- Provisional certification may serve as an intermediary step towards full certification to allow the FCC time to assess the true ability of a new provider to fully meet the mandatory minimum standards. Such a system, lasting no more than six months to one year, would allow the FCC time to conduct increased due diligence as part of the process to gain full certification, and in doing so ensure that those companies entering the VRS industry meet the highest standards and provide the highest level of service to the deaf and hard of hearing community.
- Common Carrier status should not be required for the certification of VRS service providers because, as noted, it can in some circumstances be extremely easy to obtain.

26. The Commission is also concerned that the current certification process does not offer adequate oversight and assurance that certified VRS providers are offering satisfactory service and are only seeking reimbursement for authorized service. How should our rules be changed to sufficiently deter potential fraud and abuse? To what extent should compensation of non-certified providers be permitted or prohibited? Because the Interstate TRS Fund pays for both interstate and intrastate VRS calls, do states have the appropriate incentives to monitor certified VRS providers? What type of state oversight is currently available for VRS providers that receive intrastate compensation by virtue of their state contract? Should affiliation with a state relay program be sufficient to receive such compensation, or should federal certification be required of all providers to ensure effective oversight of their practices? How much authority, if any, should the Commission delegate to the Interstate TRS Fund Administrator to monitor or audit VRS providers for compliance with our rules? Should the Commission require that VRS providers be recertified annually?

- Only a vigorous oversight, auditing and monitoring of certified VRS providers can hope to reduce fraud and abuse, this must lie in the hands of the FCC. Clear and concise rulemaking is necessary to define what sorts of calls are permissible and not permissible. For example, the FCC should share a list of prohibited destination telephone numbers with all VRS providers, as well as clearly defining exactly what sorts of calls are compensable or not compensable. Thus providers will submit for compensation only calls that are explicitly within those categories approved by the FCC. The lack of clear current guidelines is one major barrier facing the industry at the current time.
- The Companies believe that entities operating under the auspice of an "operational affiliate" relationship, whether they provide services as an entity: 1) whose applications for Fund eligibility are pending; or 2) that are providing services for the eligible provider as a subcontractor; or 3) that are engaged by eligible providers as branded affiliates; or 4) provide services under a separate brand, are ultimately the responsibility of the eligible provider, and should be compensated by means of that eligible provider's certification. From an operational perspective, such entities could be required to disclose themselves to the consumer as the service provider, identify the operational affiliate under whose eligibility the entity was providing service, and would be required to meet all Mandatory Minimum Standards, operate under all operational guidelines, and in every manner provide service as if it had already been granted eligibility by the Commission. This ensures that a single entity remains directly responsible to the Commission, who maintains legal authority over the eligible provider's regulated operations, and subject to Commission enforcement action. The Companies maintain

that with these clearly established requirements and restrictions, "operational affiliations" provide a valuable option and benefit to providers and the public, with no additional risk.

- The Commission is the ultimate regulatory authority with regard to the provision of VRS. Monitoring and auditing functions could be performed by NECA with final oversight authority by the Commission alone.
- So long as the Commission retains the right to, within the confines of clearly delineated rules and regulations and with proper regard to due process, revoke a provider's certification for noncompliance or misconduct, annual recertification would be inefficient, and place an undue burden on providers and the commission alike. A periodic (3 to 5 year) recertification process might be desirable so as to ensure that providers are current in their compliance requirements and technological ability.

B. Part II – Broader and Economic Issues Concerning Video Relay Service

27. In this part, we ask whether we should consider fundamental changes to the delivery of VRS, including questions on the structure of the VRS market. We are aware that, at present, numerous issues involving VRS remain unresolved; including specific petitions requesting that the Commission disallow certain relay practices and clarify its VRS compensation rules and rules of service. The Commission is continuing its review of all filings in the CG 03-123 and 10-51 dockets and the WC Docket No. 05-196, and will consider these other filings as we move forward in this VRS reform process.

28. We focus on three key issues. First, we wish to make sure that the VRS program fully serves the needs of its intended consumers as well as it can. We seek to ensure that this program is meeting the needs of the entire eligible population.

    - The Companies absolutely agree that the FCC, the VRS industry and consumers must all work together to ensure that the VRS program lives up to its promise and is able to meet the needs of the entire eligible population.

29. Second, it has been several years since the adoption of Section 225 of the Communication Act. Clearly, advances in technology and the way that people communicate necessitate a reexamination of the Commission's VRS program. Technological advancements, in areas such as video communication devices and video transmission protocols may enable a more efficient and effective VRS program than that which currently exists.

    - The Companies also recognize that advances in technology and specifically in the way that people communicate necessitate a fresh look at how to most effectively and efficiently provide VRS.

30. Third, we are concerned that the program is fraught with inefficiencies (at best) and opportunities for fraud and abuse (at worst). For example, the TRS Fund administrator had projected that the Fund would have reached a funding requirement of $891 million for the 2009-10 Fund year. Eighty-eight percent of this, or $780 million, would have been payment for VRS minutes. The size of the Fund is driven by the number of users, the compensable minutes per user, and the per-minute compensation rate for each minute of use. Although the data on each of these factors is not reported individually, the TRS Fund administrator reports that VRS minutes of use will grow to an estimated 98.2 million for the 2010-11 Fund year, equaling a demand increase of 261 percent since calendar year 2005. To

the extent that this growth represents increased access to VRS users who rely on this service for communication, the VRS program has been a success in fulfilling the objectives of the ADA. However, to the extent that such increases are attributable to fraudulent or abusive activities designed to generate illegitimate VRS minutes, steps need to be taken to reform the program. Over the past few years, the per-minute compensation rates have significantly exceeded the estimated average per-minute costs of providing VRS. In December 2008, the House Committee on Energy and Commerce concluded that "[t]here is substantial evidence that the FCC has failed to set reasonable rates for the compensation of TRS providers. As a result, consumers are being significantly overcharged to finance the TRS Fund and TRS providers are being significantly overcompensated." In addition, auditors who reviewed provider costs that had been reported on the Relay Service Data Requests (RSDR) reported that they were not able to validate all of those costs. The auditors explained that not only were providers unable to offer supporting documentation to prove that their submitted costs were appropriate as TRS costs, but that some providers did not even "have a methodology to allocate indirect costs, and could not reconcile the costs claimed on the RSDR to their accounting records."

- The concerns raised by the Commission may well be valid, though the characterization of the program as "fraught with inefficiencies (at best)" seems unsubstantiated. Opportunities for fraud and abuse exist, as they will in any system, and represent an area upon which to improve.
- It should be noted that the overwhelming majority of providers conduct themselves in a manner consistent with the rules and intent of the program. Most of the minutes that have been compensated for have been legitimate and of great benefit to those it was intended to serve.

- The Commission, most VRS providers and consumers should take great pride in finally bringing a form of telecommunications access to deaf, hard-of-hearing and speech impaired consumers that have been denied to them for the bulk of the previous century.
- The growth of the industry over the past 5 years is as much a reflection on how inadequate the previous text-based system was as it is upon how life-changing VRS has been for this population.
- The issue as to whether per-minute compensation rates have "significantly exceeded" the estimated average per-minute costs is still one of great debate. The system of reporting costs is still based on the traditional text based format and has not addressed significant areas of cost that VRS companies have been put in the position of providing with little or no guidance.
- The success of the program to date would not have occurred without the bearing of these costs by VRS companies as the infrastructure requirements that were already in place when TRS began were nowhere to be found in the area of video communications when VRS began and little consideration was given to that fact.
- The Companies welcome the opportunity to work with the industry, consumers and the Commission to address these issues and create a stronger, higher quality and more efficient VRS that legitimately serves the intended consumers.

31. Moreover, we know that the VRS program, as currently structured, presents easy opportunities for fraud and abuse. Although the increased payments to VRS providers have been driven, in part, by legitimate growth in the number of minutes of VRS used, we now know that that at least part of that growth was generated by the illicit activities of some of the VRS providers themselves. This past

year, the Department of Justice indicted 26 individuals for fraud. These individuals allegedly boosted some VRS providers' revenues by hiring persons with hearing or speech disabilities to make VRS calls for the sole purpose of raising revenues. Additionally, we continue to receive numerous allegations of abusive practices by VRS providers—such as using VRS to avoid paying for video remote interpreting services (VRI), hosting or promoting teleseminars for the express purpose of generating VRS minutes, and paying individuals or organizations to place VRS calls using a particular provider's service—over the past few years. These practices threaten the very sustainability of the VRS program; neither the Commission nor the American public can further allow the fraudulent abuse of a program designed to deliver essential telecommunications services to persons with speech or hearing disabilities. As the Commission moves forward in this reform effort, it will seek to ensure an equitable VRS compensation rate that fosters increased provider compliance with its TRS rules, while ensuring that revisions to its rules preserve the rights of the program's consumers.

- Fraud and the abuse of the VRS program are of great concern to the Companies, as well as all consumers, VRS providers, interpreters and all those associated with the industry.
- These practices have maligned the entire industry despite the fact that the overwhelming majority of those associated with the industry are conducting themselves consistent with best practices and the intent of the program.
- There continue to be significant bodies of "grey area" that have to date been unaddressed by the FCC. The Companies look forward to working together with the industry, consumers and the FCC to address all of these "grey areas" and create a clear set of rules and guidelines for the industry.

- Consumer rights need to be at the forefront of the establishment of all the rules applying to the industry.
- All rules need to be incorporated clearly into the Mandatory Minimum Standards.
- It needs to be clear that any rate that is established still leaves the opportunity for fraud and abuse.
- The only true way to address these is to establish clear rules and standards, have an ongoing system for implementing new rules to address issues that are unforeseen at this time, and most importantly have a vigorous program to identify and enforce any violation of these rules.

1. The Components of Video Relay Service

32. VRS is defined in the Commission's rules as a form of TRS that "allows people with hearing or speech disabilities who use sign language to communicate with voice telephone users through video equipment." VRS communications require the interaction of three separate yet interlinked components: videophone equipment, video communication service, and ASL relay interpreter service. Although some VRS providers now supply all three components as a single package, we question whether this vertical integration is necessary, and therefore separate them for purposes of analysis herein.

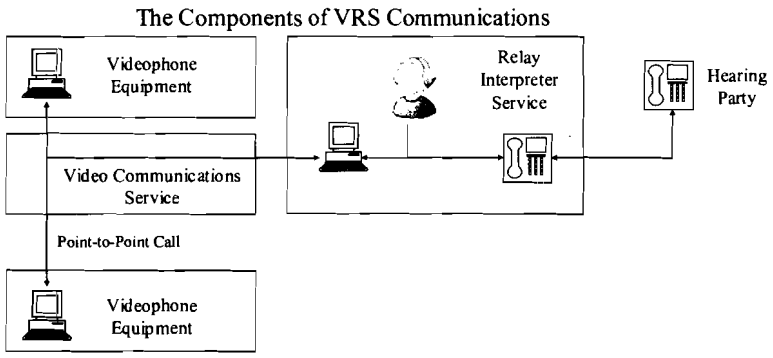
- The Commission correctly identifies the three components for VRS communications. This is analogous to the text based relay system that was most widely used prior to the growth of VRS. In that system, there was (1) a basic system of telephony service that has been in existence for decades. This system was essentially unable to be used by many deaf, hard-of-hearing and speech impaired individuals. Finally, in the 1960's

(though not widely used until the mid 1970's), (2) TTY equipment appeared that allowed this population to have some access, though this was still only useful with others who shared this same type of equipment. It was not until the early 1990's that (3) Text Relay Services became available so that deaf, hard-of-hearing and speech impaired consumers had a way to use this equipment and telephony service to reach hearing people through the placing of a telephone call.

- The approval VRS as a form of TRS was done without considering how these three components might be supplied and paid for. The initial attempts at providing a pure VRS, where companies did not distribute equipment or video communications service (outside of the ability to connect to the VRS Company) was met with little interest and the minutes generated in 2002 and 2003 reflect this.
- It was not until equipment and the ability to use the video communication service were provided to consumers that the "explosion" of usage of video communications and VRS began to take place.
- Clearly based on historical experience with telephony, TTY and text based relay services this vertical integration is not necessary.
- We grant that for the growth of VRS to take place, given that no consideration was given to the provisioning of equipment or to providing video communication services, VRS companies have been forced to take on the responsibility for these areas that TRS companies did not previously need to concern themselves with.

33. The diagram below illustrates this concept. For example, hypothetically, an end user could obtain videophone equipment in the form of a tablet computer equipped with a camera and wireless Internet

access. That equipment could allow the end user to access both a public Internet-based video communication service, which would enable both point-to-point communications with other similarly equipped individuals, and a choice of ASL relay interpreter services (*e.g.*, via a desktop "connect to interpreter" button) that would allow communication with hearing parties.



34. *Videophone Equipment.* We seek to understand the types of videophone equipment most used by deaf and hard-of-hearing individuals. What are the functionalities that VRS users need from their videophone equipment? To what extent does existing videophone equipment rely on proprietary protocols rather than common standards? Should we require updated protocols based on common, industry-consensus standards to be used by videophone equipment distributed by VRS providers?

- Deaf and hard-of hearing individuals primarily utilize a limited range of products that have been provided by VRS companies (either for free or for purchase) that range from set-top devices designed to attach to a TV set or computer monitor, software programs for downloading onto a computer and for use with a webcam, to stand alone videophone products.

- Baseline features as they are today include the ability to place a call, receive a call, and support voice carry over (VCO).
- Additional features should be supported to achieve functional parity including call forwarding and video voicemail.
- At this point in time, the majority of the equipment that VRS consumers use utilizes H.323 protocol, an older technology.
- In contrast, SIP based products comprise the majority of the software-based VRS offerings available and additionally, SIP is the standard used by much of the (non-VRS) videoconferencing solutions.
- In addition there exist some programs that utilize proprietary protocols (though these are not widely used, the most notable is iChat).
- It is essential to see the further growth in technology that common, industry-consensus (including consumer input) standards are established for equipment for use with VRS providers.
- The Companies advocate for convening a group of representatives from consumer groups, the FCC and each of the certified and pending VRS providers to address and establish an industry-wide set of standards that factors in the direction of mainstream technologies.

35. In the context of our existing rules, should videophone equipment supplied by VRS providers, and the networks on which they operate, also be standardized so that they retain a mandatory minimum set of functionalities regardless of the provider selected by the VRS user? We specifically seek comment on whether it is feasible for the Commission to adopt technical standards that would ensure the

continuation of videophone equipment functionality after a consumer switches default providers. Where user features are housed in the provider's network (rather than the videophone equipment itself), is it technically feasible to use a standardized protocol within the network so that switching providers will not eliminate functionalities of the user's equipment?

- The only way to ensure interoperability of equipment and the continuation of videophone equipment functionality is to establish a clear set of industry standards towards the types of equipment to be supported.
- VRS providers have demonstrated too much interest in ensuring that their products are best suited to their platform and exercising control over the consumer through this equipment.
- This would ensure that the consumers' equipment works the way it was intended, regardless of what VRS provider they wish to utilize.
- One critical feature to include is the ability for consumers to program the "Call VRS" button to route calls to their provider of choice and have the ability to change this at their discretion. Only through this functionality can we ensure that VRS companies are providing the very best VRS services to consumers.
- If industry-wide standards are implemented, VRS companies could still distribute equipment to consumers, though it is suggested that the equipment be funded outside of the VRS per-minute reimbursement rate.

36. We seek to understand the extent to which VRS users are limited to using videophone equipment specifically designed for VRS use, as well as the extent to which changes in the VRS program should occur that would allow users to utilize off-the-shelf equipment for VRS calls. Do most users currently

rely on videophone equipment that is distributed by VRS providers? Is there off-the-shelf hardware or software, such as webcams or other general-user technology that could serve as an acceptable substitute for videophone equipment and software that are specially designed for VRS users? What are the quality-of-service differences (if any) between videophone equipment built especially for VRS and off-the-shelf products, such as video-cameras used with equipment such as desktop computers, tablets, or mobile phones? What level of videophone equipment functionality is required to ensure that VRS calls made with videophone equipment are functionally equivalent to calls made by hearing individuals? How might this functionality evolve over the next three to five years? For example, should standardized real-time text communications be a feature on videophone equipment? What are the costs and benefits of different devices, and is the videophone equipment currently distributed by VRS providers still needed, *e.g.*, given the rapid spread of inexpensive, easy-to-use webcams? What features are typically associated with voice telephone handsets (*e.g.*, speed dial lists) and can they be provided with commercial, off-the-shelf videophone equipment? Is mobile videophone equipment suitable for VRS available today, and if not, what technological innovations or market developments are needed before they can become commercially viable as a market offering?

- The VRS industry has led the charge in deciding for consumers what offerings will be available to them. The prevailing interest in doing this was to ensure that consumers could most easily utilize the VRS company that provided the equipment.
- By default, this has led to control over the consumer's choice as to which VRS provider they use.

- Again, we emphasize that the only way to ensure that consumers are not left using equipment that is limiting and outside the mainstream is to establish clear, industry-wide standards.
- The Companies agree that it is imperative that the deaf, hard-of-hearing and speech impaired communities not be left using a bunch of "Betamax" type equipment while the rest of the world moves on to "VHS" equipment. There is currently a variety of off-the-shelf hardware and software that could readily be used for providing access to VRS providers, unfortunately little of it has interoperability with the videophone equipment that is most prevalent among consumers.
- If a SIP based standard were to be implemented it could open the door to more and better products for consumers to choose from.
- Mobile devices (e.g., smartphones such as the iPhone, Android phones, or Blackberries) continue to become more pervasive and many of these come equipped with SIP based video communications service. It is clear that in the next 3-5 years, the VRS industry must support these devices in order to maintain functional equivalency.
- Overall, there is a need for solutions that fit all market segments. More "savvy," computer-literate deaf & hard of hearing consumers certainly prefer the flexibility of a webcam solution. Other consumers who did not grow up with computers might prefer the simplicity of a videophone.
- Mobile carriers need to offer more flexible plans that benefit the deaf and hard of hearing. Data only plans need to be made available and the use of video calling needs to be included, without having to additionally have voice calling plans.

37. *Video Communication Service.* What are the functionalities that VRS users need from video communication service providers? For example, the Commission determined that assigning VRS users geographically appropriate ten-digit numbers was functionally equivalent to assigning users of the public switched telephone network numbers based on their local switch. Are there other functionalities necessary to ensure functional equivalence for VRS users that are not currently being provided? VRS users usually obtain broadband transmission separately from their VRS service. Does this separation affect what constitutes functionally equivalent service? Several years ago, interconnected Voice over Internet Protocol (VoIP) was primarily provided as an over-the-top, nomadic service. Today, many facilities-based broadband providers offer interconnected VoIP with quality-of-service guarantees. Could video communication service witness a comparable transition in the near future? How can we assure that video communication services used for VRS remain functionally equivalent to comparable service over the next three to five years?

- Much of the functionality that VRS consumers need from video communication service providers is readily available.
- Call forwarding, as proposed by Purple, could be approved on an industry wide basis. This would allow consumers to more freely utilize the provider of choice without being constrained based on the equipment they choose to utilize.
- To answer the question of whether video communication service could see a transition such as the market has seen with interconnected VoIP and quality of service guarantees, one needs to look at the background and context of such a service. Many traditional providers such as ILECs or cable companies have had success offering 'triple-play' services, e.g., telephone, Internet, and television. Especially for the cable companies,

the telephone part of the triple play used VoIP technology. In order to sell this to wary consumers, they needed to guarantee a quality of service level. At the end of the day, however, the triple play was mostly a pricing bundle; most consumers didn't care what the underlying technology was. As far as VRS goes, it is not apparent who would offer similar bundles.

- To date, many VRS providers have used technology as a way to acquire and control consumers.
- In order to achieve true functional equivalence VRS providers should put as much focus and attention into the quality of "Relay" service they provide as they do on technology.

38. *Relay Interpreter Service.* What are the functionalities that VRS users need from ASL relay interpreter services? The Commission has held that reaching a CA is the equivalent of getting a dial tone, and that functional equivalency means that CAs must be available at all times and sufficient in number so that a VRS user may reach a CA without long waiting times. We seek comment on what other functionalities are required from relay interpreter service to ensure functional equivalence for VRS users. Have CAs met the quality-of-service expectations of VRS users? For example, is the speed and accuracy of CA interpretation fully meeting the needs of VRS users? How do the relay interpreter services of VRS providers compare to the capabilities of other forms of relay? How may the needs of VRS users evolve over the next three to five years?

- Relay Interpreter Services are the true equivalent of their predecessor, text-based relay, and are the component that most truly fits within the TRS program for funding of relay services.
- VRS consumers need access to highly qualified interpreters.

- Ultimately, VRS consumers should be able to freely choose amongst providers based on a number of criteria, including quality of interpreting service provided. This is only possible with standardization of technology that does not pair services with specific video equipment.
- There is much anecdotal evidence to support the fact that the quality-of –service expectations are frequently not met. The challenge in assessing this is that it frequently is not something that can be assessed until after the relayed call has taken place.
- It should be recognized that VRS is distinctly different than text-based relay.
- ASL is a complicated language that utilizes its own grammar and structure. In addition to this, you have a wide range of consumers who utilize a variety of dialects and signs to convey their messages.
- It is unrealistic to expect even the most qualified of interpreters to be able to effectively handle all the calls that are routed to them.
- It is impossible for any interpreter to be well versed in all the regional variations of sign, all the content matter that may be involved in a call and all of the nuances that can be so necessary to accurately "relay" a call.
- The NAD-RID Code of Professional Conduct in section 2.0 offers the following "Guiding Principle":

  Interpreters are expected to stay abreast of evolving language use and trends in the profession of interpreting as well as in the American Deaf community. Interpreters accept assignments using discretion with regard to skill, communication mode, setting, and consumer needs.

- Unfortunately, given the current system for provision of VRS, it is impossible for VRS interpreters to follow through on this as there is little information prior to the call to help the interpreter or the consumer with making these determinations.
- The Commission should not constrain VRS providers from addressing these concerns through methods that may not have been necessary in previous forms of "relay."

39. *General View of VRS Components.* Looking at these components together, how and why do VRS users currently choose their providers? What are the primary qualities that VRS users look for when selecting a VRS provider? How well do the current VRS providers meet the needs of VRS users for reliable relay interpreter service, innovative equipment, and functionally equivalent video service? How well do video communication service providers and videophone equipment developers meet the needs of individuals who do not use VRS (*i.e.*, individuals who use only point-to-point video communication service)? Why do end users switch VRS providers, and how do the incentives and costs associated with switching VRS providers differ from the incentives and costs of switching other video communications service providers? Is there any need for the three components described above to be vertically integrated?

- To date, the single most important factor consumers use to choose their VRS provider has been who has provided them with the free videophone equipment.
- Competition in the VRS industry, to date, has had little to do with the quality of relay interpreting service. It has also had little to do with the innovativeness of the equipment or the quality of the video communication service.
- Approximately 20% of consumers have opted to use other providers than the dominant provider. These consumers have made the choice to use other providers for a number of reasons, the most common being the quality-of-service is better.

- Vertical integration of these components is not the primary issue, rather it is the lack of any standardization within the industry that has consumed vast resources from VRS providers; all to the detriment of the consumers we are charged with serving.

40. Are there other necessary components or different ways to consider the structure of this vital service? How has the development of broadband communication affected the need for the various components of VRS?

- The Companies advocate for the convening of a group of representatives from consumer groups, each of the certified providers, each of the providers with pending certification, and the FCC to immediately begin examining and addressing these components and the best way for providing each of the components and the mechanisms needed to fund each of them.

2. The Demand for Video Relay Service

41. The Commission has the duty to ensure that TRS is available to all persons with a speech or hearing disability "to the extent possible." To achieve that statutory objective, the Commission must better understand the potential universe of VRS users and the obstacles that limit the availability or usefulness of VRS to those users. Such information is essential to understanding how effective the program is and how we can improve it.

42. First, we seek data about the number of current VRS users. Although we know the number of ten-digit numbers that have been assigned to VRS users, we do not have data on how many individual VRS users there are. Should we require VRS providers to report the number of VRS users they serve? What sorts of information do VRS providers have about their users, and what information should we require them to collect?

- Information provided monthly to NECA includes the number of the consumer calling. Providers are not in the position to gather more specific data than who the caller is. The number of VRS consumers a provider services is contained within the monthly NECA billing submission.
- Data regarding the number of consumers is most effectively collected through the ITRS database.
- For confidentiality concerns providers maintain minimal information on their callers. There should ne no additional information necessary.

43. Although we recognize that data about the number of potential VRS users is limited, to estimate the potential user base we remain interested in obtaining any data that might be available about the number of people in the United States who are deaf, hard of hearing, or have a speech disability that limits voice communication. How many of those people communicate in ASL? Approximately what percentage of those individuals currently use VRS? Approximately what percentage use traditional TTY-based TRS? What percentages use both? Is there a way to determine these numbers in a reasonably accurate manner?

    - The Companies do not have information regarding how many people communicate via ASL or what percent of that group currently uses VRS. Providers are limited to only information about callers who use their service, and such demographic data is not readily available.

44. Second, we seek data on the extent to which there may be technological barriers to using VRS. The Commission's work on the National Broadband Plan has identified numerous barriers experienced by people with disabilities and other Americans to obtaining broadband. However, data collected to date

has not specifically identified the number of persons with a speech or hearing disability who lack a broadband connection at home or access to one. Is such data available? Does the cost of broadband Internet access or videophone equipment deter eligible end users from using VRS?

- The Companies do not have information regarding the number of persons with a speech or hearing disability who lack a broadband connection and such demographic data is not readily available.
- The cost of both broadband and videophone equipment does create a barrier to some lower income individuals. Subsidies for these individuals would be appropriate.
- The lack of availability of broadband service in many areas also serves as a barrier for many potential VRS consumers.

45. Third, we seek data and insight into the trends in VRS minutes of use (MoU) per user over time. What factors are driving total VRS MoU per user? Point-to-point MoU per user? Interpreted MoU per user? How might these factors change over time? How do they compare with the trends in functionally equivalent voice communication services?

- The availability of high quality video communications is a factor in the increase of MoU per user.
- While it is difficult to acquire the data to most accurately assess these questions, we endeavor to explore them briefly. We find it reasonable to expect that the average MoU per user are growing over time as consumers become more comfortable with the technology and gain more confidence in using it for a variety of meaningful communication purposes.

- With the addition of mobile handsets that are capable of providing access to VRS we should expect to see another period of significant growth, over the next few years, as people are able to utilize these more often (similar to the explosion of phone usage we have observed with cell phones).
- In addition, it seems reasonable to expect that more and more employers will find this a reasonable accommodation that allows deaf, hard-of-hearing and speech impaired individuals to perform a wider variety of job related tasks that include the use of the telephone. This would also drive the average MoU per user upward.

46. Fourth, to what extent are potential VRS users meeting their communications needs through other means? For example, how many potential VRS users rely instead on traditional TTY-based TRS programs or other IP text relay programs, and why? What are the trends in terms of number of VRS users? Do these trends show that VRS is a complement or a replacement for other forms of TRS? To what extent do individuals who are deaf and hard of hearing use video communication services and/or equipment that are not designed specifically for VRS use (*e.g.*, Skype)? How can the Commission collect reliable data to understand the extent to which consumers rely on commercially-available video communication services and equipment as a substitute for VRS, and to understand the reasons for choosing one type of service over another? We have anecdotal reports that upwards of 80% of video communication calls made by deaf or hard-of-hearing individuals using VRS equipment are point-to-point video calls that do not involve relay interpreter service. Is this accurate? To what extent do VRS users rely on non-compensable videophone-to-videophone calls in lieu of VRS and why? How many deaf or hard-of-hearing individuals use texting via mobile phones or other mobile equipment as an alternative means of communication? If hearing people who can communicate using ASL are eligible

to receive ten-digit numbers for their videophones, to what extent would this reduce the number of calls that would otherwise have to take place using VRS?

- Some providers are still providing IP Relay or Text services but that usage is decreasing as consumers are migrating to VRS and in some cases AIM and other similar services.
- The Companies find that a much smaller percent of deaf or hard of hearing individuals communicate directly through alternative services.
- We do know that there are still many consumers using text-based forms of relay for a variety of reasons. Our personal interactions with consumers indicate that text-based relay is still used in homes primarily due to the unavailability of broadband and/or cost issues with subscribing to broadband services.
- IP-based forms of text relay seem to have found their niche with regard to mobile relay needs.
- With the advent of mobile devices that support video communications we would expect to see this be an area of significant growth over the next 3-5 years and a similar type of growth to what we have seen over the past 5 years may well be anticipated as more and more consumers are able to discontinue text based mobile relay and shift into VRS provided to mobile devices.

47. Finally, we seek information about other reasons why potential users do not actually use VRS. What factors, including practical, economic, or informational, contribute to the apparently low adoption rate? For instance, does the cost of broadband Internet access or videophone equipment deter eligible end users from using VRS? Do eligible individuals lack information about the program or their eligibility? Do some persons with a speech or hearing disability, such as persons who are deaf-blind,

find VRS difficult to use and if so, why? Is there demographic or other information we can use to segment the market and understand the needs of eligible individuals?

- As previously shared, the primary reasons identified to the Companies for not using VRS are the lack of availability of broadband and the cost associated with it.
- The question of how to best provide service to deaf-blind consumers has yet to be been adequately addressed.
- The best way to address these issues is to bring these segments of the community into the discussion and creatively assess how to best address the barriers they have to using VRS.

3. The Supply of Video Relay Service

48. The Commission has the duty to ensure that TRS is available "in the most efficient manner." In this section, we seek to understand the provision of VRS from a supplier's perspective and the obstacles that might limit competition among VRS providers or otherwise reduce efficiency in the provision of this service. Among other things, we note that under the present VRS model, multiple providers offer substantially similar services with no opportunity for price competition. In undertaking this review, we consider each of the three components described earlier.

49. *Relay interpreter service.* What are the cost drivers for, and the cost structure of relay interpreter service (*e.g.*, start-up versus operating costs, fixed versus variable)? Are there ways to reduce costs and improve efficiencies for the services, including sharing CA resources among VRS providers? How significant are economies of scale for relay interpreter services, particularly in relation to the requirement that VRS calls be answered within a short period of time at all hours of the day? What obstacles are there for new entrants or innovation? What is the most efficient way for a relay interpreter service provider to contract for individual CAs? Do relay interpreter services need to be

provided centrally, or could they be provided on an on-demand, as-needed basis? How many potential CAs are there in the United States? Are there enough CAs to meet current demand, and will there be enough interpreters to meet projected demand in three to five years?

- Startup costs include the cost of the video processing system, the salaries necessary for the limited full time staff, the lease on the call center facility plus the ability to pay interpreters salaries for the first three months until NECA reimbursement is provided.
- The ongoing cost of VRS is the lease costs of call centers, support costs for maintaining call centers, broadband costs, equipment costs plus the cost of compensating interpreters. This is an important consideration but a provider that properly manages their scheduling will not have a significant problem.
- Cost of entry (systems, facility, interpreters, management) and the fact that revenue does not flow during the first three months is a key consideration for new entrants. Companies that have thin margins are not able to spend money on innovation, research and development.
- The competitive market is the best way to ensure continued growth in efficiency and quality of services provided.
- Pooling of interpreting resources already takes place in an effort to move towards greater efficiency, this is especially critical for new entrants to the field as they try to meet the mandatory minimum requirements and also makes all companies that share resources more efficient.

- Efficiency in managing the supply of interpreters has a wide-ranging impact on the community and its ability to supply qualified interpreters for the many other interpreting needs that exist in the community.
- ASL interpreters should not face barriers from VRS companies to work for whomever they desire (as long as they adhere to any confidentiality agreements that are in place).
- VRS companies' resources are strained by the attention they must provide on Videophone Equipment and Video Communication Service.
- Consumers are influenced in choosing a VRS provider by the equipment they have, rather than the quality of services provided.
- VRS providers would be able to offer a much wider range of products if standards were put into place and equipment providers were responsible for being in compliance with those standards.
- Consumers should always have the unfettered ability to utilize the VRS provider of their choosing, regardless of what equipment they are using (without the threat of losing their equipment or features associated with this equipment).

50. *Video communication service.* What is the cost structure of video communication service? How many hearing individuals use video communication services? Do VRS users and VRS providers use the services offered in the general market for point-to-point video communication services, or do they rely only on specialized offerings? Do the business models and practices of mass market video communication service providers (*e.g.*, Skype) provide a good analogue for understanding this component of the market? Do the business models and practices of mass market interconnected VoIP providers (*e.g.*, Vonage) provide a good analogue? What technologies or business models could