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

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

REPORT AND ORDER
AND FURTHER NOTICE OF PROPOSED RULEMAKING

Adopted: January 17, 2017 **Released: January 17, 2017**

Comment Date: [45 days after date of publication in the Federal Register]
Reply Comment Date: [75 days after date of publication in the Federal Register]

By the Chief, Consumer and Governmental Affairs Bureau:

I. INTRODUCTION

1. In this Report and Order and Further Notice of Proposed Rulemaking (FNPRM), the Consumer and Governmental Affairs Bureau (Bureau or CGB), pursuant to delegated authority, adopts a Report and Order amending the telecommunication relay service (TRS) rules to incorporate by reference certain technical standards for the interoperability and portability of services, equipment, and software used for video relay service (VRS). In the FNPRM portion of the document, the Bureau seeks additional comment on the scope of application of the technical standard for user equipment and software.

II. REPORT AND ORDER

A. Background

2. In 2013, the Federal Communications Commission (FCC or Commission) amended its rules to improve the structure, efficiency, and quality of the VRS program.[1] Among other things, the Commission took steps to improve the effectiveness of its interoperability and portability rules, in order to enhance functional equivalence and VRS availability for consumers, ease of compliance by providers, and overall efficiency in the operation of the telecommunications relay service (TRS) program.[2]

[1] *Structure and Practices of the Video Relay Service Program et al.*, Report and Order and Further Notice of Proposed Rulemaking, 28 FCC Rcd 8618, 8620, para. 1 (2013) (*VRS Reform Order*). VRS is a type of telecommunications relay service (TRS) that allows persons with hearing or speech disabilities to use American Sign Language (ASL) to communicate in near real time through a communications assistant (CA), via video over a broadband Internet connection. *See* 47 C.F.R. § 64.601(a)(40). Under section 225 of the Communications Act of 1934, as amended (Act), the Commission must ensure that TRS "are available, to the extent possible and in the most efficient manner" to persons in the United States who are deaf, hard of hearing, deaf-blind, or who have speech disabilities. 47 U.S.C. § 225(b)(1); *see also id*., § 225(a)(3).

[2] *VRS Reform Order*, 28 FCC Rcd at 8639-41, 8642-44, paras. 40-44, 47-52; *see also id*. at 8640, para. 42 (adopting 47 CFR § 64.621 to codify existing interoperability and portability requirements).

3. The VRS interoperability and portability requirements are intended (i) to allow VRS users to make and receive calls through any VRS provider, and to choose a different default provider, without changing the access technology used to place calls, and (ii) to ensure that VRS users can make point-to-point calls to all other VRS users, irrespective of the default provider of the calling and called party.[3] Providers must ensure that videophone equipment that they distribute retains certain features when a user ports his or her ten-digit VRS number to a new default provider.[4] In the 2013 *VRS Reform Order*, the Commission recognized that ineffective interoperability rules appeared to be both hindering VRS provider competition and frustrating users' access to off-the-shelf VRS access technology.[5] It therefore (1) codified existing interoperability and portability requirements, (2) clarified that such requirements apply to software as well as equipment, (3) took steps to support the development of voluntary, consensus standards to facilitate interoperability and portability; and (4) directed that a "VRS access technology reference platform" be developed to provide a benchmark for interoperability.

4. To support the development of voluntary, consensus interoperability and portability standards, the Commission strongly encouraged the continuation of existing efforts by the Session Initiation Protocol (SIP) Forum's VRS Task Group to develop voluntary, consensus standards to facilitate interoperability and portability. The Commission also directed its Chief Technology Officer (CTO) and the Chief of the Office of Engineering and Technology (OET), in consultation with the Chief of CGB, to coordinate Commission support of and participation in that process in order to ensure the timely development of voluntary, consensus standards to facilitate interoperability and portability.[6] Further, the Commission delegated authority to CGB to adopt interoperability and portability standards, as well as other standards or recommended standards developed under the auspices of the SIP Forum or other voluntary, consensus standard organizations, 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.[7] The Commission specified that such interoperability and portability standards should include standards for the portability of address book and speed dial features.[8]

5. Finally, the Commission directed the Managing Director, in consultation with the CTO and the Chief of OET, to select a neutral party to develop a VRS access technology reference platform.[9] This reference platform is described in the *VRS Reform Order* as a software product that is compliant with VRS interoperability and portability standards, is usable on commonly available off-the-shelf equipment and operating systems, and provides users with the ability to place VRS and point-to-point calls with any provider, as well as the other VRS capabilities required by the Commission's rules.[10] Available for use by the public and by software developers, the reference platform is intended to facilitate the use of off-the-shelf equipment to access VRS and to enable VRS providers and software developers to test user equipment and software products and upgrades prior to introducing them into the market, to ensure that

[3] *Id.* at 8639, para. 40. A point-to-point call is one where TRS equipment is used by individuals with speech or hearing disabilities to communicate directly with each other, without the assistance of an interpreter. *Id.*, n.105. "iTRS access technology" is defined as "any equipment, software, or other technology issued, leased, or provided by an Internet-based TRS provider that can be used to make or receive an Internet-based TRS call." *See id.* at 8641, para. 45.

[4] *See id.* at 8639, para. 40.

[5] *Id.*, para. 41.

[6] *Id.* at 8642, para. 48. The Commission noted that such support and participation must be consistent with the guidance set forth in OMB Circular No. A-119. *Id*., n.129.

[7] *Id.* at 8643, para. 49.

[8] *Id.*, para. 50.

[9] *Id.* at 8645, para. 54.

[10] *Id.* at 8645-46, paras. 55-56.

they are standards compliant.[11] The Commission determined that "interoperability with the VRS access technology reference platform will be a minimum condition for a provider's VSR access technology to be in compliance with our rules, and thus will be a minimum condition for receiving compensation from the Fund for calls using such technology."[12] The VRS access technology reference platform, now known as the Accessible Communications for Everyone (ACE) Application, or "ACE App," is being completed, and the relevant interoperability profiles have been developed, as discussed in the next paragraph.

6. In August 2015, the VRS Task Group of the SIP Forum completed a technical standard addressing interoperability between VRS providers, entitled the VRS Provider Interoperability Profile (Provider Interoperability Profile).[13] Subsequently, the VRS providers formed another group, the Relay User Equipment Forum (RUE Forum), which published a second technical standard addressing interoperability between a VRS provider and user equipment and software, entitled the Interoperability Profile for Relay User Equipment (RUE Profile).[14] In a notice of proposed rulemaking issued August 4, 2016, pursuant to a delegation of authority in the *VRS Reform Order*,[15] the Consumer and Governmental Affairs Bureau (CGB or Bureau) proposed to incorporate both standards by reference into the Commission's VRS interoperability rule.[16] We address each of the two standards in turn.

B. Provider Interoperability Profile

7. The Provider Interoperability Profile provides technical specifications for the interface between two VRS providers, as well as the interface between a VRS provider and the TRS Numbering Directory.[17] All commenters support the incorporation of this standard by reference into the Commission's VRS interoperability rule.[18] We conclude that the Provider Interoperability Profile will advance the Commission's goals of ensuring interoperability and portability, as required by the *VRS Reform Order*. Specifically, this standard will provide a common framework for provider compliance and specific criteria for assessing such compliance. Incorporation of this standard will thereby increase the certainty that all VRS users can place and receive calls through any VRS provider and make point-to-point calls to all other VRS users, irrespective of the default provider of the parties to the call, and without the caller having to change the VRS access technology used to make such calls. In addition, because the Provider Interoperability Profile specifies the use of the SIP and H.264 protocols, it will provide more

[11] *Id.* at 8644-46, paras. 53-58.

[12] *Id.* at 8646, para. 58.

[13] 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) (Provider Interoperability Profile), https://www.fcc.gov/files/sip-forum-vrs-us-providers-profile-twg-6-1; *see also* Letter from Richard Shockey, Chairman of the Board of Directors, SIP Forum, and Marc Robins, President and Management Director, SIP Forum (filed Oct. 29, 2015). The VRS Task Group is described at http://www.sipforum.org/content/view/404/291/ (last visited July 28, 2016).

[14] Interoperability Profile for Relay User Equipment (July 20, 2016) (RUE Profile), https://datatracker.ietf.org/doc/draft-vrs-rue-dispatch/.

[15] *VRS Reform Order*, 28 FCC Rcd at 8643, para. 49.

[16] *Structure and Practices of the Video Relay Service Program et al.*, Further Notice of Proposed Rulemaking, 31 FCC Rcd 8777 (CGB 2016) (*CGB 2016 FNPRM*).

[17] Provider Interoperability Profile, § 4. 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.

[18] *See, e.g.*, Consumer Groups Comments at 2; Global VRS Comments at 1; Joint Comments of Four VRS Providers at 1. While supporting incorporation of the VRS Provider Interoperability Profile, the Consumer Groups also state that although the VRS Provider Interoperability Profile and the RUE Profile "certainly advance the Commission's goals of ensuring interoperability and portability, they may not entirely meet those goals." Consumer Groups Comments at 2 (emphasis original).

advanced video compression, which will improve video quality.[19] We further note that all current VRS providers participated in the process leading to adoption of the Provider Interoperability Profile.[20] In these various ways, these standards will "advance the statutory functional equivalency mandate [and] improve the availability of TRS, in the most efficient manner," in accordance with the *VRS Reform Order*,[21] and we therefore adopt the proposal to incorporate the Provider Interoperability Profile by reference.

8. *Effective Date*. The *CGB 2016 FNPRM* proposed that the rule amendment incorporating the Provider Interoperability Profile into section 64.621 of the Commission's rules become effective 60 days after publication in the Federal Register of the amended rule.[22] In their comments, the VRS providers initially projected that they would need at least 120 days to finish implementation and testing.[23] Accordingly, the compliance date for the Provider Interoperability Profile will be 120 days after publication of this Report and Order in the *Federal Register*.[24]

C. RUE Profile

9. The RUE Profile provides technical specifications that define a standard interface between a relay user's equipment and the services offered by relay service providers.[25] The RUE Profile thus addresses a number of technical issues not governed by the Provider Interoperability Profile, such as the portability of users' personal contacts lists and speed dial lists.[26] Adoption of the RUE Profile will enable a consumer to continue using such lists, compiled on an existing default provider's server, after selecting a new default provider. The RUE Profile also specifies other aspects of the interface between a

[19] *See* ZVRS Comments at 3.

[20] All the VRS providers have joined in periodic FCC filings describing their progress in developing these specifications. *See* Letter from Gabrielle Joseph, Vice President, ASL Holdings, et al., to Marlene Dortch, FCC Secretary (filed Jan. 8, 2015) (VRS Providers January 2015 Interoperability Report); Letter from Gabrielle Joseph, Vice President, ASL Holdings, et al., to Marlene Dortch, FCC Secretary (filed June 26, 2015) (VRS Providers June 2015 Interoperability Report); Letter from Gabrielle Joseph, Vice President, ASL Holdings, et al., to Marlene Dortch, FCC Secretary (filed May 19, 2016) (VRS Providers May 2016 Ex Parte). All providers have indicated their support for the incorporation by reference of the standard. GlobalVRS Comments at 1; Joint Comments of Four VRS Providers at 1.

[21] *See VRS Reform Order*, 28 FCC Rcd at 8643, para. 49.

[22] *CGB 2016 FNPRM*, 31 FCC Rcd at 8780, para. 8.

[23] GlobalVRS Comments at 3; Joint Comments of Four VRS Providers at 6-7.

[24] The VRS providers have requested that, prior to requiring compliance with the Provider Interoperability Profile, the Commission issue a clarification that it is permissible for VRS providers to use SIP User Resource Identifiers (URIs) that contain provider domain names, rather than user-specific IP addresses, for routing VRS and point-to-point video calls between providers and to populate the TRS numbering directory with such URIs. *See* VRS Providers January 2015 Interoperability Report; VRS Providers June 2015 Interoperability Report; VRS Providers May 2016 Ex Parte. In the event that a ruling on this matter has not been issued prior to the scheduled compliance date, the bureau will consider extending the compliance date.

[25] RUE Profile, § 2.

[26] ZVRS Comments at 7. For example, the RUE Profile requires that the configuration data sent to a user upon startup of the user's equipment must include "[a]n HTTPS URI that may be used to export (retrieve) the subscriber's complete contact list managed by the provider," and it requires each VRS provider to provide a standard xCard export interface, thus enabling users to import their list of contacts in xCard, or RFC 6351, XML format. RUE Profile, §§ 6.2, 10; *see also* Consumer Groups Comments at 2-3; VRS Providers November 2016 Ex Parte at 2. The Xcard format referenced in the RUE Profile is Internet Engineering Task Force (IETF) Request for Comments (RFC) 6351, xCard: vCard XML Representation (August 2011) (xCard XML Format), https://tools.ietf.org/html/rfc6351.

provider and relay user equipment.[27]

10. Although the Consumer Groups support the incorporation by reference of the RUE Profile in the VRS interoperability rule,[28] VRS providers contend that a rule requiring *all* provider-distributed VRS user hardware and software to comply with the RUE Profile would impose major costs and burdens on VRS providers. The providers claim that the purpose of the RUE Profile, as developed, is limited to defining an interface between user equipment utilizing the ACE App and VRS providers' networks.[29] Four providers further assert that "forcing provider endpoints to adhere to the RUE Profile would require that providers *remove* any innovative or useful features of their endpoints that are not specified in the RUE Profile and subject their networks to lower security than they employ today."[30] The same four VRS providers argue that the process by which the RUE Profile was developed was not that of a voluntary, consensus standard organization and that to incorporate the RUE Profile in a rule generally applicable to all user equipment would exceed the Bureau's delegated authority.[31]

1. Limited Incorporation of the RUE Profile

11. In this Report and Order, we incorporate the RUE Profile by reference into the interoperability rule, but on a limited basis that preserves providers' flexibility to continue offering user equipment and software that does not conform to the RUE Profile in all respects, pending further determinations in this proceeding. Specifically, the rule we adopt requires VRS providers to comply with the RUE Profile only for purposes of ensuring provider interoperability with the ACE App. We do not make the RUE Profile applicable to user equipment and software supplied by VRS providers.

12. As the Commission stated in the *VRS Reform Order*, its interoperability and portability rules are intended, among other things, to "allow VRS users to make and receive calls through any VRS provider, and to choose a different default provider, *without changing the VRS access technology they use to place calls*."[32] To the extent that user equipment and software is unusable or less usable if the user switches to a new default provider – e.g., by hindering the user's ability to make and receive calls with functional equivalence or by losing access to contact list information – the intent of the interoperability and portability rule is frustrated. This concern can potentially be addressed by either third party or provider-delivered user software that provides a convenient and usable interface to other providers after number porting. The RUE Profile addresses this problem by specifying a basic interface that is usable with any provider, so that a user can freely access any provider and switch to a different default provider, without the need to change equipment or software and without experiencing any inconvenience or disruption of communications functions. In this respect, implementation of the RUE Profile appears to advance the goal of full functional equivalence, potentially allowing VRS consumers the same degree of equipment portability that wireline voice communications users have enjoyed for decades.

13. The providers, however, state that their understanding was that the RUE Profile would govern the interface between a provider's network and user equipment employing ACE software but

[27] These include protocols for provider selection, configuration for selected providers, SIP registration, NAT traversal, contact list synchronization, SIP session establishment for each type of call, videomail message discovery and retrieval, URI representation of phone numbers, support of various media, and use of the real-time transport protocol (RTP). RUE Profile, §§ 6-9, 11-15.

[28] Consumer Groups Comments at 2. While supporting incorporation of the RUE Profile because it advances the Commission's goals of ensuring interoperability and portability, Consumer Groups also state that the VRS Provider Interoperability Profile and the RUE Profile "may not entirely meet those goals." *Id*. (emphasis original).

[29] GlobalVRS Comments at 5; Joint Comments of Four VRS Providers at 2-3.

[30] Joint Comments of Four VRS Providers at 4-5.

[31] *Id*. at 5; *see also* GlobalVRS Comments at 5-6.

[32] *VRS Reform Order*, 28 FCC Rcd at 8639, para. 40 (emphasis added, footnote omitted).

would not govern the interface between a provider's network and provider-distributed user equipment and software.[33] We recognize the concerns raised by the providers that immediate application of the RUE Profile as a whole to all user equipment and software may not be feasible without resulting in significant disruption of existing user arrangements.[34] Accordingly, we defer to the accompanying FNPRM the question of to what extent, and on what timetable, the RUE Profile should be more broadly applied to existing and prospective access technology offered by providers.

14. Notwithstanding our deferral of the broader issue, the providers agree that the RUE Profile may be used to specify a technical standard for the interface between a provider and the ACE App.[35] The Commission previously amended its rules to require VRS providers to "ensure that their VRS access technologies and their video communications service platforms are interoperable with the [ACE App]."[36] To ensure that the ACE App interoperability requirement is enforceable, we adopt a rule that incorporates the RUE Profile by reference into the existing rule requiring interoperability between provider services and the ACE App. As we expect that the ACE App will be released in the near future in a version suitable for interoperability testing, we conclude that it is reasonable to allow one year for VRS providers to complete software development, testing, and deployment to ensure that their networks are interoperable with the ACE App. Therefore, we set a compliance date for this purpose at one year after *Federal Register* publication of this Report and Order.[37]

2. Contact Lists and Speed Dial Lists

15. In the *VRS Reform Order*, the Commission made clear that a key element of VRS interoperability and portability is the use of a standard data interchange format for exporting and importing user personal contacts lists (*i.e.*, address books) and user speed dial lists.[38] The Commission therefore mandated that standards for the transfer of users' contact and speed dial lists be broadly applicable to all VRS access technologies.[39] Further, in the event that standards developed through voluntary consensus did not require support of a standardized format, the Commission authorized and directed CGB to conduct an accelerated rulemaking to adopt such standards.[40] As noted above, the RUE Profile specifies such a standard data interchange format, RFC 6351.[41]

16. In light of this clear mandate, we will not defer the adoption of a generally applicable requirement that VRS providers make users' contact lists available to users in the xCard format referenced in the RUE Profile. Further, all VRS providers agree that they can and will adhere to that

[33] Joint Comments of Four VRS Providers at 3-4.

[34] As explained *infra* para. 15, however, the RUE Profile's specifications regarding personal contacts lists and user speed-dial lists can and will be applied to all VRS access technology at this time.

[35] VRS Providers November 2016 Ex Parte at 2.

[36] 47 CFR § 64.621(a)(3). The rule also states that interoperability with the ACE App is a minimum condition for receiving compensation from the Fund for calls using such technology. *Id.*; *see also VRS Reform Order*, 28 FCC Rcd at 8646, para. 58.

[37] *See* Joint Comments of Four VRS Providers at 8 (estimating that necessary modifications to their networks to comply with the RUE Profile would take at least 12 months).

[38] *VRS Reform Order*, 28 FCC Rcd at 8643, para. 50 ("We find that VRS interoperability and portability standards should include the portability of address book and speed dial list features. . . . [T]he record demonstrates that the portability of such features is indeed critical to effective competition and the provision of consumer choice in VRS.").

[39] *Id*.

[40] *Id.*

[41] RUE Profile, § 10; see also xCard XML Format, https://tools.ietf.org/html/rfc6351.

format.[42] Accordingly, we amend the rules to incorporate into the existing interoperability and portability rules the xCard specification referenced in the RUE Profile. Compliance with this rule amendment will be required 180 days after publication of this Report and Order in the *Federal Register*.[43]

D. Updating the Standards

17. In the *FNPRM*, we proposed to follow a procedure for incorporating amendments or changes to the Provider Interoperability Profile and the RUE Profile into our rules in a timely and efficient manner. Under this procedure, CGB will make the updated standard available to the public online and issue a public notice seeking comment on such modifications, followed by an order incorporating into the VRS rules amendments or changes by reference if justified based on the resulting record. When such revised standards are completed and accepted by the Bureau, a second public notice will be issued containing information on how to access the modified standards and establishing an implementation schedule. The Consumer Groups, the only parties commenting on this proposal, support the issuance of a public notice seeking comment on modifications of the standards.[44] We conclude that the proposed procedure will enable incorporation of amendments or changes to the standards in a timely manner, and we adopt the procedure as proposed.

E. Incorporation by Reference

18. The Office of Federal Register (OFR) recently revised its regulations to require that agencies must discuss in the preamble of a rule the ways that the materials incorporated by reference are reasonably available to interested parties or how it worked to make those materials reasonably available to interested parties. In addition, the preamble of the proposed rule must summarize the material.[45] In accordance with OFR's requirements, the discussion in the following two paragraphs summarize and indicate the availability of the VRS Provider Interoperability Profile and the RUE Profile.

19. The US Video Relay Service (VRS) Provider Interoperability Profile, Version 15, SIP Forum Document Number: VRS US Providers Profile TWG-6-1 (Oct. 14, 2015) (VRS Provider Interoperability Profile), is available from the Federal Communications Commission, 445 12th Street, SW, Washington, DC 20554, at https://www.fcc.gov/files/sip-forum-vrs-us-providers-profile-twg-6-1. The Provider Interoperability Profile provides technical specifications for the interface between VRS providers and the interface between a VRS provider and the TRS Numbering Directory.

20. The Interoperability Profile for Relay User Equipment, draft-vrs-rue-dispatch-00 (July 20, 2016) (RUE Profile), is available from IETF Secretariat, 5177 Brandin Court, Fremont, CA 94538, 510-492-4080, at https://datatracker.ietf.org/doc/draft-vrs-rue-dispatch/. The RUE Profile provides technical specifications that define a standard interface between a relay user's equipment and the services offered by relay service providers.

21. Internet Engineering Task Force (IETF) Request for Comments (RFC) 6351, xCard: vCard XML Representation (August 2011) (xCard XML Format), is available from IETF Secretariat, 5177 Brandin Court, Fremont, CA 94538, 510-492-4080, at https://tools.ietf.org/html/rfc6351. The

[42] VRS Providers November 2016 Ex Parte at 2.

[43] We believe that this is a reasonable deadline, given that the VRS providers reached agreement on the xCard format in December 2015. *Id*., n.1; *see also* Letter from Michael Strecker, Vice President of Regulatory Affairs, Purple Communications, Inc., to Marlene H. Dortch, Secretary, FCC, CG Docket Nos. 10-51, 03-123, at 1-2 (filed Nov. 3, 2015); Sorenson Communications, Inc. Reply Comments on VRS Compensation Rates at 14, CG Docket Nos. 10-51, 03-123 (filed Dec. 24, 2015). They state that, "absent regulatory mandates that force providers to divert resources, providers are prepared to begin testing address-book portability in January." VRS Providers November 2016 Ex Parte at 4.

[44] Consumer Groups Comments at 2.

[45] 1 CFR § 51.5(a).

xCard XML Format specifies a standard data interchange format for exporting and importing user personal contacts lists (*i.e.*, address books) and user speed dial lists.

III. FURTHER NOTICE OF RULEMAKING

22. As discussed above, the Commission's TRS interoperability and portability rules are intended, among other things, to "allow VRS users to make and receive calls through any VRS provider, and to choose a different default provider, without changing the VRS access technology they use to place calls."[46] The RUE Profile addresses this problem by specifying a basic interface that is intended to enable a user to use the same equipment and software with any default provider without experiencing any inconvenience or disruption of basic communications functions.

23. In the accompanying Report and Order, we defer the adoption of a rule applying the RUE Profile to provider-distributed VRS user equipment and software pending further consideration of the issues raised in comments. In this Further Notice of Proposed Rulemaking, we seek additional comment on the extent to which such a rule is necessary and appropriate for functionally equivalent communication.

24. First, we seek additional comment on the user experience with provider-supplied user equipment and software. To what extent can users currently use the features and functions of provider-supplied equipment and software when making and receiving calls through other providers, or after switching to another default provider? To the extent that user equipment and software supplied by one provider performs less effectively with other providers, which functions are most problematic? Do the answers to these questions vary depending on the specific user equipment and software used by a consumer, and if so, how? How feasible is it currently for third parties, including open source and academic institutions, to innovate in providing new relay user equipment or to provide relay user equipment tailored to specific user groups or application scenarios, such as customer service or government call centers or public safety answering points (PSAPs)?

25. Second, we seek comment on the appropriate scope of application of the RUE Profile. There are a number of possible approaches. One possible approach could be to require RUE compliance for all user equipment and software, including equipment and software provided prior to the designated compliance deadline. As an alternative, to avoid imposing retrofitting costs on VRS providers, the Commission could require RUE compliance only for new user equipment and for new versions of user software. Under a third, more limited alternative, the Commission could require VRS providers to make RUE-Profile-compliant user equipment or software available to those users affirmatively requesting such equipment or software, as well as to provide information on their websites indicating how to obtain such user equipment and software. Which operating system platforms should be supported under this alternative? Under a fourth alternative, the Commission could make no further changes to its VRS interoperability and portability requirements. We seek comments on the relative costs and benefits of these alternatives. In this regard, we invite commenters to submit additional specific cost information quantifying the costs of the three alternatives outlined above. We also seek comment on the providers' claim that "forcing provider endpoints to adhere to the RUE Profile would require that providers *remove* any innovative or useful features of their endpoints that are not specified in the RUE Profile and subject their networks to lower security than they employ today."[47] What specific aspects of the RUE Profile would require removal of innovative or useful features, and what kinds of innovative or useful features would need to be removed? What specific aspects of the RUE Profile would subject networks to lower security?

[46] *VRS Reform Order*, 28 FCC Rcd at 8639, para. 40 (footnote omitted).

[47] Joint Comments of Four VRS Providers at 4-5 (emphasis in original).

IV. PROCEDURAL ISSUES

A. Paperwork Reduction Act Analysis

26. This document does not contain proposed information collection requirements subject to the Paperwork Reduction Act of 1995, Public Law 104-13. In addition, therefore, it does not contain any proposed information collection burden for small business concerns with fewer than 25 employees, pursuant to the Small Business Paperwork Relief Act of 2002.[48]

B. Regulatory Flexibility Analysis

27. *Final Regulatory Flexibility Analysis.* As required by the Regulatory Flexibility Act of 1980, as amended (RFA),[49] the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) relating to this Report and Order. The FRFA is set forth in Appendix C.

28. *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.[50] The IRFA is set forth in Appendix D. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the Further Notice of Proposed Rulemaking provided on or before the dates indicated on the first page of this FNPRM. The Commission will send a copy of the Further Notice, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.[51] In addition, the FNPRM and IRFA (or summaries thereof) will be published in the Federal Register.[52]

C. Comments

29. *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).

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

[48] Pub. L. No. 107-198; 44 U.S.C. § 3506(c)(4).

[49] 5 U.S.C. § 601 *et seq*.

[50] *See* 5 U.S.C. § 603.

[51] *See id*. § 603(a).

[52] *Id.*

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

30. *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).

31. *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.[53] 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.

V. ORDERING CLAUSES

32. Accordingly, IT IS ORDERED that, pursuant to sections 1, 2, 4(i), 4(j), 225 and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 154(i), 154(j), 225, 303(r), and *Structure and Practices of the Video Relay Service Program et al.*, Report and Order and Further Notice of Proposed Rulemaking, 28 FCC Rcd 8618, 8643, paras. 49-50 (2013), this Report and Order and Further Notice of Proposed Rulemaking IS ADOPTED, and the Commission's rules are hereby AMENDED as set forth in Appendix B.

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

34. IT IS FURTHER ORDERED that the Commission SHALL SEND a copy of this 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).

[53] 47 CFR §§ 1.1200 *et seq.*

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

FEDERAL COMMUNICATIONS COMMISSION

Alison Kutler
Chief
Consumer and Governmental Affairs Bureau

APPENDIX A

List of Commenters

ASL Services Holdings, LLC, d/b/a GlobalVRS

Consumer groups, comprising
- 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

CSDVRS, LLC d/b/a ZVRS

Rehabilitation Engineering Research Center on Technology for the Deaf and Hard of Hearing, and Omnitor

VRS providers filing jointly, comprising
- Convo Communications, LLC
- CSDVRS, LLC, d/b/a ZVRS
- Purple Communications, Inc.
- Sorenson Communications, Inc.

APPENDIX B

Final Rules

For the reasons stated in the preamble, the Federal Communications Commission amends Title 47 of the Code of Federal Regulations as follows:

Part 64 – MISCELLANEOUS RULES RELATING TO COMMON CARRIERS

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

Authority: 47 U.S.C. 154, 254(k); 403(b)(2)(B), (c), 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 section 64.621 by revising paragraphs (a)(3) and (b) to read as follows:

§ 64.621 Interoperability and portability.

(a) *General obligations of VRS providers.*

* * * * *

(3) Beginning no later than one year after [DATE OF PUBLICATION IN THE FEDERAL REGISTER], all VRS providers must ensure that their VRS access technologies and their video communication service platforms are interoperable with the VRS Access Technology Reference Platform, including for point-to-point calls, in accordance with the Interoperability Profile for Relay User Equipment (RUE Profile), (July 20, 2016), https://datatracker.ietf.org/doc/draft-vrs-rue-dispatch/. No VRS provider shall be compensated for minutes of use involving their VRS access technologies or video communication service platforms that are not interoperable with the VRS Access Technology Reference Platform.

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(b) *Technical Standards for Interoperability and Portability.*

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

(2) Beginning no later than one hundred eighty (180) days after [DATE OF PUBLICATION IN THE FEDERAL REGISTER], VRS providers shall provide a standard xCard export interface to enable users to import their lists of contacts in xCard XML format, in accordance with Internet Engineering Task Force (IETF) Request for Comments (RFC) 6351, xCard: vCard XML Representation (August 2011) (xCard XML Format), https://tools.ietf.org/html/rfc6351.

(c) *Incorporation by reference.*

(1) Certain material is incorporated by reference into this section with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. All approved material is available for inspection at the Federal Communications Commission, 445 12th St., S.W., Reference Information Center, Room CY-A257, Washington, DC 20554, (202) 418-0270, and is available from the sources listed below. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030 or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(2) The Federal Communications Commission, 445 12th Street, SW, Washington, DC 20554, (888) 225-5322 (voice), (844) 432-2275 (videophone), (888) 835-5322 (TTY), at https://www.fcc.gov/files/sip-forum-vrs-us-providers-profile-twg-6-1.

(i) The US Video Relay Service (VRS) Provider Interoperability Profile, Version 15, SIP Forum Document Number: VRS US Providers Profile TWG-6-1 (Oct. 14, 2015).

(3) Internet Engineering Task Force (IETF) Secretariat, 5177 Brandin Court, Fremont, CA 94538, 510-492-4080, at https://datatracker.ietf.org/doc/draft-vrs-rue-dispatch/ and https://tools.ietf.org/html/rfc6351.

(i) The Interoperability Profile for Relay User Equipment, draft-vrs-rue-dispatch-00 (July 20, 2016) (RUE Profile).

(ii) Internet Engineering Task Force (IETF) Request for Comments (RFC) 6351, xCard: vCard XML Representation (August 2011) (xCard XML Format).

APPENDIX C

Final Regulatory Flexibility Analysis

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

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

2. Under Title IV of the Americans with Disabilities Act (ADA), the Commission must ensure that relay services "are available, to the extent possible and in the most efficient manner" to persons in the United States with hearing or speech disabilities.[5] Section 225 of the Communications Act of 1934, as amended (Act) defines Telecommunications Relay Service (TRS) as a service provided in a manner that is "functionally equivalent" to voice telephone services[6] and directs the Commission to establish functional requirements, minimum standards, and other regulations to carry out the statutory mandate.[7] In addition, the Commission's regulations must encourage the use of existing technology and must not discourage the development of new technology.[8] Video relay service (VRS) is a form of TRS that allows persons with hearing or speech disabilities to use sign language to communicate in near real time through a communications assistant (CA), via video over a broadband Internet connection.[9]

3. In the Report and Order, issued pursuant to the Commission's mandate in the *VRS Reform Order*[10] to improve the effectiveness of the Commission's TRS interoperability and portability rules, the TRS rules are amended to incorporate by reference the technical standards for interoperability and portability of VRS services and equipment developed by the Session Initiation Protocol (SIP)[11] Forum's VRS Task Group to and a successor group, the Relay User Equipment (RUE) Forum.

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[1] *See* 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601-612, was amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 847 (1996). The SBREFA was enacted as Title II of the Contract with America Advancement Act of 1996 (CWAAA).

[2] *Structure and Practices of the Video Relay Service Program et al.*, Further Notice of Proposed Rulemaking, 31 FCC Rcd 8777 (CGB 2016) (*FNPRM*).

[3] *See* 5 U.S.C. § 604.

[4] *See id.* § 604(b).

[5] 47 U.S.C. § 225(b)(1).

[6] 47 U.S.C. § 225(a)(3) (defining TRS as "telephone transmission services that provide the ability for an individual who is deaf, hard of hearing, deaf-blind, or who has a speech disability to engage in communication by wire or radio with one or more individuals, in a manner that is functionally equivalent to the ability of a hearing individual who does not have a speech disability to communicate using voice communication services by wire or radio").

[7] 47 U.S.C. § 225(d)(1).

[8] 47 U.S.C. § 225(d)(2).

[9] *See* 47 C.F.R. § 64.601(a)(27) (2012).

[10] *Structure and Practices of the Video Relay Service Program*, Report and Order and Further Notice of Proposed Rulemaking, 28 FCC Rcd 8618, 8639-41, paras. 40-44 (2013) (*VRS Reform Order*).

[11] SIP is a communications protocol for signaling and controlling multimedia communication sessions.

4. The Provider Interoperability Profile provides technical specifications for the interface between two VRS providers, as well as the interface between a VRS provider and the TRS Numbering Directory.[12] The Bureau concludes that incorporation of the Provider Interoperability Profile will advance the Commission's goals of ensuring interoperability and portability, as required by the *VRS Reform Order*, by providing a common framework for interoperability compliance and specific criteria for assessing such compliance.

5. The RUE Profile specifies a technical standard for the interface between a provider and user software.[13] Because the Commission mandated that standards for the transfer of users' contact and speed dial lists be broadly applicable to all VRS access technologies, we amend the interoperability rule to incorporate by reference the xCard specification referenced in the RUE Profile, which the providers agree that they can and will adhere to.[14] Further, the VRS providers agree that the RUE Profile may be used to specify a technical standard for the interface between a provider and the Commission-mandated VRS access technology reference platform, or ACE App, we incorporate the complete RUE Profile into the requirement that VRS providers "ensure that their VRS access technologies and their video communications service platforms are interoperable with the [ACE App]."[15]

6. In addition, this Report and Order adopts a process that will readily enable revisions to this rule to reflect future amendments or changes in these standards by issuing a public notice seeking comment on such modifications, followed by an order incorporating into the VRS rules amendments or changes by reference if justified based on the resulting record, after which a second public notice will be issued containing information on how to access the modified standards online and establishing an implementation schedule.

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

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

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 rules.[16] The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[17] In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.[18] A small business concern is one which:

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[12] SIP Forum, US Video Relay Service (VRS) Provider Interoperability Profile, Version 15, SIP Forum Document Number: VRS US Providers Profile TWG-6-1.0, § 4 (Oct. 14, 2015) (Provider Interoperability Profile), https://www.fcc.gov/files/sip-forum-vrs-us-providers-profile-twg-6-1;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.

[13] Interoperability Profile for Relay User Equipment (July 20, 2016) (RUE Profile), https://datatracker.ietf.org/doc/draft-vrs-rue-dispatch/.

[14] Internet Engineering Task Force (IETF) Request for Comments (RFC) 6351, xCard: vCard XML Representation (August 2011) (xCard XML Format), https://tools.ietf.org/html/rfc6351.

[15] 47 CFR § 64.621(a)(3). The rule also states that interoperability with the ACE App is a minimum condition for receiving compensation from the Fund for calls using such technology. *Id.*; *see also VRS Reform Order*, 28 FCC Rcd at 8646, para. 58.

[16] 5 U.S.C. § 604(a)(3).

[17] 5 U.S.C. § 601(6).

[18] 5 U.S.C. § 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 (continued….)

(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.[19]

9. A small business is an independent business having less than 500 employees. Nationwide, there are approximately 28.8 million small businesses, according to the SBA.[20] The rules adopted in the *Report and Order* will affect obligations of providers of VRS. Affected small entities as defined by industry are as follows.

10. *All Other Telecommunications*. The Census Bureau defines this industry as including "establishments 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."[21] The SBA has developed a small business size standard for this category; that size standard is $32.5 million or less in average annual receipts.[22] For this category, census data for 2012, there were 1,442 firms that operated for the entire year. Of these firms, a total of 1,400 had gross annual receipts of under $25 million.[23] Consequently, we estimate that the majority of these firms are small entities.

11. *VRS Providers.* VRS providers are generally classified within the broad category of "All Other Telecommunications." Five providers currently receive compensation from the Interstate Telecommunications Relay Service (TRS) Fund for providing VRS: ASL Services Holdings, LLC; ZVRS, LLC; Convo Communications, LLC; Purple Communications, Inc.; and Sorenson Communications, Inc. 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.[24] 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.[25] Under this category and the associated small business size standard, approximately half of the VRS providers can be considered small.

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

(Continued from previous page)
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."

[19] 15 U.S.C. § 632.

[20] *See* SBA, Office of Advocacy, *Frequently Asked Questions* (June 2016), https://www.sba.gov/sites/default/files/advocacy/SB-FAQ-2016_WEB.pdf.

[21] U.S. Census Bureau, 2012 NAICS Definitions, 517919 All Other Telecommunications, http://www.census.gov/cgi-bin/sssd/naics/naicsrch?.

[22] *See* 13 CFR § 121.201; NAICS code 517919.

[23] U.S. Census Bureau, 2012 Economic Census, Information: Subject Series – Establishment and Firm Size: Table 4, "Receipts Size of Firms for the United States: 2012, NAICS Code 517919," http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ4&prodType=table.

[24] *See* 13 CFR § 121.201; NAICS Code 517919.

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

Requirements

12. The rule changes adopted in the Report and Order modify rules governing compliance obligations. Specifically, VRS providers must modify their networks, e.g., their protocols for routing calls to other providers and for enabling users to import contact lists, as necessary to conform to the technical standards incorporated into the existing TRS interoperability rules.

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

13. The RFA requires an agency to describe any significant alternatives, specific to small entities, that it has considered in developing its 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 and reporting requirements under the rule for such 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 such small entities."[26]

14. In general, alternatives to final rules are discussed only when those rules pose a significant adverse economic impact on small entities. In this context, however, the proposed rules generally confer benefits. In particular, technical standards for interoperability benefit the smaller VRS providers because consumers find the services of smaller providers to be more attractive when these services are interoperable than when they are not interoperable. These benefits outweigh any burdens associated with compliance. Moreover, because all of the VRS providers participated in the discussions associated with the development of the standards, the Bureau believes that these standards are acceptable to all VRS providers, including small entities. Further, to minimize any adverse impact on VRS providers, the Bureau adopted an alternative that narrows the scope of application of the technical standard for the interface between provider networks and user equipment and software, so that it only governs the interface between a provider's network and user equipment that employs designated open-source user software, rather than all user equipment and software.[27] Lastly, the Report and Order allows extended implementation periods to ensure that providers have sufficient time to implement the standards.

F. Federal Rules that May Duplicate, Overlap, or Conflict with Proposed Rules

15. None.

[26] 5 U.S.C. § 603(c)(1)-(c)(4).

[27] Specifically, pursuant to this Report and Order, based on the providers' stated understanding as to the scope of application of the RUE Profile, and with the exception of the xCard specification for user contact lists, which is more broadly applicable, the RUE Profile governs a provider's interface with user equipment employing ACE software but not the provider's interface with other user equipment and software.

APPENDIX D

Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act, as amended (RFA),[1] the Bureau 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 Rule Making (*Further Notice*). 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 specified in the *Further Notice*. The Commission will send a copy of the *Further Notice*, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).[2] In addition, the *Further Notice* and IRFA (or summaries thereof) will be published in the Federal Register.[3]

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

2. In this *Further Notice*, the Bureau seeks comment on whether, in order to further functional equivalence and the intent of the VRS interoperability and portability requirements to "allow VRS users to make and receive calls through any VRS provider, and to choose a different default provider, without changing the VRS access technology they use to place calls,"[4] the scope of application of the RUE Profile,[5] the technical standard for user equipment and software, should be expanded beyond the interface between provider networks and user equipment employing ACE software, to apply more generally to the interface between provider networks and provider-supplied user equipment and software. Comment is sought on a variety of alternatives, including the alternative of leaving the rule as is.

B. Legal Basis

3. The proposed action is authorized under sections 1, 2, 4(i), 225, 251, 255, 303, 316, and 716 of the Communications Act of 1934, as amended, section 6 of the Wireless Communications and Public Safety Act of 1999, and section 106 of the CVAA; 47 U.S.C. §§ 151, 152, 154(i), 225, 255, 303, 316, 615a-1, 615c, 617.

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

4. The RFA directs agencies to provide a description and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.[6] The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."[7] In addition, the term "small business" has the same meaning as the term "small-business concern" under the Small Business Act.[8] A "small-business

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

[2] *See* 5 U.S.C. § 603(a).

[3] *See id.*

[4] *VRS Reform Order*, 28 FCC Rcd at 8639, para. 40 (footnote omitted).

[5] Interoperability Profile for Relay User Equipment (July 20, 2016) (RUE Profile), https://datatracker.ietf.org/doc/draft-vrs-rue-dispatch/.

[6] *See* 5 U.S.C. § 603(b)(3).

[7] *Id.* § 601(6).

[8] *See 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

(continued….)

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.[9]

5. The proposals in the *Further Notice* will affect obligations of VRS providers, who are classified by the Census Bureau as "all other telecommunications."

6. A small business is an independent business having less than 500 employees. Nationwide, there are approximately 28.8 million small businesses, according to the SBA.[10] The rules adopted in the *Report and Order* will affect obligations of providers of VRS. Affected small entities as defined by industry are as follows.

7. *All Other Telecommunications*. The Census Bureau defines this industry as including "establishments 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 this category; that size standard is $32.5 million or less in average annual receipts.[12] For this category, census data for 2012, there were 1,442 firms that operated for the entire year. Of these firms, a total of 1,400 had gross annual receipts of under $25 million.[13] Consequently, we estimate that the majority of these firms are small entities.

8. *VRS Providers.* VRS providers are generally classified within the broad category of "All Other Telecommunications." Five providers currently receive compensation from the Interstate Telecommunications Relay Service (TRS) Fund for providing VRS: ASL Services Holdings, LLC; ZVRS, LLC; Convo Communications, LLC; Purple Communications, Inc.; and Sorenson Communications, Inc. 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.[14] 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.[15] Under this category and the associated small business size standard, approximately half of the VRS providers can be considered small.

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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."

[9] *See* 15 U.S.C. § 632(l).

[10] *See* SBA, Office of Advocacy, *Frequently Asked Questions* (June 2016), https://www.sba.gov/sites/default/files/advocacy/SB-FAQ-2016_WEB.pdf.

[11] U.S. Census Bureau, 2012 NAICS Definitions, 517919 All Other Telecommunications, http://www.census.gov/cgi-bin/sssd/naics/naicsrch?.

[12] *See* 13 CFR § 121.201; NAICS code 517919.

[13] U.S. Census Bureau, 2012 Economic Census, Information: Subject Series – Establishment and Firm Size: Table 4, "Receipts Size of Firms for the United States: 2012, NAICS Code 517919," http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ4&prodType=table.

[14] *See* 13 CFR § 121.201; NAICS Code 517919.

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

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

9. The *Further Notice* does not include new or modified reporting, recordkeeping, and other compliance requirements, except for compliance with a potentially broader application of the RUE Profile technical standard, to apply more generally to the interface between a VRS provider and provider-supplied user equipment and software.

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

10. The RFA requires an agency to describe any significant, specifically small business, 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."

11. Regarding the possible broadening of the application of the RUE Profile, the Further Notice seeks comment on a variety of alternative approaches, including alternatives with minimal or no impact on small entities.

F. Federal Rules that May Duplicate, Overlap, or Conflict with the Commission's Proposals

12. None.