November 14, 2012

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Gregory Hlibok
Chief, Disability Rights Office
Bureau of Consumer and Governmental Affairs
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: 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

Dear Ms. Dortch and Mr. Hlibok:

Purple Communications, Inc. hereby submits the attached redacted comments and expert report pursuant to the Second Protective Order issued in the above-captioned proceedings on May 31, 2012.

As required by paragraph 12 of the Second Protective Order, Purple submits: (a) two copies of the filing in redacted form to the Secretary’s Office along with this cover letter. Separately, Purple submits (b) one copy of the filing containing Highly Confidential Information to the Secretary’s Office along with a Highly Confidential cover letter; and (c) two copies of the filing containing Highly Confidential Information to Gregory Hlibok along with a Highly Confidential cover letter. We will also file a copy of the redacted version via ECFS.

As required by paragraph 3 of the Second Protective Order, we have received written approval from Commission staff for the confidentiality designations in the filing.

Sincerely,

PURPLE COMMUNICATIONS, INC.

John Goodman
Chief Legal Officer
Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of

Structure and Practices of the Video Relay Service Program; Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities

To: The Commission

COMMENTS TO PUBLIC NOTICE ON STRUCTURE AND PRACTICES OF THE VIDEO RELAY SERVICES PROGRAM

PURPLE COMMUNICATIONS, INC.

John Goodman
Chief Legal Office
Purple Communications, Inc.
595 Menlo Drive
Rocklin, CA 95765

November 14, 2012
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PURPLE COMMUNICATIONS, INC.

In reply to the Federal Communications Commission's (the "Commission") Notice seeking additional comment on the Structure and Practices of the video relay services ("VRS") program (the "Notice").

I. EXECUTIVE SUMMARY

The Internet-based Telecommunications Relay Services ("iTRS") program is more than a government benefit program for deaf and hard-of-hearing Americans; it is a service designed to further their civil rights as mandated by Congress through the Americans with Disabilities Act (the "ADA"). For this reason, in seeking a framework that enables the VRS program to serve the greatest number of consumers at the lowest possible cost, the Commission must also promote functional equivalence.

Functional equivalence will not be met by selecting a single, or government, sponsored provider that ultimately will provision lower quality service and equipment than a competitive marketplace. Instead, functional equivalence requires that deaf and hard-of-hearing consumers have a choice of service providers, just as hearing consumers do. Indeed, the Commission has reaffirmed the value of consumer choice on numerous occasions: "if TRS users are not able to use their carrier of choice and are forced to select an alternate provider, they may pay rates that are higher than those charged by their preferred carrier, or may not have access to particular..."
services. [B]oth results are inconsistent with the ADA⁵‡; "consistent with functional equivalency, all VRS consumers must be able to place a VRS call through any of the VRS providers' service, and all VRS providers must be able to receive calls from, and make calls to, any VRS consumer⁶⁴; "[b]ecause local numbers are readily portable and toll free numbers are not, the automatic issuance of personal toll free numbers limits user choice and reduces competition, raising concerns about functional equivalency."⁵

The Commission also has long recognized that a competitive marketplace best facilitates consumer choice and thus the functional equivalence mandated by Congress. Put simply, consumer choice requires provider differentiation through characteristics like interpreter quality, products and software. The design and implementation of the iTRS program’s tiered-rate structure, in particular, illustrates the Commission’s acknowledgement of the value of competition:

These tiers are intended to reflect likely cost differentials between small providers (including new entrants); mid-level providers who are established but who do not hold a dominant market share; and large, dominant providers who are in the best position to achieve cost synergies. . . . We therefore believe that using three tiers is appropriate to ensure both that, in furtherance of promoting competition, the newer providers will cover their costs, and the larger and more established providers are not overcompensated due to economies of scale.⁶

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⁶ See In the Matter of Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, CG Docket No. 03-123, Report and Order and Declaratory Ruling, 22 FCC Red 20140, ¶¶ 46-47, 52-54 (Nov. 19, 2007) (2007 TRS Rate Methodology Order); see also In the Matter of
The Commission has additionally concluded that "the adoption of the [tiered] VRS rates ... [are] consistent with its obligations under Title IV of the ADA, codified as section 225 of the Communications Act. ... [And] furthermore reflect full awareness of the Commission's obligations under section 225 and a commitment to further the goals of functional equivalency through strengthening and sustaining VRS."7

Now is not the time for the Commission to abandon the progress it has made towards an industry model that promotes competition, unless it is prepared to abandon its commitment to consumer choice and functional equivalence, a cornerstone of the ADA. With the release of the Notice, the Commission appears to seek final comment on a slate of questions aimed at disaggregating the components of VRS. Complete or significant disaggregation amounts to reform that will impair competition, restrict consumer choice, and threaten functional equivalence. Accordingly, Purple makes the following policy proposals further detailed in sections II and III, below:

- Disaggregation of the VRS industry will reduce competition, innovation, and consumer choice, thereby reducing quality of service and jeopardizing functional equivalence;
  - Development and implementation of technical standards are a more efficient and appropriate means of enhancing interoperability, portability, and quality of service and are more efficient and practical than a single application to be used on off-the-shelf hardware;

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7 2010 VRS Rate Order at ¶¶ 18, 20.
o Enhanced iTRS database features should be limited to third-party registration and verification functionalities that provide industry-wide protections for providers and consumers and should not interfere with functions that allow for innovation and distinction in the marketplace;

- Adoption of a weighted average cost formula for the determination of VRS rates is fundamentally flawed and must be rejected because it will result in a VRS market dominated by one VRS provider with little consumer choice, innovation and service quality;
  
  o As an alternative to a weighted average cost formula, the Commission should adopt transitional tiered rates as a bridge to a long-term unitary rate with a price cap designed to promote stability; and

  o VRS rates must take into account outreach, marketing, and research and development costs in addition to a reasonable return to investors to continue to attract capital to the VRS market.

Purple believes the policy proposals highlighted in this filing can preserve competition and choice for consumers while making the program more financially efficient. These goals are not mutually exclusive.
II. STRUCTURAL REFORMS TO DISAGGREGATE THE INDUSTRY ARE PROBLEMATIC

A. Multiple Providers Offering Distinct Services That Are Subject To Common Technical Standards Will Ensure Interoperability And Portability And Will Best Serve Consumers.

While Purple supports the use of off-the-shelf hardware equipment in the delivery of VRS to consumers, Purple opposes migration of all VRS access technologies ("VRS Access Technology") to a standard application that could be used on commonly available off-the-shelf hardware. First, there are limitations to a standard application and off-the-shelf solution that consumers certainly consider important in their use of VRS. These include features such as integrated light signaling to indicate incoming calls, integrated video mail associated with a phone number, integrated text pre-call instructions with communication assistances ("CAs"), and other call-based user profile settings such as voice carry over ("VCO").

Moreover, a standard application would leave no room for distinctions among provider services, style and nuance. Consequently, consumers will have fewer bases for exercising personal preference and the choice essential to functional equivalence. Providers also will lose incentive to compete on quality and innovation thereby stifling the competitive marketplace that best facilitates consumer choice. Thus, standard application ultimately sacrifices consumer choice and free-market competition in favor of a one-size-fits-all government-issued baseline service which does not satisfy the functional equivalence mandate of the ADA.

In Question No. 1, the Commission seeks specific comments regarding a process for developing a standard application and/or establishing standards for an application. The

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Commission also inquires whether the standard application or key components should be “open source.” While Purple opposes any standard application and off-the-shelf approach, Purple endorses the establishment of clear technical standards to improve consumer choice by better enabling consumers to move easily among providers. Purple emphasizes that the Commission must enforce these technical standards for the standards to be effective. Purple also points out 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.

By way of example, 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. Such a technical standard requires no field implementation and should be among the first of the technical standards adopted by the Commission. If such a technical standard existed and was implemented within 3-6 months from the effective date of such creation by the Commission, then consumers immediately would be free to move their address books to the providers of their choice.

Address book functionality is just one example of how a technical standard could improve interoperability and portability, and thus consumer choice, without the creation of a standard application. Moreover, as set forth in more detail below, Purple believes that if software is designed against clear technical standards and validly tested through a third-party for compatibility and interoperability, then software need not be “open source” as that would quash

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providers' incentives to innovate and stifle the competitive marketplace that fosters consumer choice and functional equivalence.

In response to Question No. 3 seeking specific comment regarding whether providers should be able to continue to offer their own internally developed applications, Purple states that it strongly believes that providers should be able to continue to offer their own internally developed applications. As a related matter, Purple also supports the implementation of an interoperability testing process. Purple recommends that the Commission first set out a range of technical standards by which VRS Access Technology is measured. Then, Purple endorses the Commission's use of a third-party testing lab that can conduct compatibility and interoperability testing prior to a provider's release of new VRS Access Technology, whether it is software, hardware, or both. Similar to Part 68 testing, providers would pay to have their software tested by a Commission-approved third-party contractor. This costs the Commission little more than the selection of a qualified vendor, improves interoperability, and thus facilitates consumer choice, competition, and functional equivalence.

In addition, the Commission could require that providers create a new identifying "flag" in their call detail records reflecting which version of software or hardware was used to place a call. By way of auditing, any call that was generated by a non-certified application would be ineligible for compensation by Rolka Loube Saltzer Associates LLC (the "TRS Fund Administrator"). This would keep the industry accountable to a set of technical standards and would provide the Commission with the assurance that VRS Access Technology met the technical standards adopted by the Commission to ensure interoperability and portability.

\[\text{See Comments of Purple Communications, March 8, 2012, CG Dockets 10-51 & 03-123.}\]
While Purple previously has provided recommendations regarding off-the-shelf hardware,\textsuperscript{11} Purple declines to offer specific comments in response to Question Nos. 2, 4, 5, 6, and 7 as they ultimately relate to the details of a premise with which Purple has expressed its disagreement, as stated above. Indeed, Purple notes that the technical support and troubleshooting issues relating to a standard application and off-the-shelf equipment and raised by the Commission in Question No. 7 lend further support to Purple's position opposing this approach.

Finally, in Question Nos. 8, 9 and 10, the Commission seeks specific comments regarding the process for selection of a standard application, transition to a new VRS system, and the necessity of changes to the Commission's rules. In response to Question Nos. 8, 9 and 10, Purple reiterates its concern that the Commission's efforts to further reform the industry may actually set back the progress that has been made in clarifying industry expectations and establishing a more competitive marketplace to support the consumer choice that promotes functional equivalence. The necessity of inventing a process for the selection of a standard application is just the beginning of a Pandora's Box of bureaucracy, clarifications and new rulemaking that a re-invented VRS industry would require.

For these and the reasons set forth above, Purple opposes a standard application and off-the-shelf hardware solution.

\textsuperscript{11} See id
B. Enhanced iTRS Database Operations Should Serve Only A Limited Role.

Purple supports the use of a third-party vendor for certain functions that secure the service for use only by the deaf and hard-of-hearing. Purple believes that this limited third-party function will advance audits by the TRS Fund Administrator by improving transparency and assisting inquiries regarding anomalous call patterns. However, Purple does not endorse any industry structure that would, in effect, separate the video communication service component of VRS from the ASL relay CA service component by providing the functions of the former from an enhanced iTRS database. As explained below, Purple believes that the disaggregation of the VRS industry will 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.

Accordingly, in response to Question No. 1, Purple supports the use of a third-party vendor, such as Experian, for the express purposes of user identification and verification as part of a third-party managed registration process for VRS. This function provides independent protection to the industry, the TRS Fund and providers. Purple does not support the use of an enhanced iTRS database for development and distribution of VRS Access Technology, usage accounting, call routing or other value-added features. These functions support marketplace differentiation, innovation and competition, and thus consumer choice, and should be maintained by providers. Instead, as noted in Section II(A) above, Purple believes that stringent technical standards that are enforced by the Commission provide a simpler and more efficient solution to concerns about these functionalities and their impact on the interoperability and portability that supports consumer choice.
In response to Question No. 2, Purple offers the following recommendations regarding the interface between a registration and verification vendor and the industry. Purple proposes that a registration and verification vendor would work closely with the Commission’s iTRS numbering administrator to ensure that every 10-digit number issued was related to an eligible and verified consumer. The third-party vendor should independently analyze and verify the name, address, and eligibility of all registrants. Utilization of a third-party for this purpose ensures the integrity of the VRS program and the TRS Fund and allows providers to focus on quality of service and not the policing of illegitimate use, which compromises functional equivalence.

In Question Nos. 3 and 4, the Commission seeks comment regarding the necessity of multiple video communication service providers and changes to the Commission’s rules. Purple believes that the issues raised by these questions simply confirm the logistical difficulties that such a system will pose to providers, consumers, and the Commission. The disaggregation of VRS among component vendors likely will 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? The universal software company? The TRS Fund Administrator? The interpreting services provider? In addition to consumer confusion, additional vendors undoubtedly will create additional bureaucracy and, possibly, additional costs for a lower quality service.

If the Commission ultimately seeks to disaggregate VRS among a series of component vendors each operating under contract with the Commission, perhaps the Commission should consider simply issuing a request for proposal to operate the VRS program under a single
Whether the Commission contracts with a series of component vendors or utilizes a single vendor with a monopolistic contract, marketplace competition, the innovation and quality that support consumer choice, and functional equivalence will be lost. Purple strongly opposes these approaches, which contravene the Commission's own stated objectives, as well as the letter and spirit of the ADA.  

For these and the reasons set forth above, Purple discourages the Commission from adopting an enhanced iTRS database for any function beyond registration and verification and from separating the video communication service component of VRS from the ASL relay CA service component.

III. VRS RATES SHOULD BE FAIR, PREDICTABLE AND ALLOW FOR REASONABLE PROFITABILITY

For the purposes of responding to the Notice, Purple has retained the services of telecommunications expert Steven E. Turner. Mr. Turner is a managing director at FTI Consulting, an independent third party consulting firm ("FTI"), and is responsible for the telecommunications practice in FTI's Network Industry Strategies group. Mr. Turner has held a variety of research, engineering, operations, and management positions in the telecommunications industry, including at AT&T. Among many other areas, Mr. Turner has expertise in network component costs, call center operations, and cost management.

12 As the Commission has previously stated:

Our overarching goal in this proceeding is to improve the VRS program so that it better promotes the goals Congress established in section 225 of the Act. Specifically, we seek to ensure that VRS is available to all eligible users, is provided efficiently, offers functional equivalence, and is as immune as possible to the waste, fraud, and abuse that threaten its long-term viability. We note that this is largely consistent with the goals outlined in the recent Consumer Groups' TRS Policy Statement, and that we seek to reform VRS in accordance with these goals to the extent possible.

December 2011 NPRM at ¶ 11.
Purple has asked Mr. Turner to evaluate the TRS Fund Administrator's rate proposal filed on October 15, 2012, based on publicly available information. As Mr. Turner details in his expert report attached hereto as Addendum A (the "FTI Report"), contrary to providing fair and predictable rates and reasonable profits, the TRS Fund Administrator's rate proposal will have the effect of decreasing rates for non-dominant VRS providers to such an extent that they will be forced out of business, and, as a result, undermine the Commission's goal of increasing competition in the VRS industry to facilitate consumer choice and promote functional equivalence.

A. The TRS Fund Administrator's Rate Proposal, Based On Weighted Average Cost, Is Fundamentally Flawed And Must Be Rejected.

The Commission should categorically reject the TRS Fund Administrator's weighted average VRS rate formulation because it is based on flawed assumptions and will have a negative impact on service quality and competition, and ultimately consumer choice and functional equivalence.

First, the TRS Fund Administrator's weighted average approach does not fully take into account the fact that VRS costs are volume-sensitive and that the VRS industry is characterized by significant economies of scale, which means that the dominant VRS provider benefits the most if the Commission were to adopt a single, industry-wide target compensation rate while smaller VRS providers suffer due to lower volumes. Indeed, the Commission itself has

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14 Hereinafter cited as "FTI Report."

15 Id. at ¶ 11-25.
previously rejected applying a single weighted average rate to all VRS providers precisely
because of this fundamental structure of the VRS industry and the need for tiered rates:

"[W]e will no longer apply a single weighted average rate to all providers. Instead
we will adopt tiered rates based on the monthly minutes of use provided. . . . We
believe that doing so may more appropriately reflect the financial situation of all
providers. [T]hese providers are not similarly situated with respect to their
market share and their costs of providing service. For several years now, one
provider has a dominant market share, and thus this individual provider’s
projected minutes and costs largely determine the rate. The record reflects,
however, that providers with a relatively small number of minutes generally have
higher per-minute costs. . . ."

Additionally, the TRS Fund Administrator’s weighted average approach is based in part on the
premise that VRS is a declining cost industry—a premise that is not accurate even when
including a productivity factor. By adopting the TRS Fund Administrator’s rate proposal, the
Commission will exacerbate the market dominance of Sorenson to the detriment of all VRS
participants, compromising consumer choice, and threatening functional equivalence.

***BEGIN HIGHLY CONFIDENTIAL INFORMATION***

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16 2007 TRS Rate Methodology Order at ¶¶ 47, 52-54 (internal citations omitted); see also 2010 TRS Rate Order at ¶ 17 ("[W]e find that the current tier structure remains a workable, reliable to [sic] way to account for the
different costs incurred by carriers based on their size and volume of TRS minutes relayed. The rationale for
adopting the tiers in the 2007 TRS Rate Methodology Order remains applicable; that is, providers with a
relatively small number of minutes generally have higher costs.")

17 FTI Report at ¶¶ 48-53.
If the Commission wants to preserve the intent of the VRS reform process to ensure that VRS is "effective, efficient, and sustainable for the future," then the Commission will reject the TRS Fund Administrator's rate proposal and adopt a way forward that both promotes competition and is financially prudent. As stated in the FTI Report, the single most important issue before the Commission is whether to pursue a compensation regime that will promote a VRS market with multiple providers (and reap the benefits of competition) or promote a VRS market that will yield the lowest short-term cost (but lose the benefits of a competitive market). This single decision will drive much of the Commission's decision-making, and implicates not only the cost of the VRS program, but the civil rights of deaf and hard-of-hearing Americans.

B. As An Alternative To The TRS Fund Administrator’s Rate Proposal, The Commission Should Adopt Tiered Rates As A Bridge To A Long-Term Unitary Rate.

As demonstrated in the FTI Report and made clear in prior filings by Purple, VRS providers operating with higher volume have lower costs due to efficiencies. For smaller providers the pathway to greater volume is a marketplace that operates under a set of stringent technology standards that ensure interoperability and portability. Under such a structure, consumers can freely move from provider to provider with their relevant calling information,

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18 December 2011 FNPRM at ¶ 1.
19 FTI Report at ¶ 61.
such as address books, and exercise the choice that is essential to functional equivalence.

Purple believes the Commission must first adopt and enforce clear technology standards that will facilitate interoperability and portability, thereby increasing competition and consumer choice. During this time period that technical standards are under development and implementation, size disparities among providers will persist as will cost disparities as evidenced in this filing. To accommodate for this economic reality, Purple proposes that the Commission preserve a tiered rate structure on a purely transitional basis. Purple has previously submitted a detailed proposal outlining how expanding the thresholds of the tiers and lowering rates could result in cost savings to the VRS program while enabling smaller providers to "climb the scale curve" following the implementation of industry-wide technology standards to increase interoperability and portability.

Based on the Notice and the TRS Fund Administrator’s filing, Purple offers an updated approach to a three-tiered model that will enable VRS providers to gain additional market share during a period of limited duration with a known end date before conversion to a unitary rate compensation model. The rates and tiers proposed by Purple as a transitional rate structure are as follows:

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### Reimbursement Rate Per Minute

<table>
<thead>
<tr>
<th>Tier</th>
<th>Minutes Per Month</th>
<th>Reimbursement Rate Per Minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1</td>
<td>0 – 500,000</td>
<td>$5.92 A 5% reduction from the current Tier-1 rate</td>
</tr>
<tr>
<td>Tier 2</td>
<td>500,000 – 2,000,000</td>
<td>$4.82 A 5% reduction from the current Tier-3 rate</td>
</tr>
<tr>
<td>Tier 3</td>
<td>More than 2,000,000</td>
<td>$4.10 A 15% reduction from the new Tier-2 rate</td>
</tr>
</tbody>
</table>

The application of this rate structure will save the iTRS Program more than $70 million annually\(^{22}\) and still allow smaller VRS providers the ability to innovate and compete with the full understanding that the tiered system eventually will be eliminated in favor of a long term unitary rate.

### C. Following The Transitional Tiered Rate Structure, The Commission Should Adopt A Unitary, Three Year Price Cap Approach To Promote Stability.

Once technology standards are implemented to provide for interoperability and portability, and a more openly competitive market is established, Purple recommends that the Commission adopt the lowest rate paid under the transitional tiered plan as the starting rate for a new three year unitary rate period. This new starting rate would be paid to all providers and adjusted annually for efficiency. Again, the stability that predictable rates would bring to the market would further innovation, efficiency and competition and thus consumer choice.

The rates for VRS should be regulated by price cap methodology. As previously stated in Purple’s August 18, 2010 Comments on Notice of Inquiry,\(^ {23}\) the stability provided by the price cap would optimize the incentives for VRS providers to lower costs and engage in long-term planning and investment in their VRS businesses thereby facilitating great competition and

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22 See Attached Exhibit 1 for detailed analysis of savings and estimated reimbursement rates by provider.

consumer choice. Under a price cap system, rates would remain steady, subject to standard adjustment factors based on well-established and objective indexes. Moreover, a price cap structure motivates providers to operate efficiently because providers obtain the benefits of those cost reductions until rates are reset.24 When providers succeed in decreasing costs and increasing efficiency, the resulting surplus of funds can be invested in innovations and improved services for consumers.

D. Inclusion Of Outreach, Marketing, And Research And Development Costs Is Absolutely Necessary, As Is A Reasonable Return To Investors.

If lower costs are derived through more than one VRS provider operating at scale, and the best way for smaller VRS providers to grow is through innovation once technology standards are uniformly enforced, then it would be counterproductive for the Commission to exclude the costs of outreach, marketing, and research and development from the very firms that need to grow in order to achieve a market structure that can support lower rates and the consumer choice essential to functional equivalence. Properly constructed, the transitional tiered rate structure could be designed to ensure each VRS provider is paid equitably for outreach, marketing, and research and development. For example, one approach is that outreach, marketing, and research and development are paid on a per minute basis up to the first 2 million minutes per month for each provider. For minutes above 2 million, the reimbursement rate would be lowered and not include any allocation for these items. An approach like this incentivizes and funds the innovation of the smaller VRS providers without giving the dominant VRS provider an undue marketing, outreach, or research and development windfall from which it can continue to fund its dominant position, a position that threatens consumer choice and functional equivalence.

With respect to the amount of capital costs that are allowed to be recovered, and as the FTI Report states, a traditional rate of return investment analysis approach is not a suitable option for VRS, which is a labor-intensive industry. Instead, as the FTI Report points out, there are a “number of ways that the Commission can properly regulate the VRS market while achieving its public policy objectives. However, in doing so, it is essential that the Commission look toward an approach that continues to foster innovation and competition,” and that provides a return on investors’ money. Indeed, it is important that the Commission not dismiss the benefits to the marketplace and consumers of providing a reasonable return on investor money. If the VRS industry becomes entirely unattractive to investors, innovation and competition will substantially decline. The Commission should follow the guidelines for the valuation of enterprises, which is based on earnings and discounted cash flow analysis. As suggested in the FTI Report, earnings require a policy structure that rewards competition and efficient operations and allows for reasonable profitability, all of which may be established based on industry proxies.

25 FTI Report at ¶ 56.
26 Id. at ¶ 59.
27 Id. at ¶¶ 58-61.
28 Id. at ¶ 58.
29 Id. at ¶¶ 58-59.
E. In Light Of The Above, Purple Proposes A Three-Phase Implementation Timetable For VRS Reform.

Purple offers the following three-phase implementation schedule for VRS reform:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Phase Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>During Phase 1, which would last for 12-months from the effective date of the FCC’s Order, technical standards would be developed and implemented for the centralized registration and verification, device interoperability, portability and the third party testing of VRS Access Technology. Rates during this period would be the transitional tiered rate structure.</td>
</tr>
<tr>
<td>Phase 2</td>
<td>During Phase 2, the technical standards would be implemented and enforced across the industry. Consumers would have new flexibility to choose providers and move their information from one provider to the other. This Phase would last for no more than 36-months and could last for less time if at least two other providers were operating with at least [20%] market share which would reflect the achievement of scale and serve as a trigger by which unitary rates could be applied industry wide. In any case, at the end of 36-months, regardless of market share re-allocation, all providers regardless of size would be paid a unitary rate. This provides the Commission and providers with a known “end date” to any notion of small provider subsidization.</td>
</tr>
<tr>
<td>Phase 3</td>
<td>During Phase 3, a new three-year, unitary rate would be implemented for all providers regardless of size and would be evaluated annually under a price cap efficiency factor calculation.</td>
</tr>
</tbody>
</table>

IV. CONCLUSION

The mandate of the ADA is not met by a VRS program supported by a single provider devoid of incentives to innovate, preserve quality, and create the consumer choice that fosters functional equivalence. The Commission has always sought to promote innovation, quality and competition, because those factors increase consumer choice and functional equivalence. The Commission should not abandon these policies. Efficient cost structures should not come at the cost of creating a monopoly that provides a base-line standardized service. The recommendations offered herein harmonize the Commission’s policy objectives of competition,
consumer choice, and functional equivalence while ensuring that the VRS program is "effective, efficient, and sustainable" into the future.
EXHIBIT 1
Reimbursement Rate Analysis

***BEGIN HIGHLY CONFIDENTIAL INFORMATION***

***END HIGHLY CONFIDENTIAL INFORMATION***
ADDENDUM A
REPORT OF

STEVEN E. TURNER

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I. INTRODUCTION

A. Qualifications

1. I am a Managing Director at FTI Consulting responsible for the telecommunications practice in the Network Industry Strategies group. I hold a Bachelor of Science degree in Electrical Engineering from Auburn University in Auburn, Alabama. I also hold a Masters of Business Administration in Finance from Georgia State University in Atlanta, Georgia.

2. From 1986 through 1987, I was a Research Engineer for General Electric in its Advanced Technologies Department developing high-speed graphics simulators. In 1987, I joined AT&T and, during my career there, held a variety of engineering, operations, and management positions. These positions covered the switching, transport, and signaling disciplines within AT&T. From 1995 until 1997, I worked in the Local Infrastructure and Access Management organization within AT&T. In this organization, I gained familiarity with many of the regulatory issues surrounding AT&T’s local market entry, including issues concerning the unbundling of incumbent local exchange company (“incumbent” or “ILEC”) networks. I participated on the AT&T team that negotiated with Southwestern Bell Telephone Company concerning unbundled network element definitions and methods of interconnection.

3. From 1997 to 2006 I was President of my own consulting firm, Kaleo Consulting. Kaleo Consulting was a boutique consulting firm specializing in providing expert testimony in technical and financial areas related to telecommunications. My projects involved issues related to contractual terms and conditions between telecommunications service providers, the costs for network elements including interoffice transport, collocation, loops (media used to connect to
customer premises), switching, signaling, and other related areas. My consulting assignments also included the responsibility of negotiating interconnection agreement terms and conditions between new entrants and incumbents or negotiating settlements with numerous companies including AT&T and Verizon. To the extent that these contracts required the inclusion of rates for telecommunications services, I developed and/or evaluated numerous models pertaining to the development of network component costs. Finally, my firm provided strategic consulting services to companies regarding where and how to enter various telecommunications markets.

Within the same period, from 1998-1999, I also co-founded and served as President for ALT Communications, a Competitive Local Exchange Company (CLEC) in Texas. In December 2006, I moved to FTI Consulting as a Managing Director and continue to provide consulting services in the telecommunications industry.

4. As part of my consulting practice, I have developed a deep knowledge base regarding regulatory requirements within the telecommunications industry and have provided expert testimony on telecommunications regulation in most states within the United States, before the Federal Communications Commission (FCC) on many occasions, and before the Canadian Radio and Television Commission (CRTC). I have also provided expert testimony in federal court proceedings involving the regulation of telecommunications carriers.

5. Of particular relevance to this present report, I have also had extensive experience in managing a large call center while at AT&T. While the call center was not responsible for serving the hearing impaired, the issues involved with the management of call center personnel, staffing for variations in demand, utilization levels and other common issues for call centers are
part of my direct experience. Moreover, I continue to advise clients on call center operations and cost management approaches.

6. A copy of my curriculum vitae is attached to this report.

B. Overview

7. I have been asked by Purple Communications, Inc. (Purple) to provide my expert opinion regarding the issues raised in the October 15, 2012 FCC Public Notice\(^1\) seeking additional comment on proposed video relay services ("VRS") compensation rates. Specifically, I provide my opinion, and support of such opinion, on the "rate structure, proposed rates, and cost calculations, including its weighting of individual providers' costs"\(^2\) proposed in the Fund Administrator Supplemental Filing\(^3\) by Rolka Loube Saltzer Associates ("RLSA Proposal"). In addition, I provide my opinion and associated support on the five "Open Ratemaking Issues" identified in the FCC Public Notice.

8. As I detail below, the proposals in the Fund Administrator Supplemental Filing will serve to decrease rates for non-dominant carriers to such an extent that they will be forced out of business and, as a result, undermine the Commission’s goal of increasing competition in the VRS industry. I base this conclusion on the following key factors:

All evidence supports the fact that VRS costs are volume-sensitive with each and every independent data point pointing to the same conclusion:

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\(^2\) Id., Section II.A.

The largest VRS provider is benefitting from the largest reduction in costs due to historical double-digit industry growth rates;

There appears to be a premise that VRS is a declining cost industry, a premise that is not accurate, even when including a productivity factor;

A single, industry-wide target compensation rate will perpetuate and exacerbate the market dominance of Sorenson, to the detriment of competition and consumers;

The Commission must compensate VRS providers in a manner that allows them to recover their costs as well as provide a return to their investors; and

A traditional rate of return regime is not applicable to the VRS industry, and the Commission would be best served by targeting return components that best mimic the incentives in a competitive marketplace.

9. Therefore, based on my evaluation and the conclusions reached above, the FCC should not implement the Fund administrator’s recommendations as outlined in the RLSA Proposal.

II. PROBLEMS WITH THE FUND ADMINISTRATOR’S RECOMMENDATIONS

A. The Commission’s Previous Orders Have Shown That VRS Costs Are Volume Sensitive.

10. In its 2007 TRS Rate Methodology Order, the Commission determined that, “[I]n light of these different per-minute costs, we conclude that we will adopt tiered VRS
compensation rates based upon call volume." In that Order, the Commission reviewed "the
providers' more recently filed actual (or annualized actual) costs and minutes of use contained in
their cost data submission for the 2007-2008 Fund year" and determined that "providers that
handle a relatively small amount of minutes ... have relatively higher per-minute costs ... [and]
... providers that handle a larger number of minutes ... have lower per-minute costs." This also
led to "some VRS providers ... receiv[ing] compensation significantly in excess of their actual
costs" and that in 2006 some "VRS providers' actual cost of providing service ... was $4.5568
per-minute - almost one-third less than the rate paid of $6.644 per-minute." Based on this
information, the Commission "base[d] the VRS rate on the providers' projected cost and minutes
of use." In short, the Commission unambiguously determined that a VRS provider's cost is
subject to economies of scale and that "dominant providers ... are in the best position to achieve
cost synergies."

11. Then, in the 2010 TRS Rate Order, the Commission determined that "[t]he
rationale for adopting the tiers in the 2007 TRS Rate Methodology Order remains applicable; that
is, providers with a relatively small number of minutes generally have higher costs." Further,

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4 Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, CG Docket No. 03-123, Report and Order and Declaratory Ruling, November 19, 2007, ¶ 48 ("2007 TRS Rate Methodology Order").
5 Id., at fn. 143.
6 Id., at ¶ 54.
7 Id., at ¶ 48.
8 Id., at fn. 144.
9 Id., at ¶ 47.
10 Id., at ¶ 53.
11 Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, CG Docket No. 03-123, Order, June 28, 2010 ("2010 TRS Rate Order").
12 Id., at ¶ 17.
the Commission presented NECA's proposed rates by tier, which were based on 2009 "actual, historical costs," after accounting for working capital allowances and expense increases. Comparing the Commission adopted cost-based rates in the 2007 TRS Rate Methodology and those in the 2010 TRS Rate Order, reveals that the underlying costs decreased, resulting in rate decreases by 13.7% in Tier 1, by 6.2% in Tier 2 and by 37.5% in Tier 3. In short, that highest volume tier, Tier 3, experienced substantially greater cost-based rate declines than either of the other two tiers.

12. Thus, not only has the Commission determined, through actual data provided by the VRS providers, that those providers with greater volumes tend to have the lowest unit costs, the Commission data has shown that the carriers with the largest volumes continue to experience significant economies of scale as those volumes increase. And, while the volume increase in Tier 1 and Tier 2 are, by definition, limited due to the upper bound in those tiers, Tier 3 has no limit on the potential volume increase. Specifically, the maximum possible volume increase in Tier 1 is 49,999 minutes, the maximum possible volume increase in Tier 2 is 449,999, but there is no limit on the potential volume increase in Tier 3. Indeed, Sorenson experienced increases in the tens of millions of minutes between 2006 and 2009.

13. To be clear, VRS costs are sensitive to overall increases in volume. By way of example, consider a carrier with 250,000 monthly minutes and a carrier with 2,500,000 monthly minutes (i.e., one carrier is ten times larger than the other). While carriers may experience an

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12 Id., at ¶6.
13 Id., at Table 1.
14 Overall industry volume increased from about 44 million minutes in 2006 to about 99 million minutes in 2009. Given that today Purple and CSDVRS, the second and third largest providers, account for less than 20 million minutes, at least 30 million of those minutes are likely to be growth in Sorenson's overall volume.
increase in minutes by 50%, the first carrier would only gain 125,000 minutes while the second carrier would gain 1,250,000 minutes (again, ten times as many minutes). As a result, it is the second, larger carrier that would experience the greatest improvements in its economies of scale. The point here is that the economies of scale relate to overall volumes in terms of minutes and not percentage increases (or growth) in a particular company’s minutes.

14. Thus, it is not surprising that Tier 3 experienced a 37.5% reduction in the cost-based reimbursement rate between 2007 and 2010 while Tier 1 and Tier 2 carriers experienced only a 13.7% and 6.2% reduction in costs, respectively. And, during this period, only Purple and Sorenson were considered Tier 3 providers capable of garnering more than 449,999 minutes of growth per month. All told, Sorenson experienced the vast majority of the total industry minute growth during this period. As such, it is easy to explain why Sorenson had such a significant decrease in its per-minute costs.

15. In short, not only has the Commission verified that there are significant economies of scale in the provision of VRS services through actual point-in-time data provided by the VRS providers, the Commission data also shows that the largest providers experienced significant economies of scale over time as total market volumes increase.

B. Recent Information Underscores The Fact That The VRS Industry Is Characterized By Significant Economics Of Scale.

16. The RLSA Proposal similarly provides information that can be used to estimate the change in costs experienced by the VRS providers from 2010 to 2012. Specifically, the RLSA Proposal determined that the “weighted average cost is $3.396 (including accounting for
the federal corporate income tax liability." At this time, three VRS providers dominate the total industry minutes, Sorenson, Purple and CSDVRS. Therefore, if one knows the three-year weighted average costs and volumes for Purple and CSDVRS, it is relatively straight-forward to back into Sorenson’s weighted average cost and minutes. The following table summarizes this data:

**Figure 1: Volume and Average Cost per Minute Comparison**

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![Table Image]

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17. As can be seen from the above table, Purple CSDVRS and Sorenson each have minute volume exceeding 500,000 minutes per month, making them Tier 3 providers. Yet, Sorenson is approximately five times the size of Purple and CSDVRS combined. As the Commission recognizes, “one provider has a dominant market share, and thus this individual

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16 RLSA Proposal at pg. 5.

17 The total industry data comes directly from the RLSA Proposal. Of the industry, Sorenson, Purple and CSDVRS comprise the vast majority of minutes. This analysis conservatively assumes that these are the only three providers in the industry. If data for the other, much smaller providers were available, they would have substantially higher costs than Sorenson. Thus, by including the minutes and costs of the smaller VRS provider’s in the Sorenson category, this analysis results in conservatively high per-minute costs for Sorenson. Of course, RLSA and the FCC can easily review the underlying cost information by carrier to validate these positions. All data reflects a three-year weighted-average of the data relied upon RLSA (actual 2010 and 2011 data with projected 2012 data).
dominant provider having approximately 7,000,000 per month (again, about ten times the size as the second and third largest providers in the industry).

20. During its September 13, 2012 ex parte conference with the Commission, Purple presented an analysis showing, based on its own underlying cost data, the economics of scale associated with larger call volumes. At that time, Purple did not have the information subsequently provided in the RLSA Proposal to validate its positions, but that information is now available. In short, the Commission has received both the Purple analysis showing anticipated economies of scale at different projected volume levels as well as specific quantitative data from multiple carriers that undoubtedly prove additional economies of scale even within the previously defined “large, dominant providers” category, which was initially set at any volumes exceeding 500,000 minutes per month.

21. There are numerous reasons for the significant economies of scale above 500,000 minutes per month, and, in fact, the potential for economies of scale above 500,000 are even greater than those for companies within Tier 1 or within Tier 2. These economies come from a variety of areas including, but not limited to: (1) significant efficiencies in general and administrative costs (indirect costs), and (2) efficiencies in relay center costs.

22. Every data point suggests that general and administrative costs are the single most significant cost reduction as volumes increase. In particular:

The RLSA Proposal shows that total industry per-minute indirect costs dropped 11.3% between 2010 and 2012, as volumes increased by 8.7%. This reduction of about $0.074 per minute accounted for about one-half of the total

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Notice of Ex Parte Conference, Purple Communications, Inc., September 18, 2012 (“Purple Ex Parte Filing”). This filing included a presentation, the last slide of which was not included in the filing since it contains Highly Confidential Information falling under the Second Protective Order.
provider’s projected minutes and costs largely determine the rate, thereby skewing the overall weighted average cost significantly toward Sorenson’s underlying costs. Notably, both Purple and CSDVRS have costs approximately 70% higher than Sorenson.

18. Further, the *RLSA Proposal* shows that the Tier 3 providers' cost-based rates decreased from $3.90 in the 2010 *TRS Rate Order* to approximately $3.396 per minute in the *RLSA Proposal*, a 12.9% reduction. As before, this reduction is largely based on greater economies of scale in the industry, with volumes increasing from an average of approximately 84 million between 2007 and 2009 to an average of approximately 104 million between 2010 and 2012.

19. As previously noted, the Commission has long recognized that the VRS industry is characterized as an industry that benefits from economies of scale. However, the Commission has historically only recognized these economies between three categories of providers: “small providers (including new entrants); mid-level providers who are established but who do not hold a dominant market share; and large, dominant providers who are in the best position to achieve cost synergies.” But, these categories are demonstrably not sufficient to reflect the real-world cost differences, and economy of scale differences, between those providers having approximately between 500,000 minutes per month and 1,000,000 minutes per month and the

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18 2007 *TRS Rate Methodology Order* at ¶ 52.
19 A simple average of the three providers' costs would be $4.479 per minute, about one-third higher than the weighted average cost.
20 2010 *TRS Rate Order* at Table 1.
21 *RLSA Proposal* at pg. 5.
22 Again, had it been possible to remove the data for the Tier 1 and Tier 2 providers, the Tier 3 average cost per minute would have been lower. As such, the 12.9% reduction from the 2010 *TRS Rate Order* to the *RLSA Proposal* is likely understated.
23 2007 *TRS Rate Methodology Order* at ¶ 53.
cost decline of $0.143 between 2010 and 2012 (from $3.574 in 2010 to $3.396 in 2012).

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Again, this reflects a combined rate for Sorenson and all other carriers. But, the total minutes are heavily dominated by Sorenson and should be a reasonable proxy for Sorenson's specific data.
23. In short, each and every piece of evidence reveals that general and administrative costs, or indirect costs, benefit from significant economies of scale. Given that these indirect costs constitute 17.0% of industry-wide total costs, as detailed in the RLSA Proposal, and are the second-largest cost category after Communications Assistants' (CA) Related Costs, these costs are both significant and demonstrably decline as volumes increase — even for providers with call volumes in excess of 500,000 minutes per month.

24. The reasons for general and administrative cost reductions as volumes increase is relatively straight-forward — many of these costs are relatively fixed. For instance, a VRS provider will have one chief executive officer, one chief technical officer, one chief financial officer, one chief legal officer (or similar positions), despite the total volume of minutes (or market share) of the provider. While it may be the case, although not necessarily, that the compensation for those positions may be higher for larger organizations, these salary increases would not increase in lock-step with volume (i.e., a salary will not double when volume doubles). Similarly, legal and regulatory costs, human resources costs, financial and accounting functions, etc. do not vary directly with volume. Each of these functions, and the resources required to perform these functions, require a base level of investment and expense. Again, while the resources may increase somewhat with volume (or may not), they will not increase in lock-step with volume.
C. The Suggestion That CA Costs Do Not Benefit From Economies Of Scale Is Unfounded And Contradicted By All Available Evidence.

25. Several Sorenson commenters, including Dr. Pelcovitz and Dr. Katz have argued that "providers can attain high efficiency at relatively low call volumes." They have purportedly made such claims based on use of the Erlang-C model. However, neither Dr. Pelcovitz nor Dr. Katz ever explain, assess, or justify the appropriateness of either their assumptions or the Erlang C model in estimating the costs of VRS. While Erlang-C is undoubtedly useful in evaluating the staffing needs of call centers within an organization, it cannot be used to evaluate the staffing levels of different organizations with different call patterns and volumes without carefully adjusting for these differences. And, it is equally essential to understand the well known and documented limitations of the Erlang-C model.

26. First, Erlang-C assumes that sessions are initiated at a constant rate. This is far from the real-world experience where performance, and efficiency, is ultimately dictated by the peak calling situations. Put another way, staffing must be based on the maximum number of active sessions at any time during the day (or staffing during that shift of the day) and the performance levels desired in terms of waiting times and call abandon rates. Assuming a constant rate of session initiation, even over a peak hour, will necessarily understate the known volatility in call volumes within that hour. It would certainly be inappropriate to assume constant call volumes throughout an 8-hour or 24-hour period as has been assumed by Dr. Pelcovitz. Failure to account for these factors, or even acknowledge that they exist, masks the

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27 Katz March 2012 Declaration at p. 22 and Pelcovitz May 2010 Declaration at p. 10, fn. 11.
28 Pelcovitz May 2010 Declaration at p. 11 and following.
real-world efficiency that is achieved. As such, the efficiencies depicted in Appendix 2 of the
Pelcovitz May 2010 Declaration and in Figure 1 of the Katz March 2012 Declaration are simply
not attainable and, by assuming away the volatility of call session initiations, flattens out the
curve that would actually be experienced – making it appear that there is less efficiency gain at
the higher portion of the curve.

27. Second, Erlang-C tends to flatten out the curve that would result from a real-
world evaluation of call volume because it assumes that there will always be sufficient agents to
handle the call volume and that calls are never abandoned. In other words, a call could be
waiting for a very long time before it is handled, when that call would likely be abandoned in the
real world. This, in turn, tends to create less variation in agent staffing than actually occurs.
When combined with the assumption of constant session initiation, Erlang-C is simply incapable
of reflecting real-world variations. As a result, many modern uses of Erlang-C are combined
with Monte Carlo simulations to produce better results. Given the known weaknesses of Erlang-
C, most modern call centers use much more sophisticated staffing models that tend to take into
account the inherent unpredictability in call session initiation and in customer behavior.

28. Even more problematic is that, at least as far as the model produced by Dr.
Pelcovitz is concerned, Erlang-C is not even used in his calculations despite his claims to the
contrary.29 In reviewing Appendix 2 of the Pelcovitz May 2010 Declaration, the second column
in each table (identified as “agents”) does use Erlang-C modeling. However, he then determines
the “total agents required,” which, in each and every case, results in a “total agents required”
figure that is equal to or greater than the Erlang-C calculations. It is this value, the “total agents

29 Unfortunately, Dr. Katz did not produce either a model or a table that could be replicated.
required" value that Dr. Pelcovitz ultimately uses for his efficiency calculations. Unfortunately, this calculation has nothing to do with Erlang-C—it is a straightforward calculation of: \[
\frac{\text{Calls per hour} \times \text{Holding Time in Seconds}}{\text{Maximum Agent Seconds per hour}}.
\] 
The Maximum Agent Seconds per hour equals the maximum agent utilization (occupancy) assumed to be 50% times 3,600 seconds per hour—which equals an agent being able to handle 1,800 seconds per hour. Thus, take the first column in Appendix 2, where the assumption is 13.69 calls per hour and an average holding time of 390 seconds (360 seconds plus a 30 second setup time), for a total of 5,339 total seconds. In this case Dr. Pelcovitz derives 3 "total required agents" by dividing the 5,339 total seconds by the 1,800 seconds per agent (which equals 2.97 and is rounded up to the next number of agents). Using the very next row, at 30,000 minutes, the 20.53 calls per hour at 390 seconds holding equals 8,007 seconds which, when divided by the maximum utilization of 1,800 seconds per agent, arrives at 5 agents (4.45 rounded up to 5). In short, it is obvious that, while talking about Erlang-C and its use in call center staffing, Dr. Pelcovitz never even utilizes it in his staffing efficiency model.

29. And the problems with this analysis go far beyond not using Erlang-C which, as mentioned above, would be problematic even if it were actually used. Appendix 2 shows that Dr. Pelcovitz calculates something very near a 99% at all volume levels. This is, to be blunt, a contrived calculation and merely reflects the difference between the "rounded up" number of employees assuming full utilization of the 1,800 seconds per hour and the "unrounded" number of employees. So, in the above example at 20,000 minutes, the 99% efficiency factor is simply the ratio of 2.97 agents from the raw calculation and the rounded up requirement of 3 agents (2.97 / 3.00 = 99%). At 30,000 minutes, the 89% efficiency factor is simply the ratio of 4.45
agents from the raw calculation and the rounded up requirement of 5 agents (4.45 / 5.00 = 89%).

Again, the claimed efficiency calculation has nothing to do with any actual process to staff call centers. It assumes perfectly even call volumes at every second of every minute of every day of every month in a year. This cannot reflect any real-world situation.

30. But, based on real-world experience and common sense, there is simply no way to ever achieve actual VRS efficiency in the 95% area. The reason that Drs. Pelcovitz and Katz show such a high utilization is that they assume a “maximum agent occupancy” of 50%. There is no basis or support for this input.\(^{30}\) More importantly, they treat this 50% maximum agent occupancy factor as a maximum occupancy, not an average occupancy. For example, at the extremes, any given agent fluctuates between 100% efficiency and 0% efficiency. Even if, on average, that agent achieves 50% efficiency, this efficiency is measured over a period of time, not at a given point in time (again, which would either be 0% or 100%). Unfortunately, it appears that both Drs. Pelcovitz and Katz are utilizing a hypothetical overall efficiency of 50% as a maximum occupancy over any given time period (in other words, that a given agent will handle 1,800 seconds of calls per hour, each and every hour of that agent’s shift). But, this is clearly not the case. An individual agent may experience significantly higher occupancy during the peak busy hour and significantly lower occupancy during a slower time of the agent’s shift.

\(^{30}\) Drs. Pelcovitz and Katz do not appear to have done any independent efficiency analysis. Rather, they reference a 2009 GoAmerica filing in which a “similar model of trunking efficiency” was provided and where GoAmerica apparently stated that VRS efficiency is “capped [] at 50 percent in order ‘to avoid repetitive stress injuries.’” [Katz March 2012 Declaration at p. 23, fn. 58.] But, GoAmerica never asserted that there was a 50% cap on VRS efficiency. Rather, the GoAmerica filing was being used to demonstrate that higher call volumes do yield a much more productive agent occupancy and, by having a large number of very small competitors, those call centers would be inefficient and yield inefficient use of a limited supply of interpreters. GoAmerica never suggests that the 50% efficiency factor it used was anything more than a hypothetical average utilization for illustrative purposes. For this very reason, GoAmerica said “[o]ther input assumptions would yield results similar to, although obviously not identical to, that set forth in the example” – because its inputs were only intended to be illustrative, not accurate. [GoAmerica Comments at p. 5, fn. 3.]
On average, that hypothetical agent may experience 50% occupancy, but the actual occupancy during any given period may fluctuate from 0% when idle to 100% when active, to 95% over a 30 minute period to 75% over an hour period, to much less. In short, it is demonstrably wrong to suggest that a VRS staff would ever be able to achieve 50% occupancy both in the busy hour and during the slow hour.

31. Perhaps the most significant problem about using a 50% occupancy assumption and assuming that this level of utilization must occur evenly at every point throughout the day is it removes all of the call initiation volatility from the evaluation of staffing levels. By doing so, this assumption eliminates the factors associated with volatility smoothing as a function of increased volume. Put another way, Erlang-C and similar analyses will not fully reflect the true decrease expected to be realized in CA costs as volume increases. First, while Commission rules require that VRS providers answer 80% of calls within 120 seconds, 24 hours per day, seven days a week, competitive pressures require the fastest response times (i.e., slower response times will lead to a loss of customers and lower volumes, thereby increasing unit costs). As such, efficient staffing is a significant driver of labor costs. And, efficient staffing (meaning higher utilization) is more achievable with a larger volume of calls. From my experience performing traffic studies in regulatory proceedings and while an employee at AT&T, traffic during the busy hours is often as much as 12 times higher (or even higher) than traffic that occurs in lower use periods of the day. Staffing levels must be set to meet the performance thresholds desired during those busiest times of the day. However, from my experience, when you have higher volumes of traffic, it is easier to smooth these peaks out over the staffing that you have available because the
larger volume of traffic makes the predictability within the peaks more stable as illustrated further below.

32. This specific situation is analogous to the measurement of volatility of stocks and portfolios – measurement of the standard deviation of the change in a stock’s price. As most sophisticated investors realize, volatility is a key measure of risk associated with a particular stock or portfolio (i.e., the more volatility, the riskier the stock or portfolio). Thus, as a stock’s price may change both within a given day and from day to day, so will the call volumes in any given call center. As such, the volatility in call volume leads to inherent risk in staffing a call center.

33. While volatility is unavoidable, there are ways to reduce the risk associated with volatility. In the financial world, the measurement of Beta (β) is often used to estimate the relative risk of a given stock or portfolio to the market as a whole. Without getting into too much detail in the particular workings of the market or the calculation of Beta (β), the purpose is to gauge the covariance (the correlation of two random variables) of a particular stock or portfolio as compared to the overall market return. A Beta (β) of one indicates that the stock or portfolio returns change in direct correlation to the returns of the overall market. A Beta (β) of less than one the stock or portfolio is less risky than the market and a Beta (β) of greater than one indicates that the stock or portfolio is more risky than the market. But, the more relevant discussion is that the larger the portfolio of stocks (i.e., the more diversification), the more the Beta (β) of the portfolio will approach one and have the same risk as the overall market. And, as such, it is possible to reduce the overall variance in return on investment.
Figure 2: Volatility of Portfolios to the Market

34. Similarly, the larger the volume of calls a VRS provider has, the more that provider’s call patterns will reflect the call patterns of the overall market.

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31 Equity Portfolio Diversification, William N. Goetzmann, School of Management, Yale University and Alok Kumar, McCombs School of Business, University of Texas at Austin, The Author 2008, Oxford University Press, March 28, 2008, p. 441. The only intended purpose of this graph is illustrate the normalization of variance as the number of stocks in a portfolio increases.
Figure 3: Normalized Variance Of Portfolios to the Market

As such, and as illustrated in the above chart, the larger the volume, the more that provider's call patterns will reflect the call patterns of the overall market and the less variance will be experienced. This does not necessarily reduce the volatility of the call volumes in a day or from day to day, but it will, on average, reduce the risk associated with having a smaller number of call minutes. Ultimately it is the staffing level during the peak load that dictates the staffing levels overall and the more predictable those peak loads are, the more efficient (i.e., higher utilization) will be a provider's CA staff.  

The RLSA Proposal shows that total industry per-minute indirect costs dropped 11.3% between 2010 and 2012, as volumes increased by 8.7%. This reduction of about $0.074

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32 Id.
33 See, Katz March 2012 Declaration at p. 21. "Firms that process larger volumes are able to take greater advantage of statistical averaging to smooth out the stochastic variation in their traffic volumes." But, while correctly identifying these facts, Drs. Pelcovitz and Katz utilize a model that eliminates these very factors, assuming constant rate of session initiation, no abandonment, and the same variance whether at Purple's volumes or at Sorenson's volumes.
per minute accounted for about one-half of the total cost decline of $0.143 between 2010 and 2012 (from $3.574 in 2010 to $3.396 in 2012).

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38. In addition, independent research and analysis confirms that call volume is a key determinant of economies of scale. For example, in an issue paper recommending best practices for call center staffing, the North American Quitline Consortium (an industry group focused on promoting best practices for call centers staffed with counselors to help callers with issues such as smoking cessation) states:

Another factor that has a major impact on staffing is the size of the center or the agent group. Centers handling large volumes of calls will naturally be more efficient than smaller groups. This is due to the economies of scale of large groups.

As highlighted in the example below, doubling the call volume does not require two times the number of staff to meet the same service goal of 80% in 20 seconds. When call volume increases eight times, only about six times the number of staffers is needed. As the volume grows, the staff-to-workload ratio gets smaller and smaller.

*The reason for these increased efficiencies and the lower staff-to-workload ratio is simply that with a higher volume of calls, there is a greater likelihood that when an agent is finished with a call, there is another call for that agent to handle. With a bigger volume, each person has the opportunity to process more
calls each hour. Each person spends less time in the available state, waiting for a call to arrive, and not as many agents are needed because each person handles more calls.\textsuperscript{34}

39. Finally, the Commission must recognize that there are other, perfectly valid reasons that two different providers may have very different cost structures. The fact that there are multiple competitors with different business plans is, in itself, an indicator that the industry players are competing in a way that mimics the way a competitive market would reach. At this point in time, Sorenson undoubtedly dominates the market. It has more marketing budget, outreach budget, and research and development budget. Smaller providers, such as Purple and CSDVRS must try to gain market share through other strategies. Many industries exhibit this characteristic and smaller players that cannot compete on costs compete based on factors such as quality of service and customer service. As such, factors such as average response time, quality of interpreters and labor rates for such interpreters, may very well result in a higher cost structure for some competitors than for others. This result is not indicative of an ineffective or uncompetitive industry — rather, it is reflective of a competitive industry in its growth and development where the service has not been commoditized.

40. Thus, in addition to the largely intuitive notion that general and administrative costs decrease on a per-unit basis as volumes increase (an intuitive notion that is supported by a myriad of data points), call centers also experience economies of scale and those economies result in improved utilization of employees and lower per-minute costs of VRS providers.

Industry participants have postulated a variety of hypothetical models that question the extent of

the economies of scale in the VRS industry, but none of the participants have even attempted to correctly use the Erlang-C model with inputs supported by actual data. And, none of these providers have put forth any explanation as to why all actual data shows significant economies of scale - whether comparing smaller providers to Sorenson or whether comparing Sorenson at its current volumes to Sorenson at much lower volumes.

41. However, Drs. Pelcovitz had Katz have postulated two theories to support a potential reason for the realized economies in scale. First, Dr. Pelcovitz explains that "[t]he textbook model of a firm's costs function depicts a "U" shaped cost curve." He bases this conclusion on three reasons, two of which either do not apply or are largely irrelevant in the cost curve. In particular, Dr. Pelcovitz does not explain which production costs, such as factories, may be difficult to expand or how buying in bulk would apply to the VRS industry. But, more importantly, while the VRS industry may experience a U shaped cost curve, such a curve is not likely to cause an increase in costs at the volumes exhibited by these companies (there are many, much larger call centers providers that deal with much larger volumes than those at issue here). And, at the same time, Dr. Pelcovitz notes that Sorenson does not experience many of the pitfalls of other industries because it can readily establish new call centers to avoid a shortage of its inputs (interpreters).

42. More problematic is the suggestion that "[t]o the extent that a firm operating at that traffic volume had significantly higher costs than does Sorenson, it would likely be due to management decisions rather than failure to achieve sufficient scale." This statement is baseless, unsupported, and highly suspect. In order to believe this, one would have to believe

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35 Pelcovitz May 2010 Declaration at p. 7.
36 See, Katz March 2012 Declaration at p. 17.
that both Purple and CSDVRS, competitors of each other with similar volumes and similar cost structures, both have equally ineffective or inadequate management. That is highly unlikely. Rather, a much simpler explanation can be seen by actual data – both between competitors at different volume levels and by Sorenson’s own experience as its volumes have increased. Given that the Commission’s cost-based rates for the third tier, which is overwhelmingly based on Sorenson, decreased from about $6.30 in 2007 TRS Rate Methodology to $4.51 in its 2010 TRS Rate Order, a 28.4% reduction, it seems clear that Sorenson experienced substantial cost declines as its own volume increased. Then, the Commission found that the weighted-average cost-based rate decreased to $3.396 (another 33% reduction) in the RLSA Report. In light of these extraordinary reductions in the industry cost-based compensation rates, and in the face of substantial overall industry growth, it is incomprehensible that one could write these off as being the result of “management decisions.”

D. Given The Fact That There Are Such Significant Economies Of Scale, With The Largest Carriers Achieving The Largest Reduction In Per-Minute Costs, There Is No Basis To Use A Single Weighted Average Industry Cost-Based Rate To Calculate A Reduction To Existing Rates.

43. The single largest problem with the RLSA Proposal is that it contemplates using a single, industry-wide cost as a basis for adjusting the current rates of all VRS providers. All of the information available shows that this methodology makes no sense and will harm all VRS providers other than Sorenson and will help Sorenson – essentially exacerbating the problem of having one carrier dominate the market.

44. For starters, the RLSA Proposal recommends that the Commission “reduce[e] the current VRS rates by one-third of the difference between the current rate and a three year
weighted average [overall-industry] cost. 37 But, as mentioned before and further supported above, the Commission recognizes that “one provider has a dominant market share, and thus this individual provider’s projected minutes and costs largely determine the rate.” 38 As such, what RLSA is really proposing is that the rate for all VRS providers should be reduced by one-third toward Sorenson’s costs. Of course, this would ensure that Sorenson is able to earn a return with its cost structure, but any carrier with a higher cost structure (meaning all other providers in the industry) will be adversely affected. In fact, the RLSA Proposal has the result of reducing both the Tier 1 and Tier 2 rates by $0.95 but only reducing the Tier 3 rates by $0.56, roughly 60% of the reduction in the Tier 1 and Tier 2 rates. 39 And, this larger proposed reduction in the Tier 1 and Tier 2 rates is being made without any information or evidence suggesting that the Tier 1 and Tier 2 providers have experienced greater cost reductions than the Tier 3 providers.

45. At the same time, the RLSA Proposal identifies that there is “substantial turn-over in firms providing VRS.” 40 The staffing levels of the largest three providers, Sorenson, Purple and CSDVRS, have remained constant during this time. Thus, this turn-over identified by RLSA is occurring in the smaller firms, which suggests that they are not profitable. Using a target industry-wide rate that predominately reflects the costs of the largest and most efficient provider will make it nearly impossible for smaller competitors to survive.

37 RLSA Proposal at 6.
38 2007 TRS Rate Methodology Order at ¶ 52.
39 This translates into a 15.2% reduction in Tier 1 and Tier 2 rates compared to only an 11.0% reduction in Tier 3 rates. However, the dollar reduction is the more meaningful metric in this instance because what really matters to these carriers is the dollar reduction in the per-minute compensation.
40 RLSA Proposal at 6.
46. Further, the *RLSA Proposal* will have a similar impact on Purple and CSDVRS. The following table compares Purple's and CSDVRS's costs to the recommended compensation in the *RLSA Proposal*:

**Figure 4: Proposed Impact on VRS Providers**

<table>
<thead>
<tr>
<th>Provider</th>
<th>Tier 3 Rates</th>
<th>Costs</th>
<th>Recommended Compensation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purple</td>
<td>$X</td>
<td>$Y</td>
<td>$Z</td>
</tr>
<tr>
<td>CSDVRS</td>
<td>$U</td>
<td>$V</td>
<td>$W</td>
</tr>
</tbody>
</table>

This table shows only the Tier 3 rates compared to each provider's costs. While the VRS compensation rates in the *RLSA Proposal* are implemented in a "waterfall" fashion, the point is to show that only one provider has sufficient economies where they could profitably provide service at the highest tier (meaning that Purple and CSDVRS would lose money for all minutes in excess of 500,000 per month).

47. The above table demonstrates that, by using a single, industry-wide rate for all three Tier 3 carriers, the *RLSA Proposal* is actually creating a scenario where only one carrier is actually profiting from providing VRS services at the highest volume tier. As one might expect, this would be disastrous not only to Purple and CSDVRS but to all VRS providers other than Sorenson. As one might conclude, this would exacerbate the existing dominance of Sorenson in the industry and could encourage monopolistic conduct. In short, the *RLSA Proposal*, if adopted, could be the first step (and perhaps the final step) toward destroying competition in the VRS industry.

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41 This table shows only the Tier 3 rates compared to each provider's costs. While the VRS compensation rates in the *RLSA Proposal* are implemented in a "waterfall" fashion, the point is to show that only one provider has sufficient economies where they could profitably provide service at the highest tier (meaning that Purple and CSDVRS would lose money for all minutes in excess of 500,000 per month).

42 See, Table 1.
E. There Is No Reason To Believe That VRS Costs Will Necessarily Continue To Decline.

48. A fundamental concept behind the RLSA Proposal appears to be a belief that there is a "downward trend in actual cost of service" and that a projected increase in 2012 costs "need(s) to be scrutinized closely for reasonableness." As identified previously, there have been substantial unit cost decreases, on average, in the VRS industry. And, the larger the volume increases, the larger the unit cost declines.

Figure 5: Comparison of Price Declines and Volume Increases

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49. But, despite these overall declines, the RLSA Proposal also recognized "the substantial increase in communications assistants' cost" projected for 2012. Again, while suggesting that these costs "need to be scrutinized closely for reasonableness" RLSA does also recognize that they are within the range of labor compensation increases, although on the very high end. I would agree that these costs should be carefully scrutinized but, at this time, there is no reason – or even suggestion – that these real-world cost increases are not accurate.

48 RLSA Proposal at 3.
44 Id., at 3.
45 RLSA Proposal at 3.
50. The fact of the matter is that, while the VRS industry is characterized by having significant economies of scale, the industry is also characterized as having a very high labor-related cost component. In fact, Purple’s VRS employee costs conservatively constitute in excess of two-thirds of total expenses. If one were to include Purple’s other labor-related costs, including call-center contracted labor, advertising and marketing, outside services and professional fees and other associated costs, Purple’s overall labor-related costs would be a much higher percentage of total costs. While there are variations in labor costs, they undoubtedly and indisputably increase over time. And, because labor costs are the single largest cost (by far) of providing VRS services, the total unit cost of providing VRS services are likely to increase, not decrease, over time absent increased volume and economies of scale.

51. Of course, labor cost increases may be offset, or even more than offset, by productivity gains. Higher productivity gains may be realized in the event of new technologies or even efficiencies in performance. The 2007 Rate Methodology Order suggested that VRS experiences productivity gains of about 0.05% per year. In short, without the development of significant new technologies, it is reasonable to expect that VRS labor costs increases will exceed the productivity gains in any given year—again, absent an increase in volumes resulting in greater economies of scale.

52. In short, there is no reason to expect that the VRS industry will experience cost declines absent overall growth in VRS volume resulting in greater economies of scale. And, while there may have been a reason to expect significantly greater economies in years past, with

Employee costs include salaries and wages, payroll taxes and benefits paid to employees.

2007 TRS Rate Methodology Order at ¶ 47.
an average annual growth of 38% between 2005 and 2009,\textsuperscript{48} the average annual growth has only been about 3.0% over the last two years.\textsuperscript{49} There is no basis for the belief that this will change in the near future. As such, there is simply no reason to envision that the VRS industry will experience a reduction in per-minute costs going forward and no evidence has been presented to support such a notion.

53. While it is understandable that the Commission is frustrated by "the large discrepancy between actual costs and provider compensation in the face of substantial evidence that providers are receiving far more in compensation than it costs them to provide service,"\textsuperscript{50} it is not fair to conclude that past "projections that consistently overstate true costs and overcompensate VRS providers"\textsuperscript{51} are still true today. In fact, it would have been very difficult for VRS providers to accurately estimate the economies of scale they were to realize over that period.\textsuperscript{52} This is not unusual in an industry characterized by rapid adoption of new technologies. However, once an industry has experienced high-scale adoption, growth rates become more stabilized and predictable. Rather, the relatively small and steady growth in the VRS minutes today make it much more likely that providers can more accurately estimate their costs, and these costs are not likely to decrease in any significant way without the benefits of additional economies of scale. At the very least, the above analysis makes it clear that RLSA's suggestion that "the Commission could determine an annual reduction in the differences in Tier rates if the

\textsuperscript{48} VRS industry minutes grew from 27.2 million in 2005 to 98.7 million in 2009.
\textsuperscript{49} VRS industry minutes grew from 98.7 million in 2009 to 104.8 million in 2011.
\textsuperscript{50} \textit{2010 TRS Rate Order} at ¶ 12.
\textsuperscript{51} \textit{Id.}
\textsuperscript{52} In order to do so, each provider would have had to anticipate the growth in VRS minutes and their portion of that overall growth. Such a dynamic market with such astronomical growth makes any forecast subject to numerous assumptions and uncertainties.
Commission finds that such a reduction is in the public interest\textsuperscript{53} would be inappropriate given the current nature of the VRS industry.

F. The Commission Must Reevaluate Its Views For Calculating Costs For The Establishment Of Compensation Rates.

54. The \textit{FCC Public Notice} seeks comments on "the appropriate treatment of capital costs, rate of return and related issues."\textsuperscript{54} Industry participants have widely supported the need for the compensation rates to compensate providers for all costs required to provide VRS services.\textsuperscript{55} These views are well founded and much supported. Should the Commission fail to reimburse providers for some reasonable level\textsuperscript{56} of marketing, outreach and research and development, it follows that providers will not cover their costs. As various commenters have pointed out, failure to compensate for these real-world costs will necessarily lead to a number of negative consequences.\textsuperscript{57}

\textsuperscript{53}RLSA Proposal at 7.
\textsuperscript{54}FCC Public Notice, pg. 8.
\textsuperscript{55}See, for example, Comments of Sorenson Communications, Inc., March 9, 2012, pg. 40 ("Sorenson March 2012 Comments") and CSDVRS Ex Parte Notice, CG Docket Nos. 10-51 and 03-123, October 25, 2012 ("CSDVRS Ex Parte Notice").
\textsuperscript{56}A reasonable level does not necessarily mean a per-minute compensation rate equal for all providers. For example, a unitary compensation rate for marketing, outreach and research and development will help perpetuate the market dominance of the current dominant provider. Assuming an equal per-minute compensation rate for all VRS providers and that Sorenson's currently has an approximately 80% market share, Sorenson would enjoy approximately 4 times the marketing, outreach and research and development funds than all other industry players combined (or approximately ten times the next largest provider). Sorenson would then be able to spend ten times the amount of marketing dollars and invest ten times more on research and development than any other provider, thereby perpetuating a scenario where Sorenson will continue to dominate the market, if not corner the market. The RLSA data suggests that approximately $38 million is spent on marketing, outreach and research and development per year. These funds are necessary and should be disbursed to VRS providers in a competitively neutral manner so as not to unreasonably distort the market.
\textsuperscript{57}See, for example, Declaration of Michael L. Katz, March 9, 2012, pg. 45 ("Katz March 2012 Declaration") and CSDVRS Ex Parte Notice, October 25, 2012.
55. Similarly, the industry has widely agreed that a traditional regulated rate of return methodology is inapplicable for the VRS industry. Sorenson has commented that "attempts to limit profits to a specific return on capital would grossly under-compensate providers" because "[u]nlike traditional telecommunications services, which are capital intensive, the vast majority of VRS costs stem from non-capital expenses." Sorenson further explains that "[i]n a service industry, the firm doesn't just pass through its labor costs; it earns a margin on those costs to reward it for assembling the labor pool and organizing it into a productive unit."

56. The RL&A Proposal fully supports the fact that using a traditional return on investment analysis would be catastrophic for the industry and each provider in the industry. The three-year weighted average return on investment, using the Commission's 11.25% rate of return adopted in 1990, is $0.0569 (less than six cents). When adjusted for taxes, this amounts to $0.0769 (less than eight cents). This accounts for only 2.3% of the industry-average cost structure. Assuming approximately 100,000,000 industry-wide minutes, this amounts to a total annual industry-return of $7.7 million dollars on an industry with not only a capital investment base in excess of $50 million, but approximately $340 million in annual expenses. While these margins would not be attractive to any industry participants, the vast majority of these dollars are going to Sorenson, leaving very little for the remainder of the industry. In short, a rate of return

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58 Reply Comments of Sorenson Communications, Inc., September 2, 2012, pp. 4-5 ("Sorenson September 2010 Comments") and Comments of CS-DVRS.
60 The specific rate of return is simply not a very significant matter. By way of example, reducing the rate of return by 1/3", to 7.5%, would reduce the calculated industry cost by only about 2.5 cents. Similarly, increase the rate of return by 1/3", to 15%, would increase the calculated industry cost by only about 2.5 cents. As such, while it is important to allow industry participants to recover these costs, the more significant rate-setting issues revolve around properly establishing rates that achieve the FCC's public policy objectives.
methodology for compensating VRS providers will simply not be attractive, will drive investors (and investments) from the market and harm the industry as a whole.

57. While it is true that many business decisions are made based on rate of return related to capital investment, this is not a primary driver in valuing an enterprise. Here, it is important to differentiate between investing capital (i.e., money) and capital investment (i.e., the capital, or fixed, assets of a firm). Rather, a business' primary objective is to maximize its enterprise or shareholder value. McKinsey and Company publishes a text on the valuation of enterprises entitled Valuation: Measuring and Managing the Value of Companies. In this text, the authors note the following: "The guiding principle of value creation is that companies create value by investing capital they raise from investors to generate future cash flows at rates of return exceeding the cost of capital (the rate investors require to be paid for the use of their capital)." It is important to note here that the valuation of an enterprise is not tied solely to the return on capital investment (i.e., fixed assets) as limited in the Rolka report, but instead is tied to the return on the capital (i.e., dollars) raised from investors. This concept of providing a return on investors' money is important for the Commission to consider in this proceeding because investors will no longer invest money in this industry if those dollars are not generating returns and, as such, the FCC will fail in achieving a competitive landscape.

58. Given that shareholder value is tied to the discounted value of future anticipated cash flows, it is obvious that earnings are critical to the value of a company and investors' decisions are, in turn, guided by these earnings. For this reason, one of the most widely-used valuation techniques is expressed as a multiple of earnings or a similar metric (such as earnings

before interest, taxes, depreciation and amortization or EBITDA) relative to the enterprise value
for the firm. McKinsey’s text on valuation goes on to note:

Discounted cash flow (DCF) analysis is the most accurate and flexible method for
valuing projects, divisions, and companies. Any analysis, however, is only as
accurate as the forecasts it relies on. A careful multiples analysis—comparing a
company’s multiples with those of similar companies—can be useful in making
such forecasts and the DCF valuations they generate more accurate. Such an
analysis can help test the plausibility of cash flow forecasts, explain mismatches
between a company’s performance and those of its competitors, and support
useful discussions about which companies the market believes are strategically
positioned to create more value than other industry players.52

In short, there are many approaches that the Commission could implement that would
properly drive proper business incentives in the labor-intensive industry that does not
have significant fixed assets. But, unfortunately, a return on fixed investment is not one
of the methodologies. Whether forecasting cash flows, margins, EBITDA, or utilizing
metrics and multiples, the most important decision is to send the correct economic signals
to the marketplace – signals that encourage investment in new technologies, superior
customer services, efficiency gains and competition.

59. Moreover, of the numerous ways that the Commission can properly regulate the
VRS market while achieving its public policy objectives, it is most essential that the Commission
look toward an approach that continues to foster innovation and competition. By way of
example, should the Commission move to an industry-wide cost as a basis of establishing the
reimbursement rate for VRS, Sorenson would undoubtedly reap windfall profits and drive most,
if not all, competitors from the market. Doing so will help the Commission achieve the lowest
VRS cost per minute and minimize the size of the fund – but only in the short run. In the long

52 Id. at Kindle Location Nos. 5469-5474.
run, the industry, and the hearing impaired consumers that it serves, will suffer from marginal or nonexistent competition.\textsuperscript{63}

60. On the other hand, it is also true that efficient regulation necessarily needs to incentivize carriers to continue providing services as well as to improve its operations (improved services, lower costs, etc.). In this respect, the Commission would be best served by creating a consistent and sustainable compensation regime that fosters effective competition, hampers the ability of a single carrier to dominate the market and rewards productivity improvements. This compensation regime could effectively be informed by historical costs but, as stated above, the rates must cover costs plus allow an earning potential that will drive enterprise value and mimic the mechanics of a competitive marketplace.

61. Once established, the industry needs some measure of predictability in revenue streams in order to make informed decisions about long-term opportunities and make rational investment decisions. Sorenson, for example, has supported the concept of a rate cap.\textsuperscript{64} A rate cap is a perfectly rational and appropriate regulatory approach that helps ensure viable providers with proper incentives. And, it also establishes predictability in the fund administration and size. However, the Commission needs to be careful that a price cap mechanism drives a competitive market, not a market that will result in a single, dominant provider. As such, price caps must be both tiered in manner that will reward efficiencies toward a competitive market but provide a disincentive toward pursuing market dominance. This could be done in any number of ways. The Commission could set an absolute maximum minute threshold for any single provider. The

\textsuperscript{63} Lack of competition is widely recognized as having numerous repercussions, including less innovation, poor service and inefficient operations.

Commission could establish a tier structure that, while providing revenue for minutes above a maximum threshold, that revenue will result in reduced earnings for each minute in excess of the maximum threshold (i.e., variable costs exceed per-minute revenues). The Commission could continue eliminating marketing, outreach and research and development funds at a given maximum minute threshold and redistributing those funds to competing carriers. The possibilities are endless.

III. CONCLUSION

62. At its core, the single most important issue the Commission needs to determine is if it wants to pursue a compensation regime that will promote a VRS market with multiple providers (and reap the benefits of competition) or if it wants to promote a VRS market that will yield the lowest short-term cost (but lose the benefits of a competitive market). This single decision will drive much of the Commission’s decision-making.

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64. While Sorenson may argue that such cost differences may be due to better management practices, such an argument is purely speculative and unfounded. And, despite the ultimate reason for these lower costs, one fact remains the same and remains undisputable – should the Commission implement a single, industry-wide rate, as opposed to a tiered rate structure, either companies such as Purple and CSDVRS will go out of business or Sorenson will reap a windfall profit perpetuating its market dominance. As a result, should the Commission want to promote competition and the rewards thereof, it must adopt policies to level out the playing field so that no single provider dominates the market.

65. Once the Commission makes its determination on how and if it wants to promote competition in the VRS industry, there seems to be unanimous agreement that it is imperative that the Commission adopt a compensation regime that best simulates the incentives in a competitive market and that rate-of-return regulation does not accomplish this goal because of the unique, labor-intensive nature of the VRS industry and the lack of significant capital investment. The best way for the Commission to do this is to focus on the bottom-line market driver – enterprise value, which is, in turn, driven by earnings.

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It is equally true that it would be impossible to argue that all differences are entirely volume-based. But, it is beyond belief that the entire reason that Sorenson has costs less than one-half of those of its next two largest competitors is because its management practices are that much better.
Mr. Turner's Curriculum Vitae
Steven E. Turner
Managing Director – Economic Consulting

Steven Turner is a Managing Director of the FTI Network Industries Strategies group within the Economic Consulting practice. Mr. Turner has offices in Washington, DC and Canton, Georgia. Mr. Turner has a long and distinguished career working in the telecommunications industry. He has provided extensive expert testimony in technical and financial areas related to telecommunications specifically addressing contracts, terms and conditions, telecommunications network investment and operations costs, and other related issues.

Background

In 1987, Mr. Turner joined AT&T and, during his career there, held a variety of engineering, operations, and management positions. These positions covered the switching, transport, and signaling disciplines within AT&T. From 1995 to 1997, Mr. Turner worked in the organization responsible for AT&T’s entry into the local infrastructure market and developed models evaluating AT&T’s potential market entry alternatives including switch and fiber builds, hybrid fiber-coax service, broadband fixed wireless, and others. While in this organization, Mr. Turner gained familiarity with many of the regulatory issues surrounding AT&T’s local market entry, including issues concerning the unbundling of incumbent local exchange company networks. Mr. Turner was on the AT&T team that negotiated with SBC concerning unbundled network element definitions and methods of interconnection.

From 1997 to 2006, Mr. Turner was President of his own consulting firm, Kaleo Consulting. Kaleo Consulting was a boutique consulting firm specializing in providing expert testimony in technical and financial areas related to telecommunications. Mr. Turner’s projects involved issues related to contractual terms and conditions between telecommunications service providers, the costs for network elements including interoffice transport, collocation, loops (media used to connect to customer premises), switching, signaling, and other related areas. Mr. Turner’s consulting assignments also included the responsibility of negotiating interconnection agreement terms and conditions between new entrants and incumbents or negotiating settlements with numerous companies including AT&T and Verizon. To the extent that these contracts required the inclusion of rates for telecommunications services, Mr. Turner developed and/or evaluated numerous models pertaining to the development of network component costs. Finally, Mr. Turner’s firm
provided strategic consulting services to companies regarding where and how to enter various telecommunications markets.

Now at FTI Consulting, Mr. Turner continues to work extensively within the telecommunications industry both in the United States and internationally.

Mr. Turner holds an MBA with a concentration in Finance from Georgia State University. He has also received his Bachelor of Science degree in Electrical Engineering from Auburn University.
STEVEN E. TURNER

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FTI CONSULTING EMPLOYMENT EXPERIENCE:

Managing Director (Network Industry Strategies – Telecommunications) (Dec 2006-Present)
- Provide expert testimony in technical and financial areas for telecommunications specifically
  addressing contracts, terms and conditions, telecommunications network investment and operations
  costs, and other related issues.
- Negotiate contracts and settlement agreements on behalf of clients particularly related to
  telecommunications terms and conditions.
- Develop and/or evaluate numerous models pertaining to the development of costs for various
  components of telecommunications networks including interoffice transport, collocation, loops,
  switching, signaling and other related areas.
- Develop models to aid companies in developing market entry plans for the local telecommunications
  market. This assistance includes evaluating what market entry alternatives as well as which
  geographies provide the best profit opportunities for the new entrant.

KALEO CONSULTING EMPLOYMENT EXPERIENCE:

President – Telecommunications and Financial Consulting Firm (Jan 1997-Dec 2006)
- Head of boutique consulting firm specializing in providing expert testimony in technical and financial
  areas related to telecommunications including the following: contractual terms and conditions and
  costs for interoffice transport, collocation, loops (media used to connect to customer premises),
  switching, signaling and other related areas.
- Negotiated contracts and settlement agreements on behalf of clients with numerous companies
  including SBC (Southwestern Bell, Ameritech, and Pacific Bell), Verizon (Verizon-East and GTE
  territories), and BellSouth.
- Developed and/or evaluated numerous models pertaining to the development of costs for various
  components of telecommunications networks including interoffice transport, collocation, loops,
  switching, signaling and other related areas.
- Develop models to aid companies in developing market entry plans for the local telecommunications
  market. This assistance includes evaluating what market entry alternatives as well as which
  geographies provide the best profit opportunities for the new entrant.
- Provided consulting services for venture capital project evaluations.

ALT COMMUNICATIONS EMPLOYMENT EXPERIENCE:

Co-Founder and President – Competitive Local Exchange Carrier (Feb 1998-Jun 1999)
- Co-founded the first operational Competitive Local Exchange Carrier (CLEC) providing
  telecommunications services in Texas using the unbundled network elements platform (UNE-P).
- Established all contractual relationships with SBC to provide local phone service in Texas.
- Established all legal authorities required with the state regulatory bodies to provide local phone service
  in Texas.
- Developed tariffs necessary to provide in-state and inter-state services.
- Negotiated the sale of ALT Communications to Birch Telecom (headquartered in Kansas City, MO) in
AT&T EMPLOYMENT EXPERIENCE:

DISTRICT MANAGER - CONNECTIVITY NETWORK PLANNING - LI&AM (Feb 1996-Dec 1996)
- Managed the development of AT&T's infrastructure Plans of Record for the Southwest region. These plans entailed defining the right mix of built and leased infrastructure to meet AT&T's local offer needs at the least cost.
- Managed AT&T's dedicated access inventory in the Southwest region. This effort involved identifying the optimum supplier(s) in each market for AT&T's access needs to meet both financial and strategic objectives.

- Managed the development of strategic models to analyze alternatives for entering the local market. These models considered various technologies for entering local that would optimize the contribution to AT&T from a revenue, expense, and capital perspective.

- Directed a CCS-NSD management-union team in re-engineering the engineering, provisioning, and maintaining of the Operator Services network. Delivered a re-engineered process that reduced operational expense significantly while mitigating the impacts on customers and employees.

PROJECT MANAGER/SYSTEM ENGINEER - CCS Centralized Test Center (Jan 1992-Jun 1994)
- Coordinated implementation plans and system development for new services and network elements in the Common Channel Signaling (CCS) Network. The planning scope included provisioning, monitoring, and maintaining the T1.5 facilities for the CCS signaling circuits.
- Acquired funding (development, capital, and head count) through writing and defending business cases in support of projects for new services or network elements in the CCS Network. Upon approval, coordinated the implementation of system development and capital projects affecting the CCS Centralized Test Center.

DEPARTMENTAL QUALITY MANAGER - Network Operations (Jan 1990-Jan 1992)
- Developed the Network Operations Quality Management System and implemented it into an organization of 5000 people. Implementation required gaining organizational support for staffing and training 40 Quality Specialists and managing their efforts in transferring the quality technology into Network Operations.

OPERATIONS SUPERVISOR - Regional Network Service Center (Nov 1988-Dec 1989)
- Managed the Regional Network Service Center serving AT&T customers in the Southeastern United States through correcting their service troubles. Responsibilities included leading a team of 20 associates who responded to over 2000 customer troubles per month and escalating with Local Exchange Companies to remove barriers to trouble resolution.

4ESS SWITCH ENGINEER - Network Engineering Services (Dec 1987-Nov 1988)
- Identified current levels of asset utilization, analyzed future needs, and developed a capital budget to purchase and provision the necessary equipment to efficiently meet customer needs. Managed the implementation of over $10M in capital projects.
GENERAL ELECTRIC EMPLOYMENT EXPERIENCE:

RESEARCH AND DESIGN ENGINEER - Simulation and Control Systems (Jun 1986-Dec 1987)

- Designed and developed a major sub-system for a high-speed graphics simulator supporting both defense and commercial customers.
- Designed and developed a Very Large-Scale Integrated (VLSI) Chip with over 80,000 transistors used in the video display sub-system for the high-speed graphics simulator.

EDUCATION:

August 1990: Masters of Business Administration Degree - Finance
Georgia State University
Atlanta, Georgia

December 1986: Bachelor of Science Degree - Electrical Engineering
Auburn University
Auburn, Alabama
Steven E. Turner
Expert Testimony


Transcripts for hearings in the above matter are available from the Oklahoma Corporation Commission.


Transcripts for hearings in the above matter are available from the Kansas Corporation Commission.


Transcripts for hearings in the above matter are available from the Texas Public Utilities Commission.


Before the Nevada Public Utilities Commission, Cost Proceeding before the Nevada Public Utilities Commission to Determine Cost-Based Rates for Unbundled Elements and Interconnection for Nevada Bell and Sprint-Centel of Nevada, Rebuttal Testimony of Steven E. Turner Regarding Collocation, June 1997.

Transcripts for hearings in the above matter are available from the Nevada Public Utilities Commission.


Transcripts for hearings in the above matter are available from the Arkansas Public Services Commission.


Transcripts for hearings in the above matter are available from the Texas Public Utilities Commission.


Transcripts for hearings in the above matter are available from the Hawaii Public Utilities Commission.

Before the Public Service Commission of the State of Missouri, In the Matter of AT&T Communications of the Southwest, Inc.'s Petition for Second Compulsory Arbitration Pursuant to Section 252(b) of the Telecommunications Act of 1996 to Establish an Interconnection Agreement with Southwestern Bell Telephone Company, Joint Position Statements, November 1997.

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