and how such data should be compared with dropped or disconnected telephone calls made over mainstream voice networks. Should such metrics be collected through user feedback or test calls or by analyzing provider logs? Is it possible to distinguish call drops that occur due to disruptions in the Internet connectivity of the VRS user from call drops caused by the VRS provider or deficiencies in the VRS user software or hardware? Are there metrics and measurement methodologies used in wireless or wired networks that can be used for VRS? We further seek comment on how such data should be collected.

73. *Service Outages.* Commission rules require all Internet-based TRS providers to notify the Commission in the event of a service outage or a voluntary service interruption of less than 30 minutes and to seek advance approval for voluntary interruptions of longer duration.¹⁹⁰ In addition, as noted above, redundancy of facilities is a requirement for all forms of TRS.¹⁹¹ In general, to achieve functional equivalence, we believe that the frequency and extent of VRS service outages and interruptions should not exceed that of outages and interruptions occurring on transmission services used by hearing people. We seek comment on this assumption. We seek comment on an appropriate metric to measure functional equivalence in this regard.

74. *Other Metrics.* We seek further comment on other concrete, measurable metrics we could employ to measure the quality of service among VRS providers. Commenters should address, with specificity, what should be measured, how it should be measured, and how often it should be measured, along with any estimated costs of such measurements.

IV. FURTHER NOTICE OF PROPOSED RULEMAKING

75. In this Further Notice of Proposed Rulemaking, we propose a four-year plan for VRS compensation, an amendment to permit server-based routing of VRS and point-to-point video calls, safeguards around who may use enterprise and public VRS videophones, and to allow customer service support centers to access the TRS Numbering Directory for direct video calling.

A. VRS Compensation Rates

76. *Background.* In 2007, the Commission adopted a tiered VRS compensation rate structure in order to reflect likely cost differentials between small, mid-level, and large, dominant 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.”¹⁹² Subsequently, the Commission determined that VRS compensation rates for all the rate tiers were

¹⁹⁰ 47 C.F.R. § 64.606(h).

¹⁹¹ See 47 CFR §64.604(b)(4)(ii) (requiring TRS to have “redundancy features functionally equivalent to the equipment in normal central offices, including uninterruptible power for emergency use”).

¹⁹² *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, 20162-63, para. 53 (2007) (*2007 TRS Rate Methodology Order*).

substantially in excess of providers’ actual costs.¹⁹³ To partially address these discrepancies, the Commission reduced rates in 2010.¹⁹⁴

77. In the *2013 VRS Reform Order* the Commission adopted a transitional four-year “glide-path” of further compensation rate adjustments in lieu of a more immediate reduction of the rates to cost-based levels, in order to assist providers in adjusting to cost-based rates.¹⁹⁵ Specifically, the Commission’s four-year rate plan established gradual per-minute VRS rate reductions every six months, from July 1, 2013, through June 30, 2017, as follows:¹⁹⁶

Table 1

Tiers	July – Dec. 2013	Jan. – June 2014	July – Dec. 2014	Jan. – June 2015	July – Dec. 2015	Jan. – June 2016	July – Dec. 2016	Jan. – June 2017
Tier I (1 st 500,000 monthly minutes)	\$5.98	\$5.75	\$5.52	\$5.29	\$5.06	\$4.82	\$4.44	\$4.06
Tier II (2 nd 500,000 monthly minutes)	\$4.82	\$4.82	\$4.82	\$4.82	\$4.82	\$4.82	\$4.44	\$4.06
Tier III (monthly minutes exceeding 1 million)	\$4.82	\$4.63	\$4.44	\$4.25	\$4.06	\$3.87	\$3.68	\$3.49

78. In the *2013 VRS Reform Order*, the Commission also reassessed the use of a tiered compensation rate structure, noting that the relatively higher per-minute costs incurred by smaller providers may reflect inherent economies of scale rather than provider “learning curve[s].”¹⁹⁷ Finding that “no party ... has presented a valid reason why the TRS Fund should support indefinitely VRS operations that are substantially less efficient,” the Commission decided that, “to encourage the provision of VRS in the most efficient manner, the gap between the highest and lowest tiered rates will be reduced over time, in accordance with [the four-year transition] schedule.”¹⁹⁸ For the purpose of this transition period, however, the Commission retained a modified version of the tiered VRS compensation rate structure, so as “to ensure that smaller VRS providers have 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.”¹⁹⁹ Upon the completion of certain structural reforms, which the

¹⁹³ *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 VRS Rate Order*).

¹⁹⁴ *2010 VRS Rate Order*, 25 FCC Rcd at 8697, para. 15.

¹⁹⁵ *2013 VRS Reform Order*, 28 FCC Rcd at 8703-04, para 212.

¹⁹⁶ *2013 VRS Reform Order*, 28 FCC Rcd at 8703-04, para 212.

¹⁹⁷ *2013 VRS Reform Order*, 28 FCC Rcd at 8698, para. 197.

¹⁹⁸ *2013 VRS Reform Order*, 28 FCC Rcd at 8698, para. 198.

¹⁹⁹ *2013 VRS Reform Order*, 28 FCC Rcd at 8704, para. 214; *see also 2013 FCC VRS Reform Order*, 28 FCC Rcd at 8698, paras. 199-200. A tiered compensation rate structure allows providers to earn a higher compensation rate on

(continued . . .)

Commission expected to occur before the expiration of the four-year plan, the Commission contemplated moving to a unitary compensation rate for all minutes, which the Commission hoped to set based on pricing benchmarks developed through competitive bidding for the provision of various elements of VRS.²⁰⁰

79. On March 1, 2016, after considering a petition by all six certified VRS providers urging an interruption of the scheduled compensation rate adjustments, the Commission adopted a temporary “freeze” of the compensation rates of the smallest VRS providers—those handling 500,000 or fewer monthly minutes.²⁰¹ Relying on an analysis by the TRS Fund administrator, Rolka Loube Associates LLC (Rolka Loube), which showed that the smallest VRS providers would not be able to recover their costs for the 2015-16 Fund year,²⁰² the Commission concluded that, absent compensation rate relief, the smallest providers would be unable to continue growing their operations.²⁰³ To allow those providers additional time to “reach the optimum scale to compete effectively,” the Commission reinstated, for the smallest providers only, the Tier I rate of \$5.29 per minute that was in effect prior to June 30, 2015, for 16 additional months, i.e., from July 1, 2015, to October 31, 2016.²⁰⁴ The Commission also adjusted the rate reductions scheduled to occur after the expiration of the rate freeze, in order to avoid subjecting the smallest VRS providers to a sudden drop in compensation after the expiration of the 16-month period.²⁰⁵ As revised by the Rate Freeze Order, the rate plan for the last two months of the four year plan is shown below:

Table 2

the initial minutes of service provided each month. As a result, smaller providers receive more compensation per minute, on average, than larger providers.

²⁰⁰ *2013 VRS Reform Order*, 28 FCC Rcd at 8706, paras. 216-17.

²⁰¹ *See Structure and Practices of the Video Relay Services Program, Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Report and Order, 31 FCC Rcd 2339 (2016) (*VRS Partial Rate Freeze Order*); *see also Structure and Practices of the Video Relay Services Program, 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) (*VRS Rate Freeze FNPRM*); Joint Proposal of All Six VRS providers for Improving Functional Equivalence and Stabilizing Rates, CG Docket Nos. 10-51, 03-123, at 7 (Filed Mar. 30, 2015), <https://ecfsapi.fcc.gov/file/60001041879.pdf> (Joint VRS Providers Proposal).

²⁰² *VRS Rate Freeze FNPRM*, 30 FCC Rcd at 12981-82, para. 18; *VRS Partial Rate Freeze Order*, 31 FCC Rcd at 2342-43, para. 8; *see also* Rolka Loube, Interstate Telecommunications Relay Services Fund Payment Formula and Fund Size Estimate at 24-25 (filed Apr. 24, 2015) <https://ecfsapi.fcc.gov/file/60001044735.pdf> (*2015 TRS Rate Filing*).

²⁰³ *VRS Partial Rate Freeze Order*, 31 FCC Rcd at 2343-44, para. 10; *see also id.*, n.30 (*quoting* Joint VRS Providers Proposal at 11 (stating that in order to continue operating despite deficits, the smallest VRS providers “have been forced to seek alternative financing arrangements, such as short-term bridge loans from family members, or to subsidize their VRS operations from revenue generated by other profitable non-VRS divisions”), 11-12 (asserting that such alternative financing arrangements are insufficient to enable the smallest providers to continue their growth trajectories)).

²⁰⁴ *VRS Partial Rate Freeze Order*, 31 FCC Rcd at 2344-45, paras. 12-14; The Commission also directed the TRS Fund administrator to pay each of the smallest VRS providers a one-time lump sum reflecting the difference between the compensation they would have received if they had been paid at a rate of \$5.29 per minute and the compensation they actually received at the lower applicable rates, for all compensable calls completed during the period between July 1, 2015, and the effective date of the *VRS Partial Rate Freeze Order*. *VRS Partial Rate Freeze Order*, 31 FCC Rcd at 2348, para. 20.

²⁰⁵ *VRS Partial Rate Freeze Order*, 31 FCC Rcd at 2345, para. 15.

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	Jan. – June 2015	July – Dec. 2015	Jan. – June 2016	July – Oct. 2016	Nov. – Dec. 2016	Jan. – Apr. 2017	May – June 2017
Tier I (1 st 500,000 monthly minutes) for VRS providers with 500,000 or fewer minutes in a month	\$5.29	\$5.29	\$5.29	\$5.29	\$5.06	\$5.06	\$4.82
Tier I (1 st 500,000 monthly minutes) for VRS providers with more than 500,000 minutes in a month	\$5.29	\$5.06	\$4.82	\$4.44	\$4.44	\$4.06	\$4.06
Tier II (2 nd 500,000 monthly minutes)	\$4.82	\$4.82	\$4.82	\$4.44	\$4.44	\$4.06	\$4.06
Tier III (monthly minutes exceeding 1 million)	\$4.25	\$4.06	\$3.87	\$3.68	\$3.68	\$3.49	\$3.49

80. On December 20, 2016, Convo, Purple, and ZVRS submitted a joint VRS compensation proposal to the Commission,²⁰⁶ and on January 31, 2016, Global joined those three providers in their submission of a revised version of the proposal.²⁰⁷ These providers contend that, because VRS market shares are so unequally distributed among providers, it is inequitable to calculate compensation rates for all VRS providers based on a weighted average of all providers' costs, especially as many of the structural reforms of the VRS market contemplated in the *2013 VRS Reform Order* have yet to be implemented or take effect.²⁰⁸ In addition, the providers maintain that further reductions in VRS compensation rates, absent structural reform, would threaten their viability and impede their ability to grow, hindering the Commission's goal of ensuring functional equivalence by means of competition, innovation, and high quality service.²⁰⁹ To remedy this situation, the providers propose 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).²¹⁰ The proposed rates for providers with 500,000 or fewer monthly minutes and

²⁰⁶ Previously, during 2016, various parties requested that the Commission suspend further rate cuts for VRS. *See, e.g.,* Letter from Paul C. Besozzi, Counsel to Purple Communications, Inc., to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 10-51, 03-123 at 1 (filed July 26, 2016); Emergency Petition of GlobalVRS for Extension of the Rate Relief Termination Date on ASL Services Holdings, LLC, dba GlobalVRS, CG Docket Nos. 10-51, 03-123, at 1 (filed Aug. 12, 2016). *See* Letter from Mark A. Tauscher, Chairperson, RL Interstate TRS Advisory Counsel, to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 10-51, 03-123 at 1 (filed Dec. 7, 2016).

²⁰⁷ *See* Letter from Paul C. Besozzi, Counsel to Purple Communications, Inc., to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 10-51, 03-123 (Jan. 31, 2017) (2017 Joint VRS 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 NOI regarding appropriate VRS service quality metrics

²⁰⁸ 2017 Joint VRS Providers Proposal at 4-5.

²⁰⁹ 2017 Joint VRS Providers Proposal at 6-7.

²¹⁰ 2017 Joint VRS Providers Proposal at 8-10.

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for Tier I minutes are the same rate levels that were applicable to those rate categories in January-June 2016.²¹¹ The proposed Tier III rate is equal to the industry weighted average cost for 2015 stated in Rolka Loube's 2015 TRS Rate Filing.²¹² As justification for their proposal to create a new Tier II for minutes between 1,000,001 and 2,500,000, the providers maintain that the economies of scale needed to operate at the Tier III compensation rate are not achieved until a provider reaches approximately 2,500,000 minutes per month.²¹³ The providers request that the effective date of their four-year rate proposal be set retroactively as January 1, 2017.²¹⁴

81. *Discussion.* The Commission's prior VRS compensation rate decisions reflect a tension between two competing values: (1) providing a competitive spur for improvements in the availability, efficiency, and functional equivalence of VRS by enabling a diversity of providers,²¹⁵ and (2) conserving the TRS Fund by compensating only for the efficient provision of VRS.²¹⁶ Upon review, our last four-year plan was successful in lowering the cost of VRS by \$35.7 million in FY2013, \$86.7 million in FY2014, \$131.3 million in FY2016, and \$90.4 million in the first half of FY2017.²¹⁷ What is more, the gradual reduction in rates has driven VRS providers to provision their services more efficiently. The weighted average per-minute cost for providing service has declined from \$3.09 in 2012 (before the rate plan became effective) to \$2.63 today.

82. However, the VRS market structure has seen little change, in part because the structural reforms the Commission envisioned in 2013²¹⁸ have been slow to arrive.²¹⁹ Thus, we believe the Commission's previous four-year plan was too optimistic in assuming that rates for all VRS providers could start to converge in FY2016, as indicated by the Commission's decision to freeze small-provider compensation rates in 2016. Indeed, Rolka Loube reports that four of the five providers continue to incur per-minute costs that are higher than the weighted average per-minute cost of providing VRS.²²⁰

²¹¹ 2017 Joint VRS Providers Proposal at 8-9.

²¹² 2017 Joint VRS Providers Proposal at 9; *see also* 2015 TRS Rate Filing at 23; Rolka Loube, Supplemental Filing, CG Docket Nos. 10-51, 03-123 (filed May 1, 2015), <https://ecfsapi.fcc.gov/file/60001046238.pdf> (2015 TRS Rate Filing Supplement).

²¹³ 2017 Joint VRS Providers Proposal at 9-10.

²¹⁴ 2017 Joint VRS Providers Proposal at 10.

²¹⁵ *See, e.g., Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, CG Docket No. 03-123, Report and Order and Order on Reconsideration, 20 FCC Rcd 20577, 20588, para. 21, 20590, para. 26 (2005).

²¹⁶ *See, e.g., 2013 VRS Reform Order*, 28 FCC Rcd at 8698, para. 198.

²¹⁷ From VRS industry demand and compensation data provided to the Commission staff by Rolka Loube (Feb. 8, 2017). The estimates are based on total compensation for the minutes of service provided in each fiscal year, rather than the total payments made in each fiscal year.

²¹⁸ *See 2013 VRS Reform Order*, 28 FCC Rcd at 8698-99, paras. 199-200, 8704, para. 214; *Rate Freeze Order*, para. 14.

²¹⁹ Specifically, the neutral VRS communications platform has not been implemented, and new interoperability standards were only recently incorporated into the Commission's rules. *Structure and Practices of the Video Relay Service Program et al.*, Report and Order and Further Notice of Proposed Rulemaking, 32 FCC Rcd _____, DA 17-76, paras. 7-8 (CGB Jan. 17, 2017) (*CGB 2017 R&O*). These two planned reforms were cited by the Commission as reasons for its belief that "our structural reforms, once implemented, will eliminate any residual need for tiered rates." *2013 VRS Reform Order*, 28 FCC Rcd at 8698-99, para. 199.

²²⁰ From VRS industry reported cost data provided to the Commission staff by Rolka Loube (Feb. 8, 2017).

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83. Given these circumstances, we believe that maintaining a tiered rate structure continues to be necessary to allow smaller providers a reasonable opportunity to continue providing service. Having analyzed the cost data reported by Rolka, as well as recent data submissions from four of the providers,²²¹ we believe another four-year plan best balances the need to minimize the cost of service for ratepayers, maintain competition in the marketplace pending further structural reforms, reflect the differing costs of differing providers, and give VRS providers the long-term stability in rates to make investment decisions. We propose that this four-year period run from July 1, 2017 to June 30, 2021, and set forth a proposed restructuring of rates and tiers for this period below. Like the Joint VRS Providers, we believe three tiers plus a rate for “emergent” VRS providers are appropriate for this purpose. We seek comment on this approach, as well as each of the proposals laid out below.

84. *First*, given that the Commission’s current rate plan sets the same rate for the first 500,000 minutes of larger providers and the next 500,000 minutes, we propose adopting the Joint VRS Providers proposal to collapse the existing tiers into a single tier applicable to a provider’s first 1 million minutes. We agree that it does not appear necessary to continue differentiating between the rates for the first 500,000 minutes and the next 500,000 minutes. Accordingly, we propose to redefine Tier I to include the first 1,000,000 minutes as suggested by the Joint VRS Providers.

85. *Second*, we agree with the Joint VRS Providers that economies of scale continue to increase significantly for VRS providers with more than 1,000,000 monthly minutes.²²² In line with the suggestion of the Joint VRS Providers, we propose to draw the line between Tiers II and III at 2,500,000 monthly minutes. Two providers, Sorenson and Purple, have previously suggested lower boundaries between the highest and next highest rate tiers, at 250,000 minutes and at 2,000,000 minutes respectively.²²³ In a recent ex parte submission modeling the economies of scale for VRS, Purple’s estimates show a break in how quickly costs decrease once a provider provides more than 2,500,000 minutes each month.²²⁴ Furthermore, in the *2013 VRS Reform Order*, the Commission concluded that it should err on the side of setting the boundary too high given the risk that a too-low level could inhibit competition in the marketplace.²²⁵ We believe this calculus remains valid, and may have even greater force given the reduction in the number of VRS competitors since 2013.

86. *Third*, we agree with the Joint VRS Providers that an emergent rate for the smaller, new entrants is appropriate given the slow onset of structural reforms to encourage competition and interoperability.²²⁶ An emergent rate also reflects the Commission’s previous decision to freeze the rates for this class of providers on a temporary basis, and generally the higher cost of service for new entrants in the market. We propose to apply this emergent rate to VRS providers with no more than 500,000 monthly minutes as of January 1, 2017, and to maintain this rate for the first 500,000 monthly minutes of such providers through the end of this four-year rate plan. Structuring the emergent rate in this way

²²¹ Purple, unsigned letter to Karen Peltz Strauss et al., CGB, CG Docket Nos. 03-123 and 10-51 (filed Feb. 15, 2017) (February 2017 Purple Data Submission); Letter from Gregory Hlibok, Chief Legal Officer, ZVRS, to Karen Peltz Strauss et al., CGB (filed Feb. 15, 2017) (February 2017 ZVRS Data Submission); Letter from Jeff Rosen, General Counsel, Convo, to Marlene H. Dortch, FCC Secretary (filed Feb. 15, 2017) (February 2017 Convo Data Submission); Letter from Angela Roth, President and Chief Financial Officer, ASL Services Holdings, LLC dba Global VRS, to Marlene H. Dortch, FCC Secretary (filed Feb. 17, 2017) (February 2017 ASL Services Data Submission).

²²² 2017 Joint VRS Providers Proposal at 8-10.

²²³ *VRS Reform Order*, 28 FCC Rcd at 8700, para. 202.

²²⁴ February 2017 Purple Data Submission at 2-3.

²²⁵ *VRS Reform Order*, 28 FCC Rcd at 8701, para. 204.

²²⁶ 2017 Joint VRS Providers Proposal at 8.

should encourage new entry into the program and give small providers appropriate incentives to grow without risking a sudden reduction in rates if they grow above the 500,000 monthly minute threshold.

87. We propose to adjust the rates for each of these tiers through several steps, at six-month intervals as in the current rate plan. *First*, we seek comment on rates for the initial period of the four-year rate plan. For emergent providers, we seek comment on whether to increase the rate to \$5.29 as proposed by the Joint VRS Providers or to maintain the \$4.82 rate that is set to be in effect in June.²²⁷ We note from a preliminary review of cost data, all VRS providers that would qualify as emergent report per-minute costs for 2016 that exceed the \$4.82 rate now applicable.²²⁸ For Tier I, we seek comment on whether to increase the rate to \$4.82, as proposed by the Joint VRS Providers, or to maintain the current \$4.06 rate. For Tier II, we seek comment on whether to increase the rate to \$4.35 as proposed by the Joint VRS Providers or to maintain the current \$3.49 rate. For Tier III, we seek comment on whether to maintain the current \$3.49 rate or decrease it to the \$2.83 rate proposed by the Joint VRS Providers. We also invite parties to submit other suggested rate levels for each tier, with justification and supporting data.

88. *Next*, we seek comment on rates for the final period in the four-year rate plan. For emergent providers, we seek comment on whether to set a \$5.29 rate as proposed by the Joint VRS Providers, a \$4.82 rate reflecting the rate that is set to be in effect in June, or a \$4.06 rate based on the current Tier I rate. For Tier I, we seek comment on whether to set a \$4.82 rate as proposed by the Joint VRS Providers, a \$4.06 rate based on the current Tier I rate, or a rate of \$3.74 based on the historical costs of providers achieving only some economies of scale plus an operating margin,²²⁹ or a rate of \$3.49 based on the current Tier II rate. For Tier II, we seek comment on whether to set a \$4.35 rate as proposed by the Joint VRS Providers, a rate of \$3.49 based on the current Tier III rate, or a rate of \$3.08 based on the historical costs of providers achieving significant economies of scale plus an operating margin.²³⁰ For Tier III, we seek comment on a \$3.49 rate based on the current Tier III rate, a \$2.83 rate as proposed by the Joint VRS Providers, and a \$2.63 rate based on average historical expenses for all providers.²³¹ We also invite parties to submit other suggested rate levels for each tier, with justification and supporting data.

89. *Then*, for each six-month period between the initial and final periods, we propose to apply transitional rates that gradually transition the rates we propose for the initial period to the final rates that will apply in the first half of 2021. By definition, the larger the difference between initial and final rates, the greater the transitional step taken every six months.

90. We note that providers have long argued that, because substantial plant investment is not necessary to provide VRS, a rate-of-return allowance based on the telephone industry model is inadequate to generate sufficient profits to attract significant long-term investment in VRS companies.²³² As such, providers have argued that an 11.25% rate-of-return on net capital investment is insufficiently

²²⁷ In general, for the rates proposed by the Joint VRS Providers, *see* 2017 Joint VRS Providers Proposal at 8-10; for the rates that currently apply and that will apply in June 2017, *see* Table 2, *supra*.

²²⁸ *See* February 2017 Convo Data Submission, Attachment, “Convo Communications LLC, Statement of VRS Costs, Period Covered 1/1/2016 to 12/31/2016”; February 2017 ASL Services Data Submission, Attachment, “ASL Services Holdings, LLC, Profit & Loss, January through December 2016.”

²²⁹ From VRS industry reported cost data provided to the Commission staff by Rolka Loube (Feb. 8, 2017).

²³⁰ From VRS industry reported cost data provided to the Commission staff by Rolka Loube (Feb. 8, 2017).

²³¹ From VRS industry reported cost data provided to the Commission staff by Rolka Loube (Feb. 8, 2017).

²³² *See, e.g.*, Sorenson, Comments in CG Docket Nos. 03-123 and 10-51 at 35-45, Katz Dec., paras. 2, 56-63, 72, 78 (filed Mar. 9, 2012); Purple, Comments in CG Docket Nos. 03-123 and 10-51, Turner Dec., paras. 55-58 (filed Nov. 14, 2012).

compensatory. We also note that the Commission has recently reconsidered whether an 11.25% rate-of-return is reasonable given the current financial and economic environment and, in its 2016 *Rate-of-Return Reform Order*, determined that a lower range of 7.12–9.75% is instead reasonable.²³³ We seek comment on whether to adopt that lower range of rates-of-return if we maintain a rate-of-return approach to cost calculations.

91. To respond to the VRS providers' concern, however, we also seek comment on eschewing the traditional rate-of-return calculation and instead employing an operating margin approach with that same range of 7.12–9.75%. We note that in all cases, the operating margin approach used here would be more compensatory to VRS providers than the traditional rate-of-return approach because the amount of net investment reported by providers is consistently very small in relation to their reported annual operating expenses. We further note that the average weighted per-minute cost for the industry is \$2.63 in 2015, or \$2.82–2.89 if we include an operating margin.²³⁴ Excluding any VRS provider with significantly more than 1,000,000 monthly minutes, average weighted per-minute costs in 2015 were more than \$1.00 higher.²³⁵ We further note that for the VRS industry as a whole, total compensation for calendar year 2015 was \$563,069,736, while the total cost of service plus an operating margin was only \$360,197,998 to \$369,041,545.²³⁶ We seek comments on this analysis, and its implications for setting rates during the four-year term.²³⁷

92. In setting rates, we note that the Commission is not required to guarantee all providers that they will recover their allowable costs—the purpose of the tiered rate structure has been to set rates for providers in discrete size classes based on general differentials between large, medium-sized, and small providers, not to guarantee all providers recovery of their individual costs.²³⁸ Although we seek to preserve a diversity of suppliers in the market, the Commission is not required to ensure the viability of every VRS competitor, no matter how inefficient.

93. In this regard, we note that in an industry such as VRS, in the absence of price signals, firms often resort to marketing tactics with little or no social welfare value. For example, VRS providers have long complained about one another's practices of giving away free items to customers in order to entice them away from their current default provider or to prevent a competitor from capturing existing customers. While further discussion of these practices may be best suited to a separate proceeding, we note here that, despite the past four years of significant reductions in compensation rates, VRS providers apparently continue to give out iPads, video monitors, and state-of-the-art videophones to customers in

²³³ *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).

²³⁴ From VRS industry reported cost data provided to the Commission staff by Rolka Loube (Feb. 8, 2017).

²³⁵ From VRS industry reported cost data provided to the Commission staff by Rolka Loube (Feb. 8, 2017).

²³⁶ From VRS industry reported cost and revenue data provided to the Commission staff by Rolka Loube (Feb. 8, 2017).

²³⁷ Although we seek comment on the possible substitution of an alternative approach, such as described above, for the current rate-of-return allowance, we do not reopen questions regarding the types of expenses that should be included in allowable costs. See, e.g., *VRS Reform Order*, 28 FCC Rcd at 8696-97, paras. 192-94.

²³⁸ *2007 TRS Rate Methodology Order*, 22 FCC Rcd at 20162-63, para. 53 (2007) (establishing tiers “to reflect likely cost differentials between small providers (including new entrants); mid-level providers who are established but who do not hold a dominant market share; and large, dominant providers who are in the best position to achieve cost synergies”); see also *Sorenson Communications, Inc. v. FCC*, 765 F.3d 37, 51 (D.C. Cir. 2014) (“As we have noted before with regard to ratemaking, ‘[t]he relevant question is whether the agency's numbers are within a zone of reasonableness, not whether its numbers are precisely right.’ *WorldCom, Inc. v. FCC*, 238 F.3d 449, 462 (D.C.Cir.2001) (quotation marks omitted).”).

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order to secure their default VRS traffic.²³⁹ To the extent that a VRS provider engages in such behavior, it would appear to confirm that the marginal compensation rate for that provider (i.e., the applicable rate for the tier representing that provider's monthly minutes) continues to be well above the provider's marginal cost of serving additional customers, and remains above the marginal cost even including the per-minute cost of the giveaways offered to gain those customers' traffic. The continuation of such wasteful and disruptive marketing tactics seems to confirm the importance of bringing the rate for each tier as close as possible to the marginal per-minute cost of the affected firms. We seek comment on what proposed rates would be a step in that direction.

94. We seek comment on these proposed service tiers, the suggested alternatives for initial and final compensation rates, and the proposed schedule of rate reductions. Should we collapse the tiers to reduce the possible overpayment of some providers or expand them further to reflect the differing costs of service as VRS providers scale up? What are the most appropriate initial rates to begin the further transition to cost-based levels? What are the most appropriate final rates to ensure that providers are neither over- nor under-compensated? Is the proposed transition schedule too fast or too slow? What is the likely impact of various alternative rate levels on the competitiveness of the VRS market? What is the likely impact on the quality of service to consumers?

95. We also seek comment on any other factors we should consider in setting compensation rates for this four-year period. For example, what, if any, categories of costs should providers be able to recover as exogenous costs (including consideration of improved services discussed elsewhere in this proceeding), and how should the Commission ensure that such costs are adequately documented and that providers do not incur such costs imprudently?²⁴⁰ Are there marketplace benchmarks, such as rates paid for video remote interpreting (VRI), that could serve as a benchmark against which we could determine the reasonableness of proposed VRS compensation rates? If so, what are such benchmarks and how should we factor them into VRS rates? Further, should we impose an auditing requirement on any companies that seek to qualify for the emergent provider rate? We note that some very small providers have reported costs well above compensable rates for multiyear periods, yet have continued to offer VRS—a circumstance that appears inconsistent with the behavior of a rational firm. Conditioning the emergent provider rate on an audit to determine whether improper cost allocation is occurring may be one means of ensuring that the cost data reported actually reflects the incremental costs of a business to offer VRS alongside its other marketplace offerings.

96. Further, should we make any of the proposed initial rates that are higher than current rates retroactive to January 1, 2017, as proposed by the Joint VRS Providers?²⁴¹ On a number of prior occasions, including in the *VRS Partial Rate Freeze Order*, the Commission has applied adjustments, including changes in TRS compensation rates and contribution factors, retroactively to the beginning of a Fund Year.²⁴² Are retroactive adjustments appropriate here? If so, for which rates and based on what

²³⁹ See, e.g., Letter from John T. Nakahata, Counsel to Sorenson Communications, LLC, to Marlene H. Dortch, CG Docket No. 10-51, Exhibit A (filed Feb. 6, 2017) (describing ZVRS's "Limited Time Offer" to give prospective customers their choice of free equipment if the customer switches to ZVRS as its preferred provider).

²⁴⁰ See *2007 TRS Rate Methodology Order*, 22 FCC Rcd at 20169, para. 56.

²⁴¹ 2017 Joint VRS Providers Proposal at 10 (proposing retroactivity to January 1, 2017, because "the current VRS rates are not sustainable for all providers and do not allow for the investment necessary to grow market share in the VRS marketplace").

²⁴² *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Order on Reconsideration, 21 FCC Rcd 8050, 8056, paras. 12-13 (2006); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Memorandum Opinion and Order, 21 FCC Rcd 8063, 8072-73, para. 21 (2006); *VRS Partial Rate Freeze Order*, 31 FCC Rcd at 2344-45, paras. 12-14; see also *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Order, 19 FCC Rcd 2993, 2996, para. 8 (CGB 2004); *Telecommunications*

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specific justification? For example, in what way is such retroactive compensation relevant to providers' ability to recover their costs and attract investment on a going-forward basis?

B. Server-Based Routing

97. *Background.* When the Commission amended the TRS rules to improve interoperability,²⁴³ it strongly encouraged the Session Initiation Protocol (SIP) Forum's VRS Task Group to develop consensus technical standards to facilitate interoperability and directed Commission staff to support and participate in that process.²⁴⁴ The Commission delegated authority to CGB to adopt interoperability standards developed under the auspices of the SIP Forum if the Chief of CGB finds that such standards will advance the statutory functional equivalency mandate or improve the availability of TRS in the most efficient manner.²⁴⁵

98. In August 2015, the VRS Task Group of the SIP Forum completed a technical standard, the VRS Provider Interoperability Profile, which addresses interoperability between VRS providers, as well as the interface between a VRS provider and the TRS Numbering Directory.²⁴⁶ Subsequently, CGB incorporated the VRS Provider Interoperability Profile by reference into the Commission's VRS interoperability rule.²⁴⁷

99. Under the TRS rules, calls that involve multiple VRS providers are routed based on the information provided in the TRS Numbering Directory.²⁴⁸ The Provider Interoperability Profile 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. The technical standard thus specifies the use of call routing information that contains provider domain names, rather than user-specific IP addresses, as well as the call recipient's telephone number.²⁴⁹ When the call reaches the terminating provider's server or gateway, it is then directed by the terminating provider to the IP address of the user device associated with the user's telephone number. Section 64.613(a) of the Commission's rules, however, 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."²⁵⁰ On a number of occasions,

Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, Order, 19 FCC Rcd 24981, 24982, para. 4 (CGB 2004); *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities*, Order, 23 FCC Rcd 1680, 1682, para. 7 (CGB 2008).

²⁴³ 2013 VRS Reform Order, 28 FCC Rcd at 8618, 8620, 8639-41, 8642-44, paras. 1, 40-44, 47-52.

²⁴⁴ 2013 VRS Reform Order, 28 FCC Rcd at 8642, para. 48.

²⁴⁵ 2013 VRS Reform Order, 28 FCC Rcd at 8643, para. 49.

²⁴⁶ 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.

²⁴⁷ CGB 2017 R&O, 32 FCC Rcd at ____, paras. 7-8.

²⁴⁸ The TRS Numbering Directory is sometimes referred to as the "iTRS database."

²⁴⁹ Provider Interoperability Profile, § 9.1.1.

²⁵⁰ 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 generally *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities et al.*, Report and Order and Further Notice of Proposed Rulemaking, 23 FCC Rcd 11591 (2008) (*First*

VRS providers have requested the Commission to clarify that the Commission's rules permit providers to use SIP URIs that contain provider domain names, rather than user-specific IP addresses, for routing VRS and point-to-point video calls between providers.²⁵¹ They have also requested permission to populate the TRS numbering directory with such URIs.²⁵²

100. *Discussion.* To enable implementation of the new call routing protocol specified by the VRS Provider Interoperability Profile, we propose to amend section 64.613 of the rules to provide that the routing information provided to the TRS numbering directory may include URIs that contain provider domain names rather than user IP addresses. All the current VRS providers, as well as consumer groups, support this approach.²⁵³ We believe that this proposed amendment will advance interoperability and will otherwise serve the public interest for the following reasons.

101. *First*, enabling the use of domain names to route VRS and point-to-point video calls will allow the implementation of a consensus interoperability standard and will thereby advance VRS interoperability, an objective long sought by the Commission and one that is integral to achieving functional equivalence.²⁵⁴

102. *Second*, the record indicates that this rule amendment will improve the efficiency, reliability, and security of VRS and point-to-point video communications, thus advancing these important Commission objectives as well. As explained by the providers, using domain names enables providers (1) to switch service centers for maintenance and incident mitigation by changing [domain name system (DNS)] entries, (2) to more easily identify the provider of a peer-to-peer call to work on interoperability problems, and (3) to implement DNS load balancing and advanced routing based on SRV records.²⁵⁵

103. *Third*, we believe that amending the rule to allow routing based on domain names, which providers describe as “an important part of modern communications technology,”²⁵⁶ 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.²⁵⁷

104. *Finally*, the record indicates that the proposed amendment will not impair the Commission's ability to prevent fraud, abuse, and waste in the VRS program. 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

TRS Numbering Order); *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 (2008).

²⁵¹ Vice President, ASL Services et al., to Marlene H. Dortch, Secretary, FCC, at 4 (filed Jan. 8, 2015) (VRS Providers January 2015 Interoperability Report); Letter from Gabrielle Joseph, Vice President, ASL Services et al., to Marlene H. Dortch, Secretary, FCC, at 1-2 (filed May 19, 2016) (VRS Providers May 2016 *Ex Parte*).

²⁵² VRS Providers January 2015 Interoperability Report at 4; VRS Providers May 2016 *Ex Parte* at 1-2.

²⁵³ See, e.g., VRS Providers January 2015 Interoperability Report; at 4; 2011 Consumer Groups TRS Policy Statement at 7.

²⁵⁴ See generally 2013 VRS Reform Order, 28 FCC Rcd at 8639-44, paras. 40-52; see also 2011 Consumer Groups TRS Policy Statement at 7.

²⁵⁵ VRS Providers May 2016 *Ex Parte* at 1; see also VRS Providers January 2015 Interoperability Report at 4.

²⁵⁶ VRS Providers May 2016 *Ex Parte* at 1; see also VRS Providers January 2015 Interoperability Report at 4.

²⁵⁷ 47 U.S.C. § 225(c)(2).

(continued . . .)

to retain such information in their records for five years.²⁵⁸ Such information is needed, for example, to ensure that compensation is not paid for calls originating from international locations²⁵⁹ or other non-compensable calls. The providers represent that using domain names for the routing of calls will not affect their ability to comply with the call detail rule.²⁶⁰

105. We seek comment on these conclusions, and any other factors we should consider regarding this proposed amendment.

C. VRS Use of Enterprise and Public Videophones

106. *Background.* In 2013, the Commission established a TRS user registration database (TRS-URD or database) and required VRS providers to submit information to the database identifying each registered VRS user.²⁶¹ After the TRS-URD is populated with data from registered users, VRS providers must use the database to verify the identity of at least one party to each VRS call and may not seek compensation for any calls that do not pass the per-call validation check conducted through the database.²⁶² The purpose of these rules is to reduce fraud and abuse to the TRS program by allowing the use of VRS only by individuals whose eligibility to use this service has been verified and whose registration is validated on a call-by-call basis. Each registered user is assigned his or her own ten-digit telephone number, which identifies the user's calls.

107. Historically, VRS providers have handled and received compensation for VRS calls placed from both private videophones of VRS users, and from enterprise and public videophones. For the limited purposes of this FNPRM, we use the term "enterprise videophones" to refer to videophones provided by entities such as businesses, organizations and governmental agencies that are designated for use by their employees who use ASL. These phones can be situated in a variety of locations, including private or shared offices, conference rooms, or other common rooms. "Public videophones," for purposes of this FNPRM, are those made available in public spaces, such as schools, hospitals, libraries, airports, and governmental agencies, for use by any individuals who communicate through ASL.²⁶³

²⁵⁸ 47 CFR § 64.604(c)(5)(iii)(D)(2)(v), (vi), (7).

²⁵⁹ See 47 CFR § 64.604(a)(7) (prohibiting compensation for calls originating from international IP addresses except under specified circumstances).

²⁶⁰ 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 [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).

²⁶¹ See *2013 VRS Reform Order*, 28 FCC Rcd at 8647-8655, paras 62-86. Section 64.611(a) requires each VRS provider to transmit the following information from each of its registered users to the TRS-URD: full name and residential address; ten-digit telephone number assigned in the TRS numbering directory; last four digits of the social security number or Tribal Identification number; date of birth; Registered Location; a digital copy of the user's self-certification of eligibility for VRS and the date on which such certification was obtained by the provider; and the date on which the user's identification was verified. 47 CFR § 64.611(a)(3), (4); see also, 64.615(a)(1), (5). *2013 VRS Reform Order*, 28 FCC Rcd at 8650-51, 8654, paras. 70-71, 80, 82. The Registered Location is the most recent information obtained by the VRS provider that identifies the physical location of the end user. 47 CFR § 64.601(a)(28).

²⁶² 47 CFR § 64.615(a)(1), (a)(5)(ii)-(iii); *2013 VRS Reform Order*, 28 FCC Rcd at 8655-56, paras. 85-86.

²⁶³ Compensation for calls from enterprise and public phones has been permitted, because these phone calls have been necessary to provide functionally equivalent telephone service to VRS users, and based on the expectation that,

(continued . . .)

108. The TRS-URD and associated TRS Numbering Directory have been set up to enable validation of individual VRS users by transmitting either the originating or terminating iTRS number for each call. For enterprise or public videophones, each of which permit use by more than one individual, however, the identity of all users of the videophone cannot be known in advance and thus is not retrievable from registration information associated with the videophone's iTRS number. For this reason, at present, there is no means of validating the eligibility of registered VRS users wishing to use these phones. We propose procedures to achieve this, along with safeguards for the use of these phones to protect against fraud, waste and abuse.

109. *Limiting Use to Registered Users.* For all public videophones, and for enterprise videophones that are not located in private workspaces, we propose to require that VRS providers establish log-in procedures for VRS users. For example, for VRS users who already have registered a personal videophone, the VRS provider can require the user to electronically enter the user's iTRS number plus a personal identification number (PIN) before making or receiving a VRS or point-to-point call. Individuals who are not registered for VRS would first be required to complete such registration with the provider in accordance with the requirements of section 64.611(a) of the rules and receive a personal identifier (ID) and PIN number from the provider in order to begin using the public or enterprise videophone with such log-in information.²⁶⁴ We also propose that when VRS providers submit the call data records (CDRs) for calls made from public and enterprise phones, in addition to the registered telephone number, the CDR should include the telephone or ID number of the person using the public or enterprise videophone. We seek comment on this proposal or any other alternative suggestions to ensure the eligibility and verification of users of enterprise and public phones. We ask commenters whether these precautionary measures will further the Commission's efforts to reduce waste, fraud, and abuse and improve its ability to efficiently manage the VRS program.²⁶⁵

110. For enterprise videophones that are located in private workspaces, defined as workspaces where access is limited to one individual, we propose to permit the registered VRS user of the enterprise videophone to log in a single time, without having to again log in each time the phone is used. We seek comment on this proposal.

111. In addition, we propose that VRS providers be required to submit the registration information specified below to the TRS-URD administrator for each new public or enterprise videophone prior to initiating service, and for each such videophone already in service, within 60 days of notice from the Commission that the TRS-URD is ready to accept such information.²⁶⁶

112. For enterprise videophones, we propose to require the following information:

- Name and business address of the enterprise;

given that most hearing people are not fluent in ASL, it will usually be obvious to the CA if an individual placing a call from such a videophone is ineligible to use VRS. *See generally 2013 VRS Reform Order*, 28 FCC Rcd at 8654, para. 81 (noting, in its determination not to require third party independent verification of eligibility to use VRS, and instead directing VRS providers to require CAs to terminate any call that does not involve an individual that uses ASL or that otherwise does not appear to be a legitimate VRS call, because "unlike other forms of TRS, VRS requires users to communicate with a CA in ASL during each call").

²⁶⁴ See 47 CFR § 64.611(a).

²⁶⁵ See *VRS Reform Order*, 28 FCC Rcd 8647, 8651 paras. 62, 72; 47 CFR § 64.615(a) (requiring per-call validation of VRS calls).

²⁶⁶ See 47 CFR § 64.611(a)(4)(ii) (providing that registration information must be submitted to the TRS-URD within 60 days of notice from the Commission).

(continued . . .)

- Name of the responsible person for the videophone, as well as a digital copy of a self-certification (as described below) from that person and the date this certification was obtained by the provider;²⁶⁷
- Tax identification number of the enterprise (for non-governmental enterprises);
- Registered Location of the phone;
- VRS provider's name;
- Date of the videophone's service initiation; and
- For existing enterprise videophones, the date on which the videophone was last used to place a point-to-point or TRS call.

In addition, we propose that each VRS provider be required to obtain from the individual responsible for each enterprise videophone a certification that such responsible person (1) has authority to port the phone to a different VRS provider, (2) will, to the best of that person's ability, permit only eligible VRS users with hearing or speech disabilities to use the phone, and (3) understands that the cost of VRS calls is financed by the federally regulated Interstate TRS Fund. We seek comment on the collection of the information listed, as well as any exception to the above-proposed information collection requirements that should be made for governmental entities that are restricted in their ability to provide certain information due to national security concerns. We also seek comment on whether enterprises consider any of the proposed information collection requirements described above to contain commercially sensitive information, and if so, whether it is necessary for the Commission to impose data security requirements on VRS providers in order to protect such information

113. For public videophones we propose to require the following information and seek comment on such collection:

- Name and physical address of the organization, business or agency where the public videophone is located (which will be used as the Registered Location of the videophone);
- VRS provider's name;
- Date on which the videophone was placed in that location; and
- Date on which the videophone was last used to place a point-to-point or TRS call.

114. For both enterprise and public videophones, in the event that a registered videophone is removed from service or permanently disconnected from VRS, we propose that the VRS provider be required to notify the TRS Fund Administrator of such termination of use within 24 hours of such termination. In addition, for each type of phone, we propose to require each VRS provider to monitor usage and report any unusual activity to the TRS Fund administrator. Because each of these videophones are available for use by multiple individuals, we believe that the collection of this information is necessary to ensure the legitimacy of calls made on these phones. We seek comment on our assumptions and on these proposals and ask commenters to describe the types of unusual activity that should trigger a report to the Commission.

D. Direct Video Calling Customer Support Services

115. A direct video calling (DVC) customer support service is a telephone customer assistance service provided by an organization that permits individuals who are deaf, hard of hearing, deaf-blind, or have a speech disability, using telephone numbers that are registered in the TRS numbering directory, to engage in real-time video communication in ASL without using VRS. The purpose of DVC is to provide

²⁶⁷ The responsible person is the person who is the individual responsible for acquiring, maintaining and overseeing the videophone on behalf of the enterprise.

direct telephone service to such individuals that is functionally equivalent to voice communications service provided to hearing individuals who do not have speech disabilities. Because it is a direct service, no CA is involved and there is no compensation from the TRS Fund. In January 2017, CGB and the Wireline Competition Bureau (WCB) granted VTCSecure, LLC (VTCSecure), a DVC customer support service provider, a waiver of the Commission's rules to allow it to access the TRS Numbering Directory.²⁶⁸ While expressing its general support for DVC, in February 2017, Sorenson sought partial reconsideration of this waiver order, to require that DVC customer support services numbers used for direct ASL communication be separate and distinct from general customer service numbers used by hearing consumers.²⁶⁹ Sorenson suggests that if general customer services numbers used for DVC are placed into the TRS Numbering Directory, providers would have to route all calls to those numbers via point-to-point calls, which would limit the ability of VRS users to choose between making a VRS call or a point-to-point call to reach such customer service representatives, taking away the ability of TRS customers to have access to all VRS provider services.²⁷⁰

116. We seek comment on whether to amend section 64.613 of the Commission's rules to allow all providers of DVC customer support services to access the TRS Numbering Directory. We believe amending our rules to allow DVC customer support service providers access to the TRS Numbering Directory will enhance the functional equivalence of the TRS program by allowing VRS users to engage in more direct, private, and reciprocal communication with customer service agents. As the Commission has repeatedly recognized, compared to traditional TRS, "point-to-point services even more directly support the [purposes of section 225]" because they "increase the utility of the Nation's telephone system" for persons with hearing and speech disabilities by "provid[ing] direct communication—including all visual cues that are so important to persons with hearing and speech disabilities."²⁷¹ We also believe allowing DVC customer support service access to the TRS Numbering Directory will likely reduce the TRS costs that would otherwise be borne by the TRS Fund because using DVC "involve[s] direct, rather than interpreted, communication and does not trigger the costs involved with interpretation or unnecessary routing."²⁷² We seek comment on these tentative conclusions. We further seek comment on the concerns raised by Sorenson, specifically whether any rule changes should require that ASL-capable DVC numbers be distinct from general service numbers used by hearing individuals to the same customer call center. Finally, we seek comment on any other factors we should consider regarding this

²⁶⁸ *Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities; Structure and Practices of the Video Relay Service Program*, CG Docket Nos. 03-123, 10-51, Order and Declaratory Ruling, DA 17-86 (WCB, CGB Jan. 18, 2017) (*VTCSecure Waiver Order*).

²⁶⁹ Petition of Sorenson Communications, LLC for Reconsideration of VTCSecure, LLC Order and Declaratory Ruling, CG Docket Nos. 10-51 and 03-123, at 2 (filed Feb. 16, 2017) <https://ecfsapi.fcc.gov/file/10216021924400/2017-02-16%20FINAL%20Pet%20for%20Recon%20re%20VTCSecure%20Waiver.pdf> (Sorenson Reconsideration Petition). CGB and WCB issued a public notice seeking comment on the petition. *Consumer and Governmental Affairs Bureau and Wireline Competition Bureau Seek Comment on Sorenson Communications, LLC Petition for Reconsideration of the VTCSecure, LLC Order and Declaratory Ruling*, DA 17-191 (rel. Feb. 22, 2017).

²⁷⁰ Sorenson Reconsideration Petition at 2. As an example, Sorenson states that if the DVC customer service number used to access the Social Security Administration were to be entered into the TRS Numbering Directory, deaf consumers would no longer be able to place VRS calls to SSA, and instead would only have the option of reaching the agency's customer service center via point-to-point calls.

²⁷¹ *VTCSecure Waiver Order* at 5, para. 9 (citing *Telecommunications Relay Services and Speech-to-Speech Service for Individuals with Hearing and Speech Disabilities; E911 Requirements for IP-Enabled Service Providers*, Second Report and Order and Order on Reconsideration, 24 FCC Rcd 791, 821, para. 67 (2008) (*Second TRS Numbering Order*) and *2015 VRS FNPRM*, 30 FCC Rcd at 12995-96, para. 61).

²⁷² See *VTCSecure Waiver Order* at 5-6, para. 10 (citing *Second TRS Numbering Order*, 24 FCC Rcd at 821, para. 67).

(continued . . .)

proposed rule amendment, including specific costs or additional benefits from allowing DVC customer support services providers to access the TRS Numbering Directory, as well as alternative proposals for ensuring direct access to DVC customer support services.²⁷³

E. Per call validation procedures

117. Section 64.615(a)(i) of the Commission's rules requires each VRS provider to validate the eligibility of the party on the video side of each VRS call (once the TRS-URD is up and running) by querying the TRS-URD on a per-call basis.²⁷⁴ In the *2013 VRS Reform Order*, the Commission directed the Managing Director, in consultation with the CTO, the Chief of OET, and Chief of CGB, to select (or have the TRS Fund administrator select under objectives and factors determined by the Managing Director in consultation with the CTO, the Chief of OET, and Chief, CGB) a neutral party to build, operate, and maintain the TRS-URD under contract to the Commission (or the TRS Fund administrator), which would be compensated through the TRS Fund.²⁷⁵ However, the Commission also directed the Managing Director to consider whether modifying or rebidding the TRS Numbering Directory contract to include features and functions of the TRS-URD is the most effective and efficient way to build, operate, and maintain the TRS-URD, and to conduct its contracting process accordingly.²⁷⁶

118. After making the consultations referenced above, the Managing Director has contracted with the TRS Numbering Directory administrator to validate the eligibility of the party on the video side of each VRS call by utilizing the TRS Numbering Directory to respond to the per call query.²⁷⁷ Because section 64.615(a)(i) requires that each VRS provider validate the eligibility of the party on the video side of each VRS call by querying the TRS-URD,²⁷⁸ we propose to amend section 64.615(a)(i) to require that each VRS provider query either the TRS-URD or the TRS Numbering Directory, as directed by the Commission or the TRS Fund Administrator, and seek comment on this proposal.

V. ORDER ON SERVER BASED ROUTING AND RESEARCH AND DEVELOPMENT

A. Server Based Routing

119. In this Order, pursuant to section 1.117 of the Commission's rules,²⁷⁹ on the Commission's own motion, and after our review, we set aside the effectiveness, in part, of the report and order issued by CGB in January 2017, in which CGB incorporated certain technical standards on VRS interoperability into the Commission's TRS rules,²⁸⁰ pending the Commission's consideration of the accompanying FNPRM.

²⁷³ Commenters to VTCSecure's petition for waiver generally recognized the benefits of DVC customer support services, but VRS providers raised concerns that granting non-VRS providers access to the TRS Numbering Directory would create technical, security, and cost issues and suggested the Commission conduct a rulemaking to address such issues. See *VTCSecure Waiver Order* at 6-7, paras. 11-16. We are using the rulemaking process to consider allowing providers of DVC customer support services similar access to the TRS Numbering Directory.

²⁷⁴ 47 CFR § 64.615(a)(i); see also *VRS Reform Order*, 28 FCC Rcd at 8651, para. 72. VRS providers may offer to register users who are not confirmed by the per-call validation, 47 CFR § 64.615(a)(ii), but where eligibility cannot be established, the provider must terminate the call and will not be compensated for the call. 47 CFR § 64.615(a)(1)(iii).

²⁷⁵ *VRS Reform Order*, 28 FCC Rcd at 8649, para. 68.

²⁷⁶ *Id.* at 8649, para. 68, n.167.

²⁷⁷ The TRS-URD will continuously update the valid number list in the TRS Numbering Directory.

²⁷⁸ 47 CFR § 64.615(a)(1).

²⁷⁹ 47 CFR § 1.1117.

²⁸⁰ *CGB 2017 R&O*.

120. One of those standards, 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. The technical standard thus 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 domain name, rather than a user-specific IP address.²⁸¹ However, section 64.613(a) of the Commission's rules currently requires that the URI for a VRS user's telephone number "shall contain the IP address of the user's device."²⁸² Thus, after our review of the *CGB 2017 R&O*, we have determined that until the Commission acts on the accompanying FNPRM, which proposes to amend section 64.613 to allow such server-based routing, that provision of the rules does not authorize VRS providers to provide to and retrieve from the TRS Numbering Directory the routing information specified by the VRS Interoperability Profile.

121. The *CGB 2017 R&O* sets a deadline for compliance with the VRS Interoperability Profile that is 120 days after publication of the *CGB 2017 R&O* in the Federal Register. To avoid the possibility of subjecting VRS providers to conflicting obligations pending action on the accompanying FNPRM proposing to amend section 64.613(a), we set aside on our own motion the effectiveness of the *CGB 2017 R&O* with respect to the deadline set for compliance with the VRS Interoperability Profile.²⁸³

B. Research and Development

122. In the 2014 *Technology Transitions Order*,²⁸⁴ we set an initial budget for research and development projects to be supported by the TRS Fund. This initial budget of \$3 million represented approximately 40 percent of the expenditures reported by VRS providers for 2012 on compensable R&D.²⁸⁵ This amount, we explained, would allow 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 and improving the efficiency and availability of TRS, as well as provide certainty regarding the initial level of R&D to be funded directly from the TRS Fund. We stated that we would consider authorizing additional amounts for particular categories of research or specific research projects upon request of the Managing Director.²⁸⁶

²⁸¹ VRS Provider Interoperability Profile, § 9.1.1.

²⁸² 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 generally *First TRS Numbering Order*, 23 FCC Rcd at 11612-13, paras. 50-53.

²⁸³ *CGB 2017 R&O*, 32 FCC Rcd at ___, para. 8; 47 CFR § 64.621(b)(1).

²⁸⁴ *Technology Transitions, ATT Petition to Launch Proceeding Concerning the TDM-to-IP Transition, Connect America Fund, Structure and Practices of the Video Relay Service Program, Telecommunications Relay Services and Speech-to-Speech Services for People with Hearing and Speech Disabilities, Numbering Policies for Modern Communications*, 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 (2014).

²⁸⁵ *Id.* at 1482, para. 149, citing Letter from David Rolka, President, Rolka Loube Saltzer Associates (RLSA), to Marlene H. Dortch, Secretary, Federal Communications Commission, CG Docket Nos. 10-51, 03-123, at 3 (filed Apr. 23, 2013).

²⁸⁶ *Id.* In that Order, we made clear that providers would continue to receive compensation for R&D expenses that are necessary to meet our mandatory minimum standards.

(continued . . .)

123. Congress, in recognizing the need for relay services for persons with hearing and speech disabilities, charged the FCC with ensuring that the services evolve with improvements in technology.²⁸⁷ To this end, we must continue this important research. We find that to continue these research and development efforts, we must take action to ensure continued funding from the TRS Fund beyond the initial project's \$3 million budget, as that amount was only sufficient for the 2016–2017 TRS Fund Year. Therefore, to continue to meet our statutory obligations, we direct the TRS Administrator, for the 2017–2018 TRS Fund year, and as part of future annual ratemaking proceedings, to include in proposed administrative costs for our approval (or the bureau's approval, on appropriate delegated authority) an appropriate amount for research and development necessary to continue to meet our charge of furthering the goals of functional equivalence and efficient availability of TRS.

VI. PROCEDURAL ISSUES

A. Regulatory Flexibility Analysis

124. *Final Regulatory Flexibility Analysis.* As required by the Regulatory Flexibility Act of 1980, as amended (RFA),²⁸⁸ the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) relating to this Report and Order. The FRFA is set forth in Appendix D.

125. *Initial Regulatory Flexibility Analysis.* As required by the RFA, the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities of the policies and rules addressed in this document.²⁸⁹ The IRFA is set forth in Appendix E. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the FNPRM. The Commission will send a copy of the FNPRM, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.²⁹⁰ In addition, the FNPRM and IRFA (or summaries thereof) will be published in the *Federal Register*.²⁹¹

B. Paperwork Reduction Act Analysis

126. The Report and Order adopts new information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA).²⁹² The new information collection requirements will be submitted to the Office of Management and Budget (OMB) for review under section 3507(d) of the PRA.²⁹³ OMB, the general public, and other Federal agencies are invited to comment on the new information collection requirements contained in this proceeding. In addition, we note that, pursuant to the Small Business Paperwork Relief Act of 2002,²⁹⁴ the Commission previously sought comment on how the Commission might further reduce the information collection burden for small business concerns with fewer than 25 employees.²⁹⁵

²⁸⁷ 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); 47 U.S.C. § 225(d)(2) (requiring that the Commission’s regulations “do not discourage or impair the development of improved technology”).

²⁸⁸ 5 U.S.C. § 601 *et seq.*

²⁸⁹ See 5 U.S.C. § 603.

²⁹⁰ See *id.* § 603(a).

²⁹¹ *Id.*

²⁹² Public Law 104-13, 109 Stat 163 (1995) (codified at 44 U.S.C. §§ 3501-3520).

²⁹³ 44 U.S.C. § 3507(d).

²⁹⁴ Pub. L. No. 107-198, 116 Stat. 729 (2002); see 44 U.S.C. § 3506(c)(4).

²⁹⁵ 2015 VRS FNPRM, 30 FCC Rcd at 12998-99, para. 70.

127. The FNPRM seeks comment on proposed rule amendments that may result in new or modified information collection requirements. If the Commission adopts any new or modified information collection requirements, the Commission will publish another notice in the *Federal Register* inviting the public to comment on the requirements, as required by the PRA.²⁹⁶ In addition, pursuant to the Small Business Paperwork Relief Act of 2002,²⁹⁷ we seek specific comment on how we might further reduce the information collection burden for small business concerns with fewer than 25 employees.

C. Comments

128. *Comments.* Pursuant to sections 1.415 and 1.419 of the Commission's rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). *See Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998). Section 1.415(b) of the Commission's rules does not establish a minimum time period for the Commission to receive comments on proposed rules. Rather, the rule states that a "reasonable time will be provided for submission of comments."²⁹⁸ In this proceeding, because the effectiveness of the current compensation rates for VRS providers expires on June 30, 2017,²⁹⁹ we find that the public interest weighs in favor of avoiding confusion regarding applicable VRS compensation rates after June 30, 2017. In order to enable the Commission to take action on this rate matter before the VRS rate expiration date, the Commission is setting April 24, 2017, as the deadline for filing comments, and May 4, 2017, as the deadline for filing reply comments.³⁰⁰ In addition, because the proposed rule amendment on server-based routing appears to be non-controversial and is a prerequisite to implementing a recently adopted interoperability standard, we apply the same comment deadlines to that matter.³⁰¹

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://fjallfoss.fcc.gov/ecfs2/>.
- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority

²⁹⁶ 44 U.S.C. §§ 3501-3520.

²⁹⁷ *Id.* § 3506(c)(4).

²⁹⁸ 47 CFR § 1.415(b); *see also* 5 U.S.C. § 553(c).

²⁹⁹ *See supra* section IV.A.

³⁰⁰ *See, e.g., First TRS Numbering Order*, 23 FCC Rcd 11591 (Further Notice of Proposed Rulemaking with comments due 21 days after the date of publication in the Federal Register and reply comments due 36 days after the date of publication in the Federal Register).

³⁰¹ *See supra* section IV.B.

Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.

- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

129. *People with Disabilities:* To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

130. *Ex Parte Rules.* The proceeding this FNPRM initiates shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules.³⁰² Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter’s written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (*e.g.*, .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission’s *ex parte* rules.

VII. ORDERING CLAUSES

131. Accordingly, IT IS ORDERED that, pursuant to sections 1, 2, 4(i), and 225 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 154(i), 225, the foregoing Report and Order, Notice of Inquiry, Further Notice of Proposed Rulemaking, Declaratory Ruling, and Order ARE ADOPTED, and the Commission’s rules are hereby AMENDED as set forth in Appendix B.

132. IT IS FURTHER ORDERED that this Report and Order SHALL BE EFFECTIVE 30 days after publication of a summary in the Federal Register, except as otherwise specified.

133. IT IS FURTHER ORDERED that any rule amendments that contain new or modified information collection requirements SHALL BE EFFECTIVE on the date specified in a notice published in the *Federal Register* announcing Office of Management and Budget approval of the information collection requirements of such rules pursuant to the Paperwork Reduction Act.

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

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

³⁰² 47 CFR §§ 1.1200 *et seq.*

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A**List of Commenting Parties****Comments**

ASL Services Holdings, LLC (ASL Services)

Convo Communications, LLC (Convo)

CSDVRS, LLC d/b/a ZVRS (ZVRS)

Hancock, Jahn, Lee, and Puckett, LLC, d/b/a Communication Access Ability Groups and Star VRS and Star VRS for the DeafBlind (CAAG)

Mid-American Regional Interpreter Education Center (MARIE Center)

Purple Communications, Inc. (Purple)

Registry of Interpreters for the Deaf, Inc. (RID)

Sorenson Communications, Inc. (Sorenson)

Sarah Spencer (Spencer)

Telecommunications for the Deaf and Hard of Hearing, Inc., National Association of the Deaf, Deaf and Hard of Hearing Consumer Advocacy Network, 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 (Consumer Groups)

Reply Comments

Ken Alexander (Alexander)

Lisa Fritz (Fritz)

Convo

Purple

Sorenson

Video Relay Services Consumer Association (VRSCA)

ZVRS

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 § 64.604 by adding new paragraphs (a)(47), (48), and (49) to read as follows:

§ 64.601 Definitions and provisions of general applicability.

(a) * * *

(47) *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.

(48) *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.

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

* * * * *

3. Amend § 64.604 by revising paragraphs (b)(2)(iii)(B) and (b)(4)(iii) and adding paragraphs (b)(8) and (c)(5)(iii)(L)(6) as follows:

§ 64.604 Mandatory Minimum Standards

* * * * *

(b) * * *

(2) * * *

(iii) *Speed of answer requirements for VRS providers.*

* * * * *

(B) VRS CA service 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 CA service 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.

* * * * *

(4) * * *

(iii) A VRS CA may not handle VRS calls from a location primarily used as his or her home unless as part of the voluntary at-home VRS call handling pilot program as provided for by paragraph (b)(8) of this section.

* * * * *

(8) *Voluntary at-home VRS call handling pilot program.* Any VRS provider that holds a conditional or full certification to receive compensation from the TRS Fund pursuant to section 64.606 of this part as of [INSERT DATE OF ADOPTION OF FINAL RULE PUBLISHED IN THE FEDERAL REGISTER] may participate in the voluntary at-home VRS call handling pilot program. The pilot program shall be in

effect for one year, for service provided by participants beginning November 1, 2017, and ending October 31, 2018.

(i) *Notification of intent to participate.* A VRS provider seeking to participate in the pilot program shall notify the Commission of its intent to participate on or before September 1, 2017, and shall include in such notification a detailed plan demonstrating that the VRS provider intends to achieve compliance with the mandatory minimum standards applicable to VRS and with the safeguards enumerated in this paragraph (b)(8). Plans submitted by VRS providers shall specify the following:

- (A) A description of the screening process used to select CAs for the at-home call handling program;
- (B) A description of specific training to be provided for at-home CAs;
- (C) A description of the protocols and CA expectations developed for the at-home call handling program;
- (D) A description of the grounds for dismissing a CA from the at-home program and the process for such termination in the event that the CA fails to adhere to applicable requirements;
- (E) A description of all steps that will be taken to install a workstation in a CA's home, including evaluations that will be performed to ensure all workstations are sufficiently secure and equipped to prevent eavesdropping and outside interruptions;
- (F) A description of the monitoring technology to be used by the provider to ensure that off-site supervision approximates the level of supervision at the provider's call center;
- (G) An explanation of how the provider's workstations will connect to the provider's network, including how they will be integrated into the call center routing, distribution, tracking, and support systems, and how the provider will ensure system redundancy in the event of service disruptions in at-home workstations;
- (H) A signed certification by an officer of the provider that the provider will conduct random and unannounced inspections of at least five percent (5%) of all at-home workstations during the pilot program; and
- (I) A commitment to comply with all other safeguards enumerated in this paragraph (b)(8) and the applicable rules in this chapter governing TRS.

(ii) *Authorization for at-home VRS call handling.* Upon Commission approval of a VRS provider's plan, the provider may conduct at-home VRS call handling during the period of the pilot program. The Commission may cancel such approval if a VRS provider fails to comply with any of the safeguards enumerated in this paragraph (b)(8) or other applicable mandatory minimum TRS standards. VRS providers may be subject to withholding, forfeitures, and penalties for noncompliant minutes handled by at-home workstations, as is the case for non-compliant minutes handled by call centers.

(iii) *Limit on minutes handled.* In any month of the program, a VRS provider may be compensated for minutes served by at-home CA workstations up to a maximum of *either* thirty percent (30%) of a VRS provider's total minutes for which compensation is paid in that month *or* thirty percent (30%) of the provider's average monthly minutes for the 12 months ending October 31, 2017, whichever is greater.

(iv) *Personnel safeguards.* Before permitting CAs to handle VRS calls from at-home workstations, VRS providers shall:

- (A) Ensure that each CA handling calls from an at-home workstation has the experience, skills, and knowledge necessary to effectively interpret from these workstations, including a thorough understanding of the TRS mandatory minimum standards and at least three years of experience as a call center CA.
- (B) Establish protocols for the handling of calls from at-home workstations (to the extent there are additional protocols that differ from those applicable to the provider's call centers) and provide training to

at-home CAs on such protocols, in addition to all applicable training that is required of CAs working from call centers.

(C) Provide each CA working from an at-home workstation equivalent support to that provided to CAs working from call centers, as needed to effectively handle calls, including, where appropriate, the opportunity to team interpret and consult with supervisors, and ensure that supervisors are readily available to a CA working from home to resolve problems that may arise during a relay call, such as difficulty in understanding a VRS user's signs, the need for added support for emergency calls, and relieving a CA in the event of the CA's sudden illness.

(D) Establish grounds for dismissing a CA from the at-home VRS call handling program (i.e., for noncompliance with the standards and safeguards enumerated in this paragraph (b)(8) and the rules governing TRS), including a process for such termination in the event that the CA fails to adhere to these requirements, and provide such grounds and process in writing to each CA participating in the pilot program.

(E) Obtain from each CA handling calls from an at-home workstation a certification in writing of the CA's understanding of and commitment to complying with the rules in this chapter governing TRS, including rules governing caller confidentiality and fraud prevention, and the CA's understanding of the reasons and process for dismissal from the at-home VRS call handling program.

(v) *Technical and environmental safeguards.* Participating VRS providers shall ensure that each home environment used for at-home VRS call handling enables the provision of confidential and uninterrupted services to the same extent as the provider's call centers and is seamlessly integrated into the provider's call routing, distribution, tracking, and support systems. VRS providers shall ensure that each at-home workstation:

(A) Resides in a separate, secure location in the CA's home, where access is restricted solely to the CA;

(B) Allows a CA to use all call-handling technology to the same extent as other CAs, including the ability to transition a non-emergency call to an emergency call, engage in virtual teaming with another CA, and allow supervisors to communicate with and oversee calls;

(C) Is capable of supporting VRS in compliance with the applicable mandatory minimum technical and emergency call handling standards to the same degree as these are available at call centers, including the ability to route VRS calls around individual CA workstations in the event the CA experiences a network outage or other service interruption;

(D) Is equipped with an effective means to prevent eavesdropping, such as white noise emitters or soundproofing, and to ensure that interruptions from noises outside the room do not adversely affect a CA's ability to interpret a call accurately and effectively; and

(E) Is connected to the provider's network over a secure connection to ensure caller privacy.

(vi) Monitoring and oversight obligations. VRS providers shall:

(A) Inspect and approve each at-home workstation before activating a CA's workstation for use;

(B) Assign a unique call center identification number (ID) to each VRS at-home workstation and use this call center ID to identify all minutes handled from each such workstation in its call detail records submitted monthly to the TRS Fund administrator;

(C) Equip each at-home workstation with monitoring technology sufficient to ensure that off-site supervision approximates the level of supervision at the provider's call center, including the ability to monitor both ends of a call, i.e., video and audio, to the same extent as is possible in a call center, and regularly analyze the records and data produced by such monitoring to proactively address possible waste, fraud, and abuse;

(D) Keep all records pertaining to at-home workstations, including the data produced by any at-home workstation monitoring technology, except for any data that records the content of an interpreted conversation, for a minimum of five years; and

(E) Conduct random and unannounced inspections of at least five percent (5%) of all at-home workstations during the pilot program.

(vii) *Commission audits and inspections.* At-home workstations and workstation records shall be subject to review, audit, and inspection by the Commission and the Fund administrator and unannounced on-site inspections by the Commission to the same extent as other call centers and call center records subject to the rules in this chapter.

(viii) *Monthly reports.* Each participating VRS provider shall report the following information to the TRS Fund administrator with its monthly requests for compensation:

(A) The call center ID and full street address (number, street, city, state, and zip code) for each at-home workstation and the CA ID number for each individual handling VRS calls from that workstation; and

(B) The location and call center IDs of call centers providing supervision for at-home workstations, plus the names of persons at such call centers responsible for oversight of such workstations.

(ix) *Six-month report.* Each participating VRS provider shall submit, no later than seven months after the start of its program, a report covering the first six months of its program, containing the following information:

(A) A description of the actual screening process used to select CAs for the at-home call handling program;

(B) Copies of training materials provided to at-home CAs;

(C) Copies of written protocols used for CAs working from home;

(D) The total number of CAs handling VRS calls from at-home workstations over the first six months of the program;

(E) The number of 911 calls handled by the provider's at-home workstations;

(F) A description and copies of any surveys or evaluations taken of CAs concerning their experience using at-home workstations and participating in an at-home call handling program;

(G) The total number of CAs terminated from the program;

(H) The total number of complaints, if any, submitted to the provider regarding its at-home call handling program or calls handled by at-home CAs.

(I) The total number of on-site inspections conducted of at-home workstations and the date and location of each inspection;

(J) A description of the monitoring technology used to monitor CAs working at home and an analysis of the experience of supervisors overseeing at-home CAs compared to overseeing CAs in a call center;

(K) Copies of any reports produced by tracking software and a description explaining how the provider analyzed the reports for anomalies; and

(L) Detailed documentation of costs incurred in the use of at-home workstations, including any costs associated with CA recruitment, training, and compensation, engineering and technical set-up (including workstation set-up), and administrative and management support (including oversight, evaluation, and recording).

* * * * *

(c) * * *

(5) * * *

(iii) * * *

(L) *Procedures for the suspension/withholding of payment.*

* * * * *

(6) If the VRS provider submits a waiver request asserting exigent circumstances affecting one or more call centers that will make it highly improbable that the VRS provider will meet the speed-of-answer standard for call attempts occurring in a period of time identified by beginning and ending dates, the Fund administrator shall not withhold TRS Fund payments for a VRS provider's failure to meet the speed-of-answer standard during the identified period of time while the waiver request is under review by the Commission. In the event that the waiver request is denied, the speed-of-answer requirement is not met, and payment has been made to the provider from the TRS Fund for the identified period of time or a portion thereof, the provider shall return such payment to the TRS Fund for any period of time when the speed-of-answer requirement was not met.

* * * * *

4. Amend § 64.611 by adding paragraph (a)(5) and amending paragraphs (b), (c)(2)(i), and (g)(1)(vii) to read as follows:

§ 64.611 Internet-based TRS registration.

(a) * * *

(5) *Assignment of iTRS Numbers to Hearing Point-to-Point Video Users.*

(i) Before assigning an iTRS telephone number to a hearing individual, a VRS provider shall obtain from such individual, the individual's full name, residential address, date of birth, and a written certification, attesting that the individual:

(A) Is proficient in sign language;

(B) Understands that the iTRS number may be used only for the purpose of point-to-point communication over distances with registered VRS users; and

(C) Understands that such iTRS number may not be used to access VRS.

(ii) Before assigning an iTRS telephone number to a hearing individual, a VRS provider also shall obtain the individual's consent to provide the information required by this paragraph (a)(5) to the TRS User Registration Database. Before obtaining such consent, the VRS provider, using clear, easily understood language, shall describe the specific information to be provided, explain that the information is provided to ensure proper administration of the TRS program and inform the individual that failure to provide consent will result in denial of service. VRS providers shall obtain and keep a record of affirmative acknowledgment of such consent by every hearing point-to-point video user to whom an iTRS number is assigned.

(iii) The certification required by paragraph (a)(5)(i) of this section must be made on a form separate from any other agreement or form, and must include a separate signature specific to the certification. For the purposes of this rule, an electronic signature, defined by the Electronic Signatures in Global and National Commerce Act, as an electronic sound, symbol, or process, attached to or logically associated with a contract or other record and executed or adopted by a person with the intent to sign the record, has the same legal effect as a written signature. For the purposes of this rule, an electronic record, defined by the Electronic Signatures in Global and National Commerce Act as a contract or other record created, generated, sent, communicated, received, or stored by electronic means, constitutes a record.

(iv) Before commencing service to any hearing point-to-point video user to whom a VRS provider assigns an iTRS number on or after the TRS User Registration Database is operational, a VRS provider shall submit to the TRS User Registration Database the information listed in paragraph (a)(5)(i) and the following additional information:

(A) The ten-digit telephone number assigned in the TRS Numbering Director to the hearing point-to-point user;

(B) The VRS provider’s name and the date of service initiation; and

(C) The date on which a ten-digit number was assigned to or removed from a hearing point-to-point user.

(v) For all other hearing point-to-point video users to whom a VRS provider has assigned an iTRS number, the VRS provider shall transmit the information required by paragraph (a)(5)(iv) of this section within 60 days after the TRS User Registration Database is operational.

(vi) Upon the termination of service to any hearing point-to-point video user, a VRS provider shall submit to the TRS User Registration Database the date of termination of service.

(vii) A VRS provider shall maintain the confidentiality of the information about hearing individuals required by this paragraph (a)(5) and may not disclose such information except as required by law or regulation.

(viii) Before commencing service to a hearing point-to-point video user who is transferring point-to-point video service from another VRS provider, a VRS provider shall notify the TRS User Registration Database of such transfer and shall obtain and submit a properly executed certification under paragraph (a)(5)(i).

(ix) Hearing individuals who are assigned iTRS numbers under this paragraph (a)(5) shall not be deemed registered VRS users. VRS providers shall not be compensated and shall not seek compensation from the TRS Fund for any VRS calls to or from such iTRS numbers.

* * * *

(c) * * *

(2) * * *

(i) Take such steps as are necessary to cease acquiring routing information from any VRS, IP Relay, or hearing point-to-point video user that ports his or her number to another VRS or IP Relay provider or otherwise selects a new default provider;

* * * * *

(g) * * *

(1) * * *

* * * * *

(vii) If the provider assigns iTRS numbers to hearing point-to-point video users, an explanation that hearing point-to-point video users will not be able to place an emergency call.

* * * * *

5. Amend § 64.613 by amending paragraphs (a)(1) and (2) as follows:

§ 64.613 Numbering directory for Internet-based TRS users

(a) * * *

(1) The TRS Numbering Directory shall contain records mapping the geographically appropriate NANP telephone number of each Registered Internet-based TRS User and hearing point-to-point video user to a unique Uniform Resource Identifier (URI).

(2) For each record associated with a VRS or hearing point-to-point video user’s geographically appropriate NANP telephone number, the URI shall contain the IP address of the user’s device. For each record associated with an IP Relay user 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.

* * * * *

6. Amend § 64.615 by amending paragraph (a)(3)(i) as follows

§ 64.615 TRS User Registration Database and administrator

(a) * * *

(3) * * *

(i) Each VRS provider shall request that the administrator of the TRS User Registration Database remove from the TRS User Registration Database user information for any registered VRS user or hearing point-to-point video user:

(A) Who informs its default provider that it no longer wants use of a ten-digit number for TRS or (in the case of a hearing point-to-point video user) for point-to-point video service; or;

* * * * *

7. Amend § 64.621 by revising paragraph (a)(1) as follows:

§ 64.621 Interoperability and portability.

(a) General obligations of VRS providers.

(1) All VRS users and hearing point-to-point video users must be able to place a VRS or point-to-point video call through any of the VRS providers’ services, and all VRS providers must be able to receive calls from, and make calls to, any VRS or hearing point-to-point video user.

* * * * *

8. Amend § 64.630 by revising paragraph (a) and adding paragraph (b) to read as follows:

§ 64.630 Applicability of change of default TRS provider rules

(a) Sections 64.630 through 64.636 of this part governing changes in default TRS providers shall apply to any provider of IP Relay or VRS eligible to receive payments from the TRS Fund.

(b) For purposes of sections 64.630 through 64.636 of this part, the term *iTRS users* is defined as any individual that has been assigned a ten-digit NANP number from the TRS Numbering Directory for IP Relay, VRS, or point-to-point video service.

* * * * *

9. Amend § 64.5101 by revising paragraph (b) to read as follows:

§ 64.5101 Basis and purpose.

* * * * *

(b) *Purpose.* The purpose of the rules in this subpart is to implement customer proprietary network information protections for users of telecommunications relay services and point-to-point video service pursuant to sections 4, 222, and 225 of the Communications Act of 1934, as amended, 47 U.S.C. 4, 222, and 225.

10. Amend § 64.5103 by revising paragraph (m) to read as follows:

(m) *Point-to-point service.* The term “point-to-point service” means a service that enables a VRS or hearing customer to place and receive non-relay calls without the assistance of a communications assistant over the facilities of a VRS provider ~~facilities~~ using VRS access technology. Such calls are made by means of ten-digit NANP numbers registered in the TRS Numbering Directory and assigned to VRS customers and hearing point-to-point customers by VRS providers. The term “point-to-point call” shall refer to a call placed via a point-to-point service.

APPENDIX C**Proposed Rules**

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

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 § 64.611 by adding paragraphs (a)(6) and (7) and amending paragraph (c)(1) to read as follows:

§ 64.611 Internet-based TRS registration.

(a) * * *

(6) *Enterprise videophones.* For purposes of this section, an enterprise videophone is a videophone provided by an entity such as a business, an organization, or a governmental entity that is designated for use by its employees who use American Sign Language.

(i) A VRS provider seeking compensation from the TRS Fund for providing VRS to a registered VRS user utilizing an enterprise videophone must first obtain a written certification from the individual responsible for the enterprise videophone, attesting that:

(A) The individual will, to the best of that individual's ability permit only eligible VRS users with hearing or speech disabilities to use the enterprise videophone; and

(B) The individual understands that the cost of VRS calls is paid for by contributions from telecommunications and VoIP providers to the TRS Fund.

(ii) The certification required by paragraph (a)(6)(i) of this section must be made on a form separate from any other agreement or form, and must include a separate user signature specific to the certification. For the purposes of this rule, an electronic signature, defined by the Electronic Signatures in Global and National Commerce Act, as an electronic sound, symbol, or process, attached to or logically associated with a contract or other record and executed or adopted by a person with the intent to sign the record, has the same legal effect as a written signature. For the purposes of this rule, an electronic record, defined by the Electronic Signatures in Global and National Commerce Act as a contract or other record created, generated, sent, communicated, received, or stored by electronic means, constitutes a record.

(iii) Each VRS provider shall collect and transmit to the TRS User Registration Database, in a format prescribed by the administrator of the TRS User Registration Database, the following registration information for each of its enterprise videophones to the TRS User Registration Database, for new enterprise videophones prior to the initiation of service, and for existing enterprise videophones within 60 days of notice from the Commission that the TRS User Registration Database is ready to accept such information:

(A) The name and business address of the enterprise;

(B) The name of the individual responsible for the videophone, a digital copy of the certification required by paragraph (a)(6)(i) of this section, and the date the certification was obtained by the provider;

(C) The last digits of the tax identification number of the enterprise, unless it is a governmental enterprise,

(D) The Registered Location of the phone;

- (E) The VRS provider's name;
- (F) The date of the enterprise videophone's service initiation; and
- (G) For existing enterprise videophones, the date on which the videophone was last used to place a point-to-point or relay call.
- (iv) Each VRS provider must obtain, from the individuals responsible for each new and existing enterprise videophone, consent to transmit the registered Internet-based TRS user's information to the TRS User Registration Database. Prior to obtaining consent, the VRS provider must describe to the individual responsible for the enterprise videophone, using clear, easily understood language, the specific information being transmitted, that the information is being transmitted to the TRS User Registration Database to ensure proper administration of the TRS program, and that failure to provide consent will result in the registered Internet-based TRS user being denied service. VRS providers must obtain and keep a record of affirmative acknowledgment for every enterprise videophone of such consent.
- (v) Each VRS provider shall maintain the confidentiality of any registration and certification information obtained by the provider, and may not disclose such registration and certification information or the content of such registration and certification information except as required by law or regulation.
- (vi) After the time period for the 60-day notice from the Commission that the TRS User Registration Database is ready to accept registration information has passed, VRS calls provided to enterprise videophones shall not be compensable from the TRS Fund unless the user of the enterprise videophone is a registered VRS user and logs in to the videophone with a user identification plus passcode or PIN. For enterprise videophones located in private work spaces where access is limited to one individual, the user of such enterprise videophone may log in a single time, without being required to log in each time the videophone is used.
- (vii) VRS providers shall require their CAs to terminate any call which does not involve an individual eligible to use VRS due to a hearing or speech disability or, pursuant to the provider's policies, the call does not appear to be a legitimate VRS call, and VRS providers may not seek compensation for such calls from the TRS Fund.
- (viii) A VRS provider may be compensated from the TRS Fund for dial-around VRS provided to registered users of registered enterprise videophones.
- (7) *Public VRS phones.* For purposes of this section, a public videophone is a videophone that is made available in a public space, such as a school, a hospital, a library, an airport, or a governmental building, for use by any individual who communicates through American Sign Language.
- (i) A VRS provider seeking compensation from the TRS Fund for providing VRS to a registered VRS user utilizing a public videophone must transmit to the TRS User Registration Database, in a format prescribed by the administrator of the TRS User Registration Database, the following information, for each of its new public videophones prior to the initiation of VRS on the videophone, and for existing public videophones, within 60 days of notice from the Commission that the TRS User Registration Database is ready to accept such information:
- (A) The name and physical address of the organization, business, or agency where the public videophone is located;
- (B) The VRS provider's name
- (C) The date on which the videophone was placed in that location; and
- (D) The date on which the videophone was last used to place a point-to-point or TRS call.
- (ii) After the time period for the 60-day notice from the Commission that the TRS User Registration Database is ready to accept registration information has passed, VRS calls provided to public videophones shall not be compensable from the TRS Fund unless the user of the public videophone is a

registered VRS user and logs in to the videophone with a user identification plus passcode or PIN.

(iii) VRS providers shall require their CAs to terminate any call which does not involve an individual eligible to use VRS due to a hearing or speech disability or, pursuant to the provider's policies, the call does not appear to be a legitimate VRS call, and VRS providers may not seek compensation for such calls from the TRS Fund.

(iv) A VRS provider may be compensated from the TRS Fund for dial-around VRS provided to registered users of registered public videophones.

* * * * *

(c) *Obligations of default providers and former default providers.*

(1) Default providers must:

(i) Obtain current routing information ~~including IP addresses or domain names and user names~~, from their Registered Internet-based TRS Users, registered enterprise videophones, and hearing point-to-point video users;

* * * * *

3. Amend § 64.613 by revising paragraphs (a)(1), (a)(2), and (a)(4) to read as follows:

§ 64.613 Numbering directory for Internet-based TRS users.

(a) *TRS Numbering Directory.*

(1) The TRS Numbering Directory shall contain records mapping the geographically appropriate NANP telephone number of each Registered Internet-based TRS User, registered enterprise videophone, public VRS phone, Direct Video Calling customer support services, and hearing point-to-point video user to a unique Uniform Resource Identifier (URI).

(2) For each record associated with a ~~VRS or hearing point to point user's~~ geographically appropriate NANP telephone number for a Registered Internet-based TRS User, registered enterprise videophone, public VRS phone, Direct Video Calling customer support services, or hearing point-to-point video user, 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.

(3) * * *

(4) ~~Only~~ The TRS Numbering Administrator, and Internet-based TRS providers, and Direct Video Calling customer support services providers may access the TRS Numbering Directory.

* * * * *

4. Amend § 64.615 by revising paragraph (a)(1) to read as follows:

§ 64.615 TRS User Registration Database and administrator.

(a) *TRS User Registration Database.*

(1) VRS providers shall validate the eligibility of the party on the video side of each call by querying the TRS User Registration Database or the TRS Numbering Directory, as directed by the Commission or the TRS Fund Administrator, on a per-call basis. Emergency 911 calls are excepted from this requirement.

* * * * *

(iv) The eligibility of a party using an enterprise videophone or public VRS phone may be validated by the registration information for the enterprise phones or public VRS phones in the TRS User Registration Database.

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 each of the Further Notices of Proposed Rulemaking.² The Commission sought written public comment on the proposals in the *2013 VRS FNPRM* and the *2015 VRS FNPRM*, including comment on the two IRFAs.³ No comments were received on either IRFA. This Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.⁴ A copy of the Report and Order, and FRFA (or summaries thereof) will also be published in the Federal Register.⁵

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

2. The Report and Order makes rule changes to improve the functional equivalence of video relay service (VRS) by approving eight-month trials for: (a) skills-based routing by which VRS calls can be routed to a communications assistant (CA) who specializes in legal, medical or technical terminology; and (b) the use of deaf interpreters who work in conjunction with hearing interpreters in special situations, such as when a caller has limited signing ability. The Report and Order also: (a) modifies the formula for calculating the speed of answer so that the measured wait time does not end until 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 interactive voice response (IVR) system; (b) permits the assignment of North American Numbering Plan (NANP) ten-digit telephone numbers that are registered in the telecommunications relay services (TRS) directory (iTRS numbers) to hearing individuals who know American Sign Language (ASL) to communicate directly with VRS users through point-to-point video service without the use of a CA; and (c) authorizes a twelve-month pilot program for at-home VRS call handling, subject to requirements, including training, having secure workstations in a separate room, monitoring, and reporting to the Commission on the number of CAs working from home, their locations, and the minutes of use, which are necessary to protect to the privacy of VRS users and prevent waste, fraud, and abuse.

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

3. No comments were filed in response to either IRFA.

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

4. 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

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 *Structure and Practices of the Video Relay Service Program*, Further Notice of Proposed Rulemaking, 28 FCC Rcd 8618, 8760-71 (2013) (*2013 VRS Reform Order*); *Structure and Practices of the Video Relay Service Program*, Further Notice of Proposed Rulemaking, 30 FCC Rcd 12973, 13000-03 (2015) (*2015 VRS FNPRM*).

³ *2013 VRS Reform Order*, 28 FCC Rcd at 8726, 8760-71, para. 286, App.; *2015 VRS FNPRM*, 30 FCC Rcd at 12997, 13000-03, para. 67, App.

⁴ See 5 U.S.C. § 604.

⁵ See 5 U.S.C. § 604(b).

(continued . . .)

proposed rules as a result of those comments.⁶ The Chief Counsel did not file any comments in response to the proposed rules in this proceeding.

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

5. 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.⁷ The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”⁸ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.⁹ A “small business concern” is one 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.¹⁰

6. The rules adopted in the Report 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.

7. *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.¹¹ The SBA has developed a small business size standard for “All Other Telecommunications,” which consists of all such firms with gross annual receipts of \$32.5 million or less.¹² For this category, census data for 2012 show that there were 1,442 firms that operated for the entire year. Of these firms, a total of 1,400 had gross annual receipts of less than \$25 million.¹³ 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

⁶ 5 U.S.C. § 604(a)(3).

⁷ 5 U.S.C. § 603(b)(3).

⁸ *Id.* § 601(6).

⁹ *Id.* § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). 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.*

¹⁰ *Id.* § 632.

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

¹² 13 CFR § 121.201; NAICS Code 517919.

¹³

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

Requirements

8. The two trials—for skills-based routing and deaf interpreters—are voluntary. There are some recordkeeping, reporting and other compliance requirements associated with the trials, but those requirements apply only if a VRS provider decides to engage in a trial.

9. The long-term rules adopted in the Report and Order have minor compliance requirements. First, the modification for measuring the speed-of-answer only requires VRS providers to make minor adjustments to their automated methods of keeping records of how fast calls are answered. Second, the assignment of iTRS numbers to hearing individuals who can sign is essentially an extension of the VRS providers' existing obligation to collect and maintain the required data to facilitate the assignment and usage of such numbers by VRS callers and to prevent waste, fraud, and abuse. Finally, although the Report and Order includes regulatory requirements associated with a pilot program for at-home VRS call handling, including training, having secure workstations in a separate room, monitoring, and reporting to the Commission on the number of CAs working from home, their locations, and the minutes of use, such requirements are necessary to protect the privacy of users and prevent waste, fraud, and abuse.

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

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

11. The skills-based routing trial and the trial of deaf interpreters are voluntary, thereby minimizing the potential recordkeeping, reporting and compliance requirements. Even for VRS providers that choose to participate in the trials, the VRS providers will be designing their own trials; therefore, they will control the sizes of their trials and the corresponding compliance impacts. Moreover, the proposal for a skills-based rating trial was initially made jointly by all of the VRS providers in 2015,¹⁵ and many of the reporting requirements for both trials have been suggested by the smaller VRS providers.¹⁶

12. The new rules concerning speed of answer evolved from a proposal to increase the speed-of-answer requirement. To address concerns raised by the VRS providers of having to comply with an increased speed of answer without receiving corresponding increases in their compensation,¹⁷ the Commission decided not to change the speed of answer at this time. The small change in the methodology for calculating speed-of-answer will have minimal impact on the VRS providers.

13. The requirement to provide iTRS numbers to hearing individuals will have similar proportional impact on large and small VRS providers. The data gathering and recordkeeping associated with the provision of such numbers is basically an extension of the VRS providers' current roles in providing iTRS numbers to VRS users. The costs of number assignments, back-office services, and the

¹⁴ 5 U.S.C. § 603(b).

¹⁵ Joint Proposal of All Six VRS providers for Improving Functional Equivalence and Stabilizing Rates, CG Docket Nos. 10-51, 03-123, at 4-6 (filed Mar. 30, 2015).

¹⁶ See, e.g., 2015 ASLServices Comments at 16; 2015 Convo Comments at 9, 14; 2015 ZVRS Comments at 16.

¹⁷ See, e.g., 2015 Purple Comments at 3-4; 2015 Sorenson Reply Comments at 2-3; 2015 Consumer Groups Comments at 6.

like shall be handled in the same manner as comparable cost functions performed in connection with number assignment and point-to-point communications for registered VRS users.

14. The regulatory requirements associated with pilot program for at-home VRS call handling, including training, having secure workstations in a separate room, monitoring, and reporting to the Commission on the number of CAs working from home, their locations, and the minutes of use, are necessary to protect the privacy of users and prevent waste, fraud, and abuse. The VRS providers will be in control of the number of such CAs working at home, and a VRS provider can decide not to allow any CAs to work at home. The costs of setting up the necessary workstations and the associated training, monitoring, reporting, etc. shall be handled in a manner similar to comparable functions performed at the VRS providers' call centers.

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, including this FRFA, in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act.¹⁸ In addition, the Commission will send a copy of the Report and Order, including this FRFA, to the Chief Counsel for Advocacy of the Small Business Administration

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

17. None.

¹⁸ See 5 U.S.C. § 801(a)(1)(A).

APPENDIX E

Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),³²¹ the Commission has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies and rules proposed in the Further Notice of Proposed Rulemaking (FNPRM). Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadline for comments on the FNPRM provided in the item. The Commission will send a copy of the entire FNPRM, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).³²² In addition, the FNPRM and the IRFA (or summaries thereof) will be published in the Federal Register.³²³

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

2. The FNPRM addresses server-based routing of video relay service (VRS) calls; and registration of VRS enterprise and public videophones in the telecommunications relay service (TRS) user registration database (TRS-URD); access to the TRS Numbering Directory by direct video calling (DVC) customer support services; and per-call validation procedures for VRS calls.

3. The proposed changes to permit server-based routing will 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 will use the providers' domain names, rather than user-specific IP addresses, as is currently required.³²⁴ Pursuant to a request from VRS providers, the Commission proposes to permit domain names to be included in the user routing information provided to the TRS numbering directory.³²⁵

4. The use of enterprise and public videophones³²⁶ to initiate and receive VRS calls was not included in the design of the TRS-URD, which will be used to validate consumers as registered users of VRS.³²⁷ The Commission proposes to require the registration of enterprise and public videophones in the TRS-URD and to require that the users of such videophones log-in to use the videophones, so that calls from such equipment may be appropriately processed and compensated for by the TRS Fund, as they

³²¹ See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601–612, was amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

³²² See 5 U.S.C. § 603(a).

³²³ See *id.*

³²⁴ SIP Forum, US VRS Provider Interoperability Profile, SIP Forum Document Number: VRS US Providers Profile TWG-6-1.0, § 9.1.1 (Oct. 14, 2015) (VRS Provider Interoperability Profile), http://www.sipforum.org/component/option.com_docman/task.doc_download/gid.786/Itemid.261/; 47 CFR § 64.613(a)(2).

³²⁵ Letter from Gabrielle Joseph, Vice President, ASL Holdings LLC et al., to Marlene H. Dortch, Secretary, FCC, CGB Docket No. 03-123, et al., at 1 (filed Jan. 8, 2015)

³²⁶ For purposes of the FNPRM, the Commission uses the term “enterprise videophones” to refer to videophones provided by entities such as businesses, organizations and governmental agencies that are designated for use by their employees who use American Sign Language (ASL). These phones can be situated in a variety of locations, including private or shared offices, conference rooms, or other common rooms. “Public videophones,” for purposes of the FNPRM, are those made available in public spaces, such as schools, hospitals, libraries, airports, and governmental agencies, for use by any individuals who communicate through ASL.

³²⁷ 47 CFR § 64.611(a)(4)(ii), 64.615(a).

(continued . . .)

have been in the past. Such registration and log-in procedures are needed to prevent waste, fraud, and abuse of the TRS Fund.

5. The Commission proposes to permit providers of DVC services to have access to the TRS Numbering Directory. Such access will enhance the functional equivalence of TRS as required by section 225 of the Communications Act of 1934, as amended,³²⁸ because such access is needed for the purpose of routing point-to-point video calls to and from DVC call centers.

6. Lastly, section 64.615(a)(1)(i) of the Commission's rules requires each VRS provider to validate the eligibility of the party on the video side of each VRS call (once the TRS-URD is up and running) by querying the TRS-URD on a per-call basis.³²⁹ Because the per-call query function has been built into the TRS Numbering Directory rather than the TRS-URD, the Commission proposes to amend section 64.615(a)(1)(i) to require per-call validation using either the TRS-URD or the TRS Numbering Directory, as directed by either the Commission or the TRS Fund administrator.

B. Legal Basis

7. The authority for this proposed rulemaking is contained in sections 4(i), 201(b), 225, and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 201(b), 225, 303(r).

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

8. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the proposed rules and policies, if adopted.³³⁰ The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."³³¹ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.³³² A "small business concern" is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.³³³

9. The rules proposed in the FNPRM will affect obligations of VRS providers and providers of DVC services. 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.

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

³²⁸ See 47 U.S.C. § 225(a)(3).

³²⁹ 47 CFR § 64.615(a)(1)(i).

³³⁰ 5 U.S.C. § 603(b)(3).

³³¹ *Id.* § 601(6).

³³² *Id.* § 601(3) (incorporating by reference the definition of "small-business concern" in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register."

³³³ 15 U.S.C. § 632.

Establishments providing Internet services or voice over Internet protocol (VoIP) services via client-supplied telecommunications connections are also included in this industry.³³⁴ 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.³³⁵ 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.³³⁶ Thus, a majority of “All Other Telecommunications” firms potentially affected by the rules adopted can be considered small.

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

11. The proposed server-based call routing option will permit the use of domain names, and will require VRS providers 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. The changes to the TRS-URD design to permit calls to be made from enterprise and public videophones will require VRS providers to register such equipment in the TRS-URD, in a manner similar to how they currently register individuals in the TRS-URD. The other proposed rule changes do not involve recordkeeping requirements.

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

12. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.³³⁷

13. The proposed server-based call routing option 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.³³⁸

14. The provision of VRS service to enterprise and public videophones is optional for VRS providers. The proposed registration requirements for such videophones and log-in procedures for users of such videophones apply equally to all VRS providers and users, and are necessary to prevent waste, fraud, and abuse of the TRS Fund. The registration requirements for enterprise and public videophones are no more burdensome than the registration requirements for individual videophones. To the extent there are differences in operating costs resulting from economies of scale, those costs are reflected in the different rate structures applicable to large and small VRS providers. Therefore, the Commission does not adopt any of the four alternatives listed above for small entities.

³³⁴ <http://www.census.gov/cgi-bin/sssd/naics/naicsrch>.

³³⁵ 13 CFR § 121.201; NAICS Code 517919.

³³⁶

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

³³⁷ 5 U.S.C. § 603(b).

³³⁸ The rate structures are discussed in section IV.A of the FNPRM.

15. Permitting providers of DVC call centers to access the TRS Numbering Directory is necessary for the purpose of routing calls to and from DVC call centers. Such access would subject such call center providers to call-routing rules similar to those currently applicable to Internet-based TRS providers. Such rules are not burdensome.

16. Requiring VRS providers to transmit per-call validation queries to the TRS Numbering Directory instead of the TRS-URD, as currently required, is not burdensome. The only difference is the database that must be queried.

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

17. None.