

below, and as Sorenson and other commenters make clear, interoperability standards will be needed—even with a single VRS application running on off-the-shelf equipment—to accommodate differences in providers’ backend systems. And since standards are needed in any case, there is no defensible reason to destroy consumer choice in a misguided effort to achieve interoperability.

1. A Mandated Single-Application, Off-the-Shelf-Equipment Environment Will Not Resolve Interoperability.

Contrary to the assertions of ZVRS and CAAG, interoperability issues are not simply a product of the multiple VRS-endpoint choices available to consumers. Rather, as Sorenson has explained, and as the Consumer Groups recognize, “current interoperability problems are the result of a combination of issues with applications/equipment and VRS provider gateways/proxies Moreover, there is no evidence to suggest or support that a single application would address interoperability issues that arise from gateway/proxy problems.”¹³⁵ Likewise, RERC-TA states that “it is a fallacy to assume that the interoperability problems in the VRS industry would be solved via introducing a common application.”¹³⁶ Indeed, RERC-TA explains that it has conducted a number of interoperability tests and found that “interoperability problems occurred even though all these test cases involved clients that are based on a common app ... It is not just the hardware and software that have to interoperate, but also the network, the proxies, and the gateways.”¹³⁷

¹³⁵ Consumer Groups PN Comments at 4-5.

¹³⁶ RERC-TA PN Comments at 6.

¹³⁷ *Id.* RERC-TA’s testing even demonstrated that two endpoints offered by ZVRS cannot seamlessly interoperate with one another. *See* Letter from Christian Vogler, Ph.D., Director, Technology Access Program, Gallaudet University, to Marlene H. Dortch, Secretary, Federal

2. Industry-Wide Standards, not Central Planning, Will Promote Interoperability, and the Development Process is Underway.

Accordingly, implementing standards to ensure interoperability represents a far more effective approach to interoperability than depriving deaf consumers of the feature-rich, specially-designed equipment upon which they have come to depend. A variety of commenters from all corners of the VRS industry agree. For example, Purple states that “clear and stringent technical standards are a far simpler means of establishing the interoperability and portability that is essential to consumer choice than a standard application.”¹³⁸ ASL/Gracias asserts that the Commission should “allow individuals the freedom to determine whether to accept nationally-distributed equipment or purchase equipment of their choosing, so long as the equipment remains compatible with Commission standards.”¹³⁹ Convo likewise states that “[t]he adoption of industry-consensus interoperability reference standards will enable VRS industry-wide interoperability without jeopardizing the ability of VRS technologies to evolve.”¹⁴⁰ And RERC-TA proposes “setting strict minimum standards for the interoperability of multiple VRS and off-the-shelf platforms.”¹⁴¹

In an effort to gin up support for its proposal, ZVRS argues that RERC-TA has documented that Sorenson’s ntouch VP is not fully interoperable.¹⁴² But RERC-TA doesn’t call for the elimination of choice, even though that’s what ZVRS would like the Commission to

Communications Commission, Spreadsheet at 2, CG Docket Nos. 10-51 and 03-123 (filed Aug. 9, 2012) (“TAP August 9 Letter”).

¹³⁸ Purple PN Comments at 6.

¹³⁹ ASL/Gracias PN Comments at 5-6 n.7.

¹⁴⁰ Convo PN Comments at 15.

¹⁴¹ RERC-TA PN Comments at 7.

¹⁴² See ZVRS PN Comments at 25.

believe. As reflected in the language above, RERC-TA advocates widespread choice and interoperability standards. Indeed, ZVRS's argument highlights that interoperability standards are sorely needed—as Sorenson and RERC-TA argue unequivocally. The bottom line is that interoperability is a two-way street: both providers and their endpoints must meet a particular standard for a point-to-point call to be possible. If the ntouch VP doesn't interoperate with a ZVRS endpoint, that doesn't somehow lead to the conclusion that Sorenson has blocked interoperability (as ZVRS suggests). Rather, it indicates that both providers need to take steps to identify and resolve the problem—which standards will allow.

ZVRS's citations to RERC-TA's filings is especially galling, as those same filings demonstrate that ZVRS's Z4 application is not even interoperable with some of ZVRS's *own equipment*.¹⁴³ Yet, ZVRS attempts to distract from its own interoperability failings by taking every opportunity to impugn the interoperability of Sorenson's equipment.

Interestingly, however, ZVRS itself “supports the creation of a common set of interoperability standards.”¹⁴⁴ If ZVRS agrees that there should be standards to ensure interoperability, then why eliminate consumer choice under the guise of interoperability as well? The answer is clear: because ZVRS wants to eliminate Sorenson's world-leading technology that consumers overwhelmingly prefer.

Moreover, as Sorenson noted in its comments, standards are far from an abstract idea. To the contrary, a working group—which includes representatives from the leading VRS providers and the FCC's Chief Technology Officer, among others—has been established under the SIP

¹⁴³ See TAP August 9 Letter, at Spreadsheet.

¹⁴⁴ ZVRS PN Comments at 28.

Forum to work toward identifying and adopting VRS interoperability standards.¹⁴⁵ On November 15, 2012, after parties filed comments on the PN, the SIP Forum Board approved the VRS Task Group Charter, which means the working group is now up and running.¹⁴⁶ The Commission should allow the Task Group to complete its work to establish interoperability standards—not adopt anticompetitive central-planning proposals that threaten to unwind years of progress toward achieving telecommunications functional equivalence for deaf and hard-of-hearing consumers.

3. A Reference Platform May Be Effective in Making Interoperability a Reality, but It Should Be Chosen Carefully and Should Not Impede Innovation.

Both RERC-TA and the Consumer Groups have proposed the use of a “reference platform” to facilitate interoperability testing.¹⁴⁷ Essentially, the reference platform would consist of a single endpoint that all parties establish as a benchmark for interoperability testing. If a provider’s device can make and receive a point-to-point call with the benchmark endpoint, it passes the interoperability test.¹⁴⁸

Sorenson supports the idea of a reference platform, as it would help ensure practical implementation of the standards that the industry is in the early stages of developing. But Sorenson’s support is subject to three critical caveats. First, care should be taken to choose the best possible platform. If, for example, flaws exist in the way that a particular protocol is implemented in the reference platform, then the flaws will be perpetuated throughout all devices

¹⁴⁵ Sorenson PN Comments at 54-55.

¹⁴⁶ Video Relay Service (VRS) Task Group Charter, *available at* <http://www.sipforum.org/content/view/404/291/> (last visited Nov. 29, 2012).

¹⁴⁷ Consumer Groups PN Comments at 6; RERC-TA PN Comments at ii, 8.

¹⁴⁸ Consumer Groups PN Comments at 10; RERC-TA PN Comments at 8.

that use the reference platform as a basis for interoperability. Accordingly, the choice of reference platform should be chosen by industry consensus through the SIP Forum VRS Task Group currently in operation.

Second, the reference platform should merely set a baseline for interoperability and should in no way impede future innovation. In other words, providers should not be prevented from adding new features to their devices simply because those features weren't included on the reference platform. Otherwise, innovation will be frozen, and the reference platform will create a *de facto* standardized device, to the detriment of consumers.

Finally, the Commission must recognize that interoperability should not affect the way a provider's own devices communicate within its own ecosystem—such as on a point-to-point call between two customers of the same provider, or when a customer's endpoint communicates with the provider's back-office systems. So long as providers can interoperate with one another, end users will be able to achieve interoperability despite using different devices. But standardizing internal network architecture is in effect no different than simply creating an industry-wide, standardized device. Accordingly, the reference platform should be used to test for interoperability between providers' endpoints, but should have no impact on the ways that a provider chooses to structure its own internal network.

4. Although Portability of Speed-Dial Lists and Address Books Can Benefit Consumers, Requiring Full Portability of All Enhanced Features Will Kill Innovation.

Both Purple and the Consumer Groups urge the Commission to develop standards for both interoperability and portability.¹⁴⁹ In this context, however, “portability” does not and cannot mean full portability of all enhanced features. Otherwise, free-riding concerns would

¹⁴⁹ Purple PN Comments at 6; Consumer Groups PN Comments at 4.

destroy providers' incentive to innovate, resulting in a "race to the bottom" that would produce a uniform, featureless endpoint and directly contravene the Consumer Groups' and Purple's core interest in preserving competition and choice in endpoints. Indeed, Purple clarifies that, in its comments, "portability" refers to address books: "Purple believes that one of the most significant barriers to consumer choice and movement among providers is the lack of address book portability across the industry. The Commission could quickly and easily establish a technical standard requiring address book portability."¹⁵⁰ Likewise, RERC-TA states that "porting VRS address books could be handled in a functionally equivalent manner via VRS providers supporting a mainstream cloud-based service, and allowing consumers to export their address books."¹⁵¹

ZVRS, on the other hand, calls for full portability of features available on any equipment distributed by providers: "ZVRS believes that any interoperability standard must allow VRS Access Providers to provide fully functional CPE where *all features* must stay intact when selecting an alternate VRS Interpreting Provider or when making a dial-around call."¹⁵² Once again, the juxtaposition of ZVRS's position against that of RERC-TA and the Consumer Groups exposes ZVRS's quest to eliminate competition via Commission rulemaking. Instead of devoting resources to the development of innovative features, ZVRS prefers to leave the hard work to Sorenson and benefit from the finished product. If ZVRS gets its way, however, providers will have no incentive to innovate at all because a healthy portion of their research and development dollars would be subsidizing their competitors.

¹⁵⁰ Purple PN Comments at 6.

¹⁵¹ RERC-TA PN Comments at 18.

¹⁵² ZVRS PN Comments at 30 (emphasis added).

Accordingly, to the extent “portability” refers to consumers’ ability to transfer address-book and speed-dialing data, Sorenson supports the development of such standards. Sorenson vigorously opposes, however, any regressive, innovation-killing policy that requires innovative providers to transfer all the fruits of their labor to competitors.

5. Third-Party Interoperability Testing Can Add Value to the Process, As Long as the Initiative Is Adopted by Industry Consensus, Not Imposed by Regulatory Fiat.

A variety of parties, including the Consumer Groups, RERC-TA, Convo, and Purple urge the engagement of a third-party to conduct interoperability testing.¹⁵³ Sorenson agrees with the concept of interoperability testing and already works with other providers on an *ad hoc* basis to troubleshoot interoperability problems. A third-party testing initiative, however, must be developed by consensus through a working group, such as the SIP Forum VRS Task Group that is currently operating.

Indeed, Sorenson vigorously opposes any suggestion that the FCC itself adopt interoperability standards of any kind. As Sorenson noted in its comments and reply to the FNPRM, standards continually evolve to incorporate new technology, and any Commission-imposed requirements will freeze VRS interoperability standards in place and become a straightjacket that will stunt innovation.¹⁵⁴

¹⁵³ Consumer Groups PN Comments at 11; RERC-TA PN Comments at 10; Convo PN Comments at 17; Purple PN Comments at 7.

¹⁵⁴ See Sorenson FNPRM Comments at 65; *see also* Sorenson FNPRM Reply Comments at 30-31.

C. ZVRS and Its Allies Fail to Address the Enormous Cost and Customer-Service Nightmare That ZVRS's Proposal Would Cause.

ZVRS and its supporters ignore a number of other fatal flaws that plague the single-application proposal. First, supporters fail to recognize the enormous and unending costs of keeping the application up-to-date and operational on the constantly evolving menu of off-the-shelf equipment. As Sorenson has discussed, operating systems are constantly evolving, and VRS services will be unavailable to users of new devices and operating systems until the government or its chosen application developer decides to update the VRS application.¹⁵⁵ Essentially, the Commission will be stuck between a rock and a hard place: allow technology to outpace VRS services, or pay enormous costs to keep up with a rapidly evolving industry. RERC-TA recognizes the problem, stating that this proposal “would have the unfortunate effect of further delaying the availability of VRS on new hardware, which is already a problem today on mobile Android devices, due to the over-reliance on a single vendor to provide the platform.”¹⁵⁶

Second, apart from the cost of keeping the application up-to-date, ZVRS's off-the-shelf proposal would generate enormous costs in the form of stipends necessary to equip VRS users with devices on which the application can run. While CAAG, a supporter of ZVRS's proposal, acknowledges that equipping users may require “a periodic stipend,”¹⁵⁷ it does not come to grips with the magnitude of that stipend, nor does it identify a funding source. As Professor Katz explained in his Declaration attached to Sorenson's comments on the PN, ZVRS's off-the-shelf

¹⁵⁵ Sorenson PN Comments at 65.

¹⁵⁶ RERC-TA PN Comments at 7.

¹⁵⁷ CAAG PN Comments at 3.

stipend proposal could cost the TRS Fund \$40 million—and even then users would have received support for a single device, with no allowance for upgrades over time.¹⁵⁸

Third, this proposal would take an enormous toll on the TRS Fund beyond the need to keep up with evolving technologies, as the Commission would need to engage an outside party to develop the VRS application.¹⁵⁹ In order to develop the application, that developer would need to understand each VRS provider's backend operations so that the application could work with all of them. In turn, providers would have to retrofit their back-office systems to work with the new application. The sum total would be an enormously expensive effort that would result in a uniform endpoint utterly devoid of features. ZVRS and its proponents flatly ignore this explosive-cost, negligible-return reality.

Finally, supporters fail to acknowledge the customer-service disaster that would result from this proposal.¹⁶⁰ It is hard envision what incentive a developer would have to support an application once it has been paid. And per-minute compensation for customer support eliminates any developer incentive to fix bugs or develop bug-free products. Moreover, end-user issues will likely lead to finger-pointing and inefficiency as providers and the developer dispute responsibility for problems. Purple agrees, stating that “the technical support and troubleshooting issues relating to a standard application and off-the-shelf equipment ... lend further support to Purple's position opposing this approach.”¹⁶¹ ZVRS and its supporters, however, are silent on this issue.

¹⁵⁸ See Katz PN Declaration ¶ 23.

¹⁵⁹ Sorenson PN Comments at 63-64.

¹⁶⁰ See *id.* at 66.

¹⁶¹ Purple PN Comments at 8.

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The Commission should see ZVRS's single-application proposal for what it is: an attempt to gain market share, not by offering superior products or services, but by eliminating the innovation that has benefited deaf and hard-of-hearing consumers and pushed VRS closer to functional equivalence. In a direct refutation of ZVRS's proposal, the record reflects broad support for the development of interoperability standards and a strong rebuke of policies that kill innovation and force a community with specialized needs onto generalized equipment. Accordingly, the only possible reasoned decision is to reject ZVRS's single-application proposal in its entirety.

IV. COMMENTERS AGREE THAT DISAGGREGATING VRS NETWORK FUNCTIONS WOULD DISSERVE CONSUMERS AND POSE HEIGHTENED RISKS TO PRIVACY—AT A HIGHER COST TO THE FUND AND WITHOUT COMBATTING FRAUD.

A. ZVRS's Disaggregation Proposal Would Generate Widespread Disruption Without Any Corresponding Benefits.

Commenters reacted with great concern and confusion in response to ZVRS's proposal to disaggregate certain network functions and entrust them to a centralized and vastly expanded iTRS Database Administrator. Purple, for example, explains that the proposed disaggregation would "threaten the competition that is integral to consumer choice and thus functional equivalence, while unwinding many improvements that the Commission has made to the industry since 2010."¹⁶² Sorenson made the same points in its own comments, describing in detail how the proposal would centralize call handling in a manner that would eliminate competition and innovation, fail to address fraud (or even attempt to address fraud), expand the burden on the TRS Fund, complicate the industry-wide compensation structure, and spawn an

¹⁶² Purple PN Comments at 9.

unwieldy and unresponsive customer service experience for consumers.¹⁶³ Moreover, Sorenson observed that it would lead to these harms without producing any corresponding benefit. As Professor Katz noted in his declaration attached to Sorenson's comments, there is "no evidence of a public-interest problem to which [ZVRS's] proposal would be a solution."¹⁶⁴

Like Professor Katz, RERC-TA raises questions about the proposal's general purpose and design. RERC-TA questions in particular the policy underpinnings of the proposal as crafted, observing that it "conflate[s] several conceptually unrelated functions and entities" and "lump[s] them all together" in a "problematic" way.¹⁶⁵ Rather than even consider the proposal in its current form, RERC-TA recommends that it be reconsidered at a conceptual level: "Before any extensions to the database are considered, each proposed function should have a clearly defined purpose, and it should be defined clearly who will [be] in control of what information, and in what situations [it] will be used."¹⁶⁶

Without more information about which functions would be entrusted to the revamped administrator and, more importantly, *why and how* they would be entrusted to the administrator, RERC-TA finds it difficult to comment beyond pointing out that the proposal's proponents appear not to have thought it all the way through. As an example, RERC-TA notes that "[i]t is not clear why address book information would belong with an enhanced iTRS Database" as proposed in the PN; from a functional equivalence perspective, RERC-TA observes, "there is

¹⁶³ Sorenson PN Comments at 81-100.

¹⁶⁴ Katz PN Declaration ¶ 3.

¹⁶⁵ RERC-TA PN Comments at 14-15.

¹⁶⁶ *Id.* at 15.

nothing similar available in the mainstream.”¹⁶⁷ RERC-TA likewise questions the proposal to centralize the video mail function, disputing the proposal’s assumption that “the logical place for implementing interoperable voice mail is an enhanced iTRS Database.”¹⁶⁸

ZVRS’s disaggregation proposal is a solution in search of a problem. Or, as Sorenson explained in its comments, it should be understood for what it really is: a calculated effort by one of Sorenson’s competitors to eliminate an element of the competitive landscape in which Sorenson has succeeded by providing service that customers value highly. In the place of the existing consumer-friendly competitive dynamic, ZVRS proposes a centrally planned system in which network operations and even certain features are supported by a government-appointed network operator.

As the Commission is aware, Sorenson voiced strong support earlier this year for the creation of another centralized database as a component of a transition to a “per user” compensation model.¹⁶⁹ As Sorenson explained in that context, a so-called “VRS User Database” would be necessary in order to achieve the reductions to waste, fraud and abuse that a per-user regime could deliver. Among other things, a VRS User Database implemented in that context could protect against duplicate subscriptions (and duplicate payments), facilitate the allocation of funds for a TRS broadband pilot, and ease the administration of a “new-to-category” financial incentive program. Even in that context where there was a clear potential to eliminate the minute-pumping incentives inherent in the per-minute regime, however, Sorenson was guarded about its support, explaining that the database’s creation must be accompanied by

¹⁶⁷ *Id.* at 18.

¹⁶⁸ *Id.* at 19.

¹⁶⁹ *See* Sorenson FNPRM Comments at 58-61; Sorenson FRPRM Reply Comments at 55-57.

robust measures to ensure protections for the customary proprietary information it would contain.

The proposals contained in the PN for an enhanced and greatly expanded role for the iTRS Database Administrator—which go far beyond the mere operation of a database—are markedly different from the conceptual VRS User Database that the Commission raised in the FNPRM in the context of a transition to a per-user compensation system. Not only would the expanded iTRS “database” house much more (and more varied) data on every VRS user in the country, it would also apparently require much more widespread access by providers with competing interests, and it would even provide communications platform functions as well as some vertical features. And, perhaps most importantly, the expanded iTRS “database” operations identified in the PN would not have the same impact on waste, fraud, and abuse than would a per-user regime backed up by a VRS User Database. Therefore, notwithstanding its support for another central database in another context, Sorenson cannot support the wholesale transition of network operations and functionalities to a vastly expanded iTRS Database/communications provider administrator.

Sorenson nonetheless can support reforms that can address the potential for waste, fraud, and abuse without exposing users to unnecessary privacy risks. Accordingly, Sorenson agrees with other commenters who call for an expansion of the iTRS Database Administrator’s role to include storage of basic registration information as well as confirmation from the end user’s provider that it has verified the user’s eligibility. Such a database could also contain a flag if the user to whom the number is assigned would be ineligible for VRS compensation—such as a hearing user with a VRS-capable endpoint and an associated ten-digit number—thus potentially permitting point-to-point calls between ASL-capable hearing persons and deaf persons. With this

limited expansion, providers could access the database for each call to validate that the end user is registered and verified—and the verification status would be explicit, rather than implied simply from presence of the user’s number in the database for an extended period of time.

The iTRS Database should not store usage information (including contact lists) under any scenario, and it should secure the information it does contain against uses other than call processing. For example, it must secure name and address information so that it could not be used by competing VRS providers with access to the database as a source of marketing leads. Moreover, the iTRS Database Administrator should not itself conduct registrations or verifications, as it lacks the staff to conduct them nationwide and interposing a third party into the sign-up process is likely to create a significant impediment to enrolling legitimate users.

Unlike more expansive proposals, entrusting this role to the iTRS Database Administrator would comport with the capabilities of a Database Administrator, would have comparatively few privacy-related consequences for users, and it could also have a direct and positive impact on call efficiency and the reduction of waste, fraud, and abuse.

B. The Commission Should Not Entrust the Database Administrator with Gathering Registration and Verification Information.

While some commenters have argued that the iTRS Database Administrator’s role could be expanded to include *gathering* and storing customer registration and verification information, none of the commenters justifies the expansion or addresses the various harms that it would impose on consumers. Convo, for example, argues that “[t]he iTRS Database should be expanded to collect additional information about the public’s use of VRS, and the iTRS

Administrator should be tasked with registering and verifying all VRS users.”¹⁷⁰ According to Convo, “[t]hese actions will provide the Commission with unprecedented data about the nature of the community of VRS users and the manner in which they use VRS.”¹⁷¹ While Convo neglects to explain why centralizing an “unprecedented” volume of personal data and usage information related to every VRS user in the country would be beneficial, it does suggest three potential benefits that might flow from the proposal. Addressing each in turn helps clarify why the Commission should reject ZVRS’s broad disaggregation proposal (beyond simply storing users’ registration and verification information, which would permit providers to confirm on each call that the user is registered and verified).

Convo argues first that centralizing the registration and verification functions would result in cost savings for the TRS Fund by eliminating video mail messages left for inactive ten-digit telephone numbers.¹⁷² While Sorenson shares Convo’s interest in preserving scarce TRS Fund resources, there is no logical connection between 1) centralizing the collection and storage of registration and verification data; and 2) eliminating video mail messages left for inactive numbers. The problem with “stranded” video mail messages simply does not result from the fact that providers themselves currently gather and store their own customers’ registration and

¹⁷⁰ Convo PN Comments at 18. CAAG alone argues that the Database Administrator should also be responsible for routing calls internally among a provider’s call centers, subject to “provider-specified internal call routing rules to be communicated to the operator of the enhanced iTRS Database.” See CAAG PN Comments at 4-5. As Sorenson explained in its comments, this tangent of the disaggregation proposal would wreak havoc on VRS providers’ operations: “Call center routing depends centrally on critical company decision-making that simply cannot be outsourced, including decisions related to staffing availability, costs, interpreter abilities, and other core operational factors.” Sorenson PN Comments at 94. Under no circumstances, therefore, should the iTRS Database Administrator hold responsibility for routing calls within a provider’s network of call centers.

¹⁷¹ Convo PN Comments at 18.

¹⁷² See *id.* at 18 n.49.

verification information. Rather, it is a consequence of the fact that there are no rules or guidance on what it means to be an inactive customer—or, relatedly, on whether providers may seek compensation for video mail messages left for them. Some providers (including Sorenson) have proactively adopted clear-cut approaches to inactive users and video mail messages left for them, but the Commission should issue rules or formal guidance to the industry as a whole. Even if the Commission were to centralize these functions, it would not solve the “stranded video mail” problem without generating guidance for the administrator on when messages are compensable. Since the lack of guidance is the problem (not the lack of centralization), the Commission should simply release direction on inactive users and video mails, and then turn to providers for implementation.

Second, Convo argues that centralizing these functions would “ensure that all users meet the same verification standards and thereby reduce any consumer confusion caused by the disparate registration methods currently utilized by VRS providers.”¹⁷³ This rationale reinforces the point made by Professor Katz that creating a centralized network operations provider is a solution in search of a problem.¹⁷⁴ There is simply no evidence on the record (or anywhere else, so far as Sorenson knows) that consumers are confused because providers use different registration forms. Moreover, if there is any consumer confusion related to registration and verification, it is a consequence of the relatively vague requirements that the Commission has implemented (by order, not in the rules). Centralizing the registration and verification function would not clear up that ambiguity, however. Rather, if the Commission believes that consumers are confused because providers’ forms are not identical (and, again, Sorenson is not aware of any

¹⁷³ *Id.* at 19.

¹⁷⁴ Katz PN Declaration ¶¶ 45-47.

widespread confusion on that score), then the proper reaction would be to clarify the requirements—not to centralize the collection and storage of registration and verification data.

Finally, Convo argues that “cost efficiencies can be gained by assigning registration and verification responsibilities to a single entity.”¹⁷⁵ Convo contends that providers are currently devoting redundant resources to gathering registration and verification information, but “if the iTRS Administrator verifies and registers all users, the overall costs of user verification and registration paid by the TRS Fund should be substantially lower.”¹⁷⁶ This argument grossly misses the mark. The primary problem with Convo’s theory is that it assumes that VRS providers could or would completely shut down their networks of field staffers if the iTRS Database Administrator handled all registration and verification. But any VRS provider committed to expanding its customer base would still need staff in the field to locate new customers, as well as to provide field maintenance and repair when service problems cannot be addressed through a videophone call. Convo’s proposal would actually generate redundancy (not cure it) by preventing those field staffers from registering users in real time, instead leaving it to another team managed by the iTRS Database Administrator to make a duplicative contact with the customer. Convo’s approach also assumes the iTRS Database Administrator actually has the resources and capabilities to undertake the registration and verification processes efficiently and in a timely manner—but it manifestly does not. Many VRS providers employ deaf outreach and training staff to locate users, visit their residences or workplaces, obtain their registration information, verify the information’s accuracy, and answer any questions they may have about the process. The Database Administrator simply is not equipped to take on this role, as it does

¹⁷⁵ Convo PN Comments at 19.

¹⁷⁶ *Id.* at 20.

not have the nationwide network of deaf employees necessary to gather this information reliably. The process of building up that staff would be extremely costly, if it were even possible for the Database Administrator to do it. And, in the period of time before the administrator had this kind of staff in place, many otherwise eligible consumers would find themselves without access to VRS because they were unable to complete the registration and verification process once it was entrusted to the Database Administrator.

Moreover, depending on the compensation structure adopted for the expanded centralized administrator (a glaring source of difficulty, as Sorenson explains below), the cost savings that Convo envisions might simply result from improper incentives—with a predictably harmful impact for consumers. If the iTRS Database Administrator is not compensated on a per-user basis every time it gathers another consumer’s registration and verification data (or in a comparable manner), then the administrator will have no financial incentive to make sure that it registers and verifies as many consumers as it can or that it does so with any kind of urgency. Costs would surely go down, but only because otherwise eligible users will have no access to VRS, in violation of the ADA mandate to ensure the service is “available ... to the extent possible ...”¹⁷⁷

C. Disaggregating Network Functions from the Provision of VRS Would Jeopardize Privacy Rights, Fail to Address Fraud, Undermine Service Quality, Further Complicate the Compensation Structure for the VRS Industry, and Lead to Disastrous Customer Service Experiences.

Moreover, the parties that have voiced support for an expanded role (beyond storage of registration and verification information to enable providers to confirm that each call involves a registered and verified user) appear not to even consider the severe harms that the proposal

¹⁷⁷ 47 U.S.C. § 225(b)(1).

would inflict on consumers and on the TRS Fund. As Sorenson explained in its comments, centralizing these functions would jeopardize consumers' privacy interests, fail to even attempt to combat fraud, degrade service quality, require a complete reassessment of the industry-wide compensation structure, and—perhaps most troubling—undermine customer support.

Privacy. Sorenson explained in its comments that the proposal to centralize every VRS user's identification and usage data in a single massive database to which every provider (and perhaps other entities) have some degree of access would create an unprecedented risk to consumers' privacy interests.¹⁷⁸ Directing the iTRS Database Administrator to take on the full range of responsibilities identified in the PN would for the first time in history pool in a single location an extraordinarily detailed body of information covering every VRS user in the country. The risks associated with such an undertaking are clear, as the iTRS Database Administrator would have to afford providers (and others, perhaps including auditors, the TRS Fund administrator and FCC staff) with some measure of access to the information. But housing all of this information centrally and making it available to some degree to a variety of entities—many of which have directly competing interests—would create dangerous temptations for improper access.

Many other commenters voiced similar concerns about consumers' privacy interests in the event of an expanded role for the iTRS Database Administrator. The Consumer Groups, for instance, noted the importance of ensuring that “the personal information of the users remains private and confidential,”¹⁷⁹ RERC-TA likewise pointed to the importance of “ensur[ing] that

¹⁷⁸ Sorenson PN Comments at 85-89.

¹⁷⁹ Consumer Groups PN Comments at 18.

consumers' privacy is protected,"¹⁸⁰ and ZVRS "adamantly opposes the creation of any system which would undermine the privacy of personal information."¹⁸¹

Assessing the privacy-related impacts through the lens of functional equivalence helps underscore the risks. It is not difficult to imagine the reaction that consumer groups and privacy rights organizations would have if the Commission proposed storing every hearing telecom user's critical data (including name, address, phone number, usage data, and user profiles) in a single massive repository to which every provider had some level of access. Accepting these privacy risks would be unthinkable in the hearing world, and it should be unthinkable for deaf consumers too.

Fraud. In contrast to the VRS User Database that the Commission considered in the context of a transition to a per-user regime, centralizing the various functions identified in the PN would not even attempt to curtail fraud. As Sorenson explained in its comments, some may be concerned that the current guest-user rules create opportunities for fraud—but centralization of the functions identified in the PN would do nothing to address any misconduct related to those rules.¹⁸²

Far from combatting fraud, Video Interpreters United ("VIU") argued in its comments that centralizing these functions would actually *increase* the potential for fraud. VIU observed that there would be more entities involved at one level or another in the provision of VRS—including the possibility of more fly-by-night interpreting providers tantalized by the prospect of setting up shop (and earning per minute compensation, with the minute-pumping incentives that

¹⁸⁰ RERC-TA PN Comments at 17.

¹⁸¹ ZVRS PN Comments at 32.

¹⁸² Sorenson PN Comments at 83.

come with it) without needing any of the infrastructure or routing capability that VRS providers must currently support.¹⁸³ In short, entrusting the full range of functions identified in the PN to a centralized network provider would do nothing to combat fraud; if anything, it might generate more.

Quality of Service. A centralized database provider may have little incentive (depending on the as-yet undetermined compensation structure) to find and register users, improve transmission capabilities, offer high-quality video mail or address book features, or perform at a reasonably high level with respect to any of the other functions identified in the PN.¹⁸⁴ This, of course, is the central flaw with any “solution” that eliminates competition, as ZVRS’s disaggregation proposal would do. RERC-TA suggests that consumers do not worry about (or have any connection with) many of the functions that would be entrusted to the enhanced database provider,¹⁸⁵ but that position neglects to account for the impact that these functions have on overall quality of service. Even core call routing—including maintaining adequate transmission capacity and successfully completing calls—has a direct bearing on quality of service. Providers currently compete on this metric (and many others, of course), which gives them competitive incentives to deliver superlative service. That incentive—and the service quality that comes with it—would be lost with respect to any functions transferred from competing providers to the expanded database operator under ZVRS’s disaggregation proposal.

Compensation Structure. Supporters of expanding the role of the iTRS Database Administrator also ignore the impact the proposal would have on the industry-wide

¹⁸³ Comments of Video Interpreters United at 1, CG Docket Nos. 03-123 and 10-51 (filed Nov. 14, 2012) (“VIU PN Comments”).

¹⁸⁴ See Sorenson PN Comments at 89-91.

¹⁸⁵ RERC-TA PN Comments at 16-17.

compensation structure.¹⁸⁶ At a threshold level, the Commission would need to address the challenge of developing a compensation system that might incentivize the Administrator to, for example, seek out users (for registration and verification operations) or offer cutting edge features (for many of the other functions the proposal identifies). The Database Administrator's current contract structure would fail to generate appropriate incentives of this kind. The current structure would also lead to incentive problems in connection with the expanded customer support role the Database Administrator would need to play (when problems inevitably arise with the functions it provides) and, even more critically, in connection with the provision of point-to-point services (which, depending on the scope of its expanded role, may be supported in substantial part by the administrator).

Apart from attempting to develop a new compensation system that creates appropriate incentives for the Database Administrator, it is also important to recognize that expanding the Database Administrator's role (and implementing a corresponding reduction in the role played by VRS providers) would require a complete reassessment of the compensation structure for the entire VRS industry. The existing system, of course, addresses all of these issues through competitive forces. Providers have market-based incentives to supply cutting edge and efficient network operations and to provide highly responsive customer support—all of which is supported through a single compensation system.

Customer Service. Finally, and perhaps most critically, expanding the Database Administrator's role as suggested in ZVRS's proposal would undermine customer service in

¹⁸⁶ See Sorenson PN Comments at 91.

sweeping and entirely predictable ways.¹⁸⁷ Without any explanation or analysis, CAAG suggests in its comments that entrusting the Database Administrator with more functions would somehow *improve* customer service and the availability of features and enhancements.¹⁸⁸ But, as both Purple and Sorenson explain in their filings, the actual impact would be precisely the opposite. Purple noted that the proposed disaggregation would create debilitating “logistical difficulties” for “providers, consumers, and the Commission.”¹⁸⁹ Disaggregation, Purple explained, would:

reduce quality and innovation because no single provider will be accountable for a particular customer’s experience. This approach likely will create a technical support nightmare for consumers—who should a consumer file a complaint against if they have difficulties connecting to VRS? ...In addition to consumer confusion, additional vendors undoubtedly will create additional bureaucracy and, possibly, additional costs for a lower quality service.¹⁹⁰

Sorenson sounded precisely the same warning in its own comments. Disaggregating VRS—including through the development of a single standardized endpoint and the transfer of functionalities to the iTRS Database Administrator—would result in a notably disjointed experience for consumers. With as many as three separate providers supporting an end-to-end service formerly offered by just one, consumers will frequently have no idea whom to contact to resolve the problems and technical difficulties that will surely arise. In turn, as Sorenson explained in its comments, it will often be difficult for any of the three providers in the chain to zero in on the source of the difficulty and resolve it with anything like the level of responsiveness that exists today.

¹⁸⁷ *See id.* at 90-91.

¹⁸⁸ CAAG PN Comments at 5.

¹⁸⁹ Purple PN Comments at 10.

¹⁹⁰ *Id.*

In a disaggregated world, any one provider may have no meaningful insight into the problem at the root of any particular complaint, meaning that—from the customer’s perspective—there will be an aggravating amount of run-around time as the multiple providers burn money and consumer patience attempting to determine the source of the problem and a way to resolve it. Not only would this be far less efficient and responsive than the current system (in which vertically integrated providers have strong competitive incentives to rapidly identify and resolve any technical problem), it would generate greater burdens on the TRS Fund. This is because the three entities providing a service formerly offered by just one would have to staff duplicative customer support operations that would spend substantial time simply trying to determine which entity in the chain bears responsibility for resolving a problem.

V. OTHER ISSUES RAISED IN COMMENTS: THE COMMISSION SHOULD REJECT CALLS FOR NATIONAL CERTIFICATION, DISREGARD THE PROPOSAL TO LIMIT THE VRS INDUSTRY TO A SINGLE PROVIDER, CONSIDER SKILLS-BASED ROUTING SUBJECT TO CRITICAL SAFEGUARDS, AND PRESERVE CONFIDENTIALITY FOR SENSITIVE FINANCIAL INFORMATION.

A. While Superlative Interpreting Is Fundamental for VRS, Imposing a National Certification Requirement Would Degrade Service Quality and Raise Costs.

As it did in its comments in response to the Commission’s VRS Reform FNPRM,¹⁹¹ RID argues in its comments in response to the PN that the Commission should adopt a national NAD-RID certification requirement.¹⁹² As Sorenson explained in its FNPRM reply comments, it shares RID’s commitment to ensuring that VRS providers employ only highly qualified interpreters, but it adamantly opposes a uniform national certification requirement under which

¹⁹¹ Comments of Registry of Interpreters for the Deaf, Inc. at 3, CG Docket No. 10-51 and 03-123 (filed Mar. 9, 2012).

¹⁹² RID PN Comments at 2.

interpreters must be approved by a designated national certifying agency or agencies.¹⁹³ While RID's PN comments largely cover the same ground as its FNPRM comments, RID has neglected to address any of the critical concerns that Sorenson raised in its FNPRM reply. Sorenson summarizes those concerns again here.

First, NAD-RID interpreter certification currently requires applicants to hold a bachelor's degree before they can sit for the performance portion of the certification exam.¹⁹⁴ But not all successful video interpreters have college degrees. As a result, many highly skilled interpreters who have been in the VRS workforce for years would find themselves unqualified overnight without any short-term prospects of resuming work in their chosen profession.¹⁹⁵ While some of these interpreters might decide to attend college in order to secure a certification that has little bearing on their abilities, many others would reasonably conclude that the cost—in terms of time or money or both—is too exorbitant to bear.

Second, national certification would completely bypass and ignore the state-based certifications that many highly skilled interpreters have obtained. Many states have adopted their own state-level requirements because they do not feel that a national certification process can meet the needs of their local deaf and hard-of-hearing communities. Interpreters working in many states—including, for example, Missouri, Kansas, Utah, Illinois, Texas and Michigan—must obtain certification at the state level, and many of them therefore have had no need to even

¹⁹³ Sorenson FNPRM Reply Comments at 60-64.

¹⁹⁴ See RID, Educational Requirements, *available at* <http://rid.org/education/testing/index.cfm/AID/195> (last visited Nov. 29, 2012).

¹⁹⁵ In addition, NAD-RID does not certify bilingual and trilingual interpreters at all. As a result, imposing a NAD-RID certification requirement would completely undermine providers' ability to offer ASL-to-Spanish VRS, and it would effectively terminate VRS employment options for the interpreters who currently handle those calls.