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>> JOHN LEE: So we will get started in about five minutes and so if you want to grab some last-minute refreshments from the back, get your refreshments, and we will get started.

>> CHRISTIAN VOGLER: We should be able to hear you, can you speak up?

>> Yes. Here I am.

>> JOHN LEE: Great, hello, Bob. This is John Lee. Very nice to have you. You seem to be very far away from the mic. Can you get slightly closer?

>> BOB SEGALMAN: Can you hear me better now --

(Microphone feedback)

>> JOHN LEE: We could. But we did get some feedback.

(Feedback. echoing)

>> BOB SEGALMAN: Can you hear me now?

>> JOHN LEE: Yes, we can hear you better. Since you are online, we will get started now.

>> BOB SEGALMAN: We're over the phone. Would you prefer cues?

>> CHRISTIAN VOGLER: We are ready to go ahead.

>> JOHN LEE: Okay. Yes, so we're ready to get started. So, thank you everyone. Sorry for the slight delay, but we will get started.

So thank you for coming for the second day of the ITU-T Question 26 Rapporteur's meeting. We had a very productive day yesterday and I'm hoping that we will do the same today.

Before I start, Andrea mentioned that she wanted to just let you know that she was -- she's sorry she is late. She had a very early morning meeting with Geneva, so we left about 15 minutes ago. So we will be here a little later.

But, to get started, I'd like to just view the amended agenda first. Revision 2. Just so that everybody is aware of what we have in the plans for today, we will start with some sessions. There are four sessions in the morning. Then we will have a coffee break. When we come back from the coffee break, I'd like to have that discussion we had discussed. And it's related to just an open forum, where we can discuss things about this topic, and things that you may have or questions you may have so that everybody can participate.

Then we will go into the review of some of the changes that we have. There won't be many at this time from what I see, but I -- what I've done is I've outlined some of the areas where we do now have contributions. Then we will go into a presentation -- we will get back into the contribution list. And you see the contribution list up.

Then that's -- that will continue after lunch. Then we will end with -- I'll give a quick introduction of F. relay, a few closing remarks, and so I'm hoping that we will probably end a lot earlier than we did yesterday, after the afternoon coffee break. So hopefully that will help us in the afternoon.

So to get started, we have Bob Segalman. He has prepared a statement, which Paula has kindly agreed to read. And this is contribution 13.

>> PAULA: Just to confirm. We're just checking to make sure that Bob is on.

>> BOB SEGALMAN: Yes, I am.

Just to confirm, this is Bob Segalman. I am hearing but I have poor speech. I'm a retired sociologist and I have a small nonprofit in my Sacramento home. Our mission is to help people with speech disabilities, similar to the way TDI helps the deaf population. An assistant is reading my talk to save time.

Claude asked that I talk about TRS for people with speech disabilities or PSD. Speech-to-speech, or STS, works much like TTY except that we talk instead of type to a CA trained to understand garbled speech. Some form of STS is available in Australia, Finland, New Zealand, Sweden and in the U.S. All of these services have Websites with details about how they work. The Websites, contact phone numbers for STS, and contact information for many of the people who provided the facts stated here are listed in my complete paper, which I think you have.

There are special problems applicable only to STS. We all belong to organizations connected with our major disability, such as CP, ALS, Parkinson's, et cetera, but we make up such a small percentage of the consumers in those agencies, that speech disability issues are not a priority.

We are also finding that speech itself is a barrier to advocacy, practically and psychologically. A large proportion of people with speech disabilities have other disabilities, such as cognitive disabilities, which prevent them from being advocates. Those of us who are able to be advocates are frequently employed and because of our disabilities, our jobs and our struggles with activities of daily living take up so much energy that we don't have any left for advocacy. A final barrier is that many of us develop a psychological pattern of getting what we want by being passive.

STS and video assisted speech-to-speech, VASTS, the acronym VASTS, work similarly worldwide and are described fully in my complete paper. STS is often provided 24/7, but VASTS may have restricted hours. Relay services in some countries must only be used for the purpose of enabling users to participate in conversational telephone calls. VASTS enables PSD who use STS currently, or are unable to use STS currently to make relay calls to hearing persons via an STS CA. The user needs both a telephone line and video communication equipment, using a web camera and Skype software. Some providers give detailed descriptions of their STS and VASTS services in the complete paper.

VASTS works just like a regular STS call, except with the addition of a video connection on the call. This enables the communications assistant or CA to see the STS user as they are speaking. Seeing the STS caller's mouth movements, facial expressions and gestures can enable the CA to better understand and revoice for the caller. STS and VASTS relay can be used by people with cerebral palsy, multiple sclerosis, muscular dystrophy and Parkinson's disease. It can also be used by people who stutter, have had a laryngectomy or use a voice augmentative device.

STS, as used in the USA, New Zealand and Australia, started as an idea in my head about 1990. STS grew out of my own attempts to be understood over the telephone. The Swedish and Finnish services developed independently of the other three services.

Australia has provided a similar service to the US since the late 1990s. The service has similar problems to those in the US described above. In Australia they call it Speak and Listen. There is an excellent video that explains the service at their website. I used Speak and Listen when I was in Australia. It worked well. Australia also provides the Type And Listen service that Americans call Hearing Carry Over for hearing users with speech difficulty. The national education and information staff provide free training in six locations to help people use relay. There is also a central help desk. Darryl Sellwood, an STS user, describes STS and VASTS in respect to the social capital that it provides to consumers. People gain capital through communication and self presentation. To the degree that STS and VIDSTS can increase communication and self presentation, users gain social capital and improved quality of life. Such improvement relies upon both technology and the CA to increase communications. This concept parallels the work on societal integration that Dr. BJ Gallagher in McDaniel college in Maryland and I have begun. These social integration opportunities will dramatically increase as soon as technology allows a direct connection between cognition and data input. The requirements for vocalization or typing are major barriers to communication for people with speech and dexterity disabilities.

This may be the first academic analysis of STS. I encourage such analysis because it can contribute to the development of STS. This analysis can improve communication both in person and by telephone.

It can reduce challenges such as "The communication partner dismissing them, using closed questions to dominate the conversation, directing the conversation past them to their companions, and often not using language that respects the person's intellectual capabilities."

Sellwood describes college education as a stepping stone for employment for PSD. This parallels my personal experience that applying for jobs requiring less education than I have always increased my likelihood of employment. Sellwood predicts a greater likelihood of using VIS-STS rather than the landline STS. I encourage people to read his complete document.

For Finland, information came from Belinda Troger, account manager at Evantia Limited for 2011. Interpreting services for deaf, hearing-impaired and speech-impaired changed remarkably in September 2010. Different interpreting services use different programmes, like Skype and MSN. A remote interpreter project aims to combine and standardize the Video Interpreting Service for deaf and speech-impaired.

Video relay was just becoming available to supplement mail services, SMS, or phoning. PSD would especially benefit from video, because they often have physical disabilities, making driving to the relay office difficult. PSD often need other software to communicate with. Checking which video software and which communication software best suit each user is essential. Both the video and communication software work together. And more development is needed for emergency calls.

In New Zealand, STS started in 2004, and accounts for 1 to 2 percent of all relay call minutes. The service is described at the relay VASTS is offered, but there is only one user. There should be more users following a disability conference in August. There, the VASTS user, who is a member of the New Zealand Relay Advisory Group, will make a presentation.

Sweden has two STS types of services. One is called Taltjanst. >> INTERPRETER: It's a Swedish word so excuse me in my pronunciation is off. Taltjanst. >> BOB SEGELMAN: The second is call Tiletal. Joakim Frogren provided information about Taltjanst where he works as what we would call an STS CA in the speech interpretation service or SIS. About 64 percent of Swedes live in places with SLS access. The CA also has face-to-face assignments. And the term CA is used here just for convenience.

During 2012, the CAs completed 2389 assignments for 130 clients. About 72 percent of the CA's time was spent interpreting, helping people with speech disabilities be understood, travel took up about 26 percent of their time, and preparation took up 1 percent. Close to 62 percent of the clients served were between 21 and 65 years old, 38 percent were older than 65.

The average interpretation time during an assignment is barely 2 hours. The average assignment is carried out at a 20-minute distance from where the interpreter is located. Out of ten assignments, four are public service, four are lease sure activity, and two are healthcare. There were very few assignments requiring interpretation for clients in the workplace.

The Taltjanst service started out in a project in Uppsala in the mid 1980s. This came to be known as the Uppsala Model of SIS.

>> INTERPRETER: I've said SLS. It's SIS.

>> BOB SEGELMAN: Since then, ten regions have developed SISs. In Ostergotland the service has existed since 2000. Two people work with this service in this region and both work 30 hours per week as CAs. They do 300 to 400 assignments per year. An assignment can be anything from a five-minute telephone call to a four-hour meeting. Although there are 400,000 people in the region, they only have about 15 active clients per year. Even though they are out informing regularly, they have a hard time recruiting new clients. That is a big problem for them, because they are convinced that many people would need support if only they knew that the service existed. The CA interprets talk both through telephone and in real situations. They also give support in reading and writing, since it is quite common that neurological injuries not only limits the speech, but also other cognitive and physical functions. In order to support the communication, the CAs use pen and paper, pictures, symbols, illustrations, signs, and so on. They develop methods individually according to the kind of disabilities their clients have. There is not just one method used, but several different ones.

This service is included in the health and welfare system so it does not cost anything for clients to use it. This service is not available to people who have so severe disabilities that they cannot take responsibility for their actions. Nor to people that have so severe speech difficulties that they cannot be understood by the operators. Totally in Sweden, there are about 25 more or less active interpreters in the SIS. The CAs meet on a yearly conference to discuss strategies and ethical dilemmas, et cetera.

The Teletal service is a free, nationwide service where you get the support of a third person supplied in the call. Lena Granberg at Teletal reported that Teletal is receiving and deliver around 3,000 phone calls every month made by around 200 specific phone number users. There is no need to book the service in advance and no permission is required. Teletal is a telephone service that is open for those who need support during important phone calls.

An interpreter accompanies a call and will help callers: One, interpret ambiguous terms and difficult words. Two, provides support for memory. Three, documents the conversation and sends it to the user. Four, helping with telephone exchanges. Five, as security and support. Six is present throughout the conversation. No permit is required to call with Teletal.

In the United States, STS is provided by AT&T, Hamilton Relay, and Sprint. There appears to be about 2000 users nationwide. There is pending action at the FCC which will result in improved performance of STS communication assistants and improved outreach. A second pending action will make STS available over the Internet. A third pending action will make VASTS available over the Internet nationwide. One big advantage of a nationwide programme, as opposed to the current state administered programme, is that consumers will only have to lobby for improved service at the national level rather than lobbying in each state. There are not enough consumers capable and interested in lobbying in each state. Many consumers have physical and cognitive disabilities that prevent them from lobbying. Our inability to lobby has resulted in most States not reimbursing STS providers sufficiently. Consequently, providers cannot make a profit and are not motivated to improve quality of service and outreach programmes.

Sprint provides STS in 33 states. Each state has its own set of outreach specialists and account managers responsible for Sprint STS. Print has dedicated customer service so users can: A, ask for assistance. B, request printed relay service information. C, make suggestions for improvements. D, file compliments. And E, file complaints.

The following STS services offered by Sprint are described in the full text of this presentation. They are: My Wireless STS, My e-mail, My Name, My Places, My Style, My Phone Book, My Saved Message.

Sprint is the provider in New Zealand and is the provider of VASTS and started providing it there before it became available in the United States. Sprint has a joint programme with the United Cerebral palsy, UCP, National and Local offices to distribute STS information.

Hamilton Relay provides STS in about fifteen States and one territory. Hamilton is one of two STS and VASTS providers in California. As far as we know, California is the only state with multiple STS providers.

Besides all standard Relay Service Customer Profile options, Hamilton STS customers in California and Louisiana have the following options. Customers in Rhode Island and Iowa will also soon have these options:

A, operate profiles to establish specific preferences by telephone number and indicate availability by hour for the day and day of the week at each number.

B, retain information from one inbound call for subsequent calls. C, STS mute transmission.

D, option to direct the CA to ask specific questions of the STS user before the call begins.

E, determine who will explain relay to the other party.

F, require the CA to confirm call handling preference before dialing the requested number.

G, STS speed dialing.

H, call handling requests from speech-generating device users.

I, STS message for answering machines.

J, first Thoughts.

K, STS Other Instructions.

L, option for callers to ask to call the STS user by name rather than by number.

AT&T. AT&T provides STS in eight states and Washington, D.C. AT&T offers VASTS in California and Virginia.

I am pleased that STS and VASTS are part of relay and I'm grateful to the STS providers, the state relay administrators, and the FCC for their support of STS.

AT&T provides STS in English and Spanish in eight states and Washington, D.C. AT&T offers VASTS in California and Virginia. Besides toll free customer service, it offers assistance or technical support by e-mail.

Customer profiles include options such as: A, About Me for name and address, et cetera. B, call settings for CA gender, personalized explanation of STS, and other special instructions. C, speed dial. D, account settings to allow redial of last number dialed, multiple users, call name, billing method, long-distance carrier, local toll carrier, caller ID. And, D, locking to block or restrict calls to certain telephone numbers. STS relay is available 24 hours a day, 7 days a week. VASTS has more restricted hours.

Prior to the first use of VASTS, customers may want to contact the customer care team to set up their customer profile. AT&T also has a dedicated STS training line for California customers.

Users can tell the CA if they want him or her to have an active or passive role. Active means the CA will revoice or repeat everything you say. Passive means the CA will, upon request, revoice or repeat only those parts of the conversation that are not understood by the person you are calling.

For a VASTS call, the user needs: One, a telephone connection -- land line, cordless or wireless -- to dial the STS service. Two, high speed Internet connection. Three, VideoPhone or web camera. Four, a Skype IM user account. And, five, which is optional, a customer relay preference with VASTS to speed up your calls.

In conclusion, I am pleased that STS and VASTS are part of relay. And I'm grateful to the STS providers, the state relay Administrators and the FCC for their support of STS. I want to thank TDI and ITU for making this presentation possible.

Thank you.

>> JOHN LEE: Thank you very much, Paula. Thank you very much, Bob, for that presentation.

So are there any questions or thoughts related to that presentation from the floor?

Okay. There is none.

Bob -- wait, sorry. Christian has something he would like to add.

>> BOB SEGELMAN: I'm really pleased that I was able to do this today. I like working with TDI.

>> JOHN LEE: Thank you, Bob.

We very much appreciate your submission. It will be very helpful in creating our paper.

>> CHRISTIAN VOGLER: Hi. This is Christian speaking.

>> BOB SEGALMAN: Let me know -- hi. Christian.

>> CHRISTIAN VOGLER: That's a lot of good information and we really appreciate it.

I do have a question for you. From my perspective, it seems like VASTS -- it would be a simple decision to offer that everywhere. It's like a no brainier. So I'm wondering -- do you have any data that compares the performance of STS with and without video? Is there any data that shows that with video communication is more efficient?

>> JOHN LEE: Bob, do you have a response?

>> BOB SEGALMAN: One moment, please.

Yes. In California they found that video works a lot better because the CA can see the consumer. And they are less likely to make mistakes and not be able to understand. The big problem with video STS is that the FCC will not be able to consider it until the current pending regulations are passed. And apparently the FCC is still working on them. And I'm hoping that if somebody in the audience is from the FCC and can talk about that, lots of people cannot use STS but could use VASTS. So we would like it to be available nationwide.

Go ahead.

>> JOHN LEE: Thank you, Bob. Since we do have somebody from the FCC, Greg, did you have a response?

>> GREG HLIBOK: Yes, actually, I can respond and I have a question.

>> JOHN LEE: Go ahead.

>> GREG HLIBOK: Would you like me to come up front?

>> JOHN LEE: Sure. So, Bob, this is Greg Hibok from the FCC. And he has a response and a question.

>> BOB SEGALMAN: Hi, Greg.

>> GREG HLIBOK: Hi Bob and everybody in the room. I'm sorry that I can't see you this morning. But it's nice to see you.

STS first started with a contract in 2006. And we were in that time improving the quality of STS. And we would let STS users mute so that the hearing end-user wouldn't hear the original utterance from the primary STS user. We improved the dial prompts to get to relay. We added speed dial so that it wouldn't require the caller to hang up and then redial. So 7-1-1 became available and it became available to STS users and all other users as well.

We also reduced the time of waiting online from 15 to 20, so that the CA had to remain on call for 20 minutes.

And so all of those issues are absolutely fixable. Unfortunately, the chain of command had other priorities, and one of the priorities was Internet based STS, and we have had that since 2009.

The video assisted STS is part of that, but I can assure you that we are actively looking and working on this issue until we can move and take action. All the points you made in your presentation are excellent and I understand they're all absolutely valid and needed. And so you can take my word for it that we are working on this.

So now to my question. For a dial prompt, in order to receive -- reach the STS communication assistant, who is trained to hear and understand speech, I understand from your presentation that the caller profile plays a really important role in making that more efficient so that you can quickly reach the CA. But the caller has to set up that in advance. What about STS users who don't have a caller profile? How does that work in practice? Do they have more difficulty reaching or communicating through STS? That's my first question.

My second question is Internet based STS, those regulations are pending. But we -- there is IP STS, we do have a request, because in IP captioned service or VRS or IP-Relay, all of those other requests were already made after they were already piloted. So there was a product out there to test. And then they petitioned the FCC in order to include that in relay. But we haven't seen a product for Internet STS.

Is there something available? If there was, I think that would be really helpful so that something could be piloted and that we could have very specific characteristics of a product, an actual product.

I also wanted to ask about My Wireless. It was part of your presentation. Is that part of the profile and is that specifically for mobile devices? So anyway, that's my third question.

>> JOHN LEE: So, Bob, do you have a response?

>> BOB SEGALMAN: Yes. Let me talk about users without a profile. That delays things a lot. Unfortunately, there is no way to give information to users on the call to advise them to set up a profile. If the FCC would allow providers to tell people who call in without a profile that that would help to set one up, more people would have a profile. So can the FCC allow providers to do that without the Regulation, without additional Regulations?

>> GREG HLIBOK: Actually, there is no Regulation that would prohibit that.

>> BOB SEGALMAN: I've been told by providers that they cannot do that. Is there some way the FCC can let providers know that, that they can do that? Go ahead.

>> JOHN LEE: Thank you, Bob. So Greg has a response?

>> GREG HLIBOK: Actually, that might be something that has fallen through the cracks. First of all, in the regulatory requirements in general with the FCC, they are about functional requirements. They require certain features to be included and they are minimum requirements. And if you go beyond those minimum standards, we're perfectly okay with that. We don't prevent going beyond minimum standards. And so if they are becoming more assertive and reaching out and establishing relationships with users and establishing profiles and encouraging that, that is absolutely fine. As long as it doesn't have the effect of increasing unnecessary calls. That would be something that we would be concerned about.

But if the companies are going beyond quality standards, that's perfectly permissible. And I would be happy to remind providers that they are able to do more in that area. And they receive an extra $1.31 per minute with the hopes that that is the kind of work that they are doing, outreach, establishing profiles and assisting consumers and opening accounts and all of those things. So there is nothing in the Regulation that would currently prevent that.

>> JOHN LEE: Thank you, Greg.

We are running out of time so I am going to let Christian conclude in his remarks, since he started it. And then we will close out this session. So we can move onto the next presentation.

Christian?

Thank you, Greg.

>> CLAUDE STOUT: I have a question as well. May I ask a question of Bob?

>> JOHN LEE: We could. We are running out of time. But if it's quick, sure.

>> CLAUDE STOUT: Okay.

>> CHRISTIAN VOGLER: Hello. This is Christian again. I also have a follow-up question related to video STS. I think it's interesting you mentioned the application Skype. From my perspective as a sign language user, I've never been particularly happy with Skype. The Skype video has very uneven video quality. Sometimes it's wonderful and sometimes it's not acceptable. And so, Bob, I was wondering about your thoughts about that. Are you satisfied with the video quality in Skype and is there a need for a particular product that would be specifically designed for the use of video STS?

>> JOHN LEE: Bob, do you have a response?

>> BOB SEGALMAN: Yes. The people who run Video STS in California tell me that the quality of the videos are adequate. But there are no -- there is no information from Virginia.

You asked about IP-Relay, and there have been no trials. Perhaps Greg can tell us if the FCC might allow providers to use the outreach funding for an IP trial. Go ahead.

>> JOHN LEE: Thank you, Bob. So Greg, do you have a response to that? If so, I'll let you have that.

>> GREG HLIBOK: No, actually.

>> JOHN LEE: Okay. Thank you.

So we are out of time for this presentation, but Claude, as long as it's short. No. Okay. Thank you.

So thank you very much, Bob. That was a great presentation. And it seems like there is still a lot of discussions in the room. So perhaps if we could send you some emails with questions and have a correspondence discussion, would that be acceptable with you?

>> BOB SEGALMAN: I encourage that.

>> JOHN LEE: Thank you. So --

>> BOB SEGALMAN: Thank you.

>> JOHN LEE: Thank you very much, Bob.

So at this point I'd like to move on to the next document, which is document 8, which is being presented by Mark Hill.

>> BOB SEGALMAN: Bye-bye.

>> JOHN LEE: Thank you, Bob.

>> MARK HILL: John, are we ready?

>> JOHN LEE: Yes, please go ahead, Mark.

>> MARK HILL: Good morning.

John, Christian, I'm very happy to be with you today to speak about our expectations from the Cerebral Palsy and Deaf Organization.

Historically, many deaf people with mobility issues have found it difficult to use direct point-to-point and relay systems. The TTY is cumbersome and takes an enormous amount of time especially in the context of the relay system. So let's talk about how some of us who use sign language can converse through a Video Relay Service. Many of us prefer to use this to communicate naturally, because typing is really not easy and requires us to be patient and give more time.

Here in the U.S. CPADO has expressed a deep concern about the competency of interpreters who staff VRS. We have found that some of the interpreters have a difficult time understanding the signing of individuals with limited mobility, as a result of CP, multiple sclerosis and other disabilities. As a result, we're not getting the level of competency required to achieve functional equivalence as required by Title IV of the ADA, a civil rights law for People with Disabilities.

It is crucial that TRS for deaf persons with mobility disabilities are sufficiently met on a routine daily basis. Members of CPADO have found that many interpreters have difficulty interpreting for, or have refused to interpret for, individuals who are deaf and have mobility disabilities because they lack training on how to effectively meet our needs. We also have found many refrain from attempting to interpret some of the conversation. These omissions often lead to misunderstanding or misinterpretation between the interpreters and people who are deaf and have mobility disabilities as well as the parties on the other end of the calls. Some individuals experience frustration and have struggled to get their message across, particularly in medical and legal situations.

It is essential that a number of interpreters throughout the United States gain experience working with individuals who are deaf and have mobility disabilities. Gaining the needed skills takes dedication and a commitment to take the time required to become proficient as an interpreter working with consumers and making sure that you are communicating on a regular basis to understand our needs, issues, and preferences.

As with the programme to provide functionally equivalent speech-to-speech TRS, we suggest that the FCC implement a separate but similar service to VRS that would be called sign to sign. This service would lessen the problem of getting qualified and highly skilled interpreters to provide effective facilitation of a call. Also, it may help some deaf consumers who are not able to use peer-to-peer videoconferencing mode to chat with other deaf consumers, like a two-way VRS conversation, by either Voice Carry Over or signing that an interpreter recognizes and voices to another VRS interpreter. As would occur in a regular call, the second interpreter then would interpret to the second deaf consumer. Also, for a person who cannot sign but can speak, they would be able to watch the signer and then communicate through that VRS interpreter to speak to their deaf friend.

And that would increase the focus on functional equivalence.

I'd like to tell you a personal story. A couple years ago I called my mom through VRS, and my mother sensed something was wrong with the interpretation. It wasn't making sense, and so she emailed me and said that the interpreter -- the interpretation was not correct. I had no idea that that was the case and couldn't see the communication wasn't happening. We don't know exactly what interpreters are interpreting, and that's why we have to ensure we have highly qualified interpreters, as much as possible.

I have interviewed two deaf individuals who could not sign clearly because of limited mobility. However, they speak very well. Both wanted to be able to use VRS in its present form or in peer-to-peer VideoPhone chat, but they could not use it to visit with their deaf friends or to do personal business. There are some who are unable to voice clearly and also cannot sign clearly. With some intensive interpreter training and being able to identify interpreters who are willing to work with those of us who have mobility disabilities, we will develop some good interpreting resources and well-established policies and operating procedures, making this new form of TRS work to our benefit and that of individuals with whom we use it to communicate. This will put us on the road to experiencing complete functional equivalency with our peers in both communities, the Deaf and Hard of Hearing and the hearing.

The FCC is now considering this in its final ruling on the structure and practices of VRS. CPADO encourages the International standards body to consider this important issue that deaf people with mobility disabilities can have a golden opportunity to be a part of the telecommunication world.

Thank you for the opportunity to testify before you today. I look forward to answering any questions or comments you might have.

>> JOHN LEE: Thank you very much, Mark. That was a very good presentation.

Are there any --

>> MARK HILL: You're welcome.

>> JOHN LEE: Are there any questions or comments from the floor? Yes. I'll bring this up.

And if you could identify yourself.

>> PETER HAYES: My name is Peter Hayes. I'll let the interpreter sign. One of the things that we're going to propose for the ITU global standard and something that we're putting into our product is the ability to put flags on several different types of users. You have hearing people that know ASL. You have hard-of-hearing that don't know ASL. You have mobility. You have deaf-blind. There are so many different forms that the VRS could really help. What we're going to propose is having these flags so that when you sign up for an account, you have the ability to set these flags so that many things can occur. You can automatically be put into certain queues for certain interpreters that might be able to help you better with whatever your needs are. Or maybe if the other person you're calling knows ASL, then instead of going through an interpreter, a call would go point-to-point.

So as part of the standard we're going to propose these flags, so that there is a much more flexible system that allows to meet the needs of so many more people that could benefit from these services.

How nice would it be that when you call in, automatically there is a set of interpreters or a queue that automatically know how to help you with, you know, mobility sign language.

>> JOHN LEE: Absolutely.

Thank you. Mark, do you have a response to that?

>> MARK HILL: No. That's fine. Thank you.

>> JOHN LEE: Thank you.

>> KELBY BRICK: This is Kelby speaking from Purple Communications. Many of your concerns could be addressed by the current proposal that is with -- that is before the FCC now, that includes services -- >> INTERPRETER: I'm sorry. >> KELBY BRIK: -- Skill-based routing, which will connect a consumer with a specific interpreter with specific skill sets which are matched to the use -- which includes the use of deaf interpreters. So skill based routing and deaf interpreters, I think, could address many of your concerns.

And there is a way to proceed with that proposal that is currently on the table that addresses that. The question is whether the FCC would be willing to move forward with those.

>> JOHN LEE: Mark, do you have a response to that?

>> MARK HILL: I don't really have a response that would be very well detailed.

>> JOHN LEE: Christian?

>> CHRISTIAN VOGLER: Hello, this is Christian speaking.

I have two comments in response to both of the previous comments that were made.

First about the issue of flags, I think that's an outstanding idea. If that moves ahead, I please want to ask you to make that a coordinated effort with the NENA I-3 standards, so that they are coordinated with next-generation 911, because those standards already include the idea of having flags.

I would also encourage you to coordinate those with what Donna talked about yesterday. She was talking about the media line communication service. And that's a submission from the Advisory Commission, the FCC Advisory Commission. And so I would encourage you to coordinate with both of those other two efforts so that we're not reinventing the wheel.

I'd also like to respond to Kelby. And I agree with you, part of the issue could be addressed with the current proposal that is before the FCC. But what about situations where a deaf person is calling point-to-point with another deaf individual, how will the current proposal address that? Because that would still have to include an interpreter. Point-to-point calls are not supposed to include interpreters.

>> JOHN LEE: Okay, is there a response from the floor?

>> I believe Donna wants to respond.

>> DONNA PLATTS: Yes, thank you. Hello. Can I go ahead?

>> JOHN LEE: Yes. You may.

>> DONNA PLATTS: Thank you. Hi Mark. Thank you for sharing your concerns for the community who are deaf and have mobility issues.

When Richard Ray and I presented yesterday about emergency services through the relay service, our intention was to revise our paper for the White Paper. Do you have any recommendations that we should include within our paper? Your feedback would be very helpful on that section.

>> JOHN LEE: Mark, do you have a response?

>> MARK HILL: This is Mark. Yes, I would be happy to work with you on that. No problem at all.

>> JOHN LEE: Great. Thank you. So at this time I'd like to move forward.

>> MARK HILL: In Washington, you're in Washington state, right? Donna, you're in Washington state?

>> DONNA PLATTS: No. I actually moved to North Carolina back in February. We will have to get together on VP.

>> MARK HILL: That's fine.

>> JOHN LEE: Thank you very much, Mark, for a very good presentation and great discussion.

So at this point I'd like to move on to document 16 from the National Association of the Deaf, and Andrew Phillips will be presenting.

>> ANDREW PHILLIPS: Good morning, everybody.

It's my pleasure to be here to testify today about VRS from the perspective of the consumers.

I work for the National Association of the Deaf. I'm an attorney and I'm also involved with DHHCAN, the DHH consumer organization. And I'm pleased to see Claude here as well.

NAD is the oldest civil rights organization for Deaf and Hard of Hearing people in the United States. We're involved with every civil rights legislation that pertains to deaf people, and have been since our inception. We represent 48 million Deaf and Hard of Hearing people in the United States. There are about 250,000 Deaf and Hard of Hearing people in the United States who use American Sign Language, and as I said, I'm a member as well of the Deaf and Hard of Hearing Consumer Advocacy Network. DHHCAN. It's a consumer-based network of organizations, a coalition who represent people all over the United States, and we come together to work on specific issues having to do with issues of our lives, including VRS.

I want to talk a bit about VRS as a civil right. It's in the requirements of the Americans with Disabilities Act, under Title IV the common carrier phone companies must provide their users with accessibility features, such as those of us who are deaf.

There are three key parts of section 225. TRS must be available to the extent possible and in the most efficient manner to Deaf and Hard of Hearing people. TRS must provide functionally equivalent telephone service, and I've underlined telephone service for a reason. We will talk about that in a moment. And the FCC must encourage the use of existing technology and yet not discourage the development of new technology.

In 2000, the FCC recognized VRS as a form of TRS, and therefore it could be reimbursed from the TRS fund. Functional equivalency is the term, and yet we have talked exhaustively about how that can be provided, and we have had presentations and we will have more presentations about the issue.

I want to give you an idea of what is provided now in terms of functional equivalency. There are a few key mandatory minimum standards. VRS must be available 24/7. Users cannot be charged a greater rate than hearing callers would be charged. VRS calls must be confidential.

VRS companies may prioritize and immediately connect emergency calls to the appropriate PSAPs, and that's the 9-1-1 call pen series.

80 percent of VRS calls must be answered within 120 seconds, which is two minutes.

And, finally, the VRS communication assistants or CAs must be qualified interpreters. And a qualified interpreter is defined as someone able to interpret effectively, accurately, impartially, both resiptively and expressively, using any necessary specialized vocabulary.

But what does functional equivalency actually mean? Do people in this room feel that we have functional equivalency in the VRS realm? Can I get a show of hands? Do people feel like we're there yet? No. I see a lot of people express the feeling that we are not there yet.

One person agrees. Well, I've got two people out there that we are not at functional equivalency yet.

For the hard-of-hearing consumer groups, Deaf and Hard of Hearing consumer groups, we have discussed what does that mean? What does functional equivalency look like? And we have come up with a definition that you see here on the slide, which I'll summarize. Persons receiving or making relay calls are able to participate equally, which is a key word, in the entire conversation with the other party or parties, and they experience the same activity, emotional context, purpose, operation, work, service, or role within the call as if the call were between individuals who are not using relay services on either end of the call.

Which means that when a deaf person calls a hearing person through the VRS system or relay service of some kind, my experience should mirror that as if I were a hearing person calling this person without a relay operator involved in any way. The experience of the Deaf and Hard of Hearing community, while we're very positive about the existence of VRS, definitely see room for improvement. In talking with members of my community about their experiences with the VRS, I have come across the idea that often deaf people will quote unquote fish for a better VRS interpreter. So that means we have got an inequality of interpreting services in the call centers. Or perhaps it's just an issue of being the best match for a deaf person. And the way that deaf people are "Fishing" for better interpreters is that they will call the VRS center and in the first couple seconds if they realize that the interpreter is not following what they are saying or themselves don't have clear communication, the deaf person will hang up and call again until they find a satisfactory interpreter, which is a waste of their time.

The other issue that the community has shared is that because there is a preponderance of VP software from different VRS providers, they are not always interoperable. So when a deaf person tries to call another deaf person, VP to VP call, they may have incompatible software and equipment.

Now, where I work I have access to several VPs, because I have to be able to get the calls. And there are times when I get only a black screen or they see only a black screen, so we switch to different VideoPhone equipment to see if we can make that work. Now, hearing people don't have that problem any phone will work with any other phone system.

Another lack of functional equivalency is the fact that there are hearing people who use American Sign Language, family members, friends, coworkers with whom we could have a direct conversation, but they are not able to get a video phone to have that direct conversation. And we are forced to use the video relay system when we could use direct conversation, which would save the FCC money and would save VRS interpreters for the calls for which they are truly needed. So we would like for hearing users to get their own ten digit VP numbers as well. And currently, VideoPhones are not interoperable with mainstreamed videoconferencing services. So I might have a video phone and I want to call a friend of mine who uses Skype or FaceTime, that is currently not possible. Because the way the VRS or VP systems are, they are siloed and they are cut off from the videoconferencing world.

And some of you think that isn't a problem, because you think that we as a deaf population could just switch to Skype ourselves or FaceTime and then they would work. But many deaf people actually don't have computers with webcams or even a computer at all. There are deaf community members, especially the older set, who may just have a VP. And if a hearing family member wants to call them, they have to call them through the VRS system.

Another current challenge of the video RS system is that it's limited to the telephone system. But many people now communicate using VoIP systems at home and at work. Are there any people in this room who are using VoIP for personal conversations?

(Showing of hands)

I seem to be in front of a shy group. They don't want to admit if they have it. But I've gone to some meetings, even, where they have set up videoconferencing for remote attendees, and they will have a big screen set up with the little boxes with the video feed. But there is no ten-digit call-in number. So if a deaf person is remote who wants to participate in the meeting, they are unable to do so.

But we are getting there, we are moving towards functional equivalency. The FCC is currently very interested and encouraging the interoperability standards for VPs and VRS companies. And we have talked about having a reference platform which would be mandatory that all VRS companies would make sure that their equipment was compatible with that reference platform.

And there are also current conversations about having third-party entities who would independently verify and certify equipment. We hope that that might be a step in the right direction.

There are further discussions about giving hearing people ten-digit phone numbers, so that they can directly contact Deaf and Hard of Hearing community members through the ITRS database. That database would make it possible to flag certain numbers as a hearing user, and then prevent those people from making VRS calls.

The 21st Century Video and Communication Act, the CVAA, should untether relay services. The CVAA requires that People with Disabilities be able to access emerging IP-based communication technologies and video services or programmes, I'll say.

So in terms of how the CVAA will impact VRS, we believe that it has the possibility of untethering relay services from the PSTN, which means we would be able to have VRS through VoIP based communication and we believe that is the case because of section 716, which requires providers of advanced communication services and manufacturers of equipment used for advanced communication services to ensure that their services and equipment are accessible to and usable by individuals with disabilities, unless doing so is not achievable. And advanced communication services refers to interconnected VoIP service -- not interconnected VoIP service, electronic messaging services, e-mail, and interoperable videoconferencing services.

So that is potentially all of those would be required to be accessible. And how do you make videoconferencing accessible to Deaf and Hard of Hearing people? Obviously relay.

And we will talk about some of the practical examples of how the CVAA can impact VRS and transform it. We believe we should have the possibility to use VRS on Skype or FaceTime or any other videoconferencing platforms. We would like to be able to talk to our hearing family and friends who know ASL through Skype or FaceTime. Because if hearing people can talk to each other through FaceTime, and I might want to talk to somebody through FaceTime, even if they don't know ASL, I should have the ability to pull in a VRS interpreter to have that conversation and still have access to that individual.

Or smart TV, more and more conferencing services are provided on smart TVs. We also believe the CVAA, the accessibility requires that the current mainstreamed videoconferencing services be interoperable with, for example, VPs. Why should they be siloed? VPs should be included within the larger platform of videoconferencing systems.

A lot of hearing people are involved in the gaming community, Internet-based games, like Second Life or Halo. And they create community through those games and they know other users and other players. Some people have even gotten married after meeting in things like Second Life. Well, Deaf and Hard of Hearing people also want access to that enjoyment and those activities, and they are IP-based. So we need VRS to facilitate our entrance into that community. Can you imagine interpreters having to interpret a war game like Halo? But think way, you have it.

There are some additional functional equivalency needs that we need. As some of the previous people have said, we have asked the FCC to raise quality standards for VRS interpreters, for CAs, and improve how CAs are matched with callers. We do believe that VRS interpreters should be nationally certified, you know, especially many of us who are professionals, such as myself as a lawyer, want to be able to communicate through a nationally certified interpreter. We want to see better matching happen between VRS interpreters and callers. It's not a one-size-fits-all approach in the VRS arena. Some interpreters have skills, for example, as Mark was talking about, for those who have CP. Some are fluent ASL users, some are more fluent in English based style systems.

I've had wonderful experiences with interpreters, and other individuals have not had the same experience, even with the same interpreter, because it's not a one-size-fits-all approach. So we want to allocate the resources more effectively.

There may be a specific type of call like a medical call, that should be routed to a medical queue. There may be interpreters with background knowledge and experience who can facilitate a certain kind of call. Community-based agencies do that kind of matching between assignments and interpreters. We feel VRS should be no different. And then we proposed to the FCC that Deaf and Hard of Hearing people should be able to create a list of preferred interpreters. Because if I know an interpreter works well with me, then I want to be able to access that interpreter for my calls. As interpreters get to know my issue, I mean, it's the same thing when we were in the University. I had the same interpreters in law school for my classes, and they became more and more proficient as they were used to the jargon. So we would like to have a preferred or favorite list of interpreters, so that when I make a specific call I can check the list of favored interpreters. If any of them are online, then I'll get them first. If not, then I'll be routed to another random interpreter.

And another issue has to do with affordable broadband access. VRS obviously requires that broadband access. It needs to be fast and it needs to be affordable. Now, in big cities that is not such an issue. You can get high speed Internet that is affordable in most big cities. But what about our rural communities? They don't enjoy the same access or they are very expensive if they have the access to it. So we need to fix that.

And a lot of VRS calls are being made through mobile devices nowadays, like the iPhone, which is fantastic. But is there a cap? Those devices do charge once that cap is met. So we would like there to be special set asides for the Deaf and Hard of Hearing community regarding that.

In closing, much has changed in the TRS arena since the ADA was passed in 1990. The consumer groups as well as the FCC continue to work together to ensure that Deaf and Hard of Hearing Americans have functionally equivalent Telecommunications Access. But as you can see, there is a lot of work ahead of us to keep pace with the evolving communications technology.

Thank you very much. I am happy to answer any questions or take any comments at this time.

>> JOHN LEE: Great. Thank you, Andrew, that was a great presentation. So are there any questions on the floor? We have a quick ten minutes, so... who are you?

>> SIMON HORNE: I'm Simon Horne. I'm the founder of a company called Spranto. I used to work for a Silicon Valley start up. We used to link Skype and FaceTime and things with standard based video teleconferencing units. We found the difficulty the reverse. They do not allow access to their networks. So it's hard to build a relay service to access those services if those don't allow an IPI or access to their services. And that's the biggest issue in that space. Yes, people like using them. But, unfortunately, they don't open up their networks for interconnecting.

The other issue is that as it presently stands, most of the vendors do follow closely to a standard. It's whether they will open it up and be able to connect to other conferencing standards and VoIP and stuff like that, that's for further discussion, but it's possible to do, as I understand it.

That's all.

>> ANDREW PHILLIPS: I understand your concern. The consumer groups are hoping that the CVAA will have some requirements in terms of an effort to create a gateway or improve that interoperability between the various videoconferencing services, the mainstream videoconferencing service, with videophones.

I know that in the past all instant messaging systems were separate as well. But over time when AOL and Time Warner merged, there was an agreement to make that then more interoperable. And so I've also read about Polycom wanting to improve the interoperability that they have got with videoconferencing services.

So we, the disability groups, hope that the CVAA will push and promote industry to make their services interoperable. But, however, whether or not that happens, we know that market forces are moving in that direction and they are pushing towards interoperability, and so the market may tell. And if not, just as the presentation said before, there are different phone systems, and today obviously that is no longer the case.

I think it's a very interesting point.

>> PETER HAYES: And we are working towards these things as opposed to trying to make things interoperable. We will try to come out with a free Skype that works with the Deaf and Hard of Hearing today. More important, one of the most interesting things that we found, when you talk about true functional equivalency, is not having to have an interpreter in the middle in the first place. Unfortunately, one of the bad things about the current VRS system is it encourages VRS companies to have more minutes. If there is a system out there where companies can easily provide another deaf person to help the needs of someone, then you have a much, much better system. So having worked for a VRS company, we saw the ten to twenty percent of all calls went to the same ten organizations. And if those organizations had the ability to hire more deaf people, creating more jobs, saving the taxpayer tens of millions of dollars, while at the same time providing a better service with no interpreter in between, and two deaf people talking, ASL to ASL, you get a better experience all around.

And so as part of the standard and part of what we're talking about, we want to create a system where it's easy for companies to be able to provide service and have their own automated call distribution to provide deaf-to-deaf communication, so that VRS isn't required.

>> ANDREW PHILLIPS: I think you've made some wonderful points.

I know that the consumer groups are pushing for hearing people to be able to get a ten digit phone number for VideoPhones, and we're hoping that that will lessen the need for the VRS calls.

I wouldn't blame the VRS companies for wanting to rack up the minutes. The problem is that people don't want to hire deaf employees. So, for example, I was meeting with several Government agencies, and I've encouraged them to hire Deaf and Hard of Hearing people to answer calls, like you've just explained, and they don't seem very interested in following that model.

One of the examples is Verizon, who has a hot line, a customer service hot line, that Deaf and Hard of Hearing people can call through VideoPhone. And I would think that if a hearing person has a ten digit VP number, then maybe some of these places would have hearing people who happen to know sign language who can accept those calls.

So... yes.

>> JOHN LEE: Thank you. So we have three questions in line and I'll close the session after that. So we have Donna first, then Christian, then we will close with Andrea. So Donna, go ahead.

>> DONNA PLATTS: I'm sorry. I forget when we were talking about the different video apps, such as Skype, FaceTime, et cetera, not being interoperable with telephone services, but when you're considering emergency calls in the future, because the next-generation 9-1-1 will be able to accept those sorts of video, text, voice-based calls all within one system. So the more video apps that are available will enable hearing people to be able to call 9-1-1 using those apps as well, why wouldn't we as deaf people then have that same comfort of being able to call directly and then pull in a sign language interpreter or communication assistant? And that's something that we would look at as a part of the future in the next-generation environment.

>> ANDREW PHILLIPS: I agree that all emerging technologies like next-generation 9-1-1 can benefit us as well, but we have to make that NG9-1-1 system interoperable so that people can make FaceTime calls to 9-1-1 or Skype calls to 9-1-1. So hopefully those efforts will also benefit the Deaf and Hard of Hearing community as things become more interoperable for our needs.

>> JOHN LEE: Christian, go ahead. Please keep it quick if possible.

>> CHRISTIAN VOGLER: Hello, this is Christian speaking.

First of all, I want to make a fast comment about instant messenger. You said that they were interoperable. But I'm sorry to say that they are diverging once again. And I don't believe that market forces are good enough to make this happen. Google decided to drop the standard. And because they decided to do that, that really isn't helping.

I also wanted to talk about FaceTime and Skype and so forth, interoperability. I heard in some of the discussions with the FCC that the mainstream videoconferencing systems aren't really working well with the regulatory system through calls to 9-1-1. So that 9-1-1 regulations through the FCC require the ability for these mainstream systems to be able to call into 9-1-1 centers. Hopefully the 9-1-1 -- next-generation 9-1-1 will help, but that's not a near-term solution.

>> ANDREW PHILLIPS: We do have a lot of challenges to overcome. But we have talented people such as Christian in our community who will help us solve those challenges.

>> ANDREA SAKS: I listened to this with great interest and I'm glad that a lot of the things you brought up, you have brought up. I was thinking about two areas. Christian just covered one.

The instant messaging are based on proprietary standards which, not trying to be rude, are a pain in the butt. We have the same problem with Skype and FaceTime. I just met with Microsoft and the problem was you can do a conference call by voice and for hearing people as many people as you can connect because that's point-to-point. Can you do that for VideoPhones? No. You have to buy the upgrade.

And I've had a huge discussion with them about how discriminatory that is. There are ways around it. And anybody who wants to talk to me about that, can. But you still cannot do it unless you buy the upgrade.

So there is all kinds of impediments that industry puts in front without having the consciousness to understand their marketing techniques. So industry is not going to help in many of these cases, and I wish it would.

But we created something in the ITU called V.IT, which linked all the text phones. And Motorola was going to put it in, and there was a regime change and they didn't want to spend the money on R&D. Do not depend on industry. The only way things do get done is when you have regulation and they have to. The problem is you have to help the FCC understand what you want and how it can be done. People like Christian and some of the people in the ITU that I work with and other organizations, and I am sure you are one of them, can design something. And this is why this document that we're trying to create is important. So that's all I wanted to say is that this document could possibly help us get where we're going, but we have to be specific in what we want to see happen and realistic and not hope that something is going to happen. Because it won't.

>> JOHN LEE: Thank you. So, Andrew, if you have a response and then we will close out the session.

>> ANDREW PHILLIPS: Wonderful points. I'd love to have further conversation with you about that. I'm hoping that the CVAA's requirements that IP-based communication be accessible to People with Disabilities will force the large videoconferencing service providers to make sure that their systems work with VRS.

I think the bigger and harder goal is to get them to work with each other, Skype to FaceTime, for example. But the FCC could push them to require that they work with VRS companies. I think that's clearly coming.

>> JOHN LEE: So at this time we are running out of time. We did go over time. So we will take a break, but it will be a quick break, a little over ten minutes. My apology for the quick break but we have to catch up with the agenda if possible. So if we can get together again at 11:00, that would be very much appreciated.

Thank you.

(Break until 11:00 AM  ET)

(Please stand by. The meeting will resume momentarily)

>> JOHN LEE: All right, everybody. So we will get started again.

One of the things is before we launch with Randy's presentation, we completely missed Christopher's -- Christopher, are you there?

>> CHRISTOPHER JONES: Yes, I'm here, John.

>> JOHN LEE: We missed Christopher's comment during Mark Hill's presentation. And, unfortunately, that was due to some technology issues. At this time I'd like to give Christopher a quick opportunity to ask his question or make his comment to Mark, and then we will go back to the agenda and start with Randy's presentation.

So Christopher?

>> CHRISTOPHER JONES: Thank you, John.

This is Christopher Jones. And I really appreciate you allowing me to speak now, John.

I just wanted to remind you that the ITU talks about VRS for deaf people with cognitive disability and/or minimum language skills. So I was quite interested to hear Mark's presentation for deaf people with mobility disability. So I'm just wondering, this is a question, is there a VRS for cognitive disabilities in the U.S. If not, should that be one that we could put in parallel with the service that Mark here is discussing?

Thank you.

>> JOHN LEE: So, Mark, do you have a response?

>> MARK HILL: I'm not completely familiar with cognitive disability. And those consumers here in the VRS system here in the U.S. I would say that pretty much nothing's happening here related to that. But I would agree with your idea in putting those in parallel.

>> JOHN LEE: Great, thank you.

So at this time I'd like to move to the first presentation of the session, which is document 14. And Randy is going to give us his presentation on relay services for the deaf-blind.

>> RANDALL POPE: Hello, everyone.

I've greatly enjoyed today and yesterday's discussions about this really important issue and all 689 of different presentations. All of which were about relay services.

The conversation I've seen thus far has caused me to change my comments slightly, because of course it's easy to overlook things when you're at home preparing remarks, and then since I've been here other things have come to mind based on your presentations.

The first thing I wanted to mention is that I really appreciate the FCC and their work on VRS and the different types of services and their work with deaf-blind, who so greatly need the service. I've seen a great deal of progress in the last five years and the collaborations that have been happening. And I've been very impressed with that.

At the same time, we have a long way to go. Part of the problem is procedural, with the requirement for getting things done and the requirements of working with Government agencies to make things happen. At the same time, I understand that the FCC has systems that must be followed, and systems always move slowly. And we as an organization have tried different ways to continue to make progress in terms of services for deaf-blind people.

I want to give you a little preview of the deaf-blind community. The first thing I wanted to mention is that most deaf and blind people don't sign. They are not sign language users. Most of them are hard-of-hearing, and they lost their vision later in life. Some of them were born hearing and sighted and lost both their hearing and sight later in life.

Some of them were born blind. Became deaf later as a result of an accident or a brain injury. And so deaf-blind people are not homogenous, they come in many different types.

Then we have deaf and blind people who use ASL, most of whom identify as being members of deaf culture. And they are very proud individuals. They are very proud of being members of the deaf community.

It may be the case that people who don't sign are not necessarily thrilled about being identified as deaf-blind. There are many misunderstandings and myths about what it means to be deaf-blind.

I want to talk more about services. In the last several years the services for deaf-blind people have made a lot of progress. There may be wonderful services out there, but deaf-blind people have a difficult time accessing those services. And there are many reasons for this. In some cases, older technology has become obsolete. It might be the case that industry has decided not to produce a product anymore. One famous example is telebraille. That had been on the market for 17 years. And people who were fully deaf-blind would use that device to access the phone. And that product was stopped production or they -- the company stopped production of that product in 1995. For people who are low vision, we had low vision displays, and it would be a display attached to a TTY. And people who were deaf and blind or low vision couldn't read the normal display on a TTY but they could read the low vision display and they are able to access the services provided by a TTY.

But that is also not being produced anymore and it's no longer available.

And the reason that these products are no longer available is because of the fact that deaf-blindness is a low incidence disability. It's not a very large community. There's still deaf-blind people out there today using older technologies, and there's still many of these technologies that deaf-blind people are using and enjoy have recently gone out of production.

There is another famous example called the deaf-blind communicator. It had a Braille device and a display, and it was a notetaker, Braille notetaker. And it allowed face-to-face communication with someone. And so basically this product could be used to communicate to anyone, whether they were deaf-blind or not. But that is another old technology that is no longer available. And each time this happens, with a piece of legacy equipment that is no longer being produced, it presents a barrier for deaf-blind people. There's examples of custommade equipment that is no longer available. And that is continuing to happen for all of us. It's something that we have been through. And each time that happens, we have to look at other alternatives and look at existing equipment, and with the purpose of making that equipment accessible to us.

In terms of VRS, we have had many issues with that. We have made some progress. With VRS, we addressed the visual issue in terms of accessing that service. For example, the color of the clothing and having it contrast with the interpreter's skin color. Also deaf-blind people, many of them require someone to sign very slowly. Often if fingerspelling is produced too quickly it looks just like a closed fist, because it's not easily seen. So fingerspelling needs to be produced very slowly.

There's some examples of an interpreter's skin being too dark and then their clothes also being dark and it makes it difficult for the consumer to see facial expression and facial grammar that is an important part of the language and that makes it very difficult. and it puts the deaf-blind person in an awkward position.

I have one example. I was on jury duty. And the interpreter came in, and the interpreter had very dark skin and I really couldn't see any facial expression. And they also didn't have enough contrast between their skin color and their clothing. And so I had to actually access services through tactile ASL, because I wasn't able to get the information any other way.

And I've been asked whether this was a racial issue or whether it was a racist response on my part. And I just want to clarify it's not that at all. The issue is I just can't see the information on the interpreter's face and that in that case I had to use tactile ASL.

There is a group of deaf-blind consumers who have no visual access at all. Their vision is such that they can't get any information from the screen. AADB and relay have made-- and ARC have made proposals to the FCC to propose a communication facilitator in order to access the visual information on the screen in order to help deaf-blind people be able to see the screen. And the purpose of that extra individual is to sign the information that is on the screen and relay it to the deaf-blind person through tactile ASL. Then the deaf-blind person themselves would sign back to the screen, back to the camera, so that the interpreter would be able to see the deaf-blind consumer's response. Unfortunately, there are many issues involved with this. Unfortunately, that communication facilitator has to go to the deaf-blind individual's home or place of business in order to provide the tactile ASL services. Typically, the FCC is not interested in providing home-based services. And that's been my understanding of the problem with that service.

Also, the communication facilitator is going to a deaf-blind person's home and of course there are -- they are a stranger coming to that home. And so there are many issues that need to be worked out in order for that service to be provided. If this could work, this would be a wonderful service for deaf-blind people. For a large proportion of the community they would greatly benefit from the provision of a communication facilitator.

And it would result in much better communication than a keyboard based Braille based service. And, of course, it's because of using the natural language of the deaf-blind individual. It makes communication easier.

People also would like to have CAs for point-to-point telephone calls. Deaf-blind people would rather communicate with friends and family or they would like to be able to do that, you know, whether it be their children or other family members or friends, they want to be able to make those kinds of phone calls.

But, unfortunately, they are stuck with text-based communication methods. And the just an Andrew mentioned in his recent presentation, there are also senior citizens who don't want to use a computer-based system and aren't comfortable with that. They prefer to use a video phone because it's easier to use and more friendly, more approachable.

One of the best things that ever happened to the deaf-blind community is the National Deaf-blind Equipment Distribution Program. And that's NDBEDP.

We have almost completed the first year of a three-year pilot programme. And I'm happy to tell you that that programme for the most part has been very successful. Deaf-blind people are getting the equipment that they need. The equipment is being used in a variety of places all around the country. And of course there's some flaws in the system and some areas of improvement, but we have to keep in mind this is a pilot programme. It's a first attempt.

And the FCC is researching this programme and taking a look at how it's operating, in order to make improvements. Because the programme through trial and error is going to result in positive improvements.

Now, the reason for this Equipment Distribution Program is because so much of the equipment that is designed for deaf-blind people is so expensive. For example, the display that I mentioned, a Braille display, a Braille display might cost in the neighborhood of $3,000. The deaf-blind communicator, that device is about $7,000. Other people who are deaf and blind need -- are able to access large print, and they don't have a computer and they can't afford a computer, and they can't afford phone service or the software that is needed to provide the larger images on the screen, and again some of that best equipment is not available anymore. And so deaf-blind people have to go through a process of continuing to replace the equipment as the older equipment becomes obsolete.

Another example is CTS, the Captioned Telephone Service. As far as I know, the deaf-blind people can't access that service. And people with low vision can't read the small size of the print on the screen. But there are some deaf-blind people who can't hear but can speak. And so that would be a service that they should be able to use. And just to give you an idea of fully blind, deaf-blind people, if they're going to a website, for example, on the screen, those of you in this room can take a look at whatever you want to look at on the screen and what area of the screen. But Braillers aren't able to actually do that. The Braille presents the information in a line-by-line format. And so it starts at the top and it actually moves across the screen and then it moves down to the next line and it moves. And it might move down a column and then over to the next column. And that might give you an idea of how difficult that is, and is the reason why deaf-blind people are often not avid Internet users.

And, actually, if we had an improved design in the Web sites, it would make it much easier for deaf-blind people to access the information. We have received complaints from deaf-blind people that they aren't able to access VRS Web sites or IP-Relay Web sites. And it's very difficult to tell if the website itself is the problem or if the deaf-blind person has limited experience or knowledge or the appropriate equipment. For example, a screen reader, the deaf-blind person may not know how to use the screen reader appropriately. So there are a wide variety of problems and there are some relatively simple solutions. The solutions involve training for how to use the equipment. For example, the software that might be of assistance, there's software that could help deaf-blind people access VRS companies' Web sites much easier.

The CTS, captioned telephone service, for example, there could be a plug that could be added so that a supplemental monitor could be used so that the text could be displayed in a larger size, or that it could work with a Braille display.

My philosophy is to try and make current equipment accessible so that deaf-blind people don't have to use special custom designed equipment. Every time we have customer equipment that is focused on people who are deaf-blind, the market just moves ahead and leaves that equipment behind.

So is the iPhone, for example, deaf people can access the iPhone, deaf-blind people can access the iPhone. But they have to find the information on the screen and have a very difficult time navigating where they exactly want to go on an iPhone. The iPhone is Braille accessible, but it's still very difficult to use. It's very difficult to find what you're looking for. And it can be quite frustrating. And I can give you many examples like this. But I think I've given you a general idea of the current situation. And what it's like to be a deaf-blind consumer.

Well, I kept my presentation short, and I think now we can open it for questions.

>> JOHN LEE: Thank you very much, Randy. So, we're -- at this point, are there any thoughts or comments from the floor? Or questions?

Mark?

>> MARK HILL: I wonder, would the iPad be a replacement for the iPhone or a better alternative because the screen would be easier to see? The reason I say that is because I personally can't use an iPhone but I do use an iPad for communication purposes. Because the screen is bigger and more comfortable to use, and I can use it with my hands. So I wonder whether that's an option.

>> RANDALL POPE: Very good question. I really want to thank the people who work at Apple. Because they have shown a commitment to accessibility. And so to answer your question, yes. You can connect an iPad just like you can with an iPhone to a Brailler -- you can connect your iPhone to the iPad to make it easier to read, and you can use those without using additional supplementary equipment.

Unfortunately, other companies aren't as accessible or their phone equipment is not as accessible. And I think that I would say that we're close, but we're not there yet. And one company is very close, but not there yet. And I think we need to be much more strict with the smartphone companies. And we need to let them know that you have plenty of time to make your phones accessible. You've had that time. And they shouldn't receive extensions for making the equipment accessible, that they need to release them accessible from the start.

>> JOHN LEE: Thank you very much.

>> RANDALL POPE: Any other questions?

>> JOHN LEE: I believe Christian and Donna and then we will move on. Christian first and then Donna.

>> CHRISTIAN VOGLER: This is Christian speaking.

A very brief comment about the iPad. Just one second while we work out logistics.

So both the iPhone and the iPad can connect to a Braille display, and that's wonderful. But I wonder about the differences between the iPad and the iPhone. The iPhone supports a voice and data plan, where the iPad doesn't. And captioned phone services require a voice plan. So, unfortunately, at present, there is no way to call a captioned phone service without a voice plan. So I see no technical reason why that should be the case, but it still is. It hasn't been dealt with or addressed.

Now, taking a step back and looking at the larger picture, I know this morning we have had three presentations. The speech-to-speech relay services, Mark's presentation, and deaf-blind services, and I'm seeing some common themes. A struggle for access. For all three groups that are having a hard time with advocacy and persuasion, convincing people how to give them best access as small groups.

>> JOHN LEE: Thank you. Randy, do you have a response?

>> RANDALL POPE: Christian, that's right. I agree 100 percent. Advocacy for deaf-blind people is difficult, because we are such a small community. And I have to tell you that advocacy for deaf-blind people is exhausting, because we have so many items on our list of things that we need to do. And there is not enough time in the day.

Deaf-blind people take a lot of time to go shopping and do their other tasks in daily living, just to maintain their own lifestyle. And when people don't have SSP services, it makes it very difficult. And there are many other reasons why it's difficult.

I firmly believe that People with Disabilities need to meet their personal needs first, and if they can do that, then they can move on to advocacy and other areas of life. But first, of course, we all have to meet their own personal needs. Because that's so important.

Thank you.

>> JOHN LEE: Thank you, Randy.

So at this point I would like to ask Donna to give her comment. And then we will move to the next presentation.

>> DONNA PLATTS: Hello. Hi, Randy.

>> RANDALL POPE: Hi.

>> DONNA PLATTS: Long-time no see. Good to see you. Thank you for sharing the challenges that deaf-blind people experience on a daily basis, particularly related to communication and technology. I've seen that the number of analog phones has significantly reduced and aren't available any longer. And there are still leftover analog phones in use. Eventually, the analog phone system will be phased out as more and more people switch to digital phone services, voice over IP services, and a variety of other vehicles.

My concern is what technology will be left for deaf-blind people, especially those who are either culturally hearing or culturally deaf, but are not necessarily comfortable with newer technologies? Some aren't tech savvy and it requires a great deal of training and work with those individuals.

I mean, I'm happy to see that the FCC has dedicated funds for the distribution programme, but my concern for them is how can those individuals call 9-1-1? I know in the future when next-generation 9-1-1 is in place, we will have the capability to use a variety of different Internet systems, regardless of the individual's communication modality.

For example, they might use a cell phone, they might sign. They might use text. If they use sign, they will be connected to a sign language interpretation center. Maybe they just need an interpreter to voice for them while the 9-1-1 operator can see me directly and type a response to me that I could feel on my refreshable Braille display or see on my computer. There are a variety of options that can be combined in NG 911. But that's the future and there are lots of possibilities.

Randy, what would you recommend to include for deaf-blind people to be able to call 9-1-1?

>> JOHN LEE: Thank you, Donna. Before I let Randy respond, there were two questions for comments as well. So we will accept them. But if you could please make them quick and go ahead, Randy.

>> RANDALL POPE: First of all, hello, Donna. Long-time no see. That's really nice to see you again.

So you asked about recommendations. I think we do have to have a very simple device developed, something that could be worn, perhaps, and the person could just push a button and it would automatically call 9-1-1, and someone would show up at the House to find out what was wrong. And I think that that would really work for somebody who was fully deaf-blind. Because if they can't access VRS, then actually placing a call to the 9-1-1 center isn't going to help them.

So it would be nice to have some kind of system where 9-1-1 centers and deaf-blind people could set up something where there was an immediate response to the deaf-blind person's home.

More concerning to me is suppose a deaf-blind person isn't able to push the button. They have had a stroke and they have fallen down. They aren't able to go to the VideoPhone and get to use VRS services and call the 9-1-1 center, my dream would be for all of us to come up with some kind of simple system where the person could push a button and it would call the 9-1-1 center right away. And actually, that would work for anyone. It would be something that could provide services for all people. Because I've known deaf-blind people that have fallen down. They have fallen down the stairs. And this one person that I know of was there for three or four days, and actually the person was found, but then two weeks later the person died in the hospital.

And, really, that kind of thing just breaks my heart. And I've heard stories like that, that have happened in a variety of different places.

And so I think that there just needs to be a very simple way for someone to get in touch with 9-1-1. And it would be something that would benefit everyone. And it wouldn't need the person to go and find their video phone, their Braille display, and all of that, and place a phone call through VRS to 9-1-1.

Now, nothing against VRS service, I think it's a great service, I think it's really wonderful. But in terms of a 9-1-1 call, we do need something very simple, so that it happens quickly.

Did that answer your question, Donna?

>> DONNA PLATTS: Yes, thank you, Randy.

>> JOHN LEE: Great. So, if we could go with the next two questions, please keep them quick. Because we still have two presentations before lunch. Go ahead.

>> DIANE MILLIGAN: I'll keep it short. This is Diane. I understand how you feel about cuts in the support service provider, SSP programme. We have had the same problem, there are things I can't do myself, can't take a bath, can't do my food chopping easily. They cut my services because I'm high functioning. It's -- those SSP services are only for people who have severe need. And so I end up having to try and afford those services out of my pocket or wait a lot longer for them.

>> RANDALL POPE: I absolutely agree with that comment.

>> JOHN LEE: Great. So, Greg, you had something that you wanted to add and then we will move on.

>> GREG HLIBOK: I think I'll come up front.

So maybe I'm a little off point, but I'd like to respond to Christian's point about the three organizations that have presented this morning: AADB, CPADO, and the STS community about their lobbying efforts. And this is coming from me personally, not as a representative of the FCC. But in my observation, Karen Peltz Strauss briefly mentioned it yesterday, the general perception that any request or recommendation is looked at through the lens of whether it creates an opportunity for abuse, because of what has happened in the past. IP-Relay clearly showed once fraud was eliminated that it cut the number of calls by half. So there are some reservations within the FCC about looking at new proposals.

My suggestion is to continue working with the FCC, acknowledge their concerns, and find an agreeable way to make it happen without just coming to us with a list of demands.

And then saying that fraud is on us to make sure that it's not an issue. Because what happens with fraud and abuse significantly slows down the process and creates quite a backup. And we're all aware of that. We're not blind to the elephant in the room. Because we don't want to miss opportunities. So we need to collaborate.

One possible item for the future, I know that TRS lobbying efforts related to rates and services, there's typically a resistance to registration for users to register with the service. But that is one of the ways to go, because if you're looking at the desire to have a consumer profile in place, to allow the companies to know individual consumer's needs, to provide better and more efficient, quicker services, picking the appropriate type of communication assistant, et cetera, that can all be included within a user registration system.

It would provide the best of both, but, you know, if you look at the IP world, registration is one of the potential ideas out there.

>> JOHN LEE: Thank you very much, Greg.

So, Randy, do you have any final thoughts before I move on or any responses to what Greg mentioned?

>> RANDALL POPE: I strongly believe that being part of consumer groups is the only way to advocate for accessibility in so many different areas. And not just communication. And so I'm very happy to be involved in my organization and I'm very happy to meet the FCC halfway.

And sometimes of course we have to go more than halfway. It's always a slow process, because of systemic issues. But it's been a wonderful learning experience.

Greg, thank you for your comments.

>> JOHN LEE: Thank you very much, Randy. Very much appreciated.

So, thank you.

At this time we do have to move onto the next presentation. Christopher will be giving us his presentation, and it's document 15. Now, before Christopher gets started, one of the things I'm going to do is I'm going to push back the start of lunch to 12:30, just because we're running out of time a little bit.

So Christopher, go ahead.

>> CHRISTOPHER JONES: Hello, this is Christopher Jones here. First of all, I would like to explain that Jack Sandover himself can't come today. He is going to a campaign meeting in London, and that's for VRS and captioned telephony. And that's been going on since 2003. So at any rate, he asked me to do his presentation today.

We have some slides. The next slide, please, John.

Next slide, please, John.

Thank you.

The accuracy, speed and delay of translation from Speech-to-Text are core measures for TextRelay services. However, it is easy to make assumptions that influence the development of measurement methods, and the aim of this note is to encourage consideration of fundamentals.

By no means is this intended as an in-depth analysis. It is a personal view and appeals to policymakers to take on a more holistic approach.

Comparisons with TV subtitles. Research and standards for subtitling speed, accuracy and delay are a clear source of information and guidance for relay services. It is tempting to make full use of them, but we must be aware of some essential differences.

If you are maybe listening to several voices, but it is always one way, the viewer cannot ask for repeats or anything else. On the other hand, the viewer has vital visual clues. Different viewers have different needs. Those who get minimal information from speech sounds or lipreading need maximum accuracy and transcription speed and delay are of lesser importance.

Those who use subtitles to back up heard speech sounds and perhaps lip shapes find delay and slow speed annoying, and in fact detract from the experience.

Low accuracy may annoy, but it is not vital as the viewer has the clues from heard speech and also lip shapes.

The essential difference from telephone conversations is that the telephone call is a two-way process. Therefore, there is an opportunity to pause and correct the listener so there is some control over the process. Different types of listeners will have different needs, just as for viewers.

Next slide, please.

There, does the hearing-impaired user have control to ask for a repeat? Does the hearing-impaired user get additional clues, sound or lipreading? Is accuracy vital for some words? Do slow speed or excessive delay spoil the experience? Level of hearing loss or similar parameters, the lipreading skills, reading speed, expectation, experience, et cetera, they must all have an influence.

Next slide, please.

Are speed and accuracy related or can we expect similar levels of accuracy as transcription speed increases?

Next slide, please.

So what happens in a voice phone conversation? The users talk at their normal speech speed. They listen at that speed. The only delay occurs if someone is considering a point, finding information, or perhaps writing down a note. People interrupt as necessary.

We need to be clear here, one rarely achieves 100 percent accuracy in a normal voice phone conversation. Speech quality, accent, line quality, and context are strong influences on the conversation.

Next slide, please.

What happens in a conversation is very much dependent upon the content. We can compare conversation, calling a retail organization, for example, a local electrician, and then calling a large commercial organization such as a call center.

Next slide, please.

The user needs to have confidence in any testing method, so that they can compare available systems. And we need independent testing.

Next slide, please.

There are usually phonetically balanced tests, for example, word and sentence lists. The size of the message set, vocabulary, familiarity, feedback, repetition, training and context have been shown to have a very strong influence.

Obviously the test method has to reflect the real situation and this, in turn, demands an understanding of what happens in practice. With levels of accuracy around 95 percent and above, comparisons between different systems or operators will be difficult. It will need -- it will be difficult to translate text to flush out any differences.

Next slide, please. If a randomly selected phone call is used, we have no control over the main parameters, the vocabulary or the context, et cetera, or the complexity of the conversation. It would be very difficult and practically improbable to compare two systems. An in-house observer would be aware that the test is being carried out, and that in itself could influence the conversation and therefore the judging of a conversation.

Use of a script, and by this I mean measuring accuracy during a phone conversation between two actors, may be judged as departing from a normal conversation, but allows the balancing of content for phonetics, complexity, and accent, et cetera. But the approach can be inherently independent.

Next slide, please. Some hearing-impaired users can make full use of audio clues, and the opportunity to ask for a repeat so that they will be more interested in speed and minimal delay rather than the accuracy, but other people may not benefit from this. And, therefore, accuracy will be far more important than the speed.

Next slide, please.

In an ideal world, we should have adaptable systems so that the user chooses what they want according to their need. A fall back might be such as a two-tier system. If we have to accept a single system for all users, then clearly we need to focus and concentrate on accuracy.

So the question is, do we try to balance the need of those who require accuracy with those who require speed? And is it moral to insist on one aspect and expect another user to comply?

So to conclude, we do need to stand book back and consider before we jump into -- stand back and - before we jump into a specific method and there is no one size fits all solution.

We need to be -- we need some robust measurement method, and independent testing, so that the users themselves can decide what is best for him or her.

Also, we must make use of progress in technology for relay services. And we should aim for flexible services so that the individual needs can be Catered for.

Finally, user representatives must be involved in the design process.

Thank you for your patience. Thank you very much.

>> JOHN LEE: Thank you, Christopher.

So we do have time for one question if anybody has a question related to this. I'm not sure if Christopher can answer it, given that this is not his presentation. But... if not, could we move on to the next presentation.

Okay. Christian has a brief comment. Go ahead, Christian.

>> CHRISTIAN VOGLER: This is Christian speaking.

I'd like to point out, finding and identifying appropriate measurements is always a bit of a challenge, for accuracy is always a bit of a challenge. But also it's a scientific challenge but also it's a political challenge.

And it's a difficult balance in looking at consumers and their expectations and industry. And so it's just a balance between consumers and their expectations and the scientific research work that could make that possible.

>> JOHN LEE: Thank you, Christian.

So, Christopher, if you don't have anything else at this point, I'd like to move on to the next presentation.

Okay.

So let's move on to document 17.

>> CHRISTOPHER JONES: Yes, please, move on.

>> JOHN LEE: Thank you. So let's move on to document 17. This is captioned telephony usage. I believe Christian Vogler is presenting.

>> CHRISTIAN VOGLER: Hi. This is Christian again. Because of time, I'm going to try and proceed with all due haste. I'm going to explain what I'm going to do first. We distributed a survey to captioned telephone users in the Deaf and Hard of Hearing community about how they use the service and about their demographics, and whether they are satisfied with the service or not, and what changes they see as being necessary.

Next slide, please.

There are a variety of reasons that we did the survey, but the number one is because of the sky rocketing use of Captioned Telephone Services. It's becoming more important to find out what kind of people are using those services and how important those services are to them.

As you can see from this graph, the use of Captioned Telephone Services has really sky rocketed. Yesterday, the FCC had commented about the spike in services, and I slightly disagree with that. I believe that there has been more of a natural growth. There has probably been some misuse, but I don't believe that that is the dominant factor in the growth.

The survey was distributed to deaf and hard-of-hearing as well as late-deafened people over the age of 18, recruited through consumer organizations such as TDI, HLAA, et cetera, and distributed on the Web. We received over 3,000 responses in a very short period of time.

A lot of people were very upset about their Captioned Telephone Services. And very passionate about them. 72 percent of respondents used Captioned Telephone Services. Of that 72 percent, there were two groups. The majority group were individuals using specialized equipment, such as a captioned telephone, and then a much smaller group which used either mobile devices or a Cisco Internet phone.

Our first question was about how long individuals used the service. Something that is interesting here is that the number of people who are using mobile phones or Cisco Internet phones, although very small, is a quickly growing group.

Looking at the demographic questions of those individuals is next. Here is our gender split. The majority of respondents are female. However, in the community in general, a larger majority of individuals with hearing loss are male. So it's interesting that this is the way that more females prefer to communicate.

We have our breakdown by age. Individuals who used specialized equipment typically are older. In general, the population, those who are using Internet or mobile phones typically are younger.

Most of the people who are using Captioned Telephone Services are retirees. As expected, those individuals who are experiencing later hearing loss are retired. Looking at their educational level, those who use Captioned Telephone Services are highly educated. That could possibly be because those without higher education wouldn't necessarily participate in the survey or have less access to the service.

Most of those who responded are of higher incomes as well. In part that determines their access to the equipment.

I'll make a brief comment on this slide. There is a great confusion about how the equipment is used and who provides the service. For them, it's just a black box that they turn on and it works magically.

This question was about how they use the phone, whether it's work related or for personal use. The majority use it for personal communications, and that would be because the majority of them are retired.

This question focused on how often they make calls, and commonly people don't make -- it's very similar to other callers.

This question was about satisfaction with captioned. Most people like their captioned phone. They're not highly satisfied, but moderately satisfied, and believe it could be better.

When we asked them if they -- how they would feel about the call without captioning, and they felt that would be a bad thing.

The next question focused on how important the captions are to them. The top choice was very important, which means they couldn't use the phone without captioning. And most people said that was true, they could not use the phone without captioning. A very small number said that they could live without it, an almost insignificant number.

Our final question in our survey asked about problems with Captioned Telephone Services or issues that need improvement. 60 percent of respondents said that there is a delay between the person speaking and the captions. And that is the biggest problem to date with captioned telephone.

The second, which was 41 percent of respondents, said that sometimes the captions are good on calls, and other times not so good. There is an inconsistency in the quality of captions.

The third, which 32 percent -- sorry, 36 endorsed that there were two too many errors in the captions. And the fourth is that it takes too long for the captions to begin once the call is placed. And that was a 25 percent response.

So latency is obviously the top issue.

So any companies, if they want to improve the situation, they have to look at how to resolve latency.

Informally, I've heard from consumers of captioned telephone that they couldn't join conference calls because of that issue. That's the short version of my presentation.

Thank you.

>> JOHN LEE: Thank you, very much, Christian.

Are there any thoughts or comments related to this presentation, the survey that has been presented to us?

Okay.

Since there isn't, actually, we ended right on time.

Surprising. So, I'll -- let's go for lunch at this point. And we will come back and there's two presentations from Ultratec and then a demonstration in the first session. And then in the last session we will hold that discussion that keeps getting pulled back. In the last session we will have the discussion. We will do reviews. There is one more demonstration. We will introduce a new document and then we will adjourn.

So let's go for lunch. And come back by 1:45. And Christian had a comment.

>> CHRISTIAN VOGLER: Briefly, so everyone knows, during the lunch break we're going to have to disconnect the conferencing system. So after the lunch break is finished, you'll have to reconnect again. We apologize for that. But there is a limited amount of time on the audio bridge and we don't want to over use it.

>> JOHN LEE: Thank you. So I will see you all at 1:45.

>> PAULA: We will do the same as yesterday, in that we will close the door and when the door is closed, it's locked. And I have an ID that will open it so if you need to come back... and the same, Christian also has a key that opens the door.

>> JOHN LEE: So the door will be locked. So if you want to leave your laptops in the room, that's okay.

Thank you.

(Recessed for lunch)

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STUDY GROUP 16

RAPPORTEUR GROUP MEETING

Q26/16

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>> JOHN LEE: Sorry, we are delayed starting. There were still a lot of people in the lunchroom when I left. We will get started shortly.

Can we get started? Hello everyone. I hope you had a good lunch.

And apologies for the delayed start. I know that we have somebody online to give us the next presentations. The next two presentations in the afternoon will be from Ultratec. The first is performance of captioned telephone. The other one is QoE, quality of experience, of captioned telephone. Then we will a demonstration from Gallaudet on Total Conversation. Then we will have a break.

So if you are ready, Kevin? Great. So I'll give the floor to you. You can give us your presentation. This is document 6 and document 7.

>> KEVIN COLWELL: Okay. My name is Kevin Colwell. And I'm Vice President of Engineering for Ultratec here in Madison, Wisconsin. And first let me say that I jointly put together this contribution with Robert Engelke, the President of Ultratec, and he is unfortunately not able to attend today to make this. So I will do my best.

We are happy to make this contribution to the ITU. Ultratec, if you don't know us, created or invented the caption telephone and introduced the first captioned telephone service and product to allow people to use the caption telephone service.

That was about 12 years ago. And what we thought we would do is share with the ITU some of the things that we learned in researching and qualifying and then with our experience over the last 12 years of actually producing a captioned telephone service.

So I'm going to go through this quickly. I think Christian Vogler did a nice job of getting through his quickly. I'm going to do the same thing and try to leave plenty of time for questions. It's pretty self-explanatory, I think.

When we -- when Ultratec created the captioned telephone service, we really had in mind a vision for a new kind of relay service, one in which it was less intrusive in the call, one that was more natural, and with the goal of making this form of Relay Service as functionally equivalent to a regular telephone call as we could. And we set out with some basic goals up front in order to make that possible.

We wanted the phone set up and tear downtown fully automated. No special log-in to dial, log-in features, something like that. You simply lift the handset, dial the number, and carry on as anyone else would use the phone.

Number two, we wanted the conversation to be truly bidirectal and natural, with the ability of each party to speak directly to the other party and interrupt them if they so chose. And again from those of you who remember the early days of VCO, that was not possible in VCO and traditional relay.

Number three, we really wanted the communications assistant or captioning assistant to be anonymous in the call. Again, we felt that this was the best way for two people to communicate directly without the interference of a third-party.

We also knew that sometimes people were reluctant to use traditional relay for business type calls because of the presence of the third-party. So I know third-party participation, we were hoping that it would be the kind of relay service that people would be comfortable with to use even in a workplace or a professional setting.

Okay, number four. Following along in the same theme, the CapTel phone user is in complete control of the call. They decide whether they want the user to speed up, slow down, if they think something is unclear and want it repeated, they are in control and they ask for that.

In the same vein, number five is that the captioning assistants, really, their only role is really to provide verbatim text captions spoken by the hearing party. We don't want them interpreting it. We don't want them paraphrasing it. We want them to provide a verbatim transcription.

Number six, we felt that this had to be at the true speed of speech so that the conversation would flow naturally.

And finally, number seven, and this is really a restatement, all of this is a Relay Service that is functionally equivalent to a regular telephone call as possible.

So with that in mind we set out to create a captioned telephone service. And we soon learned that there are four key metrics that really affect the quality of the service that we're delivering.

One is the ease and speed of making the connection between the user and the other party. Again, this is all automated. It happens very quickly.

Number two was the accuracy of the captions. Everyone wants them as accurate as possible.

Number three, with transcription and keeping it as close as possible to the actual speed of conversation.

And number four, we learned that delay actions is an important and sometimes critical issue for users. So we will talk a little bit about these.

Speed of connection we referenced before. Again we wanted this to be like any other phone call. The user would simply lift the handset, dial the number, and everything else is automated. Or if you're doing this in an IP setting, or on a smartphone app, you would simply dial, if you would, like any other call on that smartphone. And the connection -- the service set up and tear down is all automated.

Accuracy of transcript. In the research and development that we did to produce the service, we soon learned, quickly learned, that it's necessary to maintain a pretty high level of accuracy. Our goal is about 98 percent. We learned that as the accuracy falls into the low 90s, the user's experience and comprehension falls off pretty quickly. So while 98 seems like a very high target for accuracy, we want to emphasize that this is crowded near the top this terms of comfort of use.

In other words, as you go from 98 percent down to the low 90 or 90s, users began to become quite uncomfortable with the service. So we learned that we need a target up in the 98 percent range.

Of course, it's -- we use a number of different methods. We use of course voice recognition, as you're well aware of, but we also use special editing and other techniques, so that we can provide that speed of transcription even in the presence of specialized words, like regional names. We're in Wisconsin here, and our local towns and places, parks, often have Indian names. So these are words that are not available in recognition systems, and so we had to find ways to make this system perform at that accuracy and insert those uncommon words.

I mentioned that we -- our target is 98 percent accuracy. We realize that we cannot guarantee that kind of accuracy on all calls. For those people that are hearing in the room, I'm sure you've spoken to someone who is talking on their cell phone, walking down a busy street, they're in a car with a lot of background noise, there are many factors that affect the accuracy and quality of the captions. So vocabulary used, again, highly technical terms or regional names and places that are not available in voice recognition and must be inserted, again, background connection, quality of telephone signal, et cetera.

So while we require that all of our CAs pass an accuracy test of 98 percent at 130 words per minute, we're not in a position where we can guarantee that for all calls.

Speed of captioning. Our target is to do this at the real speed of speech. But we have to be practical about that, too, from a training performance point of view. So, internally, we felt the minimum standard would be 125 words per minute, remember this is a -- double the speed of relay or more, traditional relay, and in fact over time have adjusted our minimum standard for our CAs to be 130 words per minute. And again, at 98 percent accuracy.

Okay.

We know from discussions we have had with various parties that some of the organizations specifying relay find it difficult to accept speed and accuracy specification of 130 words per minute at 98 percent accuracy. They're not sure they consider that achievable or practical.

I want to emphasize that we have been doing this for 12 years in full-service, and I think that that history demonstrates that those numbers are achievable, they are practical, and I think represent a good specifications for a service.

Okay. I wanted to talk a little bit about delay. I heard in the other presentations today, and I know that it came up yesterday as well, that one of the main issues and concerns from users is delay. We understand that. We work hard to minimize delay. But delay, for us, is not something that we can specify. It's the result of a combination of other variables. It's dependent upon a number of other variables in the conversation.

Again, things like the vocabulary used, any errors or corrections that have to be made, other factors with background noise, that sort of thing. So while we work to minimize delay, and we will continue to work to minimize delay and find ways of reducing it, it isn't something that we feel we can put a numerical specification on. It is dependent on a number of other conditions.

Okay. There is more detail in the paper itself, but I'm going to keep moving here, and then answer questions.

So we thought we would also share with the ITU how we measure these key metrics. So there is obviously speed and accuracy. And, first of all, we presented in the paper the methods that we use. We measure speed and accuracy by actually scripting a conversation, recording it, and then playing it to the CA, mostly anonymously, and measuring their performance. By scripting it, recording it, and then playing it, we resolve variables like make sure there is adequate speed, adequate audio quality and adequate audio level, et cetera. So when we are measuring performance of different CAs by using a scripted, recorded conversation, we can maintain the same environment for testing across the board with CAs.

In the paper we talk a bit about how we use those variables and how we set up our scripts.

So let's talk a bit about how we score, how we measure accuracy or error rate. We divide errors into two categories, major errors and minor errors. Major errors are any error that would alter, obscure or reverse the meaning of the conversation, or alter it. If a major error happens and a CA doesn't correct it, then it's counted as an error in the error count or the accuracy measurement.

We don't count what we consider to be minor errors, and I gave exams of minor errors. Minor errors might be a missing plural or using a plural form of a word when it should be singular, a missing article like "A" or "The," those sorts of things.

They don't really affect the comprehension of the conversation, and they are products of the voice recognition environment, and so we don't count them as errors.

So we measure errors, major errors, we count any word that is incorrect that affects the meaning or any missing word that should be there, and divide by the number of words in the script. And that gives us an error rate.

Okay? And then, finally, we measure the speed of captions. And speed is pretty easy to measure. You start a stopwatch when the first word appears on the screen of a captioned telephone device and you stop the watch when the last word is presented and you divide it by the number of words, and correct it for -- multiply it by 60 to get words per minute.

So that's sort of the basics of how we measure our system. We also measure delay and we categorize it, and we focus heavily on trying to reduce it. But it isn't a metric that we have a number for that we use in our system.

I would add, I guess, in closing here, closing this part of the presentation, that these are our internal standards. We have been using them for about a dozen years. And one of the pleasant things for us is that a number of states that buy our captioned telephone service and other entities do random test calls to our service, independent of us, and they measure our performance, speed and accuracy performance. And their own independent testing shows that we are meeting or exceeding our 98 percent at 130 words per minute, and their data correlates pretty well with our internal testing.

So we believe these are appropriate specifications for the service. They are achievable. They are cost effective to produce and they can be independently verified as achievable. So I'll pause here and entertain any questions that people have.

>> JOHN LEE: Thank you very much, Kevin.

So at this time, I'd like to open the floor for any questions or comments related to this presentation.

I do have a question. In our document there has been -- there was some targets that were proposed for captioned telephone. And some of the targets and the KPIs, and I just wanted to get a sense of if these were also things that you did track. So in our list we have things like captioned telephone relay call abandoned should be less than 3 percent of standard calls that are abandoned. And it's a comparative measure. And the target is 3 percent. And then there's things like, oh, the CT service announcement that the -- the service to the user will be explained to the caller user, when the call is initiated.

And I'm not sure if you do have the documents. It's in document number 5. And it's on page 10. But there is a list of KPIs that are listed that we're trying to update, key performance indicators. And I'm wondering if you had any comments on that, given that you already have your own set of targets that you like to meet. Did you have a chance to take a look at that?

>> KEVIN COLWELL: Okay. I haven't looked at the latest version of document 5, but I'm happy to do so and continue this discussion beyond this meeting.

But a couple of comments. First, relative to abandons, we do monitor and track abandons. It's a very important metric for us in operating our service and managing our service. It's a difficult one for us to specify a level. It's more abandons, while we certainly understand abandons could be the result of an internal performance number like speed of answer, for example. We know that because our call set up and tear dune is automated and it goes very quickly, that as soon as anything happens that degrades that, even a little bit, our abandon rate or our abandon call rate goes you up pretty dramatically, pretty quickly. So we monitor abandon. And there is sort of a background level of abandons that fluctuates, due to factors outside of the service provider's control.

For example, in the United States we have automated dialers that do canvassing or calls or announcements, sales calls, that sort of thing. When they hit the service, they realize right away it isn't what they are expecting, and there are a abandons. People misdial on IP, people hit a website and they realize it isn't what they were looking for. So we have a background of abandons that fluctuates. And it's really outside of the normal control of the service.

And then we see abandons that go up or shoot up in response to a service event, like availability of the service, let's say a circuit or Internet circuit should fail, that sort of thing. So we monitor those and it helps us understand if there is something else going in the environment that we need to look further into. Again, like a blockage in our circuit availability. But we don't have a number that we use that says that if it's greater than this, it's a user issue -- or it's a user experience issue. It's more like an indication of the -- of, again, the facilities that we manage, whether they are working correctly or not. So that is abandons.

Privacy. Announcement of the service. That is a controversial issue. It's an issue that was debated in some States; namely, the State of California in the United States. It's an issue that has been raised and debated for caption telephone services that we engineered for other countries in the world. And I think it really has to go -- the answer to this relates to the laws and the culture in place in a given country or location.

We can tell you that where we have used automated announcements, and this is in California, California a number of years ago, the experience was not pleasant. And most people found it very objectionable. And rapidly, both the consumers, the regulators of the service, and the providers, meaning us, looked for ways to get rid of automated announcements that were a problem for the use of the service.

>> JOHN LEE: Great. Thank you. Yes, related to the announcement, I forgot to read the first word, which was "no." So it was a contradiction. We need to rewrite that.

But in terms of the call abandonment, am I to understand that you recommend tracking, but not setting target values, is that what I'm hearing?

>> KEVIN COLWELL: Yes. Now, I would. In the United States, we have some metrics that we report to the state providers and the federal fund Administrators. We have a speed of answer calculation that we do, and that's the average time to answer a call, of course. The average speed of answer. And it's measured over a 24-hour period. And we also have a measurement that has been commonly used by relay services in the United States called service level. Service level is the percentage of calls that are answered within the target timeframe. So the standard generally applied in the United States is that 85 percent of all calls to the service should be answered in ten seconds or less. And abandons are included in that calculation, that performance metric.

So here is an example where abandons are included in a performance calculation.

>> JOHN LEE: Great. Thank you.

So I believe Christopher Jones from England had a question.

Go ahead, Christopher.

>> CHRISTOPHER JONES: Hi. This is Christopher Jones here. I'm very concerned about the automatic announcement. I think that actually contradicts the functional equivalence of the Relay Service. Captioned relay services itself is actually the most functional equivalent relay service in the world, yet or to date. But California has to reduce the functional equivalence, lower it in some way? I think that is some kind of discrimination for hard-of-hearing people and deaf people and I really don't think that this should happen.

>> JOHN LEE: Hi, Christopher --

>> CHRISTOPHER JONES: I want to see the Relay Service functionally equivalent worldwide, and I'm very much hoping that other countries don't follow the State of California in that respect. I think that California really should feel a little ashamed of itself. I know that is a very strong word to use, but I do.

Thank you.

>> KEVIN COLWELL: Hi. This it Kevin and I have a response there or at least a suggestion.

>> JOHN LEE: Go ahead.

>> KEVIN COLWELL: The issue, it seems to be, is that if local laws about privacy require the parties to understand that there is a third-party on the line, then one way to address this is to, in fact, have the Regulations and the specifications for the service require that the role of the communications assistant be sworn to secrecy or confidentiality as they are. But that they are also considered part of the telephone system, like a wire or a connection. Not a human role in that context, but a part of the specification. And they are considered to be a facilitator in the communication in the same way that an IP session would be or that a copper wire would be on a regular call.

And as long as there are appropriate standards applied to the behavior of the CA, so that they don't reveal content, they understand that that is both illegal and inappropriate, then perhaps the privacy laws that exist in the communities can be accepted without the need for an announcement.

>> JOHN LEE: Thank you.

So Christian had a comment as well.

>> CHRISTIAN VOGLER:  Christian Vogler speaking.

I have two comments to share. The first one being the words per minute issue. I was very interested to see that you mentioned a comparison there from the old kind of relay, and their rate of 130 words per minute, the current rate of 130 words per minute.

But now humans can speak between 180 and 240 words per minute. And they can speak much faster than that. So I understand that in a one-on-one conversation you can prompt somebody to slow down or pause for a moment to catch up to the conversation in the captions.

However, look at a situation such as a conference call or a webinar or anything of the sort. That's all part of the phone conversation, too, and functional equivalency is important to consider there. So I'm not comfortable saying that 130 wrds per minute is sufficient. It may well not be.

The second comment relates to delay. I understand that delay has a number of variables that interact and come into play. And it's very difficult to make specifications for measuring that or for setting targets. I understand that. Nonetheless, I do remember the survey that we did resulted in finding that 60 percent of people found that to be their top concern. So that's clearly a problem. And we have to figure out a way to address that. So I would suggest that if we say that it's impossible to set a target for delay, we may need to consider analyzing those variables and those situations that can impact delay, and then that would allow us to track those factors.

>> JOHN LEE: Thank you, Christian.

Kevin, did you have a response to that?

>> KEVIN COLWELL: Yes. And thank you, Christian. We certainly agree on many of those points. Relative to speed, we understand that people often do speak faster than 130 words per minute. So there is sort of a point of practical delivery that we -- that we're looking for, where the service is cost -- the fact is, certainly faster is better. There are also premium services, such as CART or others, where albeit at a higher cost, you can participate in more conference call environments.

So our minimum target is 130. That's the target. That's a minimum for them to start providing service. But most of them, it's a minimum number.

Also, in most telephone conversations, there is a back and forth flow to the conversation. And to the extent that one person is not doing all of the talking, like I'm doing now, that back and forth nature sharing allows the system to naturally catch up a bit.

So again the 130 words per minute is really a number that we use as a starting point to make a service we feel usable and practicalable. Obviously faster is better.

Relative to delay, I certainly agree it is the most important issue that we need to kind of work on now, and find ways to minimize as part of the quality of experience.

>> JOHN LEE: Thank you very much, Kevin.

So at this point I would like to move onto the second document, which is 007 on quality of experience of captioned telephones.

>> KEVIN COLWELL: Okay. And I'm going to turn it over to Pamela Holmes here, and so we are going to switch places. Give us one moment.

>> JOHN LEE: Hello Pamela.

>> PAMELA HOLMES: Hello everyone.

>> JOHN LEE: Very nice to meet you. So whenever you're ready.

>> PAMELA HOLMES: Okay.

Greetings everyone from Madison, Wisconsin. And I'm here speaking as the first person who used a captioned telephone in 2001. The person that petitioned the FCC for the captioned telephone requirements. And the person that oversees CapTel customer service that provides 24/7 customer service support to our nation's customers. So we hear from them every day.

Basically, my input is on the user aspects for 6.5. And, basically, we will go back to the very basics of what makes a successful relay service. One is -- so time is money in our society and the ability to make a call. The standards need to make sure that sufficient time is available to consumers.

The second is that the service needs to be equally effective to both deaf or hard-of-hearing users, and the hearing users, because there is a people on the call. Their experiences are just as important as the deaf person.

The service technology could be designed with universal design, keeping in mind people who are Deaf and Hard of Hearing.

There are people that aren't very well versed with computers. It needs to be a service that simply involves picking up the phone, dialing a number, and making a call.

And it needs to be accessible and useful. Recently when the FCC saw that there were captions with the default off, they found that the need for accessibility could no longer be met. Some of them had to stop using the service because of cognitive challenges that they had in their lives. We need to make sure that the service is truly usable.

If we go back to VCO, I found something that I wrote to the FCC in August 2000. I want to share it with you. In August 2000, the FCC themselves said, on March 6, the FCC reported and ordered that the "FCC is convinced that a federal rule is required for minimum typing speeds, and it's not possible for a call below a typing speed of (inaudible) to be functionally equivalent to a voice call."

Okay. The words per minute, people are sometimes speaking at 180 words per minute, and sometimes speaking at 240 words per minute 245. The typing speed, we are not going to make the call functionally equivalent, so that's why growth in the IP CTS service, because now people are finding that it actually means picking up the phone, being able to dial, and make the conversation as smooth as possible.

Interestingly, in May 2000, the NAD telecommunications advocacy network submitted several common problems, and it's important that ITU avoid these ten common problems.

Those problems are -- can be found in the FCC submittal that I sent in August of 2000.

Another thing, timed transmission of the spoken word. Now, the inability to speak at a normal pace, where the CA doesn't have to tell them to stop over and over again or to repeat themselves, so they are trying to type 45 words per minute.

The third is the gap of silence for the hearing party, waiting for the response. This is the constant reminder that there is a third-party in the call.

And fifth would be the failure to transmit the realtime connection. Those were the five most common problems in relay, based on slow typing experiences.

So we really want to avoid all of those and set up standards today.

Privacy of the conversation is very important. When I'm having a captioned telephone conversation, I don't feel that there is a third-party on the call. I feel that there's just the person that I'm talking to and myself. And that's great.

The users should have control of their call without feeling there is a third-party involved.

The bottom line is that the standards need to make sure that it allows independence, that they allow access to employment opportunities that are effective and time efficient. And that they allow emergency access, and that they are reliable.

Now, implementation of the technology standards needs to make sure that they advance as technology advances. Working in the industry since 1987, and I have seen, I have witnessed wonderful technology that can make a difference in people's lives. Where it's not offered and delayed in its provision to the community, sometimes it is simply because we're not keeping up with the technology as it progresses.

The ADA rules and the FCC rules here say that we are required that as technology advanced, we -- that should not impair the consumer.

>> JOHN LEE: Before we launch into questions, I've been asked to ask, we have a photographer in the room to try to take pictures, so I've been asked to ask if anybody has any problems with their picture being taken. I'm not sure where this will -- just for use within Gallaudet University.

So if anybody does have a problem, could you raise your hand? If not, we will go on.

So I'll open the floor for questions, and I believe Mark had a question first. Go ahead.

>> MARK HILL: Hi, Pam.

Long-time no see.

>> PAMELA HOLMES: Hi. Yes, absolutely.

>> MARK HILL: My question for you, first of all I have concerns about accessibility for people with mobility disabilities. Is there any way to make the device more comfortable for use for people with mobility challenges?

>> PAMELA HOLMES: I think that would be a question for Kevin. Kevin, do you want to jump in?

>> KEVIN COLWELL: Yes. Thank you for the question.

Indeed, there should be options for people with limited mobility, dexterity, vision. And so one of the things that we did years ago was introduce access to our service using standard devices, and this can be done now with standard browsers, running on anything from a mobile phone to a full desktop. There are mobile phone apps, et cetera.

We support a standard computing environment, and that provides the ability to give additional support, software and product, that might fit vision, mobility, that might be installed in that computer.

So we certainly think that is an important element.

>> JOHN LEE: Thank you very much.

So I believe Christian had a common question.

>> CHRISTIAN VOGLER: Hi. This is Christian speaking.

Again, first of all, I'm happy to hear for the support of standards. And the question for you, Pam, is there any plan to add support for standards in terms of the time, realtime text? Those standards are becoming available for Internet based environments. And if you add support for that, I would expect that that would expand the variety of devices that could be used, or the applications that could be used with the captioned telephone. And I think that is a positive sign.

>> PAMELA HOLMES: Yes. I agree. I think that in comments that we submitted to the FCC, we had mentioned that standards would be helpful.

>> JOHN LEE: Okay. Good. Thank you, Pam.

Is there any other comment related to either of the contributions on 006 or 007? Donna has her hand up. Go ahead. Donna.

>> JOHN LEE: Go ahead, we had an issue bringing you up on the screen. So go ahead now.

>> DONNA PLATTS: Hi Pam. I'm Donna Platts.

I know CapTel comes within a variety of products, some through analog, some Internet based, some VoIP based, some mobile as well. In the future, with the next-generation 9-1-1 system, as 9-1-1 is upgraded into the next-generation, there will be different systems that become accessible because of that.

Our current system already has VCO capabilities built in. I wonder if there is an option for CapTel to become VCO, so that people will have the appropriate vocabulary to be able to type out the message where that voice recognition software may spell those terms incorrectly, may not get town names correct, dependent upon the conversation between the two individuals.

So in the long run, when NG9-1-1 is in place, what do you think the possibilities are there?

>> PAMELA HOLMES: First of all, all of the analog phones that we offer currently do have the ability to dial the 9-1-1 directly. It goes to the PSAP and relies on the PSAP, which is the public service answering point to provide captioning support.

I'm not sure how to go beyond that.

>> DONNA PLATTS: As 9-1-1 evolves, do you work with 9-1-1?

>> PAMELA HOLMES: As the next-generation 9-1-1 conversion goes on, we will be working within the emergency environment to make sure that what is available is compatible with their systems, whatever systems they use.

>> JOHN LEE: Thank you. Thank you.

So is there another thought or comment related to either of the Ultratec contributions at this point?

Okay. In that case, we will move on to the next item of the agenda -- sorry Christian?

>> CHRISTIAN VOGLER: Christian speaking again.

Before I forget to ask, I was curious, have you already tried or experimented with your system in other languages, other than English? Such as German or other languages outside of English? And if not, how easy or difficult do you think it would be to modify your system to accommodate other languages?

>> JOHN LEE: Pamela, go ahead.

>> PAMELA HOLMES: We currently provide captioning support to the Spanish communities. That's the one language that we do have.

I'm going to put Kevin back in the hot seat.

>> KEVIN COLWELL: This is Kevin.

As Pam said, we do provide captioned telephone in both English and Spanish. We have also done the king's English. There are other languages that are certainly needed. I can't speak how well the performance is, like German or Italian or other romantic languages. But it's certainly conceivable that it could be provided and it should perform well.

>> JOHN LEE: Great. Thank you, Kevin.

So at this point I think we can move onto the next item of the agenda. Thank you very much to both Kevin and Pam for a great presentation.

So the next item of the agenda is a demonstration on Total Conversation. And Christian will be doing this demonstration.

>> CHRISTIAN VOGLER: First of all, we're going to do some technological rearrangement, and then we will be ready to go.

>> JOHN LEE: Okay. So we can probably do about a five-minute sitting break

>> JOHN LEE: Okay. Everyone, so let's get back.

The demo is ready.

Or almost.

There we go.

>> CHRISTIAN VOGLER: Christian speaking.

Okay. Oops. Let me go stand on my mark. Okay.

Some of you are already familiar with the concept of Total Conversation. So Total Conversation, I must first emphasize, is different than total communication. There is no connection between these two things at all. Total Conversation is a technical term that actually refers to the auditory, video, and text options that are able to be chosen. The stream can be chosen by the user, whatever combination the user requires.

So, for example, some deaf signers would prefer to have the video connection and text capability. Some others would prefer to have all three streams: The video, the audio, and the text stream. Some would prefer the audio and text stream only. So the point of this is that it can be chosen by the user. And the system can adapt to your needs and fit your needs.

So Total Conversation is actually the core of the next-generation emergency calls here in America. The emergency management system is accepting of this as a standard for the future. In Europe, we expect them to adopt this shortly. And in Europe, they are setting up a pilot project that is called REACH112. And it's called 112 because that's the European equivalent of our 9-1-1 system.

So this is a project that has just come to completion in several countries. And these countries in Europe, one including Sweden, just finished the project. It was referred to as the Omnitor, and that that was the name of the programme. And there was a company that was working in partnership with the project. And I had responsibility for this end of the project. It's an experimental technology to evaluate the technology. The project that we did here looked at that technology and then looks at providing those standards for this technology and the interoperability testing.

So with that, Norman and I are going to share a demonstration of Total Conversation using video and text. Also, one more note. We have a shared screen, so that means that the remote participants can see what we're doing on the shared screen, but the video will look slower than it actually is.

>> Hello, this is the 9-1-1 center, what is your emergency?

>> CALLER: I have an emergency Pizza order. I would like to -- well, let me go ahead and type the order. I think that will be easier.

>> Okay. That will be fine.

>> CALLER: Did you get it?

>> Emergency 9-1-1. Okay. First I need to get more information from you. Your name and address, please.

Okay. So the Pizza is going to be on its way shortly. It should arrive soon. And I'm going to give you a password to connect with the driver.

>> CALLER: Got it.

>> 9-1-1: So the Pizza is en route now. Is there anything else that you need now or are your emergency needs satisfied?

>> CALLER: Very satisfied. But it's not here yet.

>> Please be patient. Bear with us.

>> CALLER: Bye-bye. Thank you.

>> CHRISTIAN VOGLER: Okay. So, you saw obviously a made-up conversation, but you may have noticed that we were able to have both the text and the video conversation, smoothly, effectively, and you can see that some things are harder to sign, like patience, or address -- sorry, private information or address.

>> INTERPRETER: Correction of the interpretation.

>> CHRISTIAN VOGLER: Can be typed in the text box instead. So this can be seen as you type, live. So for more in-depth conversation and communication, it can be a critical component, not having to wait for somebody to finish their section of the text before you have a turn at entering the conversation. So that's very important.

And so far what you witnessed was a one-on-one conversation. In the next-generation emergency call, though, the video will involve three different persons in the call. It will involve the caller. The one who is calling to the 9-1-1 center. It will involve that 9-1-1 center. And the interpreter. I'll show you an example of that one, now.

Just a moment, I'll need to share the screen.

>> Do you want an ambulance or talk to a nurse?

>> CALLER: I think I can start with a nurse.

>> 9-1-1: Then I'll connect you to a nurse. First I want your name and address.

>> CALLER: I'll type it.

>> Lisa. (Stating address)

>> Okay. I'll now connect you to the nurse.

>> 9-1-1 has hung up. Just a moment.

>> Hi. Nurse Eric here. You have stomach pain, right? Tell me more.

>> CALLER: I've had stomach cramps for two hours.

>> SOS alarm, what has happened?

>> CALLER: There is a man lying here. I've shaken him but he does not wake up.

>> What is the name of the place?

>> CALLER: It's a park near Sfinxbacke. I'll type it.

>> Yes, an ambulance is on its way now. Can you stay and check that he is breathing?

>> CALLER: Yes, I'll check him and I'll wait for them to come. Bye.

>> CHRISTIAN VOGLER: Christian here. Okay. So that is all the testing that we have done so far, the demonstration of that, testing that was done in Europe and it's gone well.

Now, that study is done, but we're looking now to the future and we're very excited about what is happening now.

First of all, we hope that the relay service, we would encourage them to adopt these concepts of Total Conversation for the future. It represents a vast improvement in access.

And I also want to let all of you know that this programme is one that we have been using as a reference for -- that we have been using this project as a reference for 9-1-1 standards going into the future. And this is the kind of programme that is looking at the interoperability needs for next-generation 9-1-1. And then in last October, an organization known as NENA established a testing event for interoperability for access. And they used this programme to contact a number of different consumers on the consumer end, and a number of vendors who make equipment for 9-1-1 operation centers, to be sure that it was compatible. And all of the results from that were quite positive. And it looks as though everything is able to be implemented just fine.

So we are also looking at the potential of testing this in the future with all of you. And we would like to set up standards for that as soon as possible, so that we can test interoperability. And we have two more programmes that are also implemented at this point. And these programmes are available on the Web in Europe and in Holland. And the programme there is known as DJANAH. And it is fully compatible with this programme. And it's an open source programme.

The third programme is an open source programme that is provided by RERC Telecommunications Access group, one of our partners in Wisconsin, and Trace Center. And we know that this programme is also compatible with it.

>> CHRISTOPHER JONES: I have a question.

>> JOHN LEE: Go ahead, Chris.

>> CHRISTOPHER JONES: Hi. This is Christopher Jones here.

This is directed to John now.

John, I think we need two things. The Total Conversation standard needs to be modified, because it's already old. So we need to make sure that it will connect to a variety of relay services, like CapTel, VRS, TTY, Relay Services.

The second point, this is very important, we need to make sure that the video is encrypted. Those are my two points for you, John.

Thank you.

>> JOHN LEE: Thank you, Christopher.

We have Simon Horne, who would like to have the floor.

>> SIMON HORNE: Yes. I have one question. Wouldn't it, in the future, be a deal that when you ring 911 they already know your location and they already have authenticated you as being who you are? For instance, instead of having to type in your address or wherever you are, you already know where you are, like you would have GPS coordinates or some sort of authentication to show that you are who you say you are.

And the encryption thing, which Christopher did raise. But my two concerns.

>> JOHN LEE: Christian?

>> CHRISTIAN VOGLER: Yes. You're correct. There are some specifics that we haven't yet figured out. But we are addressing that and do remember that it's quite important that no matter what happens, if 9-1-1 gets all the information automatically, 9-1-1 still has to verify that that information is correct for this call, for a number of reasons. Because the technology can mess up, and because location technology accuracy is good and steadily improving, but not yet perfect.

And, also, I heard of a number of situations where the location accuracy has not been satisfactory, and so you still have to communicate with that 9-1-1 system. So it's more about providing options for communicating with 9-1-1, and that's what makes this great.

>> JOHN LEE: Thank you. We have another response.

>> JOHN MARTIN: Hi, this is John Martin. So, actually, I was part of REACH112. We provided the UK technology for the project, and it did have location based information for these apps, using GPS and lost systems and various other Protocols to bring location.

And there were many other aspects of the project that investigated simultaneous access to the PSAT and serial access to the PSAP. If you want to know more about REACH112, I'm happy to give other information. I have other Total Conversation applications here as well if anybody wants to see how they work. And I can give the whole run down on REACH112 if you want it.

>> JOHN LEE: Thank you. And I believe Simon had another response.

>> SIMON HORNE: I think that's important. Because you could lose your iPhone. It can be dropped anywhere and you can find it. So the technology is there for location services.

>> JOHN LEE: Thank you. Go ahead.

>> RANDALL POPE: So, I have two comments. This is Randy Pope. The first is that -- about low vision or the deaf-blind community, and their access.

And the second is wondering whether or not it can be Brailled. So the first is about font, can we change the font size and can it be Brailled, for those for whom that is necessary.

>> JOHN LEE: Christian?

>> CHRISTIAN VOGLER: Christian speaking. And the short answer is yes, and yes.

I know that in Sweden they have already tested their programme with Braille and with a larger screen. And so you are able to change the size of the font as well. And I understand that that has been a proof of concept that has been achieved, not yet the final product, but people are aware that that is a demand.

>> JOHN LEE: Thank you. And Donna? Please go ahead.

>> DONNA PLATTS: Thank you. This is Donna. This is very exciting. And the project REACH112 happening in Europe makes me wonder, has it been completed? Is it still in process? Are there further testing? That is my first question.

And then my second question is, of course, technology changes all the time. And I'm wondering if the PSAPs will be required to have that kind of a programme or that kind of software to use when NG9-1-1 comes online, just as the users will have it.

>> JOHN LEE: Go ahead, Christian.

>> CHRISTIAN VOGLER: The answer to the first question is I don't know. I'm not the right person to answer that.

As to the second question, what is most important is that we have standards in the programme that we can adhere to. There are some manufacturers who are working to test this with the PSAPs and ensure interoperability with the equipment they make and in the testing last year it was very effective. So we want to create standards and not standards that are irrelevant or are important and not just take what they buy off the shelf.

>> JOHN MARTIN: Just to come back on that first question. REACH112 concluded last June, 2012, and the results are available on the website REACH112.eu.

>> JOHN LEE: Thank you.

Actually, I actually have some thoughts on the second question. But before I get into that, I was just asked if we would like a group photo, and I am not sure how you all feel about that. But I think that would be a good idea.

So there is another demo, so one of the things is I'll do that, then we will take the picture, we will do the second demo, then we will go on break.

So there is actually a standard development right now at ITSE under the special Committee MTEL, and they are currently developing the EMTEL. They are currently developing a standard on how PSAP should implement Total Conversation. And they are currently working on that. And to my knowledge, it's currently in a table draft and is slated for voting sometime later in June, in a couple weeks, but that may change.

But there is work going on in other bodies that is looking at total conversation. So it did likely come forth.

Great, thank you. Are there any other thoughts related to this demonstration? Okay. If not, would it be okay if we just quickly took a group photo. Then did a second demo? Then went on break? Is everyone okay with that?

Okay. So, where would you like us?

So would everybody come up to the front, and then we will take the picture, and then get on with the second demo.

(Break for picture)

>> JOHN LEE: So the second demo is getting set up right now. So...

The second demo is ready to go, so if everybody could pay attention?

>> PETER HAYES: So, my name is Peter Hayes. I'm the CEO of Sporanto International. I was the former CTO of Z VRS; helped build that system and integrated some of the top things such as IRS, SS and half of the fortune thousand companies. So I worked a long time with the deaf. I saw some of the short comings, saw what Christian and other guys were doing and said hey, this is the direction we really need to go. So having talked to Christian several months ago, we had started building this system is what I'll call it. And we wanted to follow all standards.

So everything you see today is fully standards based existing today. It's all SIP and H 223. We are launching an entire platform that was built with the deaf in mind and fully standards based.

today, this is a live picture of my house in Clearwater, Florida. One thing about our app is we can do full HD. So this is a full HD picture. In the corner you see there is the locks. This is full standards based encryption. So everything is encrypted. Because we're using standards, all of our applications and our network, when they communicate with existing end points, such as  Cisco or Polycom or life size, which they can communicate with, point-to-point, they use the same encryption. So we can go up to AES 526 bit encryption. So there are many aspects to all of this.

But I want to show you some of the things sort of the deaf -- and I want to let Simon talk for a second. Our app is free. Imagine Skype, you downloaded it today and you could call any VRS provider or any other existing videoconferencing equipment that is standards based. And that is what we have built.

And we have built a global network that allows you to -- anybody to download the product for free and call each other or call into a VRS provider or call any existing Polycom, Tanberg or Cisco product out there. We just recently added T.140 capability. So very similar to, you know, what you were just seeing. We have the capability to do all of those same things on our platform. We can do multiparty. We can do many people at once. One other great thing about the product is we are -- I just hung it up. We are fully integrated with the PSTN, which means we already work with the telephone company. So all of our applications are also telephones. So from this app right here, we can dial my cell phone.

And again, in a second I'm going to do a demo for us. We can go ahead and bring in VRS providers. Live today. Here I'm now calling my phone. What this also allows you to do is today you could provide VRS through our platform, if you wanted to be a new VRS provider. And with all of the capabilities such as T.140, we can also do text, video and voice.

One of the really cool things, if you want to call into the MCU, what we have done is -- and again we hadn't planned to do a demo today. So sorry for the last minute. They told us five minutes ago do we want to demo. So this is how easy it is and right now anybody here can download the app, be signed up in one minute, and you can jump into this call right here. So the best part about it is it will be available to anybody out there.

So again as you can see, this is encrypted.

I'm going to go ahead, and, for example, dial in from -- they logged me out of the wireless.

No. No. On the iPad or on the iPod, it logged me out of the wireless. But that's okay. I will just log in here.

I want to show the layout changes on my laptop. Sorry, Guys.

So through the layout controls, we can put anybody sort of anywhere we want on the screen. And again we should probably -- so you can have an interpreter on one side of the screen. I'm going to go ahead and one of the interesting things we can do already today is we can go ahead and add on a sign language -- any VRS company. So we're fully interoperable today with VRS. And again, this is last minute. So we will see.

So, yes, there is Z VRS.

We will have an interpreter pop on the screen that is going to be completely confused. And so, again, we can put different people in different places on the screen. Yes, somebody -- somebody -- she might be a little confused.

She may have hung up, not knowing what is going on.

Again, this was very last minute. But also, right now, anybody in this room from their cell phone could also dial into this room with a regular telephone.

So it's a full meeting place. So again, anything could be done with this technology. Not only can we do next-generation, 9-1-1, but we can also provide a client to the Deaf and Hard of Hearing that allows hearing people to use it, allows the deaf to use it and use it with existing VRS. It remains neutral from any particular VRS provider. It's free for a personal download. We have built APIs on top of everything, so that you can build your own front for our app. If you don't like the way our apps look, you can build your own frontend and then control our technology in the background. And we may have a contest to see who designs the best app.

So with all of these major advantages, we hope to launch this very soon, like a Skype, and sort of compete with Skype by offering services. But really what we wanted to make sure was that we built it for the deaf and that sort of got priority for us, because that's where we learned this technology. All of our apps can be given a real ten digit phone number, and other things that we built in for the Deaf are flashing screens on all of our apps so they are 508 compliant. We run into that, we tried to get Cisco, we have the realtime T.140 text. So this can be used for the deaf and hard-of-hearing as well, to be able to bridge on the CapTel service, or E 9-1-1 service.

Another thing we added on our apps was the ability to set a setting called high frame rate. And what happens is in the hearing world, when you communicate, if the video goes bad, you can still hear each other. So in the hearing world they always prioritize the audio. What we have done with our high frame rate is if you have a bad connection, we actually  lower the video quality and it allows the sign language not to be missed. So that is an actual setting that you can turn on any of our apps.

>> CHRISTIAN VOGLER: Can you give a number so I can dial in?

>> PETER HAYES: Sure. 1-202-350-0181.

He is in the UK. He has the Spranto app. So this is the part where we will be talking about where we will be able to have flags. So even though two people might have a phone number, if a hearing person calls a deaf person, but that hearing person marks that they know ASL, then instead of that call going to VRS, we can route that call point-to-point. So based on the settings and flags in the system, all of the communication can happen automatic and it all happens on one global dial plan, which can be the existing numbering system. So we can go to any any country and put those numbers for that country in there.

Another interesting thing is what we have also built is a Web interface on top of this. Again I would have loved to give a real demo here. But anyone using our application can have their own cloud, where they control the users. They control the contacts in each user. Right now I can go to a Web interface and a brand new contact will pop up on my screen and we built APIs for people to control this. What some of the billion dollar companies offer today we will be putting out there, sort of, for free, on a basic level like Skype, and you pay for some of the higher end things. But the idea is to make sure that we built this with the deaf in mind initially. And, you know, they sort of didn't get skipped over, which happens so many other times.

If you want to change the layout, tell him he has his video turned off. Or he might.

>> CHRISTOPHER JONES: Hello. This is Christopher. I can't see a picture of myself. Can you --

>> PETER HAYES: Can you press the camera button on your app. Here he is.

>> Hello.

>> PETER HAYES: So again, this is a person in England. We haven't launched the product and thousands of people around the world downloaded it and started to use it for education and healthcare. We are working with several VRI companies to make sure that any company can download this, because it's encrypted, because it's HIPAA compliant. And we use technology which is standards based for firewalls. It gives us the ability -- we don't want to spend $199 on a 150 phone for this deaf person. So what we wanted to make sure is that anybody anywhere can download and, any hospital or business and give a deaf person access, whether it's to their friends, whether to give access to VRS and VRI. We are working with VRI companies so they can use this and control their own clouds. This is where the contact automatically pops up on the screen and they just hit one button and they are automatically connected to their interpreter.

I'll hang up the iPad if you want to call the iPad.

>> SIMON HORNE: You --

>> PETER HAYES: Can he still be up there? We did other cool things, like building in robotic control. I can stick this in the iPad over there, I can call it from across the world and move it around. These are some of the things that we're working through the ITU to do.

>> SIMON HORNE: (Off microphone)

>> So you're able to put an iPack inside of it, a small robot controller, and it moves the iPad around wherever you decide to point. Now, this is Simon and he called me here. As he is typing, it's very hard to see. But as he is typing, it shows up here on the screen, in realtime. And I can take this, I can take this and move it anywhere on the screen I want. I can move the cell view anywhere on the screen if we want to get it out of the way. So we can double tap to get rid of all of that stuff so it's not on the way. And you can see that I have full function on this call. So what we set out to do is truly fix all the problems that you find in the deaf community and getting access for people with video.

But one of the best parts about this is, you know, this system that the FCC built is the best one in the world. It has its down sides. But so often it's -- necessity is the mother of all invention. So often in history, even with the deaf, the typewriter, things like that get invented out of that necessity. And the system the FCC built sort of did that out of necessity.

And when I left the VRS industry and I went out into the world, nobody had done anything like the FCC had done. It's one of the largest and best federated networks. So we modeled after that and did the same thing and scaled it to the massive size.

So other things that we did do that is cool is you can share the content directly over the encrypted channel. So he is sharing a PowerPoint presentation right to my iPad. And with it, if two people are on a PC client, you're able to do that and the video goes down into the corner. So you can still see the person signing, while you're watching their content.

>> SIMON HORNE: (Off microphone.) >> PETER HAYES: It's not all the way ready. We have a PC client, IOS client. This runs on an iPad. Our Mac client will be out in 30 or 60 days. And the PC is on beta. We have an HTML5 client, which allows you to click a button to call someone. So you don't have to install the app or do anything of that. You can send someone a link, they click the button, and it directly connects you to whoever you want to get to.

>> SIMON HORNE: I'm sharing a standard document on the right-hand side. Basically, I just added my contact into the video stream. So it's able to share across any platform, even potential -- you can potentially connect with anything.

>> PETER HAYES: There we go. I had to do a demo last minute. Right? It makes it better. So any other questions?

>> ANDREA SAKS: Who is the little girl?

>> PETER HAYES: That is my two and a half year old daughter.

>> ANGIE OFFICER: Hello there. This is Angie Officer, with Sprint Relay. Just very nice job on the demo.

And I'm curious, though, what is the maximum number of participants that can join? So far I see four. Can you have up to 20 people at the same time on the screen?

>> PETER HAYES: The MCU, multiconference unit software that we have, it's all software based. So the number of people that you can fit in a room is only limited by the CPU, network and bandwidth of the computer that you put the software on. So if you buy a $10,000 honky server, we have tested up to 48 people in 720 Ph.D. At the same time, which means we can do about 100 people at the same time in SIF. They won't all be on the screen at the same time. I think 16 people is the most at the same time. The other people will still be there but, you know, they can come on if they need to be talking. But a lot of times if it's something that big, you only have one person, and you can control who is able to speak. You can link them together, so you can set up four or 20 of them.

And you can hold a conference of a thousand people. And this is something that I was talking today about, being able to hold deaf conferences and training sessions.

And people can call into this right from their VP-200 or their P 3 or Z 4 or from the Spranto app. Just one last thing I just want to show real quick. The future of this technology is moving so fast. I just got this from China, a partner from China, yesterday. This has a mount that connects to your TV. And it's got a full keyboard remote control. And this is an HD camera, but it's also a full computer.

This one here?

This is how big it is.

So it's this big, it does full 1080 Ph.D. It gives you Web surfing and all those different types of things. All of this for under $150.

So imagine the ability to take this -- and for those that aren't using software or these other things, Spranto can be loaded on here and you get a full computer along with your VideoPhone.

And this is the full -- this is the keyboard. The remote. It's a full-blown keyboard with a touch pad mouse and click buttons and everything. So again, we're sort of -- trying to tackle a lot of things at once. And we -- one of the beautiful things here is we have gotten no funding for this. So we have done all of this ourselves.

We can also brand the client to be -- for any person, that is how we have made some of our money so far is branding the client for people.

But when we decide to go, you know, when we were thinking about going to get more funding for this, we realized if we do it too soon, we would have to give up controlling and the deaf would be put on the back burner, and we wanted to make sure that didn't happen. So just pushed on and kept going until we got to the point where we can launch this. You can go www.sporanto.Com. go there and call into the room. And we will be working with Christian to make sure that we use all the same standards that they put out this, so this works with 911 as well.

>> SIMON HORNE: (Off microphone.)

>> JOHN LEE: Simon was saying that it uses all standards, T.140 to do this.

So thank you very much for the demo. Are there any other questions before we -- okay. So, thank you very much for the demo. The reason why we got asked is we have seen this in Geneva and I thought this would be a good room to show this demo to all participants. So there were a lot of questions that were raised, but there were a lot of issues, and some of the new technologies are getting worked on.

So at this point, I'd like to call for a break. I think it's a good time for a break. I'm not sure what time it is right now. 10 to. So... all right. Let's have a break until 4:15. Half hour break. This gives everybody an opportunity to chat, get refreshments, do what is needed. And we will come back and just have an open discussion. So I'll see you in half an hour.

(Break until 4:15 p.m. ET)

(Please stand by. The meeting will begin momentarily.)

>> JOHN LEE: Hello everyone. We will start again in five minutes. So if you can wrap up your conversations.

Everybody, if we could just be seated. I realize they are interesting conversations, but we'll be resuming them. So if you could be seated, we would like to have everyone participate and we will get them recorded. And I'm hoping that we can finish early so we can head out earlier than the 6 p.m. scheduled. I know some people have flights and I know everybody is getting a little tired.

Great. This afternoon is -- typically in a standard ITU meeting, what we would be doing is going over all the work products that we have created during the meeting. All the liaison statements that are outgoing. The report that I'll be writing. But given that the majority of you aren't very familiar with the ITU process, I thought I'd leave that off and I'll deal with that when we meet next in Geneva with the regular attendees, so that we can do the approval and all of that there.

What I thought we would do with this session here was that we would start off with a discussion. I know yesterday I said we would have it this morning, but I thought it would be best to leave it to now when all the presentations have been done. And we can probably take about 20 minutes or so, and we will take 20 minutes. We will just -- I can open the floor and we can talk about things. I've just put up on the board, just some ideas. So, I know that a lot of people who I've been having conversations with on the sides, none of that has been captured. And it may be interesting and a lot of people may have opinions on them. So I thought if there was an interesting topic that you've had a conversation on the side, we can perhaps bring it forward and have a general discussion, very quickly.

We can't let it drag on too much. But at least so that, A, we have it captured on the record through the captioning. And, B, so that everybody is aware of some of the discussions or thoughts that were brought out during this meeting.

One other thing that is always nice to do is the good and the bad things. So anything that you thought was very good about the meeting that you liked, it would be nice to have on record as well. If there are things that need to be improved, please let us know as well. We have never run a meeting like this, so there are a lot of things that we have to learn. I know Gallaudet has run meetings that are very successful. So...

>> CHRISTOPHER JONES: Christopher Jones has a comment.

>> JOHN LEE: I'll just quickly go through the introductions.

So things to improve. The next meeting is this year, October, late October, early November, that one will be in Geneva with the rest of the Study Group. The reason why it's March 2014 there is that will be the next Rapporteur's meeting. As typically what happens is you have Rapporteurs meeting occur between Study Group meetings. Since we have one scheduled for October, November, the next likely Rapporteur's meeting will be March. So I just thought I'd bring that up there.

And, yes, so at this point I'd like to open the floor. I know that Christopher has a comment to start with. So we will start off there, Christopher?

>> CHRISTOPHER JONES: Thank you, John.

I thought yesterday Claude's presentation was wonderful. In terms of policy, I thought that it was really very, very good.

And I would kind of like to use that as a base, really, for all the deaf organizations. And to those who respond to ITU and through the UN to the General Assembly, and that's coming up in September, and we should take a look at that policy and we could modify that. We could try and get that rolled out worldwide. Worldwide would be fantastic. That would allow full access through the telephone. That's it, thank you, John.

>> JOHN LEE: Thank you, Christopher.

I didn't quite understand, as you started talking about Claude's presentation, then you went through getting something through the General Assembly. Could you just clarify that?

>> CHRISTOPHER JONES: Yes. I'm talking about the UN, John, the United Nations.

>> JOHN LEE: Yes, but what were you asking to get through that?

>> CHRISTOPHER JONES: Okay. Remember that there is a requirement from the ITU that People with Disabilities -- they want People with Disabilities to tell the ITU what they want, so that they can improve their own accessibility. Yeah?

>> JOHN LEE: Right, resolution 70?

>> CHRISTOPHER JONES: I think that's correct, John, this is in relation to resolution 70 and the ITU.

>> JOHN LEE: Okay. Now I understand, sorry. I thought you meant to get Claude's presentation through the UN General Assembly, which confused me a bit. But now I understand. And that's definitely something that we can bring up with the ITU leadership. And I'm sure Andrea is working hard to try to do that, pushing resolution 70 through the General Assembly.

>> ANDREA SAKS: Could I --

>> JOHN LEE: Sure. Andrea.

>> ANDREA SAKS: Okay. This is kind of just a quick explanation. Resolution 70 is done. It was passed in November in 2012. The problem I'm working on is getting the funding. And you'll be -- that's not the question?

>> JOHN LEE: No. What Christopher was referring to.

>> ANDREA SAKS: Is getting the money.

>> JOHN LEE: No. What Christopher was referring to is actually the resolution 70 is great and it applies to the ITU, but it doesn't apply to the UN in general. And the General Assembly of the UN is coming up.

>> ANDREA SAKS: That's going to be in September. That is going to be the millennium goals. The millennium goals did not include accessibility at all. The ITU is sending the accessibility task force. I have an input into that, but it has to come from the organization. Since I don't work for the ITU, I'm a volunteer, I don't get to go there in an official capacity unless I go with Axel Leblois as part of G3ict, since I'm his permanent adviser or representative at ITU.

So it's a very complicated process, which is full of Protocol. And they wouldn't like it, because I swear. So I'm probably not going to speak directly. But... The thing is, they have it in hand to add to the millennium goals, a point for accessibility. So it becomes a part of that.

The other issue is that all of the UN organizations do not really have a firm policy in place. I am at the moment, today, I was working on yelling, nicely, at the State Department to get a budget for all the things that are in resolution 70, in resolution 175, because the way they have it set up now is they have a voluntary fund. And I keep pointing out to them, we are not a charity, we are a right.

So we have a long way to go. Each UN organization, which is WIPO, the ILO, WHO, all these different organizations do not have the same policy and neither does the UN. Everybody's very skatty. So, actually, the ITU is the first one to actually have an accessibility task force that is actually functioning and has written a policy.

But there still is insufficient recognition of formal funding. So that's what I'm working on. And -- well, it's one foot in front of the other foot. So I'm not going to be as wonderful and as glam to go address the UN, but I'm doing my best from from behind-the-scenes, Christopher, you can put in input and I'll make sure that it gets to the right people. Thank you.

>> JOHN LEE: Thank you very much, Andrea. At least you didn't swear.

>> CHRISTOPHER JONES: Can I respond to that, John?

>> JOHN LEE: Sure.

>> CHRISTOPHER JONES:  Christopher Jones here. I don't want to do that on my own. But what is important is that all deaf organizations need to be behind this. It's a wonderful opportunity to put this forward. I suppose, really, this is for the next-generation. We're talking about a future here. The future of your children, your grandchildren, your great grandchildren. We need to start now.

Thank you, John.

>> JOHN LEE: Thank you, Christopher.

So is there anybody else who would like to take the floor and talk about -- yes, Claude.

>> CLAUDE STOUT: I'll come up. I follow what Christopher Jones is talking about and I agree with him very much. All the various consumer groups and industry are happy to work with the ITU. And for resolution 70, and for the consumer groups, the TRS policy statement, I think is really showing how we can work together with industry and how we can develop a list of what issues we need to present the FCC, and how we need to have revision of policy and things like that.

And so if an individual consumer group submits something as a policy statement, I don't think that is the best approach. I think when we come together and present something to the ITU, then you can share what needs to be shared and help other ITU members really understand how it works here in the United States.

And when it's working well, it works very well. And so we're happy to be involved in this. And Christopher, please, send me an e-mail -- he sent me an e-mail last week for the variety of the consumer groups here in the US to sign up for another resolution. And so we're not only concerned about what is going on here in the United States, but we're also concerned about what is going on at the UN and other countries as well. So I'm happy to work with Christopher Jones and all of the variety of consumer groups that are represented here.

>> JOHN LEE: Thank you, Claude. Christian?

>> CHRISTIAN VOGLER: Christian speaking.

And diverging from this topic just a bit, because it is important in terms of the International efforts, it's not directly related to ITU. But now many of us have a pretty big headache dealing with WIPO. And that's the World Intellectual Property Organization.

So it's a very complex issue. Basically, the question is: If you have copyrighted work or work product that is not accessible, what rights are free for others to make sure that People with Disabilities do have access to that copyrighted work? And an example of this is a film, for example, that is uncaptioned. And can People with Disabilities look for captions to add to that copyrighted work?

Here in the U.S, there is quite a controversy over that use of copyrighted work. But worldwide now, there are negotiations going on with WIPO to look at the copyrighted works. And we haven't really seen what has come of that, yet.

And we would like to see a Treaty presented that works through ITU to allow that to happen. So we haven't seen progress as yet, but I want to let all of you know about it.

>> JOHN LEE: Thank you, Christian. And Andrea would like to respond.

>> ANDREA SAKS: I'd like somebody else to respond, but I'll tell you, I think we have somebody in the building here who can actually -- has just told me he is going to send me that information. Oh, God, your name just has gone out of my brain. I'm going to have dinner with you tomorrow night and I can't remember your name. Isn't that terrible? Raymond -- Randy. I knew it was an R. You know about the WIPO Treaty. I think you should talk about it right at this point. It would not come to the ITU. It stays with WIPO. The only thing that would happen with the ITU is that many people who work with the different activities who are blind who work with me would have comments and input. But the ITU would not interfere with that. But some of the people who are Persons with Disabilities who have the problem could deal with that.

So could Randy elaborate?

>> JOHN LEE: Randy, would you like to elaborate.

>> RANDALL POPE: If I could quickly do a follow-up, I want to emphasize that we are not only concerned about those who are blind, but larger concerns about the Deaf and Hard of Hearing community. And our fear is that this situation will result in the needs of Deaf and Hard of Hearing people being neglected. >> JOHN LEE: Randy, would you like to respond?

>> RANDALL POPE: Christian's comments a moment ago about WIPO, I'm hearing from blind organizations, complaints about particularly eBooks. And eBooks not being accessible. Many of the publishing companies out there are really trying to water down that Treaty, to really render it useless. And so that they wouldn't have to comply with it. You know, they consider it additional Regulation that they shouldn't have to follow. And I haven't heard anything from deaf organizations until you mentioned something today, Christian.

And I agree with you completely. It's a big concern of mine that WIPO needs to hear from us. We need to get together and address this and see if we can pull together a larger coalition in order to approach them. And really make sure that People with Disabilities have access to all of the materials, whether we're talking about eBook, video, film, television programmes, whatever it might be.

So, Christian, thank you for sharing that concern with me.

>> JOHN LEE: Thank you, Randy. So I would like to make a comment -- sorry my apologies.

Thank you, Randy.

So I would like to make a comment about this topic as well. In the previous life I used to work in intellectual property. But more to the point, one of the things is that a lot of the new regulations that are coming online both in the US and Europe is related to content accessibility. And one of the things that needs to happen, really, is that the content in themselves become accessible. Part of the issue with the intellectual property and the Treaty that is occurring at WIPO is related to inaccessible content that is created and disseminated as inaccessible content. So when you create subsidiary work from that, the IP related to that subsidiary work is really the issue at hand. And quite frankly, if the original content had within itself accessible streams of information, so that everybody could access that content, this would really become less of an issue.

So I think we need to bear in mind that what we need to make sure is that the regulations-related content does have this and does require this of content providers and content makers.

>> PAULA TUCKER: Christopher has a comment.

>> JOHN LEE: Christopher, go ahead.

>> CHRISTOPHER JONES: Sorry, John, that was actually a mistake. I didn't mean to have a raised hand there. Apology.

>> JOHN LEE: Okay. Thank you.

>> CLAUDE STOUT: I have a question. When we're talking about pulling together a technical paper on relay services, I want to understand the relationship between the technical paper on Relay Services, worldwide, and the issue we're talking about now, the WIPO issue. Is there a reaction?

>> JOHN LEE: Right. So there is a tenuous relation. But in reality there isn't. I'll try to open the floor to any discussions. But in terms of tangible relationship between the Treaty and no, there isn't, unless it was used after the fact to create other streams of accessible content. So that is a tenuous relation.

But we can bring it back to this meeting and pose a question. What were some of the contents that people did like and wish there was more of? Okay.

Well, I mean, it -- sorry, go ahead, Claude.

>> CLAUDE STOUT: This is somewhat related in terms of wrapping up this meeting.

I think we would like to hear more from John and Christian and Andrea about next steps. What is the next step with this technical paper? What is the process from here on out? Will you involve us again as you make edits or are the three of you going to be working on that internally? Is there any participation from the rest of us? When will the document be finalized, that kind of thing. If you could address that, I would appreciate it.

>> JOHN LEE: I can definitely go over where this particular paper is headed. The ITU is a UN organization, so there are a lot of procedures that we need to follow. But one of the things that this particular paper we are talking about, it's an F. Series technical paper. A technical paper will be a service level description that has user requirements and user needs. -- not user requirements, user needs and descriptions of services that are already in the -- implemented.

Once this is all gathered, we will be working to try to fit them into the document, maybe edit some of the contributions that we received so they fit nicely into the document. Get it to a point where we're able to reach a stable draft. Once we reach a stable draft, it will need to be voted on at the ITU for approval. And when things are approved, one of the things we do need to work on is the next document, which is actually the next item at the end of the agenda called F. relay. What that is, it's a technical paper on how to meet the user needs described in this particular paper we're currently writing. And it's a recommendation on how that should be achieved.

So the involvement of people is definitely something that we are looking forward to. And we -- that's part of the reason why I -- and -- and that's part of the reason why I put that fourth point about the next Rapporteur's meeting in March, because an opportunity would be to have another meeting that is a little more open like this. Because part of the issue with invitations for meetings in Geneva is that typically it's either ITU sector members or ITU state members, which means that you either have to be a country or a paying member to the ITU, which does create a little bit of a barrier.

So that is part of the reason why we are holding this meeting right now, so that it has a more open attendance and we can actually invite people that we feel will contribute to the advancements of these papers.

So that is part of the reason why I brought that up. And something that I would ask, is that something that people would like to participate in and benefit from? And I also realize that there is definitely a travel constraint. The ITU is an International organization. And traditionally our meetings have been either in Europe, actually mostly in Europe, especially for this question, because a lot of people that were running the meetings did not want to travel. And that may be a restriction, actually, for this meeting as well, and the people who are here.

If this meeting were to be in Europe, but still was an open attendance, would people still be able to attend? And those are questions that we have to work through. But we definitely do want to involve members of the community and people who wish to contribute to the document and who have definite experience and defined user needs to advance a document.

So one of the things that I would respond to is there are processes and they are very long-winded, unfortunately, and things do take quite a bit to get them to a state where they are approved and published. But we have done a lot of progress in this meeting and I hope that people will be involved for future documents that we create, specifically related to relay.

Both Andrea and Simon had their hands up. I saw Simon first.

>> SIMON HORNE: I was going to -- I travel from Australia so I don't care if it's America or Europe, it's still a long way for me.

So, well, if you wanted to move it outside into Asia or anything like that, we would be interested in hosting meetings for question 26.

>> JOHN LEE: Speak up. We can't hear you.

>> SIMON HORNE: Sorry. I live in Australia, so traveling to America or the United States is still a long way for me. But I'm still willing to travel. And also we would like to extend the offer if they wanted to move it to Asia and get input from Australia and New Zealand, we would be interested. And if you are interested in offering it, it will be on the table.

>> JOHN LEE: Thank you, Simon. Andrea?

>> ANDREA SAKS: I think Claude wanted more specifics rather than what we are going to do in a sense.

I think we have in the past had reflectors, where we sent out the document as we did it, so people could make comments and add to it or correct whatever it was that was added or adjusted. I know you don't like that, but that really is more fair.

I don't think you can just say okay, here it is, we're done. I think it's entirely possible, and this is my own view, it's not necessarily John's, and the people in the Study Group want to see it done, but I don't like things in a hurry. I personally don't think it's going to be finished at this next meeting.

>> JOHN LEE: No. It will be the next one.

>> ANDREA SAKS: So what can happen over the summer is that a document will be edited by the three editors, correct? Okay.

That document should be sent out to this mailing list, so they can look at it. And it can be. It can be. Why can't it be, John? It can't -- well, I'll let you say why it can't be.

But if they participated and contributed a paper, or there is a way we can do that, as an invited expert to the next meeting, and having contributed, then we can do it. Yes? All right. But I have to get the microphone back.

>> JOHN LEE: Yes, Andrea. One of the issues with creating an official distribution list is the membership issue and if we require a tax account. But regardless of that, what I can promise to do is once we have future versions is upload it to the FTP.

>> ANDREA SAKS: That's what I said?

>> JOHN LEE: But uploading on the FTP and future versions of this document there, so that it is public and we can share that, and since that is open access and does not require membership to the ITU to access, and because accessibility does have special rights within the group, that is something we can do and share and accept comments at that point.

>> ANDREA SAKS: Okay.

I was right and you were right and you told them how you're going to do it. So that's fine.

So the main thing was that we want everybody to be able to see that document that we created here.

And then there is the situation of if we -- we know that the next meeting is going to be in Geneva. Obviously we can do remote participation and guests, so you can participate. We're getting pretty good with the deaf community participating remotely. But it does mean getting up at a terrible hour. But I think we could organize it. Is it 3 in the morning -- well, sometimes -- yeah, okay. But it can be done and we can -- if we schedule it for the afternoon we would be better, wouldn't we, instead of morning? We can ask.

I'll talk to Samal. We will find a way so we can get it at the best reasonable time so we can get away with and get a room. It's complicated, because what happens is you have many questions, a limited amount of room, everybody wants their questions consecutive and the poor counselor has to sort this out. But we will have remote participation that will be captioned that will --

>> JOHN LEE: Things go a lot faster.

>> ANDREA SAKS: What gou mean?

>> JOHN LEE: (Off microphone.)

>> ANDREA SAKS: Okay. Now it is all right. That's another issue. When We get people making comments, we will explain the procedure to people.

I boss him around, that's okay. But I'm his granny. But I want you to feel that you can make a comment back. And also, if you wanted to come to the meeting remotely, you just tell us and we will invite you as an invited expert. Especially since you've been here. That we can legally do. Or I can have you come through the sector membership that I have, which is G3ict. Axel is very agreeable to doing that. If you wanted to submit a contribution, depending upon what it was, I could ask if we could pass it through one of the sector memberships.

It's tricky and I can't promise that -- don't you come get this mic yet. I want to say one other thing.

Andrea finds a way to do what you want to do. Just tell me what you want to do and we will do it. And I find a way to get around the rules, so as we say in Yiddish, that are Kosher. So I don't think that everybody can afford to join the ITU, but in resolution 70 it says we may seek the guidance and expertise of the community of Persons with Disabilities. And I can bend that until the cows come home and manage to get your comments and all of your stuff in and I will do it.

And the point is, we can have it -- this is what I want to get at, and then you can have it back. We can have more captured meetings. Now, where they are, again, depends on getting the host. Otherwise, they are in Geneva. But it's like one foot in front of the other. Where there is a will, there is a way. And we're also working on funding issues for fellowships, that's what I've been working on quietly in the room here this afternoon, because the council is meeting next week to determine budgets.

Now, I may not be so successful to get everything I want. There is one more council, which is happening in -- in 2014, and then there is the plenipotentiary and the plenipotentiary plans for the next four years of the ITU, which is not just the T sector. And who is going to be the Secretary-General and who is going to be the Deputy Secretary general, and what new resolutions that encompass old ones, and that's where I hope to nail it down where there is money for fellowships for people who are People with Disabilities -- it really kills me, because I hate saying that, I don't know why they make me say that. Somebody said it's politically correct. It's a mouthful. But everybody in this room who has a quote disability, they can apply for a fellowship if I can get that funding in place. So you can come to Geneva and be paid. Not as a salary, but as your expenses. That is the next goal that we are trying to do in line with the UN Convention. That's what I wanted to say. That's pie in the sky right now. And now I'll definitely not say anything else for a while.

>> JOHN LEE: Thanks, Andrea. So, does that answer the question related to next steps? Claude?

Okay. Okay. Yep. Thank you very much.

>> CLAUDE STOUT: Yes. Thank you very much.

>> JOHN LEE: Angela? Sure, go ahead.

>> ANGIE OFFICER: Hello, my name is Angie Officer with Sprint Relay. And I really enjoyed all of the presentations. A lot of good information.

And I do have a question, though, for Christian I believe, John, and Andrea.

It has to do with the White Paper. Is the goal to provide basic relay services to -- if so, then simplify it and get the White Paper passed. Or is it to design the state-of-the-art best possible relay? Because my sense is if we provide state of the art, you know, the best most advanced version, then we will have difficulty passing the White Paper.

So the question is, really, for the purposes of the technical paper, do we want to simplify the paper and keep it basic or -- I remember when we started Sprint Relay, some 21 years ago, we started with TTYs. And it wasn't easy then getting that passed, dealing with the requirement, convincing the FCC to move it to the state-of-the-art design. There was a a great educational effort with the FCC. And so when I consider the International opportunities here, we need to think perhaps slowly. One thing at a time.

So the White Paper may need to be simplified so that it starts with very basic foundation, and then is amended so that it then becomes state of the art later. That would be a recommendation.

I'm curious about your thoughts on that.

>> JOHN LEE: Thank you, Angela. One of the thoughts related to this particular paper is that we're trying to encompass everything that has been done and that has been thought of. This is not a recommendation on -- this is how you should do it. This is more of a compendium of all of the things that have been done so that countries who don't have any relay service can look at and try to figure out what do they need and what do they not need? That's part of the reasons why we have chapters like 6.10, which is related to funding. Or 6.9. Some of those chapters would not make sense unless it was people just exploring. So this is just to share information of people who have already implemented relays.

The next paper, which I will actually get Simon to talk about, is the -- is going to be the technical requirement and the user requirement. And for that paper we will likely try to be a little more targeted in the requirement. Because this is -- this will require us to effectively design a relay service, and this will be the description of what that Relay Service is.

This is effectively a wish list of everything we could and would want.

>> ANDREA SAKS: And can you hear me?

I need a mic. The wish list, I'll make sure there is a wish list in there, because some of the things that you want don't exist, and I think these are things that need to be put in there.

I think it's important, everybody -- we have got the captioning. Everybody has expressed things that they want to see. So we have to get a new category. Can we make sure that's in there?

>> JOHN LEE: It's already there.

>> ANDREA SAKS: One of the things I wanted to make a point. The people would like to have the captioning. He will upload it to the FTP server so it's free to get to. You don't have to be a member and you can read the proceedings. But they will be in a more complete form, because we're not allowed to have it until Pat spells every word right. Thank you.

>> JOHN LEE: Thank you. So at this point, I'll give it off to Simon, who is quickly going to talk about ad thing called -- a document called F. relay. It's a companion that is very much related to what we're talking about here.

>> SIMON HORNE: This particular document is more of a more technical, I would say, a more technical type of document, to specify the key performance indicators and the requirements of a relay service. This is requirements such as T.140. High definition video. It must support open standards. Things in that kind of nature. The purpose is to give an outline exactly as mentioned here, that needs to be an outline for countries to follow. But it's a little bit more detailed in terms of what the KPIs of the document -- of what a Relay Service has to deliver. So there's benchmarks there, so that countries can benchmark against.

I'm not sure about the timeframe of this particular document. It will be three or four meetings, I think, as John said.

>> JOHN LEE: And each meeting has about 18 monthS between.

>> SIMON HORNE: It's about 18 months between the meetingS. So it's going to be a slow process and it will evolve over time. So as new technology comes onboard and other providers come onboard, it will be changed. It will take a little time, but I think it will be a very good document for everybody to adhere to. And hopefully we will be able to build a common platform for everybody to communicate with each other, have KPIs that we can benchmark against, and it's a very good service to the broader community around the world. That's pretty much it.

>> JOHN LEE: Great. Thank you. So at this -- two? We have Donna and Christian who would like to make a comment. I'll give the floor first to Donna and then Christian.

Go ahead, Donna.

>> DONNA PLATTS: I agree with Angie's comment, all the presentations were good the last couple days. It's be very interesting. I just want to thank you for the opportunity to stand and watch all the presentations for the last couple of days.

Richard and I wrote the White Paper for the emergency calling issue, and it was challenging for the two of us because of thinking on an International stage. So thinking about lessons learned here in the U.S. that may apply in other countries, but it's also a challenge when writing a document like that to make sure that we're using appropriate International vocabulary so people know what we're talking about.

So I want to ask the Committee of editors to think about International vocabulary that may apply to calling centers, emergency calls, emergency services. I want to make sure that there aren't misunderstandings about the meanings of some of this vocabulary, like are we talking about police officers or fire? And I want to make sure that that vocabulary is appropriate. And we will spend more time to clean that up in the next while. And we just wanted to ask if maybe you could address that.

Another challenge we had was we didn't know necessarily what technology is available out there. Should we include issues of technology? I'm not sure if --

Also, when we talked to Christian about NENA I 3. We used I 3. And that's a NENA service. Is that a technology that is used in other countries? That is another issue that we weren't sure about. And so we came to a couple of crossroads and we were not sure the way to proceed in the drafting of our documents.

>> INTERPRETER: And now the video is frozen. I think we're back.

>> DONNA PLATTS: So we were not sure about technical standards that were available across the world, because those diverge so greatly. What are the minimum requirements, for example, that we should be working within? So we will need help on that.

So Richard and I are happy to help clean up the document, because we sort of put it together in a bit of a rush and we thought of some other things that we would like to include. And we will work on cleaning it up throughout the rest of the month and perhaps in the next month. So anyway, we enjoyed talking to everyone and listening to the conversation and getting the advice, and really just hearing about the operation and what is going on. So I'll be back in touch with you through email, and I hope to see all of you in subsequent meetings.

>> JOHN LEE: Thank you very much, Donna. Very much appreciated. Christian?

>> CHRISTIAN VOGLER: Thank you.

>> JOHN LEE: Certainly.

>> CHRISTIAN VOGLER: Okay. Hello there, Christian speaking.

First, a quick response to Donna. Now, that document focused more on collecting existing information on what is currently available here. So it wasn't intended to be incredibly technical. And my advice would be to look at the functional requirements and not mention so many specifics about the technical standards. It may be appropriate to give certain examples of standards and what those standards do. But generally it would be best to focus on the overall functional requirements.

Now, the second comment I wanted to share had to do with the overall purpose of this meeting. In setting up this meeting, what happened was the ITU had been working on the invitation for the document. But they had a difficult time pulling together some of the American information. And so the ITU decided to set up a meeting, a conference here in the U.S. that would get things started. And so we were able to get lots of great information from all of you that shared important perspectives that needed to be included in this. And so we are sort of leading the world in this area. So... so it's very good because a lot of that information on these various issues points out what we have learned worked well and what needs improvement. And that has been a very good effort.

And I have to mention that Angela, Angie Officer, I wouldn't worry too much about the difference between the state of the art and the more basic programmes for relay. We want to make sure that all of this information is available to people all over, so that they have access to reading and we can fill in those gaps. And if people want to set up a relay, they can see a guideline there of what exactly they should do.

>> JOHN LEE: Thank you. This is a great segue. What I wanted to do next is just go over all the chapters that we helped to provide information, the contributions to these chapters, and those that we still would need some work on. Then closing remarks. And what this meeting provided was expand the standard definitions. Expansion on speech-to-speech. And 6.25, captioned telephone. 6:211, which is Total Conversation. We will add new chapters related to sign to sign, and the video relay portions need to be expanded. There are security issues that were brought up that will be added to the document. Some of the deaf-blind issues that Randy raised with us will need to be added to the document.

Accuracy, quality of experience and performance indicators needs to be expanded and some other contributions need to be incorporated.

Some of the personal aspects that were brought up also need to be included into the document, user aspects, as well as call set up procedure requirements.

Then there were contributions related to 6., which is funding. 6.10, accessing emergency services.

And, finally, there is a new Chapter that will be written related to future user needs.

Now, some of the things we didn't receive during this meeting, which are still sitting empty -- and I realize some of these do not apply in the U.S., so that is not saying that we need something right away, was 6.24, lipreading relay.

6.26, text-to-text.

6.27, fax relay. Facsimile relay.

6.28, short message service. SMS relay.

6.29, instant messaging relay.

6.210, language translation relay.

6.212. This has other types of relay, but we have covered that, some of the things will be included there.

6.6, interworking, which is really interconnection. I know we have talked a lot about interconnectivity during this meeting, but we didn't really get a contribution on expanding the chapter. And it would be really nice to figure out exactly what the needs are in order to make things interconnected.

And then 6.11, which is a chapter on connection of relay services.

>> ANDREA SAKS: Speech-to-speech.

>> JOHN LEE: I had it in the -- we did receive a contribution on that. And that was in the previous list.

And that was speech-to-speech that Andrea was asking about.

And, yes.

So that is the State of our document. And the editorial team and I will be spending probably a lot of the summer updating the document, taking a lot of the contributions that we received and putting them where they fit and incorporating them into the document. Hopefully the next time you see the document, it will be a lot more complete. And then we will get better feedback and give you a more completed version of this document.

So at this point, are there any other business related to this meeting or comments?

Great. So one of the things liked to do is thank TDI for taking on and inviting us to this meeting, and Gallaudet, as well as Paula who has been here helping us set up these meetings.

(Applause)

Thank you.

So this actually, this -- I mean, I've been involved in a lot of standards development related to accessibility, and this has by far been one of the better run meetings that I've ever attended. So I'm very happy about that. And actually, there is other work that we are doing in question 26, thank you, which is related to the accessible meetings. And we are writing a document on how to run an accessible meeting. So we will be taking a lot of things that we have seen here today and incorporating that into that other document we're writing.

So yes? Angela?

>> ANGIE OFFICER: This is Angie. I agree. This has been fabulous. It's been a great couple days and I enjoyed the conversations.

I've got a question that I just thought of. Are you going to provide the transcripts to all of us?

>> JOHN LEE: Yes. So what will happen --

>> ANGIE OFFICER: Fantastic.

>> JOHN LEE: Once the edited transcript is provided to us, and once we have some of the updated documents, everything will be going up to the FTP site on that link that was sent where all the documents reside. And any updates will be done there. So that everybody here already has the link and already has access to that. So you'll be able to go there and receive that. And I'll send an update probably sometime in two or three weeks, when I'm back home with some of the updates that everybody can go there.

>> Thank you so much, John.

>> JOHN LEE: Christian, would you like to say anything?

>> CHRISTIAN VOGLER: Yes, I do. I have something briefly to add.

I want to mention the two folks sitting over there, we have Paula and Norman, who were instrumental in setting up the meeting, dealing with the technology and logistics. Thank you so much.

(Applause)

I also want to thank Claude, who has tirelessly organized and getting all of these people here. Really it's been a job and I've been really amazed with your work.

And thank you, John, for putting everything together.

>> JOHN LEE: Great. So a few more people to thank. Pat, our captioner, who has been doing an amazing job and making sure that all of the words are captured.

(Applause)

And of course our interpreters, who have been very diligent and who have helped us communicate with each other.

(Applause)

So, thank you very much. And at this point I would like to call a close of the meeting. Thank you.

(End of meeting, 5:10 p.m. ET)

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