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>>BILL PECHEY: Okay. I think we're ready to go again. Just checking to see that the speech-to-text is functioning. Can you hear us there, Cindy?

Sorry about that. We seem to be going now. It's like a JavaScript error.

Right. So this afternoon we have a longer session. And we have four presentations. We'll see how we go. We may take a coffee break earlier. But at the end of the day we have a longer period to discuss everything that's happened during the day. We do want to find out what we need to do in ITU. I'm sure there are one or two things that we picked up today that we can add to our plan of work. I found one or two myself. I would like to hear what other people think. And of course as I said earlier we would like to have comments on the accessibility

of the workshop it self. So that we can do better in the future.

Okay. So with that, without further ado, I'll hand it over to Jeff McWhinney from SignVideo in the UK who is going to talk about "Sign Language and Technology - Access, Applications and Interoperability".

>>JEFF McWHINNEY: Thank you, Chairman. And to everyone in the working group. I would like to focus today on the technology and the interoperability of the applications.

In this presentation we will present together with Jacques Sangla from WebSourd and visual aid service and Emmanuel Buu who represents IVeS. Next slide.

Didier Chabanol is upstairs at the exhibition if you have seen it. And each one of us will present a part of the total presentation.

So my focus is relevant to the reason why we are here today. Can I have the next slide?

Looking at Article 9, there are three sections which seems very relevant to what we are looking at and we can see what solutions we can find.

One is to provide forms of life assistance and intermediaries including guides, readers and professional Sign Language interpreters to facilitate accessibility to buildings and other facilities open to the public.

So how can one implement such an article. The problem is that in reality, especially in the UK, research has shown that for one interpreter you have about 250 deaf people. And this is very difficult.

In cities deaf people on average wait two weeks to have an interpreter. And that's for accessibility to public services and different facilities. One solution would be access to remote interpreting through video interpreting another solution is also the use of avatars and WebSourd with Jacques Sangla will talk a little bit more about this. Another aspect of Article 9 which is to promote access for Persons with Disabilities to new information and communications technologies and systems including the Internet.

I'll expand on this later. And the second part is to promote the design, development, production and distribution of accessible information and communications technologies and

systems at an early stage so that these technologies and systems become accessible at minimum cost. And that's where we feel that ITU have the power to be involved. And make changes.

Right. The first section I mentioned video relay service or remote interpreting. This is in picture what it is about. But Jacques will expand more on this. So I'm just touching on that quite superficially.

Often I hear comments from people saying that there are not many people who are deaf. There is no real demand for Sign Language interpreting. And so if we go back -- if we go to this slide, which shows the minutes of use of video interpreting, you see that there is a growth. Quite marked. And flattening out at 8 million minutes a month.

So there is a demand. But the interesting thing in that graph is that if you look back in 2002 before video interpreting and IP relay services or captioning relay were available, the entire relay market was 3 million minutes a month.

So now video alone contributes to 8 million minutes a month. So it adds up actually with all of the different services to 15 million. So there is a need. But it hasn't been met in the past.

Looking at barriers to efficient video calling, your responsibility in ITU is to look at that. One is the lack of peering agreements among SIP providers. So deaf people don't know whether to subscribe to one service or to another.

A second barrier that we need to look at is high speed broadband access and availability that's needed for video.

The third barrier is the problem of interoperability in video calling devices. If a deaf person decides to buy a piece of equipment and is not going to be able to use a service that doesn't match his terminal, then there's a problem there.

The next one is ENUM which is not yet widely implemented. So what would the solution be to all of these barriers? It is my view that we need to really look into the peering -- to a peering solution and to ENUM. And my colleague, Emmanuel will look at different avenues from a technical perspective so this is the end of my bit and I hand over to Jacques who will present the second part of our presentation. Thank you.

>>JACK LeVAN: So hello, everybody. My name is Sign Language

-- my name in Sign Language is this one. I'm from the WebSourd company. This company is working in social market to try to promote accessibility for those persons in 2001 and providing information and written language on the web site. So now I will talk to you about the Visi008 video relay service provided by web sourced and the avatar we have built in web tool. First I will talk to you about Visi008 so you have three different targets for this video relay service. First of all, it's a private one. To be used at home. Second one is to be used in your company. And third one is in public places, public buildings.

The main problem for deaf person in France is really to contact people easily. There are some misunderstandings. So you have to postpone your rendezvous, et cetera, and you have to follow the interpreter planning and schedule. So it's really, really a big issue of communication for deaf persons. Thanks to the Internet we can be connected between each other with SIP protocol. And we can use our system with our system with the protocol on the PC on the MacIntosh computer or on other devices like the web or other devices. So it's really an open system.

Of course, you can communicate with the system via Sign Language interpreter. Sign Language interpreter is working in Tules in south of France and in other places in France.

Now we are at the end of the first part of the experimentation of our system and we have noticed 30,000 calls for -- per person during this year.

Like I said earlier, in web tools we are conducting some studies to know what the new system that's provided to them what are the drawbacks and positives and we have listed them in the report to improve our proposals.

So now people can say that they can register their travel and they have some time to do other things before that they couldn't do. They can also order on their own some materials. And they can compare prices in different places, in different jobs. Or they can reserve for example some airplane tickets or make their own rendezvous.

Thanks to Visi008 people are really communicating more and more. And we could really say that the way hearing person can see the deaf person have really changed things to this new system. Deaf person are now more an more autonomous and more

and more responsible and that for us is really what matters when we are talking about accessibility.

In France we have an association, national association. And this association is constituted of several different associations. Hard of hearing people, deaf persons, which use Sign Language or which talks, et cetera. And the association tried to establish criteria to set up a standard to provide video relay services.

And we really want to provide full and easy telephony accessibility and of course it has to be free for deaf persons. We want to provide it 24 hours a day. So that deaf people can connect each other whenever they want. And we want to provide access to the telephone for all persons, even if they are blind or deaf or et cetera.

And we really want to provide to -- to provide very iterative materials and not too complex materials to the person. Easy to use. And we also are trying to set up quality requirements with the help of the UNI STAT association. Thank you for your attention. And now -- wait. Now I will talk to you about the avatar.

Which sign is this one. And the WebSourd. So WebSourd have sought for a long time how to translate Sign Language. And we really want to provide avatars, virtual human, that perform Sign Language. But we want it to perform real Sign Language.

So now we are working in a computer generated images that can be automatically done and we want it to be of a high quality.

So we can put this signing avatar in a web site or in a video relay services or everywhere we want to provide Sign Language that could be done automatically.

One year ago the WebSourd company has developed an avatar with a company. And we wanted to with this partnership to provide an avatar in the (inaudible) stations and their name is (inaudible). And we wanted to provide information about problems like hearing people could have. And so now I'll turn it over to Emmanuel Buu talking about more technical aspects.

>>EMMANUEL BUU: Thank you. Okay. Can you hear me? My name is Emmanuel Buu. I'm one of the co-owners of the IVeS. This is a technology partner of both significant and WebSourd for their video relay services. So to be very clear, we are basically the

people who are implementing standards, telecommunications standards and some of the standards are defined here at the ITU.

So we wanted to take the point of view from the field level. What exactly accessibility from our point of view means.

So it means basically two kinds of services. And I'm not talking here only about deaf people or hard of hearing people. I'm talking about Persons with Disabilities.

The first kind of services is the relay service. Basically when we have on the telecommunications network two people that because of their disabilities or other problems or even could be considered different languages, if they cannot share a way to communicate to each other, then we need an intermediate service or people to make that relationship.

And then there are several big huge services related disability with regard to assistance. And this is basically people who need to -- some people -- some expertise or even some assistance in their daily lives. And these people, if they can get it from remote using telecommunication, then it's very, very helpful.

I can take a very simple example. It's blind or visually impaired people who would be able to have assistance from seeing people who are using a videophone remotely to either look for object or remote relay. And that can apply to varied people and we know in Europe our population is aging so this is a very major topic.

So I've posed a different standard to see what's going on. Because here we are in the European not inventing new standard I believe that we have a range of existing standards that are relevant for disabilities. And maybe they have been used more in the business. Hello? Okay.

So there are a number of standards, technical standards either the one drafted and published by the ITU or by the Internet Task Force that are relevant for disabled people. And IVEs we are in the European that this -- we are of the opinion that this standard actually has to be implemented by service provider by device provider collectively to provide cheap, affordable and quality services for both disabled people and later for the general people. Because I can remind you that for example, one of the devices that was designed for disabled people were the remote -- was the remote control for TV and now

everybody is using it. So by designing systems and devices and phones and networks for disabled people, you open new possibilities for hearing people.

So while I've chosen IMS but I could have chosen any standards. Our point of view at IVEs, IMS maybe it's not a good standard, I don't know, but it's coming because Telco operators are in the path of migrating slowly but surely to this.

So we need to take the chance of IMS to integrate -- to make provision of such services inside the core network. Because you we are talking about people who are making videophone. People who are providing services. But there is a big player in the field who are the telecommunication operators. And if the disability is handled at the network level, then it will be a big, big progress.

So in my view, if IMS is going to be complemented and chosen by the field people, I don't know. But if it is the case, it needs to accommodate to this new device that not only aimed to provide communication services but they need to provide -- this device will provide accessibility services such as remote interpretation or remote assistance and so on.

Audio and video are not the only media to be considered. Text is very important. And so all kinds of other unforeseen media are coming up. Such as for blind people for example the ability for the person who seeks to have a remote control of the camera, a hand control as they call it. Later we might need to be able to transmit measurements, distance measurements. And real-time positioning for assisting people in their movement in a city.

And the other important part about IMS but it should apply to any standards that are going to be designed by the ITU for gentle communication, ITU has been historically founded by people, by administration, national operators. And then that this very stable and network culture is still very much in there. But in my view, to enable proper handling of accessibility, the standard that you promote should make some provision for smaller player. And should make provision that smaller service provider will have to use.

That's it.

(Applause).

>>BILL PECHEY: Thank you very much, the three of you. That

was very interesting. Do we have any questions at the moment?
Christopher Jones, please?

>>CHRISTOPHER JONES: Can everyone . . . it's a simple question really for you. I just wanted to ask about the problem of firewall, do we need to sort that out?

>> Well, this is a very major critical problem for everybody using audio and videotelephony. Well firewall was invented because one reason we have to have some kind of security on the Internet second purpose which is much more important is that we are running out of Internet addresses. So we designed some mechanism to share single Internet addresses by several devices at home.

And by doing so we put a major barrier for videotelephony. Because it causes a lot of problem everywhere. So yes this is a big problem. And I expect that migration to IPv6 is part of this solution.

>>BILL PECHEY: Thank you for that. I'm going to take the opportunity of commenting on that, as well. You may be interested to know that this Study Group 16 expensed two recommendations on the firewall and network address translation. We already have two recommendations (inaudible). We have two new ones coming out at this time. So we should solve all problems including the problems with battling the paved network translation. Anyway, that's enough. Are there any other questions. Alexandra.

>> Thanks, everybody (inaudible).

(Speaker is inaudible).

>> You mentioned that historic ITU (inaudible) and maybe there won't be much space for small (inaudible). I don't know. But I just wanted to ask you and (inaudible) to join the work. To join the work and make your contribution and can really feature and without reinventing the wheel (inaudible). But to really pull and push for (inaudible) the UN Convention ITU is there (inaudible).

(Speaker is inaudible).

>> So I really am very glad to see you here. And very glad for your given very frank (inaudible) exactly what we need and not what (inaudible).

>>BILL PECHEY: Thank you, Alexandra. Some of that didn't

come through on the speech-to-text. But (inaudible).

>> I have a question for Jacques. With regards to the avatar that you were talking about, do you intend for this to be a two-way communication or one-way?

>>JACK LeVAN: Well, the development of the avatar is really at an early stage. So now it's just an experimentation. So there is no intelligence in it. In fact for now so it's -- we just choose a model to build our avatar so it depends on the model we have.

So the first step we wanted to make is provide accessibility for information and in railway station or airport or different public sites where the deaf person could not have access of audio information so we wanted to provide that information in French Sign Language. But we could add some more features in that. And moreover, we could put it in a video relay service in the future.

So yeah, it's going to be developed. It's really at an early stage right now.

>>BILL PECHEY: Thank you very much. I think we'll have to stop the questioning. Oh, all right. One . . . we need an interpreter in which language?

>> So welcome, everybody. I'm working in the French -- in the Switzerland federation in Geneva for the deaf persons. And I wanted to ask about the avatar chart you were talking before that you put in the airport you can put in the airport in the railway station. Is it possible to add very quickly some new information in the existing system if we have to? For example if we just have a quick note to make for a delay or for emergency announcement or et cetera. Is it possible to add quickly a new message into the system or no?

>> Yes, like I said, we use the avatar with a preprogrammed system. That means that we have some chunks of Sign Language and we put them together thanks to a program and that provides complete appearances to a deaf person but it's really a good question that you are because we are already thinking about how we can make the avatar expressing themselves with new materials that we could give at the last minute to him.

>>BILL PECHEY: We have to move on. I didn't get the name of the last question?

>> Evan -- Eva Hammar.

>>BILL PECHEY: Thank you very much. I think we have to stop the questioning on that topic for now. We -- you'll have the opportunity to come back and ask more questions later. So let's move on to the next presentation which is Fanny Corderoy du Tiers from VIABLE in France.

>>FANNY CORDEROY DU TIERS: Good afternoon, my name is Fanny Corderoy du Tiers. I'm the founder of VIABLE France. Okay.

And I'm here not as a representative of my company. I'm here to present the deaf person's perspective on videotelephony communication devices.

So I was born deaf. And my association with society is quite different. Because I can't hear, I can't participate in the talking goings on in the environment. I instead have a visual environment. And that is channelled exclusively through my eyes.

So when I talk with another deaf person, I use Sign Language. And gesture. And as long as the communication remains purely visual, I remain comfortable.

Now, in contrast, when I try to speak with a hearing person, there's a barrier because I can't hear the hearing person talk and vice versa. The hearing person can't understand my Sign Language.

Now, deaf people have various goals. And one of them is Sign Language. Now, of course there are over 200 different kinds of Sign Languages, including cued speech which is a special mode of communication, lipreading, writing, gestures. So these are all different ways that deaf people can communicate. Now, that's when deaf people communicate with each other. But when I want to communicate with a non-signing hearing person, I need an interpreter who basically acts as my ears and my voice in communication.

Now, when the videophone first arrived in the world fair of 1964, it looked like this.

And the basic needs of a videophone have -- so you can see here, this is wonderful because here is a person who is talking on the phone who can see the person that they are talking to. And what we need now as deaf consumers is much more than that of course.

We need technology that keeps up to speed with our signing. We need it to be easy to use. We need it to be in

color. Of course we're not going to go for something black and white. And also it needs to be easy to call either a deaf or a hearing person.

And a modern day videophone needs to let me know when someone is calling me. So these are the four basic components of what we would like in a modern videophone.

So with these four basic visual needs, it will open the gates to a standardized product, which of course can be improved further.

So if you like we can compare it with hearing phones of the past comparing it to the iPhone which is quite popular now. And we would like something comparable to the iPhone. As far as ease of mobility. We want to be able to move around with our product. I don't want to be carrying a suitcase with me. Sorry if you can kind of hold on the slides there. Sorry; my slides were getting ahead of me. If you can just back up a little bit, please. Sorry. Yeah.

So as I was saying, ease of mobility, we need flashing lights, video and screen features, voice mail or video mail. And a touch screen.

So with these added features, we can envision a high speed, high technology device which actually acts as a mini computer that's specifically designed for deaf and visual users.

And this is what my dream looks like. And it's a VPAD. And it's created by deaf people and is distributed by VIABLE. And if you want you can go upstairs to the second floor to the VIABLE booth and we can show you this product.

So with this product with the VP, I don't have to have a hearing interpreter with me all the time. As sort of a siamese twin. It kind of frees me from the bounds of having someone accompanying me all the time.

Now, with the VPAD, I can make calls to my deaf friends, to my deaf family. I can also make relay calls and call my hearing family and hearing friends.

Now, when my mother was alive I thought it would be so great if I had this to call her. And I have actually posed a question to my team to try to get the VPAD to talk to my mother up in heaven. They are having kind of a hard time with that. But I'll let them go to it.

So basically the VPAD allows me to act as a business owner

in France. And I feel much more antonymous. And it increases myself confidence and independence compared with before. Also don't forget that if some people have a different -- different types of hearing problems or speech impediments, they can also use the VPAD to work around some of those difficulties.

In this model, we see people who have problems using their voice can call using the VPAD along with a type of keyboard -- along with a keyboard to type what they want to say and then they can hear what the other person is saying.

It can also be used for older persons. And it can be translated into text. And the VPAD is ready and has that function already built in.

Now, we also have with one push of -- with one push of a button, it will call directly to emergency services. And with the VPAD the added advantage of emergency services is that the operator can see what's going on in your environment, which is actually much better when dealing with an emergency situation.

So as a member of the deaf community, all we want is equal access. And equal access means the same kind of globalized communication that we see the rest of the world using.

And the VPAD for your information has already been installed in over 15 countries. And it's very easy to use. Very easy to install. And its visual communication at its best and please come upstairs and visit us on the second floor. We have a booth.

Now recently the deaf Olympics were held in Taipei and there were seven countries participating in this conference and it was the first time we had a VRS relay organized in Taipei with the deaf Olympics. And the deaf parents and audience members who were there were very appreciative of the fact that we had this setup. Thank you very much.

(Applause).

>>BILL PECHEY: Are there any immediate questions. We have a question I think.

>> Could you tell us how much it costs to use the service? Is it a free service that's provided for these relay services? Is it free?

>>FANNY CORDEROY DU TIERS: Are you talking about the video relay service? In France the video relay service has not yet been open to the public. But what we do have is VRI service in

France. And that's supported by Federal financing called H -- HVPH. And it's basically two different French Government agencies that support the VRI. But we have not implemented VRS nationally.

>>BILL PECHEY: Any further questions? So thank you very much. And we'll move on to our next speaker. Who is Tabitha Allum from STAGETEXT in the UK. And I just want to warn the interpreters ahead of time that in this presentation there are two audio clips. Please don't try to interpret these because as you'll see it's part of the impact of the presentation. They are not interpretable. So these presentations -- these clips are really for the hearing people of the audience. You'll see clearly why as Tabitha talks.

>>TABITHA ALLUM: Thank you, Bill, can I just check that everybody can hear me and that the speech-to-text can hear me? I'm trying to lean over the desk as much as I can.

Well, thank you for inviting me to talk to you today. I'll start by just giving you a little bit of background to the organization that I represent which is called STAGETEXT.

We are a non-profit organization placed in the UK. And we were founded by three deaf gentlemen in 2000 who felt that their access requirements weren't being met when they wanted to go to art events. At that time a group of deaf theater goers from America were going on a London call and they were quite used to seeing captioning on Broadway and in order to see it in London they had to bring captioning equipment and captioners with them and in those key performers they invited the key gentlemen of STAGETEXT. They had different degrees of hearing loss but felt that captioning was the way forward for them if they wanted to go to the theater more often. So they went back to America, they bought some captioning equipment with their own money, came back to the UK and set up STAGETEXT.

We really have five main areas of work. One is promoting captioning to arts providers. The second is actually providing captioned performances and we think there's been roughly around 2,000 captioned performances in the UK over the last ten years. Further there are providers that want to provide captioning equipment in-house and we train those captions there are currently about 40 people that work in the UK as captioners. We do a fair amount of work to encourage audiences for captioning.

So to raise awareness of captioning among deafened and hard of hearing people. And lastly -- and this is really the area I'm going to talk about most today is about developing the technology behind captioning.

In the UK we've had a Disability Discrimination Act in place since 1995. And the last part came into effect in 2001.

And this law does mean that service providers should be making their services accessible to deaf and disabled people. And that includes arts companies. However, all it says is that the adjustments should be reasonable. And there's no definition of what reasonable is. So there are still many theater companies and arts providers who in our opinion are not making adjustments to their services to allow deaf and disabled people to participate in their activities. We are really delighted to see that the provisions under the human rights convention seem a bit more positive about disabled people's rights when it comes to assessing cultures. And my talk today really looks at how technology might be able to make this part of the convention happen in the UK.

So why captioning and how does it work? Captioning is designed to give deaf, deafened and hard of hearing people access to theater performances or arts events in English. It's not intended to replace VSL interpreting performances and we find that many Sign Language users really like to pick and chose between attending captioning or Sign Language services depending on what they want to see the captions are in advance and formatted so they make sense in terms of the way the actors are delivering the lines the captioner sees the show several times in advance and rehearses their timing to a DVD so the performance can really absolutely mirror what's happening on stage.

They know the show inside out so if the actors skip lines, the captioners can do, too.

The captioner is also careful to include descriptions of sound effects and musical cues which add to the atmosphere of the show because these can completely alter the story if a gunshot is heard offstage the resulting conversations between the characters would be completely confusing to the deaf audience if that sound effect had not been adequately described on the captioning unit.

When we go and talk to theaters about the needs of deaf and hard of hearing patrons, those who know little about hearing loss often assume that the issue can be resolved with amplification or sound enhancements systems. To try to convey how captioning can transform a performance we used an exercise and this is what Bill was talking about not being able to be translated or speech-to-text transcribed so don't worry when the interpreters or nothing comes up on the speech to text if you listen to this piece of audio let me know what you can understand from it they have the high frequencies taken out which is what commonly happens to people as they age.

(Video).

>>TABITHA ALLUM: Those of you that are hearing did you manage to pick much up from that? Okay. We'll try again but this time with captioning and this is the moment we feel that people who are working with this suddenly actually get the idea.

(Video).

>>TABITHA ALLUM: Did that make much of a difference? What you can see from that is actually the timing of the captions makes you -- helps you hear what's going on. So people with residual hearing, which is the majority of deaf and hard of hearing people actually feel like they are hearing the show. And the crucial thing is that the timing of the captions has to be absolutely spot on. It wouldn't work at all if the text was delivered after the line was spoken. Which is why we can't use stenography or we prefer not to use stenographers for theater performances where the text actually can be prepared in advance.

If the timing of the captions is right, then we see the deaf audience laugh and gasp at exactly the same time as the hearing audience.

To deliver captioning in theater, we currently use a bespoke captions software that we commissioned after we analyzed the commercially available programs available on the market and we designed the software to make life as easy as possible for the captioners it includes a MIC box so the captioner can actually see what the captions would look like on the captioning unit when they are rehearsing to a DVD copy of the show other features include the ability for the captioner to add in comments such as the actor might say anything at this point and then he might say one of three things and include the software

the three options the actor may say depending on what they feel like that night it includes a quick text box which means the captioners can type live if there's something unusual that happens or an emergency on stage we promote the use of open captioning which means the captions are available to the majority of the audience although there may be areas of the auditorium that are better for viewing the captions this means the deaf audience can sit with family and friends and don't have to feel different or segregated or have to pick up a particular piece of equipment to access the show the units we use at the moment are LED display units having previously sourced low definition units from America we are working now with a British manufacturer to develop a high definition unit to our own specifications these units display text in an amber color which we find is easy on the eye and they can display different characters from different languages Chinese things like that we which find useful they can display text which is outputted by stenographers so occasionally we'll find a situation where for example there's a show happening at Christmas on London South Bank which is going to move between preprepared songs and ad-libbed cabaret and we are going to use a captioner to preprepare the songs a stenographer to output the live speech so the audience is definitely getting full transcription of what's happening on stage.

While we're happy with the technology that we use at the moment, we're always looking for alternative ways to make the audience -- make sure that the audience gets the best possible experience and currently we're investigating four things.

One is speech recognition as an alternative to stenography. The second is captions that can be broadcast wirelessly to hand held devices for non--static arts events.

Thirdly, captions that can be projected on to the stage and fourthly the possibilities of remote delivery.

So why speech recognition? One of the problems we have in the UK is a lack of stenographers. It's such a specialized field and there are relatively few practitioners and understandably they can command quite high fees for their work. Having seen this problem, we began to explore how speech recognition can enable more events to become accessible and we

ran a couple of trials at the national gallery in London where public lectures were revoiced by train revoicers and the resulting text was visible to the deaf audience. This worked but had some limitations.

Some of which were kind of covered by Christopher earlier when he was talking.

Firstly, this problem of latency, that's the delay between the words being said by the lecturer and then appearing on the computer screen and sometimes this was quite significant. This is largely because in order to be more accurate, speech recognition softwares is trying to make sense of the whole phrase before they decide what an individual word is so rather than the text coming up very quickly word by word it comes up as a whole phrase after the last word in that phrase has been determined.

Secondly, one of the problems was accuracy. And this is related to delay. If we want less of a delay then we have to sacrifice a bit of accuracy because the software won't have enough time to work out whether the word it's chosen is right or not.

Thirdly was a problem of human factors. Our trials would be even more successful if we would have been able to train the lecturers in how to deliver their talks in such a way to make it easy for speech recognition to make their event accessible.

The lecturers were really passionate about their work. And often spoke completely without notes. Referring to many, many pictures and paintings on slides behind them. And tended to speak at about 250 words per minute and it was almost as hard for the hard of hearing audience to follow the show -- the event as it was for the hearing audience, just impossible.

Had we had the chance to train the lecturer in how they could deliver their talk a little bit more steadily, the access that we were able to provide for the deaf audience would have been pretty good.

We're currently exploring whether museums and galleries having in-house revoices might mean that public talks become accessible to deaf and hard of hearing who choose to access events in English.

Having said that STAGETEXT is a big fan of opening captioning we are also interested in exploring closed captioning

on hand held devices. Having run a trial several years ago of hand held captioning in theater we concluded the constant change in the audiences field of vision between looking at the device and then looking at the stage caused headaches and made everyone really quite uncomfortable by the end of the three-hour performance.

This was made worse by the fact that many captioning users who may be slightly older also are used to wearing different sets of glasses for reading close up than they do for the things that are far away.

However, there are situations where hand held captioning could be perfect. And actually could be the only way that events could be made accessible through captioning such as talks around galleries or pieces of equipment where the users move around the space with action when we are thinking of suitable hand held devices the things we need to consider are the screen confirmation because it's much more comfortable to read text in a letter box configuration than on a four by three screen the battery life needs to be good even when the back light is on constantly and the device needs to be robust so it won't break the minute somebody accidentally drops it they also offer additional possibilities such as live program notes during music performances to allow people to follow what's happening.

I just realized now I switched my slides so they weren't making any sense before.

While LED units are fantastic parts of captioning they are expensive and sometimes felt to be at odds with the designers. An alternative might be for theater companies to project the captions on to the set and this would allow them to change font, size and color of the text to fit in with their production. Currently theaters that which to have these are using PowerPoint but the problem with PowerPoint is you can't skip animations or slides without showing you're doing so which makes it very difficult for the captioner to provide accurate captions without showing the audience that the actors don't know their lines so we are investing in our captioning feature for bespoke will give them the same functionality as LED but can be hooked up to a data projector even small theaters in rural areas and non-professional theaters have data projectors for use in their productions.

It should make the provision of captioning far more cost effective and therefore much more widespread.

A note of caution is the captioners should still be trained. It's easy for people to assume that anyone can caption production. But we believe that training is vital to ensure that the captioners understand how deaf people need the information to be presented in order to help them follow the show. Just as the hearing people follow it it's also important that the people that format the captions can spell and punks wait and it's often surprising of the number of people who can't the last area of interest for us in our current technology development is probably of most relevance to the audience today and I would really be interested in hearing from those of you who think you can help us get around some of the problems we're encountering and that's remote delivery and how the Internet can be used to make captioning provisions even more common place currently our captioners see a performance two or three times before they caption is so that they can ensure the text matches what the actors are saying.

If the production is touring then this can mean the captioner has to travel right across the UK in order to preview the show. It should be possible for the theater to broadcast their production over the Internet, accessible only by password. So that the captioner can view the show as many times as they need to from the comfort of their own homes this would dramatically decrease the cost of providing captioning because the theater would not have to be meeting the costs of travel and hotel accommodation on top of the captioners fee and if it's possible for the captioner to prepare remotely then the next step for them to be able to deliver captions from a remote location in order to do this they would need to have an audio and video feed from the theater and reliable and consistent connection back to the display unit so they can be triggering the captions. While an audio feed might be in real-time, it's likely there would be a little delay in the video feed and then a small additional delay in the captioner then seeing the video and triggering the captions.

For the audience this would be very uncomfortable and would not be considered to be good access. If the captioner could work solely from an audio feed then the delay might not be

quite so great but this would not work as well when the captioner needs to see the performers moving around in order to anticipate what they might say next additionally there might be concerns on the part of the theater and actors if the performance is being broadcast over the Internet. While there would be ways of making this secure, the concerns would still be there. Sometimes it's hard enough persuading a theater they need to provide a copy of the show on DVD. To actually go the next step and say it's going to be broadcast over the Internet I think would probably push them over the edge.

The other problem that was mentioned in a previous presentation is the issue of firewalls and how we might get around that.

The firewalls. While the potential problems of remote captioning seem insurmountable at the moment they may not always be so and if they can be resolved then there's also opportunities for the international delivery of captions if a captioner has captioned Mary Poppins in London would it make sense to do so in Australia as well and probably the answer is yes we are also currently looking at how we might be able to deliver our captioning training program remotely. We have a pretty robust training program in place now. And recently a captioner who is based in Las Vegas had to travel to London in order to be trained by us. This was really expensive. And time consuming for the trainee. And if we had been able to deliver the training over the Internet, then that would have been a far better solution.

Applications such as Skype and go to meeting open up opportunities for trainers to have face to face tutorials with students who are many miles away and to view how the trainees are using the software. We'll shortly be commissioning a training module delivered remotely which would allow us to assess this approach.

I hope that my presentation has given you just a bit of a glimpse of some of the work that we are undertaking. I would be really interested to hear your questions and also some of your suggestions of solutions. Thank you very much.

(Applause).

>>BILL PECHEY: Thank you, Tabitha. Are there any questions

for Tabitha on this very interesting topic or the rest of the presentations today? Question here. If you would give your name first, please.

>> Hi, I'm from Germany. My name is Jillian Joergen. Have you tested this with other languages like German or Italian or French with this specific thing or technology that you're using?

>>TABITHA ALLUM: For the open captioning in theater?

>> Yes.

>>TABITHA ALLUM: We only at the moment have English speaking captioners. But we can -- we can display text in any language we want to. So all we would need in order to caption a German production would be a German speaking captioner. So we actually hired our equipment to be used for Japanese and things like that. So absolutely but we don't do it at the moment because we dominantly work in English.

>> Thank you.

>>BILL PECHEY: More questions for Tabitha? So as I said before, there's a good opportunity to ask questions later on. So going to our last presentation for the day, I would like to introduce Gunnar Hellstrom most of you know I think. Gunnar has a long history of working in the ITU disability matters. He's in Sweden. He's done a lot of work to make life easier for others around the world. So over to you, Gunnar.

>>GUNNAR HELLSTROM: Thank you. Does it work? Let me check. Good.

I'm Gunnar Hellstrom from Omnitor as Bill said. We have a company in Sweden working with accessible communication. And I've been working quite a lot different standards association with improving association of multimedia communication mainly.

And one concept is thread through our work is the total conversation. And I will talk about how total conversation is meeting the UN Convention requirements and the European Commission requirements and how we can we can show that in our new European project which is about everyday communication and by using 112 emergency services. I noticed a couple of presenters have already pulled up this Article 9 from the UN Convention talking about accessibility and the need for states to take appropriate measures to ensure that Persons with Disabilities access on an equal basis with others for equal communication. That's a very good statement. And we can see

how that is met by total conversation. So total conversation is a communication concept that is one practical response to this UN requirement.

It is a simple composition of voice, text and video communication at the same time. And in real-time.

So it's a call that allows you to use these three media intermixed.

You can use audio of course for speech. You can use video for Sign Language. For lipreading, for general showing things.

And you can use the real-time text for good text impact. For just part of the communication or for the whole session.

Every call may have different requirements different sets of persons with different aims for the call. And having all three media there all the time is -- gives the best opportunities to get what you want.

It is an open standardized concept. The service subscription was made here in ITU. It's now ten years ago.

It's picked up by IETF and standardized all of these organizations to tell how it can be implemented on a protocol. So the definition we can find in ITU-T F.790, which is multimedia -- F.703 which is multimedia services description of these three media are required. And with a certain quality level.

So let's hope that we can forget about voice telephony and other multimedia conversational services and move over to more accessible total conversation.

It is implemented. It is expanded. And the users appreciate it.

And in fact if you look at it, it's just a small expansion from videotelephony. It's just adding the text part in a consistent, standardized, interoperable way. Not in different company specific ways. It's to follow the standards so you can arrange interoperability the same way as voice telephony always have.

And about real-time text, the real-time text is text while you have flood flow over the text, as you type, you send the characters. As you type you don't wait for the complete message before you send it. You have a good flow. So it can create your thoughts. And you have the other person follow the thoughts as they are created and expressed.

So all three media are real-time. And that maintains the real-time view.

And the European Commission has understood the concept and the code for a project where we have got the task to show sustainability, the usefulness of this concept for disabled people and for all.

So -- and we also connect it to emergency services because that's part of life. And this project is bridged on this, too.

The concept can be used between all kinds of people. And we have just one little example here from a deaf-blind woman who were deaf from the beginning so she knows Sign Language well. She can sign. But she cannot receive Sign Language. Therefore, she has Braille display to her computer. She can read the text on the computer. And in this call that I will show you, she'll get a call from her deaf friend first. Of course she must start all calls with text. But then when she understands who it is, she knows that yes, I can assign to this person. And the other person is going to type and they have use ages and communication in these two media. And I'll try to run the window here. Okay. It didn't play. So what we would have seen was that the text part of the screen is filled with a brief first conversation saying:

Hi, this is Paulina. And then this would provide answers in Sign Language and they have a short sign and text conversation before they hang up and we have the meeting. I'm sorry.

So we have already good European Commission support. They have worked on this topic since 2004 or something to try to promote this concept through various mechanisms. And in fact last week we got an even stronger position. The latest news is that European Commission has finally included total conversation in the universal service concept.

So it is mandated that all European states shall provide total conversation to the ones who need it.

It is through an amendment to the universal service directive that this has been taken. And the amendment was a bit delayed. But now finally last week it is agreed and out there. So it's very nice. Very good to see that the society supports this.

And we can also see that it's in full harmony with the UN Convention. Should we just look back to the user side of

communication and put the user in the center. In this picture we have a user with some communication disability. And they have different communication situations. We want to let him handle the -- with the same terminal with the same service.

Sometimes he will have contact with friends who will have total conversation devices. So they just make a call straight. And yet all media can communicate. You can guess this person is maybe signing and maybe hard of hearing so they use mainly the video but also the text.

Sometimes you want to call hearing persons (inaudible). but then even if the terminals had -- well, sorry; at the moment the hearing person only has a voice terminal. And there are, we need -- the relay has been talked so much about today. The relay service is an important part of the services we need to provide. And I am having total conversations with relay services, we can also have whatever exchange we need.

And occasionally we have an emergency situation. And what we know from everyday communication how to communicate must be used mostly in emergency situations. So whatever is our favorite tool or our favorite way to call, you must be allowed to use it for emergency use and use the common European number, 112. Or whatever is used in other regions.

So if you want to have the relay service in the 112 then it can be rolled automatically.

If you are able to handle it more directly, then you should be allowed to handle it directly.

So this is the communication situation. And you need to have a consistent interoperable way. And since you know that the emergency services cannot open for access from 50 different private communication systems, you understand that we need to do standards. We need to agree to make this happen so that you don't need to only be allowed to connect to your friends, if you are a member of the same service provider. You want to maintain the whole -- you have the telephone system where you can just get a number and know that you can reach the other person.

So that was the user view of total conversation. And this is the technical view. Total conversation can be implemented with various protocols. And will be eventually when the world moves to a protocol. Currently SI P is in the center of development of multimedia communication. So therefore, we are

basic our total conversation and implementation of SIP. And that is what is most talked about today. And most mature.

There are definitions somehow to do with the multimedia telephony as well and so on. And let's hope we continue to redesign if Paul Jones succeeds in his advancement of the multimedia system we can have a total conversation effort is implemented there with interoperability then of course of our current base SIP.

It is usually the text part that causes the most discussion. It's the best known. That is done with an RFC 103 on the presentation that has an ITU standard T1 40. And video and audio has media context.

By accepting this as a base, we also have our office people who are implementing it other ways in the upper left corner. If you have other networks or other reasons to deviation from this, you can do it. But connect to the world with this.

And we have a legacy environment with text phones and the phones that we also need to connect to with gateways. And it's fully possible and in operation.

So -- and the important part, the emergency service, there are standards in creation for IP based emergency services. And total conversation is part of it. So we are already there. It's more than the basis.

Now, a bit more about what is this project, REACH112 it's partly funded from the European Commission. And it is a project that was described as total conversation for emergency services for all.

It's the policy support program from the European Commission. And it gives deployment support. So it's not the research project. It is a deployment project. They have seen that this is a promising service. It has not taken off totally yet. Therefore it is supported from the commission.

It is the e-inclusion unit in the commission. They understood the need. They can provide the program to get the money for it. And then announced it for a general lead.

And we are a consortium with 2 partners. And it started in July -- with 22 partners. It started in July. We have been running for three years now. We are implementing pilots in five countries with -- so these 22 partners are divided in seven

countries. (Inaudible).

The important thing is that we have different providers, different manufacturers. But -- it that use the same protocol. We will prove that you can go from one country to another, from one provider to another. So that we can achieve the interoperability.

If you look back to what the e-inclusion unit helped in doing with seeing a lot of efforts to increase accessibility communication, we have the -- they reported already was it for the deaf and deaf-blind communication it's not a good status in Europe. And that emergency_s was inaccessible and they have provided communications towards this. This is a good step so that we can know this concept is viable and working.

Both for communication (inaudible) and for emergency.

So this is a map of the pilots. The pilots are centered around five service providers in the different countries in Sweden, UK, Spain, France and Poland. And we have different kinds of terminals. Some have only real-time text terminals. Some have mobile real-time text terminals but some have full conversation terminals, different kinds. And we always -- SIP with this. And we don't create more isolated islands of communication.

We can be here because we have been working in standards. And some good recent progress in standards are for example that total conversation is picked up by (inaudible) in their work with IMS. And among other stuff that IMS is important in the future. And I believe so, as well. It's the way of doing SIP calls in an operator environment.

This has just taken in the work saying that total conversation can be established with their multimedia concept and it is true they have exactly the same standards as we demonstrate on the Internet projects. And maybe we both lead to IMS.

There's also a recent relay service standard from ETSI that defines the total conversation and it's use in relay services. So it's ETSI harmonized relay service standard. It has also a report about the state of relay services in the world.

That's also a good base. It could be a good base for procurement for procurement based services in Europe. And as I

said, the emergency service standards are emerging from IETF manually. And we describe the big problem there is to define how you can supply the position commission to the emergency service. But also there is media aspects that we are more eager to get some catered for so total conversation is possible as mentioned in the EC service standards. IETF is the first one about the environments and more community.

So it seems to be in quite a good state. But there is always something new to hope for. And what can we wish for future standardization.

The calling by the nation numbered through relay services is an important topic. We have projects around it in Sweden but we haven't succeeded to start a real service on it. USA now has a relay service that arranges for destination number calling through relay services. But it's a bit private. It's not the totally open system. So there we can have a good task to describe this in the real mainstream common environment so this can be done so terminal manufacturers and service providers can provide the same services so the users can call each other (inaudible).

Also the accessibility emergency services need probably further standardization. How to take total conversation calls through to emergency services. And back the same way with the same relay service involved. If you have the relay service on the way in, and then you need to call back, you also need to have the same relay service.

And relay service invocation by a person who profiles (inaudible) further standardization.

So my conclusion is that REACH112 can be, is an important step to deployment of total conversation. It is in line with the UN Convention. It is in line with the new directive. And it is a benefit for everyone. So I want everybody to join the efforts to provide functionality equivalency for all by implementing the total conversation. Thanks.

(Applause).

>>BILL PECHEY: Thank you very much, Gunnar. Do we have any questions directed to Gunnar? Mr. Matsumoto?

>>MITSUJI MATSUMOTO: Thank you, Mr. Chairman. Just one thing. What is the definition of the emergency service related to the time of the day? In cases of fire, in cases of accident.

In case of some trouble. There are different emergencies? So I think a definition of this.

>>GUNNAR HELLSTROM: It sounds (inaudible) to want to have some quality figures or how rapidly you want to get them answered from an emergency service. I know that they have such goals. And they are very strict goals. That for voice calls, many emergency services need to respond with (inaudible).

So such things are very important.

Still -- and that is also a reason why you cannot use the regular relay services, the regular way for emergency services. If you have a relay service that is under manned, under dimension, you will have cues. I know that the US requirements is something like 80 seconds for regular video relay service response time. In Sweden we don't even have a cueing system so we just have this man saying sorry there's no relay service call back later and that's not acceptable of course even in emergency situations. So we need to arrange -- the USA have arranged that by showing in the call that you are addressing the emergency service, it will pass cues and get direct response.

And then I don't know if you can reach the same as for hearing under ten seconds. But definitely short response times, yes.

Does that answer your question?

>>MITSUJI MATSUMOTO: Yes, thank you very much. It's a general meaning. Thank you very much. Yes, I understand.

>>GUNNAR HELLSTROM: Okay. If you want to restrict emergency calls to calls where life or property is at high risk.

>>BILL PECHEY: Thank you, I saw several hands up there. I think the first one was David Meyers.

>> Hello, what I would like to know what you just described was very interesting report. But what I would like to know is can the organization see a much (inaudible) risk in which everything (inaudible) determined here (off microphone). Will be helpful at which everything will essentially agree and now be made more (inaudible). I would like to know if anything has been mentioned (inaudible). And also, is it all based on the (inaudible), what about other equipment (inaudible) (off microphone).

>>BILL PECHEY: Okay. First the deadline.

>>GUNNAR HELLSTROM: The interesting deadline is of course

when this new European directive universal service directive will be mandated. I don't know that. The procedure is that the European Union accept a mandate and place its deadline when this shall be reflected by other countries and reflected into their own legislations. I'm afraid that there will be some years still until this total conversation is really achievable everywhere. And there is another risk. It is that the interpretation of what the total conversation is diluted so that the highest risk is that interoperability requirements is lost somewhere down the road. So let's watch out for any sign of allowing total conversation without full interoperability with others.

We have deadlines in our project, REACH112 must provide evidence that total conversation is a sustainable service. Within at least three years. And I hope it will not only be us 22 partners working with total conversation, but others will join along the path. And we will during these three years see Europe converge to this.

The other question is this only for PC? No, not at all. We are talking about communication protocols behind the box. What the box is does not matter. And we already see different products, hardware products, PC, Apple and mobile.

The standard I was talking about is most likely to be implemented in mobile terminals.

>>BILL PECHY: Gunnar, the next question was from Daniel.

>> Thank you, Mr. Chairman. And I would like to remember the group -- I would like to recommend an excellent paper from an expert about the definition of the urgency, what is urgent, what is not urgent.

Of course autonomy is an urgent matter. Of course planet coming into the (inaudible) would be a great event and would be something very urgent. But as far as where a project is involved in telephonic network, one tool is dealing with domestic accident or on the street accident is to grandmother going down into stairs. Something like that.

Now since I have the floor, this paper has been written by (inaudible) of course. I forget it. And since I have the floor I would like to the reservation to go to expand to now could you explain us if we really -- we have the choice between SIP in real-time or if we have the choice to select it to be

(inaudible) which has been explained this morning. Thank you, Mr. Chairman.

>>GUNNAR HELLSTROM: We are -- accessibility is a small part of the world. Our market is a marginal market. And we must hook onto whatever we have anything moving.

So currently SIP is the main area of implementation of IP based telephony. And therefore SIP is current.

As I said, next protocol system can come. And then the developers should then remember to implement or describe total conversation even there.

So currently most important for implementation is definitely SIP. We should not wait for -- what you call the advances. We should just remind the designers of that system that -- to include us.

>>BILL PECHEY: Thank you, I think the last question was from Fanny. Do you have a question, please?

>>FANNY CORDEROY DU TIERS: Thank you, Mr. Chairman. I would like to ask a question of Gunnar. It's a really wonderful project. And I would like to congratulate your group. And you mentioned the 22 partners in five countries. That's really impressive. And basically related to my presentation, the VPAD has the emergency call technology within it. So I'm wondering if it's possible for VIABLE France to participate in the project. Because I think it would be helpful to us and perhaps to you to work with more partners?

>>GUNNAR HELLSTROM: I think maybe that question should be answered outside the meeting. I don't think it's really the purpose of this session today. The answer is we definitely want others to use the same protocols to create interoperability with our users. We cannot include more partners. It's complicated enough to keep track of 22 partners. And our deadlines and activities. We have a strong outreach and dissemination scheme and we will tell how it will be possible to have a course with other institutions. So we want to keep in touch.

>>BILL PECHEY: All right. Thank you very much, everyone. I think that brings us to the coffee break. No more presentations. But please don't go away because after the coffee break we will have a general discussion about all of the matters that came up today. And anything else that people want to raise that's related in some way. We've got over an hour to

do that. So I think we can have some very useful discussion. And I'm hoping that we will find something that the ITU should do. I've made a note of several of those topics as they came up during the day. And we can discuss them all this afternoon after the coffee break so please be back at 4:15 please.

>> I have a question. A few people have been running around the building trying to find some coffee. Can you tell us actually where is the coffee break? Where is the coffee?

(Chuckles.)

>>BILL PECHEY: Okay. You can get coffee on the ground floor. There are some reasons there which are quite hidden away. And there's also the restaurant which you go across the bridge. To go along there, there's perhaps a restaurant that has coffee there all day. Perhaps the nicer coffee.

(Chuckles.)

>>BILL PECHEY: But a little more expensive. I don't know if that happens. Okay. We will reconvene at 4:15.

(Break.)

>>BILL PECHEY: That's probably enough people that's returned now to start our discussion.

During the coffee break I wrote a few things down. On the screen. That we might want to talk about. Tell me if you can read that. If it's too large, too small. Okay. Good.

What I did was I wrote some things down as the presentations went along. And I've tried to pick out things where the ITU might be able to do some work that would help solve some of the problems that we heard about today. I think what I'll do if you don't mind is go quickly through this list and perhaps that will help stimulate people's thoughts and then I'll just open to the floor and people can raise any points they like and we'll see which way the discussion goes. We'll see which points are of most interest.

So the first one I noted down was H.325, the "Advanced Multimedia System". Clearly it has to be able to support the special types of calls needed by relay services. We heard a lot about being able to dial a destination number. And somehow the network knowing that the call has to go via relay service. That's something that Question 26 in the ITU has already raised with the people doing H.325. And they have taken that on board. So that's a step forward. But obviously we need to think about

it a bit more and make sure that these special types of connections are possible. Some of them are possible with SIP today I know. So we have to figure out how to do those things. And I should point out that ITU doesn't standardize SIP so we can't really discuss that today. It's done through the IETF.

Okay. Gunnar, please.

>>GUNNAR HELLSTROM: ITU does a lot with SIP. And so introducing SIP in an accessible way is a good thing to do for ITU.

>>BILL PECHEY: Yes, you're right. We use SIP in our standards certainly. We don't standardize it. It stands by the IETF. We may respond if they ask for a special feature but we don't . . . let's continue down the list and we'll save the discussion for these until later otherwise I shall never get through all of these things and it won't all get discussed.

The next one is we need to standardize the performance of relay services and delay the accuracy and the time to -- delay and the accuracy and time forward and so forth. Karen was probably saying with the USA the misuse of relay maybe there's something that can be done in the standardization world to make it more secure. We'll have a look at that.

It seems to be a problem that relay services that connect users with different requirements are not always simple to do. Maybe for legal reasons. Maybe for technical reasons. I don't know. It's pretty important that a user who wants to use say captioning telephony relay should be able to contact a Sign Language user through the system. I think it is. So we need to include that sort of scenario in our systems.

We heard a lot about ethical and privacy issues. Should we put those in our standards? I don't know. I think we probably should. But it might be very, very difficult to do so.

Mr. Matsumoto asked for a checklist to help manufacturers build accessible products and services. I don't know whether we can do that. But we might be able to. We should certainly give it some thought. There are some checklists around -- there are some guidance documents on making universally designed products. And that might be enough. We don't know. Again, we'll need to look at it.

Public procurement. Will it deliver accessible products.

I think from the experience in the USA, they are finding yes, it does. We might want to discuss that a little further.

They are doing that in Japan. They are also going to be doing it in Europe if I understand. Jeff asked if we could reduce the cost of interpretation by using the telecommunication. It surely can but we need to think of how and what the best ways of doing things are.

Can we use avatars in relay services? Perhaps we can. I don't know. It would be interesting to find out. With the current technology, the avatars are output only. There's no input. The only input recognizes that video is somewhat using Sign Language. But maybe there are situations where the existing scheme is fine. I don't know. We can talk about that. There's work going on in the ITU right now. Just about starting, for improving the performance of video codex. We have H.325. And 0264 all right. And they had sort of an agreement that if they could improve the performance by at least 30%, then they would start work on the next generation. And that has just been started. There's been some papers put in about technologies that might be used.

Tabitha's -- I'm not taking any questions right now. Not until I get to the end. Tabitha's talk about remote captioning in theaters. Can we reduce the video delay so that caption is not delivered too late. I don't know. We'll have to talk to the video coding experts to see how that can be done. None of them are here today I think.

There are special problems in assessing emergency services via relay services. Some experience of that in the UK. Probably there is in other countries, too. We may need to put something in our standards to make sure things are done in a sensible way.

Last week we had a little bit of a discussion about notification of what's happening. If there's a big disaster. How do you tell deaf people to go and -- go to the top floor of their house if there's a tsunami coming? It's hard to do.

There is some work in the ITU on this. It's in the Development Sector. They have sent messages to them over the years. I don't know where they got to at the moment. You'll have to check that. It came up today. Something. So those are the topics I called from the -- pulled from the presentations

today. That's not a restrictive list. You can talk about anything else you can vaguely relate to.

So where should we start? Has anyone got some burning issue they would like to talk about? Christopher Jones, please?

>>CHRISTOPHER JONES: Hello, yes, Christopher Jones. I think it's very important to have the right audio codex. That will enable remote captioning people to be able to listen to provide the service.

Likewise, Sign Language interpretation in video relay service, we want to be able to listen to the sound quality and also what your total conversation to make sure it's the right audio codex, as well. So everybody can communicate okay.

>> Another point that was generally made but not specifically said is that networks must know the difference between a point-to-point call and -- and a call that's going to a hearing person that has to pick up a relay service on the way.

>>BILL PECHEY: Yes, that's very important to be able to do that. Otherwise you can't provide functioning equivalents because deaf people would have to dial a different number which is unacceptable. We should just allow the same number. And the network should know. And there should be some way that the terminal can tell the network what to do.

I think we can probably do this. We haven't quite got there yet.

>> On this comment, this is in our view a very important issue. We believe that we should be -- we should be able to do two things. First of all, the parties that are meant to be -- to be put in relationship should be able to exchange their capabilities. But not their technical capabilities. What if -- are they able to speak? Are they able to use Sign Language. So maybe there is some room for a standard for exchanging human capability. And second thing, it's about the issue of network, knowing about the direct call or relayed call. We believe -- and this is a discussion we are handling within the REACH112 project, as well. We believe we need an addressing scheme where we add to the telephone number or to the address of the party we add a call type. And this call type should mention whether a service really needs to be invoked or not.

>>BILL PECHEY: Thank you for that. Yes, there has been some work on human capability exchange. It was done by the ISO/IEC

people as part of MPEG. I'm trying to remember what it's called. Can anyone help me? I have a feeling it's (inaudible) 21. But I could be wrong on that. Does anybody know? There is some work anyway. I don't know if it even -- it even got to the point of telling people what sort of hearing aid was involved in the call so you could adjust the frequency of response to make it work a little bit better.

Maybe Gunnar knows? Gunnar, please?

>>GUNNAR HELLSTROM: No, I know another work in this similar area. It is ETSI had work in the personal profile management and the contents. I think even (inaudible) was here some time and presented results of that work. That could be picked up and used for invoking services that are found to be needed between profiles that don't match.

So that is the advanced form of relay service invocation that I would suggest that we could bring to the business. Invocation by personal profile comparisons.

>>BILL PECHEY: Gunnar, that's a very good point. I was unaware of the work at ETSI so perhaps we can find that appropriate. Question over here?

>> I'm Andre Thompson from Sign Now. You are talking about H.325 or -- H.323 or 325 on SIP. But nobody has actually been talking about Adobe yet. And that's one of the fastest or one of the best ones in the world to be able to use. And 80% -- 98% of the world have Adobe installed. So I want to know why nobody has really raised that today because I think we need to talk about that. That's one of the possibilities that can certainly help us achieve and improve accessibility. Something to think about.

>>BILL PECHEY: Do you mean the use of Adobe Flash code, Macromedia Flash.

>> Absolutely, Flash. Yeah, Flash player.

>>BILL PECHEY: Well, it's -- all I can say about that is it's not a standard that's proved by the ITU, Adobe that -- to my knowledge have never submitted such a thing to the ITU. It's always a difficult thing if you want to bring in a proprietary standard. It gets very complicated in ITU because there's always intellectual property. You have to tread a very careful path in the areas of coding. But you never know. Maybe Adobe could bring something forward if they figure it out, if there's

a performance in some way that they can make -- they can make a standard that I don't know. They may be able to do something.

>> Hi, I'm Bert Gleib. I'm a delegate from the World Federation of the Deaf. Looking at the relay service performance, I want to remind people here that the list of 20% of deaf population of the world have access to telephone relay services. But we're talking about what governments should be doing. And my experience is the Government is not thinking about the needs of deaf populations. My experiences have always been but from bottom up operations instead of top down so Government organizations -- so organizations have to bang on Government's door so minority groups can be heard that's why we only have 20% of the deaf population in the world having access to relay services. So the real question is how do we reach out to governments in a better way to make them understand the needs of their disabled pop populations.

Then we talk about standards. Then we start talking about who the appropriate personnel would be. I don't know of any country which has a sufficient number of Sign Language interpreters for example. If you set standards but you can't find the personnel to run the relay services with the rule of performance that's set then you basically are running yourself around into circles and going back to the Government saying we need to ratify Sign Languages to help then increase the Sign Language interpreter training programs. The technology is here. And it's shown it's shown to us the point is how to get the governments to change the actual reality of what's happening. I think that's the basis of why a lot of are here. Thank you.

>>BILL PECHY: Yes, that touches a nerve I'm sure -- lots of people around the world in UK services trying to get that. So it's a problem. But we've heard a lot about the UN Convention today. I'm hoping that will give us I was going to say a lever to bash people with but that's a hammer that you need to bash people with. I think once a Government has ratified the UN Convention then there's a way it can go to the Government saying how are you going to implement Article 9 and see what they say. But we wait and see. Now that's my piece I'll have (inaudible) speak now.

>> There is a stronger hammer in Europe. I forgot to mention that in the new universal service directive not only including

total conversation but also the requirement at least for text relay services. So that is the text relay services will be mandated in Europe. But it is out of phase of what we desire we of course want to have video relay. Thank you.

>>BILL PECHEY: Thank you, Gunnar. Other comments from anybody? Ruth Meyers, please.

>> Yes, I was just wondering. Looking around the room we have lots of deaf people here and some other interested parties. (Inaudible) these meetings is I think they should hear what we say and that particularly applies to the manufacturers. But all our access needs depends on the manufacturers as well as the service providers. So I think it's great to see so many people here today. But (inaudible) is there a way of encouraging people who provide different aspects of the services to come along?

>>BILL PECHEY: Thank you, Ruth. I hope so. There are some manufacturers here today. There have been several coming in and out. One thing I have to do is produce a summary of what we do today of our Study Group 16 for Friday to take some time to explain what was discussed and what we need to do and what manufacturers need to do. That's probably all I can do. That's all we can do today. But eventually the word should get around.

We heard about public procurement helping to make more accessible products. That seems to be spreading and I think it will happen. We just all need to work together and encourage it. And all push the same way. Back in Europe for example Gunnar has been explaining what can be achieved what's -- what can be achieved by applying pressure to the right people and you can do it anywhere. You can do it -- we need to do it in all of the different countries in the world. More comments from anybody? John Fenn please.

>> Thank you, now I have the perfect opportunity to do some advertising. I represent Canada. And a company called Research In Motion which most of you have never heard of but we make a Blackberry. So we are here and we are interested. Thank you.

>>BILL PECHEY: Thank you, John. I look forward to seeing the next Blackberry and seeing whether it has the features we need. Gunnar, please.

>>GUNNAR HELLSTROM: One more comment. We are missing a friend here. Andrea Saks. She has been working a lot in this

group, Study Group 16. And she should have been here. But is out sick.

>> I have an update about Andrea. This is Karen Peltz Strauss. And I spoke to Andrea a little while ago and she has been watching the captions the whole day and is feeling much better and will be here tomorrow.

>>BILL PECHEY: Good.

>>GUNNAR HELLSTROM: One thing we worked on was when NGN was talking up here in ITU, we tried to -- or we succeeded to get accessibility requirements into the NGN scope and requirements. And we realized that it would be hundreds of work items going on beneath that. And therefore we created the accessibility checklist. And in the -- in there somewhere is stated in the requirements it is stated you should be able to take relay service calls by number. But I'm sure that it's not -- nobody has done anything with it. This requirement that is well stated in the NGN requirements. (Inaudible) picked up the total conversation and put that into their version of IMS. So I want to have on our list here to bring 3G BP telephony with all multimedia into ITU IMS. So that we have the same IMS everywhere with the accessibility features.

>>BILL PECHEY: Thank you, Gunnar. I noted that there. Any more comments from anybody on anything?

You may have noticed as most of you know, Mr. Kisrawi was here this morning. He was from Syria, he apologized for not staying this afternoon but he did say to mention that his data says that in developed countries the disability fraction is something like 12%. In developing countries it's at least 17%. And if you include the economic disability where people can't afford anything, it's 27%. So there's a big problem to deal with. It's a pity Mr. Kisrawi isn't here because he could give us perhaps a few ideas on how to approach that. So we can talk about video relay here. We're talking about people who don't even have a telephone. It's very difficult.

Any thoughts on that from anyone.

Okay. Let's move on to a different topic. What would people like to discuss. What were the burning issues. Ruth Meyers.

>> Going back and thinking about Mr. Kisrawi, it's an interesting point when we're thinking about not having any

access. I wondered perhaps if through the UN somebody could demonstrate various centers in the developing countries what we're talking about. How the People with Disabilities or disadvantaged people to find the only way to move it forward and if they don't even know what relay is.

>>BILL PECHEY: Yes, that's right. You're right. There is a part of the ITU that deals with this. It's called the Development Sector. The ITU. And they have the question in their Study Group 1 which deals with accessibility in developing countries. And they are doing a lot of good things. But really the problem is economic feasibility I think.

More questions, more thoughts from anybody? I see Paul has arrived again. If anyone would like to raise anything about SIP or H.325, the man is here.

>> I just want to try to react on the developing country. Maybe one practical way of introducing let's say advanced service and so on in such countries could be to develop -- I don't know if it's still possible -- public booths with such services. That seems to be a good way to common equipment for many people -- to have common equipment for many people.

>> Yeah, I have been making just while you were saying it, I made a note myself. Because in the Question 4 sessions, we have been discussing twice now the technical specification that has been made by ETSI -- TCHF that's been brought forward by Mac and he has been here for tomorrow had he not been forced to attend an even more important ETSI management meeting.

But indeed, there's a complete technical specification already on things that you might be able to do with public Internet access points as they call it. But something like this isn't added to that. So you can say that's a clear candidate. People that are in developing countries and would like to make some use of some relay service could maybe do it fine. And I agree. It sounds like an attractive proposal. We will look into that.

>>BILL PECHEY: Floris, any other comments? Karen, please?

>>KAREN PELTZ STRAUSS: Thanks, this is Karen Peltz Strauss. I just wanted to mention something that I was just talking to Gunnar about. I mentioned before the act that we are trying to get passed in the United States which is HR3101. It would require manufacturers and service providers of Internet based

equipment, communications equipment to make those products and services accessible. So again along the lines of what are Section 255 of telecommunications. But one of the things we've been asked to include as an amendment to the act that hasn't been passed yet of course is something that relieves service providers of liability when they -- when people purchase apps, applications, that are used on their service networks. And I found Paul's comments and presentation particularly interesting because as we move to a more app based society, everything becomes more fragmented.

So we have the device. And we have the service provider and we have all these different apps. And as chain gets longer and more complicated, incorporating access at different points in the chain become more and more difficult. So I don't know whether this -- you know whether this group is going to be talking about that. But it's a real problem. Because even if you can get good control over, part of the chain or two parts of the chain, you still have so many parts of the chain and access can fall apart in any one part of the chain. I just thought I would mention this.

>>BILL PECHEY: Yes, that's a very interesting point. Thank you, Karen. Have you got some comment on that, Paul is this going to be a problem with H.325?

>>PAUL JONES: Sorry, this is Paul Jones. I certainly hope that this wouldn't be an issue with H.325. As you are well aware working with Question 26 (inaudible) considering accessible (inaudible).

(Speaker is inaudible).

>>PAUL JONES: And one of the things that is particularly interesting to me, I don't talk loudly. One of the things that's particularly interesting to me is with 325 is the fact that applications will exist and certainly separately from what is traditionally known as your internal device which means that if you want to use text as part of your communication you can use it through a different text communication device which is to be purchased by a number of different vendors. Same thing for video. You can choose your preferred vendor for providing video functionality (inaudible). I'm quite certain there will be technical issues that have to be overcome simply because there are a number of included parts shall we say but I am quite

confident but certainly when you consider the -- we will certainly consider the accessibility implications.

>>BILL PECHEY: Thank you, Paul, it's good to hear that. Any questions or comments? Yes.

>> Yes, it's Andrew Thompson I think it's important that we remember that technology is actually created by man. It can't create itself. And so with that in mind, I think one of the things we need to consider is the concept or issue of attitude and how it's attitude or negative attitude can prevent accessibility in the development so maybe we need to think about how we change our attitude.

For example, the UN Convention says that, you know, this has -- certain things have to be done but the Government doesn't take that into account. So the technology is rich. It's out there. So it's not the technology itself. It's the people behind it and the governments that need to change their attitude to make this come to fruition.

>>BILL PECHEY: Thank you, Andrew, that's very, very true, indeed. One of the biggest problems is getting things that need to be designed implemented. We can write standards forever. And if no one implements them, they are useless. As you say we have to influence the governments to pick up these things in the future.

>> Yes, I want to react on the comment. I see the position that was stated that the standard would solve all of the issue of interoperabilities to me it's very strange. I'm from the field. And one thing that I would like to see whatever protocol is issued, SIP, H.325, H.325 plus or plus or whatever it is is that in the domain of videotelephony, we need to make sure that the vendor, the terminal manufacturer and vendor before procurement make interoperability tests with ITU standards. Because on the field one videophone have a lot of difficulty to talk to the videophone while doing daily tests with a lot of videophone and talking to support teams all over the world. And that would be a great relief to service providers if the videophone on the market where correctly tested before going to the market.

Otherwise people end up using Flash from Adobe.

>>BILL PECHEY: Thank you very much. Well, there is some work going on in the ITU which may lead to what they are calling the

ITU mark which would mean that there's some product tested against the ITU standards. But that's some way off yet.

Paul, do you have a comment on this thing?

>>PAUL JONES: Thank you, Bill I don't have a particular comment with respect to the ITU mark. I'm unaware of it. But I guess I wasn't particularly clear with the last comment. I didn't say -- I said interoperability issues. Those will exist. And I fully concur with the statements from the last gentleman. We need to have testing. That's something that we regularly do with S IP and the regular interoperability. But I think that since he's working in the field, he probably well knows that that the efforts have been less than fully successful. And there are a number of interoperability issues between various members. This is not the way things -- the way things have gone so far is actually one service provider at a time. It's been a little bit lean. So I think even with the -- if there some way to encourage some kind of compliance or performance tests at which H.325 is now part of the ITU, I think it would be fair to have something with H.325 various applications that we have. It would be good if we did have a standard part of which we would try to achieve the standard compliance so I guess the standard testing in addition to the (inaudible) actually measure the compliance to that standard. So I think the acute mark is a good mark in that idea the question is will the practice actually happen? It's completely outside my control. But I agree that something has to be done.

>>BILL PECHEY: Thank you, Paul. Mr. Matsumoto?

>>MITSUJI MATSUMOTO: My name is Mitsuji Matsumoto. I didn't mention about this issue at my presentation time. But in Japan we offer some mark to the manufacturers. Where the manufacturer is supporting accessibility, accessibility function. Created by the checklist. And then there comes the Japanese accessibility Council and gives the global mark to the company. Your company products support the accessibility. Therefore the user can understand easily unless it's supported by the accessibility functions.

This is one of the ideas.

>>BILL PECHEY: Thank you, Mr. Matsumoto, that is very interesting. You can have that assumption.

Any more questions? John, John Fenn?

>> Thank you, Chairman, yes, there's already a lot of testing going on. ETSI does a lot of what we call plug tests. And these tests actually are more in prototypes scenarios than really finished products. But that is to improve the quality of the standard. But also to see that operability and interoperability happens.

The open mobile alliance does a lot of testing, as well. And I think you should take a leaf out of the book of the mobile industry which does an extraordinary amount of testing. Otherwise your mobile phones would not work with each other.

So I think there is a lot of testing. I should warn you that testing is very, very, very expensive. So you know, it's hard to explain to our financial people that we should do more tests. But obviously we need to do tests in different formats for accessibility. Thank you.

>>BILL PECHEY: So true. There's a comment in the back there, please? Press the microphone.

>> I'm coming from Omnitor and we are working with videoconferencing and we are expecting a lot of different videoconferencing tools with lip snychronization. It means -- it doesn't mean that hearing impaired people can't use the equipment and there's a need for some kind of standard how to perform the lipreading. And also some testing, some -- and we are facing this. So this is a great problem. And a lot of hearing impaired uses out there that need those kind of equipments.

One-tenth of the population are hearing impaired. Thanks.

>>BILL PECHEY: Thank you very much. Are you saying that the video codes that you use are not providing synchronization between the lips and the sound that's coming out or is it something more?

>> It's all together. It's video and the sound is the first purpose.

>>BILL PECHEY: Okay.

>> Thank you.

>>BILL PECHEY: Thank you for that clarification.

Do we have some more comments? Anything at all?
Mr. Matsumoto again.

>>MITSUJI MATSUMOTO: Thank you, this is not directed to -- direct to any commission. But I think that there is some

effective standard body I think that would be able to look -- able to look to the committee and have a lot of standards. But I think that doesn't answer (inaudible). How do you think about that?

>>BILL PECHEY: I don't think we have much relationship but we should be able to (inaudible).

(Speaker is inaudible).

>>BILL PECHEY: Be able to take accessibility into account and have members to do that. But perhaps we could influence them in some way.

>> Can you elaborate on the next generation video codec you are mentioning in your notes?

>>BILL PECHEY: I think the short answer to that is no. That there's plenty of documentation from this portfolio of the Study Group 16 meeting about the different styles that we have around. And those can be obtained. I'm not a video coding expert. I'm just going by what people are telling me.

>> I sense that we're coming to a close of a very interesting conference. And a lot of work has been done to make this conference accessible to people who are deaf and hard of hearing. And we really appreciate that very much.

Part of that access that's been very helpful is if you could make available the captioning transcript and perhaps on the Internet link. It's difficult for us to take notes and watch the interpreter at the same time.

>>BILL PECHEY: Yes, I think that will happen. Alexandra may have some more details.

>>ALEXANDRA GASPARI: Yes, once we receive the files from the captioners, we have to check them. We edit them. And they will be posted, yes.

>> Thank you.

>>BILL PECHEY: Jeff McWhinney?

>>JEFF McWHINNEY: Yes, I, too, sense that we are reaching the end of this conference. I was very impressed by the -- this first step we've made. I would just like to just throw a little word that's a little bit funny. Hundreds of years ago deaf people were ahead of hearing people because we could see at a distance Sign Language and communicate several hundred meters away perhaps and now all of a sudden with the technology, deaf people have sort of fallen behind hearing people but hopefully

with this meeting and following meetings, we'll manage to catch up the lag. And be back on track and at the same pace as hearing people now in telecoms.

>>BILL PECHEY: Yes, I hope so, too. Ruth Meyers, a comment?

>> Yes, I would like to thank the ITU very much for making this conference accessible. My first visit to the ITU I found it very, very interesting. Just a little bit frustrating that the captioners couldn't always hear what was being said. I would like to -- the functional equipment access is a favorite term. And I would like to suggest that the ITU looks into making one room available with proper arrangements that can be used for meetings that are attended by deaf people in hopes of overcoming some of these problems. In particular when the speakers turn around to look at the -- their PowerPoint displays, their comments were lost completely. And that again is very frustrating for us and as well as for the transcript. I should be able to make sense of it all. But it would be helpful for the future. Thank you.

But thank you. It's really very much appreciated.

>>BILL PECHEY: Thank you, Ruth. I think the problem with the audio not getting through all the time to the remote captioner is something to do with this room. We had a session Thursday and Friday of last week where it worked a lot better. And I think it's perhaps one or two faulty microphones in here. We'll get the IT people to look into that.

But all the rooms in here in this building are supposed to be identical electronically. So all of the sockets are in the same place, all of the audio levels are the same. So it should all work. But I think we just had a bit of a problem today. Alexandra may have something.

>>ALEXANDRA GASPARI: Ms. Meyers, thanks for your comments. Just to -- I just want to say that behind these workshops there have been lots of preparation. Many colleagues have been involved. The commission finds interpreters, logistics. And so we are learning. As you can see. But we welcome your comments. And we would like to thank you for coming over to ITU. And to show what you are doing this week. Thanks.

>>BILL PECHEY: Thank you, Alexandra. As we are very close to the end, I think it's probably time that I should thank a few people.

I would like to thank the speakers, first of all. You put a lot of work into being here and presenting their material. And it was excellent. Thank you.

Obviously thank you to all of the interpreters. I don't know you all by name. But thank you for doing a job that is not easy I know. Especially in this sort of situation. I think they did a great job.

A special thank you to Cindy Thompson, who has been doing the speech-to-text. You may not realize that she's actually based in Chicago. So if you remember what time we started the meeting this morning and then you subtract I think seven hours, you get a good idea of what time she got up. So that's dedication, isn't it? So thank you very much, Cindy.

(Thank you!).

>>BILL PECHEY: I would also like to thank my colleague, Floris here who has been helping today and helped a lot with the preparation. And the ITU stuff. You've done a wonderful job. Of getting things organized. Making all sorts of helpful comments. The IT people have done a really good job I thought of getting this material put together. When it works you don't see it. But you don't see the work that goes behind it to making the audio connection from here to Chicago, for example, on the Internet. And we do that. It's quite tricky to do. To get the audio levels right anyone that has done this sort of thing knows it's not easy to do. They did a good job I think. And they have been so helpful with all sorts of other little things so I would like to thank them.

I would like to thank Andrea Saks, who is not here today. She's not well. You heard that. She's planning to come tomorrow. She did quite a few things to help us with the organization of this conference. You may have noticed that originally it was planned to be in Room C which is on the other side of the ITU campus but Andrea knew, nobody else seemed to know that Room C the two screens can't be split. They always carry the same information. So that was a big change. We had to move everything to here. So thank you, Andrea, for spotting that. But last of all I want to thank Alexandra because she's done an enormous amount behind the scenes for making all of this happen. You all sent your presentations to her she checked them over, edited them, put them on the web site. Thanks again,

Alexandra.

(Applause)

>>BILL PECHEY: One last thing to say before we close, we have this meeting tomorrow, which you may have noticed on the web site of the workshop. It's a joint meeting in Question 26. The accessibility question. And Floris' question on human factors. That's here tomorrow. Some of you will have registered for it. But what I don't know is how many of you and which ones here will be coming tomorrow. If you're going to come to the meeting tomorrow, could you please raise your hand? All right.

(Message from Andrea Saks).

>>ANDREA SAKS: You are welcome and I enjoyed the meeting.

>>BILL PECHEY: We'll talk about that tomorrow and we'll have the agenda and everything ready. So does anyone have any final comment to make. Oh, from Andrea, yes, thank you for drawing my attention to Andrea.

Yes, you may wonder how she did that. This system is delivered over the Internet. It's a public mechanism. If you know the URL -- you can't see it on that screen. But it is there. And you could watch the text on your PC. And that's what Andrea has been doing at home. But also on the screen is a chat. Like an instant message where you can enter something in and it appears on the screen. But she only did it once.

Okay. So thank you to everybody. So I think just looking around no more hands so I think we can now close the meeting. Thanks to everybody and thanks for making this a big success. Bye.

>>FLORIS VAN NES: And thanks to you.

(Applause)

(Session ended at 10:32 a.m. CST)

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