

FINISHED FILE  
ACCESSIBLE EUROPE  
DECEMBER 13, 2018  
9:00 A.M. CET

Services Provided By:

Caption First, Inc.  
P.O Box 3066  
Monument, CO 80132  
1-877-825-5234  
+001-719-481-9835  
Www.captionfirst.com

\*\*\*

This text, document, or file is based on live transcription. Communication Access Realtime Translation (CART), captioning, and/or live transcription are provided in order to facilitate communication accessibility and may not be a totally verbatim record of the proceedings. This text, document or file is not to be distributed or used in any way that may violate copyright law.

\*\*\*

>> Dear colleagues, we are approaching the academic quarter. So I think that our manual for colleagues are still queueing in the security screening. But we will have to start. So I would like to kindly invite the distinguished speakers to join the podium, which this session will be chaired by David Wood from the EBU. And he will be joined by several speakers, including the Minister of Serbia.

Welcome to this event, His Excellency. Dear Ladies and Gentlemen, before we start this session, we would like to also thank very much to the ESL Foundation for offering us great morning coffee as well as to Facebook for making yesterday's celebration reception so wonderful and our networking so productive.

So big thanks to you for supporting the networking component of this event. I am still seeing on the podium only one speaker. So I think I have the pleasure to invite His Excellency to join, David. Also we are missing Pilar.

>> She is on her way.

>> And we are still missing -- so maybe I would ask my colleagues from the UN maybe to make an announcement outside that we are starting. And the speakers and the audience is kindly invited to join us. So we are missing only one of our colleagues from the BBC who is just arriving on time. And now it is print time to raise the blood pressure up. And he is with us.

One more time thank you very much to our friends from ESL Foundation and from Facebook. And now we are in the full composition of this panel. Welcome to the first session. And I have the pleasure to introduce to you David Wood, our good and outstanding partner from the European Broadcasting Union who will be leading this session.

>> DAVID WOOD: Thank you very much. I am sure you had a great session yesterday. And when those award candidates, marvelous idea. I love that. Congratulations to the ITU to having that kind of award. And to the three people who were the top three and, of course, the winner. And I hope you had a good reception last night. Plenty to eat and drink. I am from the EBU. I can sing the winner of the junior year vision contest because it was in Poland. But I do work for the EBU in Geneva at the EBU's headquarters. And I am involved as the Chairman in a number of ITU-R groups. We have a group of speakers today and we are going to talk about audiovisual media services and the way that we can move forward to provide better accessibility in those services. There are some speakers who will talk about what has happened today and we will look at them. And then we have some presentations looking at what could be tomorrow. Some very distinguished speakers for you.

And so, first of all, in a minute I am going to ask Paulo to give his presentation first and Dejan for the second one, Nigel and our good friend who is not with us in person but in a short video which we will show you afterwards. I have been told that I must insist to the speakers that they don't run over time. One hour from now we have to finish. So 20 passed 10. You have up to 10 minutes each. If you -- when you get to eight minutes if you can bring the presentation to a close or earlier. And if for every minute you save you get a kiss from Pilar or Nigel, whether you are a man or a woman, all right? Let's not take that any further, Nigel.

So my objective is to hope that these speakers can, of course, give you their views. Since we are here with the ITU and the European Union that we could finish up with a kind of list, a wish list of the steps forward they think the ITU and the EU should take, what is it. Is it EU standard. A study, a regulation, a business plan. Whatever. More cooperation and so on. I'm hoping that each of us speakers can give us one or two

things to put on the wish list. I'll read them out at the end. And if you agree, I will ask you as the audience if you agree with them and what is the most important. Let's begin with Paulo Valente who is with the Cable Europe, a very important man, very well informed about the issue of accessibility, particularly in the cable environment. Please.

>> PAULO VALENTE: Good morning. Thank you, David. I would like first to thank the invitation that we received. We were very happy to participate in this important event. I think the question of accessibility is something that is many times taken as a second option, third option in the priorities of the stakeholders. And it is a very important topic that we should perhaps bring it forward to our priority list in a very important place. Cable Europe is the trade association that represents the cable operators. That means that the pay TV distributors in Europe. I am responsible for the technology policy. Anything that has a regulatory angle and policy angle I usually cover it and address to explain to our members how they can be more proactive on bringing forward some solutions. And this topic of accessibility and dealing with the disabilities of many users of our services is something that can be extremely, extremely important. From our perspective we at this point in time we have three building blocks that we consider are very important for our activity for the activity of our members which are three -- which is the pieces that exist in the European Union. One is the audio media service directive. It is something that has been recently approved and will be soon by November. In November it was approved and very soon it will be active. The European Union passed the Accessibility Act which is under the discussions at this moment of the European institutions. And the European Electronic Communications Code which deals with universal service requirements. And it has been recently approved and will be published very soon. These are the three building blocks that the cable members have to contribute. So whenever we talk about proposing solutions that can be useful for people with disabilities it is something that we are -- I think it is the topic where there is always less controversy around it. So we are always eager to propose some fruitful solutions.

I will just give a small view on our side. So from -- regarding the European Communications Code it has been approved. It is less follow-up of the universal service directive that is still valid and will be translated in to the code. End users have access to the electronic communication services. That means not only -- that means that all electronic service including television services that we carry are subject to these provisions. And for us it is quite important that our

members are aware of it. And another important piece of legislation is the Accessibility Act that is being discussed at this point. And it focuses on accessibility of EPGs and services that provide access to audiovisual media services. And this is something that is under discussion and which is an opportunity at least from our side, from Cable Europe to bring additional validity to our discussions and having spent this time looking at this event that ITU and the European Union organized.

And this is an act that is under discussion. It will focus on accessibility to consumer terminal equipment with interactive computing. That means that we have our set top boxes and we will take in to account these concerns. And it is something that we believe that will be extremely useful for the upcoming years and how we will implement our services. And finally the recently approved AVMS directive. So this is something that is addressing the audiovisual media services that need to be made more accessible for Persons with Disabilities. The framework exists already. It is a question of putting it in to practice. And I think mostly bringing the awareness to the stakeholders. I see many times I was discussing previously with David. It was surprising to see that sometimes people are bothered with permanent captions that are on television. It is just -- I would only assume that it is because they don't know how important it is for people that need these captions to be permanently made available.

Just to conclude this AVMS directive, so there is also important information that needs to be provided which is the report on a regular basis to the National Regulatory Authorities to understand how things are in the field, are being implemented. Member States should encourage accessibility action plans by being the service providers. That is something that we are passing to our members the importance of participating on these action plans. And Member States should always designate an online point of contact for provision of information. I think this is an important step. We might be very happy with regulation that we approve, but in the end if we don't have a feedback that can allow us to understand how it is being implemented it is no use. And secondly -- and lastly there is a typo with the 4 and 5. The fifth important aspect is the emergency information. That needs to be made available for the public through the AVMS. And this is important to access, to be made accessible to Persons with Disabilities. I think it is a work that has been strongly done by many broadcasters that are doing it. And I think it needs to be more shared with others, these responsibilities. And having this framework, our members at this point in time they are working to improve these contributions to our end users. It is something that we believe

that -- I can give you from my personal -- I have a son that is dyslexic. And sometimes simple things that are so useful are not put in to practice just because people are not aware of it. I understand how important all these measures that we are discussing on this event today and during these days. I think it is -- it should not stay only here and we believe that sharing it in a communication process more efficiently should be very useful to decide on future initiatives. And I think for the time being it will be my first intervention. Thank you.

>> DAVID WOOD: Thank you. Before you go, Paulo, in terms of -- if you had a sort of wish list of steps that you think should be taken, particularly by the ITU and the EU because this is their conference, is there something that you'd add to that wish list that you think should be done, needs to be done, to advance the course?

>> PAULO VALENTE: Wish lists are always good because we can express what's inside us. I think when I was preparing this event I understood that there are a lot of materials, there is a lot of work that has already been done. So we are not just reinventing the wheel. We will be able to with the work that has already been done, I think we need now just to implement it and communicate it. If we communicate it correctly with the stakeholders, if we have an action plan of communication I think it will be much more useful than trying to redo another study and redo another analysis of things. I think it is time to act and to put it in to practice. That would be my wish.

>> DAVID WOOD: Thinking that there may well be a good deal of due complication between the staff at the ITU and the staff at the commissioner in terms of various acts and you would really like them to coordinate and communicate more. I wrote that down. That's great. Thank you.

Now let's turn to Dejan Maslikovic. He is actually an assistant minister. So you have to have an appointment to see him now I believe at -- in Serbia. And we invite him to give his thoughts on the current situation. And if you can add a suggestion at the end for the wish list. Thank you.

>> H.E. DEJAN MASLIKOVIC: Thank you. Ladies and Gentlemen, dear friends, accessibility, affordability and skills for all is a very important task for all of us. The Ministry of Culture and Media of Republic of Serbia is dedicated to the fulfillment of these tasks. The Ministry have several instruments. Some of them are competition through the best project, creation of partner network. We dedicated one of those NGOs protos to successfully implement. So important projects. When they talk about region, I mean the region of the West Balkan. In the period of 2018-2019 several workshops have been organized. Delivering key skills in subtitling for deaf and

hard-of-hearing, speaking and SDH quality assurance. The purpose of these workshops is to dedicate employees' specific methods and equip them with the necessary skills for making audiovisual content accessible for persons with hearing impairments. Employees were trained to implement various subtitling techniques depending on the target audience profile. More specifically employees are educated to use the tools to create SDH and spoken subtitle use in professional software. After these workshops employees in broadcast media are to work with commonly used SDH, skills in television, SDH theater, SDH and so on, identify need and abilities of the targeted audiences and edit and condense a text with that view for subtitle for deaf and hard-of-hearing and perform television SDH and theater captioning and speaking, create and deploy appropriate quality assurance metrics for SDH, professional SDH subtitling, speech recognition practice, ability to develop and to implement quality assurance methods in subtitling.

Now we are writing in cooperation to bring new and interesting topics and challenges that will provide implementation. For example, Google, Amazon and Microsoft all have their own in-house assistance. Each have strengths and weaknesses but they are all extremely valuable and tools that exhibit a great opportunity to leverage by people with disabilities to have them accomplish daily goals. Artificial Intelligence have the potential to play an increasingly prominent role in everyday life, especially those of Persons with Disabilities. Generally developing and building a platform for virtual assistance based on Artificial Intelligence for Persons with Disabilities future task for Government, ICT companies and so on. Homemade assistance on these virtual assistance include the heavy reliance on natural language voice user interfaces. While interacting with these assistants using voice is a benefit for many Persons with Disabilities. There is a large portion of people in the disability community for whom this will be a deal breaker. Artificial Intelligence can be used in object-based broadcasting to learn about users, human habits and tailor how programs are delivered to them based on their requirements.

A key issue is that Artificial Intelligence systems should be ease of use. The ITU easy Forum for Europe on Accessible Europe ICT for all is a regional event to test the importance of new technologies, especially artificial intelligence and in this framework aiming at bridging the digital divide and equip all groups of society, including Persons with Disabilities to take advantage of ICT by enabling capacity building in digital skills. Telecommunication and ICT have vital importance for people's improvement and promoting accessibility policies. The Government of Serbia means cultural media strongly support this

ITU and these joint efforts to encourage Governments, industry, academia and other stakeholders to promote crit accessibility, especially Artificial Intelligence to create fair and equal opportunities for all.

Thank you very much.

(Applause.)

>> DAVID WOOD: Thank you. And before you go, you heard from Paulo that he thinks that there is a lot of duplicate work being done by the ITU and the EU studies. And that there should be some efforts to bring that together. I think possibly a common Working Group or something. For your part do you see any -- do you have any wish lists for the ITU and the EU for improving the situation yourself based on your experience?

>> H.E. DEJAN MASLIKOVIC: Yes, I think that there is a lot of studies, expertise but we need to move to practice. And we need to create let's say some rules, laws or I don't know what, to make independent media to do something for the Persons with Disabilities. As we all see media market is moving to the different platforms, there is no classic theater like we used to watch. So this is a great opportunity to implement all of these we are talking about to make it alive.

We are now working on -- with some private company, media company, regional company. They are developing a platform from the media platform. So we are asking them to let us develop the space on the platform for the Persons with Disabilities.

So the wish is make rules and do something practically.

>> DAVID WOOD: By rules you mean some kind of regulation for the private sector?

>> H.E. DEJAN MASLIKOVIC: Yes, yes.

>> DAVID WOOD: To get them to do more accessibility.

>> H.E. DEJAN MASLIKOVIC: Yes, exactly.

>> DAVID WOOD: I wrote that down. Thanks very much. So now we turn to Pilar Orero if you are okay. Pilar is one of the great activators, activists, sorry, I mean, in Europe. And she is a real troublemaker but a great friend. And has been active for many years. And never a minute goes by that she doesn't think of ways to help to move forward the disability landscape. Looking a little bit further about what's going to be done and what is being done in collaborative projects is Pilar Orero. Could we have your slides up, please?

>> PILAR ORERO: Yes.

>> DAVID WOOD: I will give you this hand control. Is that it?

>> PILAR ORERO: Fantastic. Well, my presentation today is we are in Europe is to understand how Europe not only as Paulo has said has issued some directives and some laws to implement accessibility and comply with the UNCRPD, but also how this has

been accompanied with some funding and some thought about how these should be implemented. And this has been done through funding through projects. That's how we do it in Europe. Basically we started -- in fact, it should be a slide before that that used to be called DTV4All. That's when Europe went from analog to digital. Europe already paid money to a pilot to change from analog to digital. We tested and we piloted that and finding different solutions across Europe and that was the first project that we had on that. Then when HDTV standard came up it was developed in Europe, straight away the Commission funded a project DTV4All.

We tested and we developed and we across Europe because it is quite interesting the needs, different languages, translation solutions we have in Europe. This has to be tested and piloted across Europe. The next one that is being funded and is running is called Easy TV. We are personalizing one of the beauties of HDTV it allows you for personalization. So Easy TV, what we have done and Europe has thought that it would be a great thing, how to interact with a television content. So it is no longer the access services but also how the player has to be accessible and how the interaction with this player has to be accessible. More policies that Europe has seen and is funded is content for all. Content for all is about translation but translation and the creation of sign language but not Avatars but sign language puppets. In fact, the Avatar is yourself. I don't know if anybody has seen this project. But it is quite interesting because it is no longer an Avatar. They capture you and it is you who signs. Okay? It is very nice. It is -- it would be amazingly at a better level when it is developed. But the concept is fantastic. And also the concept is how this can be translated. So how can we translate from spoken in to sign language. And then how can we capture the gestures and put it back in to spoken. This sort of interaction in different directions is there as well.

We have iMac. iMac is for virtual reality. We are no longer in a convergence media. We are in a virtual related 360. The European Union has also paid for that. We have solutions for access services in 360. I have got outside a booth with beautiful glasses and you can see the solutions that we have done for subtitling. Your head moves around and the subtitles should or should not move around with you. The signor should move in 360 and the beauty of audio description is 360 because you have ambi and object-based sound. Audio description grows in to a very, very interesting access service now in 360. Perhaps you can see it outside. Europe is also interested in understanding media quality. The new directive is not only interested in the quantity of accessibility services but also in



the quality of accessibility services. So where and what is quality and how can we measure it is again a pending issue there.

So on the one hand Europe is funding and is worried or is taking care of the access services and how to -- are they deployed and piloted across Europe. And the other thing that it is doing is training. They are the two legs for a successful implementation. And in Europe there is this call called Erasmus Plus and it is devoted to training. And Europe has paid now and is funding four projects to train on audio description. And this is called Atla Pro. And the other one is Accessibility for Cenegeard or any life venues. This is called Act. The other one is easy, that is Easy-to-read which is a new accessibility service which is coming up quite fast across Europe. And the other one is Life Text. And the other one is life subtitling which is what is happening now there.

In Europe we do that with not only with stenotype and Delotype and with speech-to-text. So not only they have developed the research to pilot these services but also training to how countries, how broadcasters, how institutions can learn how to implement these services in to their workflow and understand how to do it.

And the other interesting move that is happening now is that Europe is -- has accepted accessibility and accessibility services not only for the disabled but for all. So the refugees, migrants, all the population in Europe that is moving across Europe in the different languages, language accessibility translation is also considered accessibility. So now the European Commission has funded two projects on that. One is called rebuilt and that would be how accessibility services can help the integration of migrants and refugees in Europe. And the other one is Hilus and Hilus is for social networks, but it is not for a centralized social network like Facebook or Instagram or LinkedIn but the centralized network. When I would send a WhatsApp to Monica. And how can we add access services to this. In fact, Europe is doing quite a lot, not only making rules and regulations but finding solutions and finding teaching and training materials for that. One pending issue, David, that you would ask me, what would you suggest. One thing we don't have solved in Europe is the issue of icons for access services. The icons that we have for access services in Europe are not icons. They have letters. In Europe we have at least three different alphabets. We have Cyrillic and Greek and Latin. To have an A for AD for audio description, it doesn't work.

Also, for example, subtitles, we don't call subtitles subtitles across Europe. Again to have an AC or CC for an icon for subtitles is very wrong in the European concept because we

are not just one united. We are the richness of Europe as we are so varied and so complex. I think that's the beauty of it. It is just a nightmare. But it is the beauty of it. Something they have done in Denmark, these subtitles, these icons here are produced for the Danish broadcaster. You can make them with your keyboards. You don't have to download any copyright or any logo or anything. You just produce it with your keyboard. And they are authentic icons. That is no letters in them. So they can be used by everyone. I presume nobody would like to use them because they are not proprietary of anybody but they are free. They are there. If we start using them, they are accessible by the way.

So perhaps if you could all agree to start using them, I don't know. But anyway this is an issue that is a pending issue. Iconography of accessibility services is very basic to me. We haven't solved it in Europe yet. This is a proposal of many. Thank you.

>> DAVID WOOD: Thank you. I mean what would be the idea, somehow there would be an ITU standard or an EU standard for these icons and we would ask the Danish administration to submit them to the ITU?

>> PILAR ORERO: We need the definitions that were done by ITU with Andrea Saks. So we have some good definitions but we have some definitions. I think icons would be the next one. Then we can make them better or something, but at least we have something that we can more or less all agree and then we can move on. Otherwise we never know what we are talking about. So some very basic definitions, basic icons, training, basic, yes. Very pertinent actions, for example. Something like doing workshops, workshops across Europe this year on spoken subtitles.

>> DAVID WOOD: That's Pilar's.  
(Talking at the same time).

>> DAVID WOOD: Which is her argument which is quite reasonable is that audio subtitles, translations or subtitles which appear on the screen in to words is a very valuable thing, particularly in countries where there are television programs are in English, French or Italian and they don't double them. They put subtitles on them. But if we had this text-to-speech convention, audio subtitles it would help them a lot. And I think she is starting a campaign to tell the truth to match only the one of doing away with plastic bottles to get the world to do more of these audio subtitles. It doesn't cost anything. It is all done by machines. Just a quick one before you go, Pilar, Paulo said he thought there was a degree of repetition, overlap work done by the EU and ITU and he said hey, what about having some kind of Working Group to look at what each of them has done

and see if there is any overlap. Have you noticed overlap? Duplicate?

>> PILAR ORERO: This is something that we started in ITU and ISO. We realized that we were doing standards in ISO and standards in ITU. ITU more related to the technical side of it and ISO more related to the human factors. So it is -- no Monique does not agree.

>> DAVID WOOD: We can come to the questions at the end.

>> PILAR ORERO: I work in ISO. I work in -- and my point of view is that in the Committee that I work in ISO we are developing more human factor standards. Audio description standards, subtitling and caption standard and the spoken subtitling standard is nothing to do with the technical side of it. It is more to do with the interaction side of it. Okay?

>> DAVID WOOD: Shall we take that up --

>> PILAR ORERO: And then we could perhaps exchange standards. Not replicate them.

>> DAVID WOOD: Let's pick that up in the discussion and probably Andrea wants to comment as well. We will get to you. Now in terms of --

>> Excuse me, I want to say a few words. I'm absolutely in a different position because in ISO SC35 main -- the majority of the experts are technical. And Pilar comes from another background. So it means that I'm absolutely on the opposite side, especially SC35 where we study user interfaces. I think that you are thinking about the human factors Committee which is in CENELEC.

>> DAVID WOOD: Could we come back to that in the question time, if you don't mind? Thank you very much. Just human reaction I'm sure. Our next speaker I have known for some time. In terms of new technologists in accessibility he is kind of a world leader in this area, done more to push forward I think the frontiers of technology in terms of access services than anybody else probably in the world. I hope he is not going red now but this is my friend Nigel Megitt from the BBC.

>> NIGEL MEGITT: Hello. Good morning. Thank you. So yes, I definitely did go red and I'm not sure it is true. There are lots of other people doing lots of good stuff. I have done that thing of creating more slides than I have time to talk about. I try to focus on the things in the slide. Some of the material which I skip over will be there for reference purposes. So I am -- David says, I do some technical stuff. I work in the BBC as an executive product manager for access services. I also co-Chair the time text Working Group in the W3C and the time text group in the EBU as well and participate in a variety of other standards groups. So sometimes it is my fault. This slide is one of those referency slides. You probably all know this

already. I thought it would be worth summarizing the different ways that existed, make audiovisual media more accessible. Subtitles and caption, audio description, which isn't always audio. Interestingly. Language interpretation is like sign language or translation subtitles. These are Pilar's audio subtitles or spoken subtitles.

Mixes to the audio are important to affect intelligibility. Some people prefer clearer dialogue, more ambient sounds. Visual adjustments are also important for improving the visibility of things, intelligibility of what people see and there are things of changes in rate of presentation and object-based media selection. So things that we probably don't really know what they all are yet. But adjustments to address cognitive load and other issues of that sort. And I think we are at the beginning of our thinking on those.

Now this point feels really important and maybe the focus on accessibility is too much on the "disabled", in quotes. From my point of view the fact that effect the ability for a person to experience AV media are a combination of that person's innate capabilities, ability to hear, see, et cetera, move, think, feel. And the environment around them, things like the light and the ambient sounds. So when I think about the services that we provide in the BBC I don't just target people who can't see or can't hear. I also want to target people who in a particular environment might not be able to see or hear. So for me it is just as important that somebody who's watching a program on iPlayer on their tablet on a bus that's really noisy can understand what they are watching as somebody who just can't hear in a silent room. That is a point which I think needs to be recognized. And it is a real important reason for that which I will come to in a later slide.

So just a little bit about the BBC. We provide subtitles in 100% of programs in our main TV services. And we have been doing that for more than six years and audio describing more than one fifth of our programs for almost five years now. And that accessible content has been made available on broadcast and online. For subtitles we use TTML and we have some subtitles there. And I would encourage anybody to look at. What I have been doing over those years of mainly focused on subtitles and captions and audio description, and I am beginning to look at deploying additional technologies and in my EBU in W3C groups the focus there has been on time text which has chiefly been looking at subtitles and captions and has begun to begin to look at audio presentation. So particularly the TTML time text markup language of specifications is something that has developed under my Chairmanship over the last few years, although the work began in 2003 amazingly and lots of other people did important work on

that before me.

And a key point to make about that standardization side of things is that we have seen over the past few years really good convergence on a particular subset of that very big standard TTML and that subset is called IMSC. And even a subset of that, smaller subset called EPP TD. IMSC supports global subcaptioning environments and it has been adopted in lots of other places, HDTV, HSSC, by MPEG, by Smity as well and that covers everything from IP delivery and broadcast. And there are lots of documentation available as well for those. IMS test, the Mozilla developer network I think it is called which is an amazing source of documentation for developers on the Web.

This is one of those reference sites. Showing the evolution of this specification over time, it is the first W3C recommendation in 2016 to the latest one which was just in November this year which includes support for Japanese language and others. It is truly global at this stage.

Moving on to audio description, one of the things that we added in our most recent iteration in TTL was the ability to direct audio mixing and to do text-to-speech. So that's a key building block that I put in place to allow us to create a profile suitable for audio description. If you look at the workflow of audio description all the way from beginning to script and create it to mixing the audio today there is no open standard file format for creating and exchanging that. Everyone is locked in to proprietary perspective. From the BBC perspective has a bad thing and it makes it harder for people to make that content. We use it and make the content. So I set up a community group in the W3C to try to create a profile. And we have been doing some work on that and also some implementation work. And it allows us to deliver not just the audio of the audio description but also the text script of it. And so my -- in my demonstration I don't have a demo stand today but I can show anybody who wants to have a look. I can switch on a screen reader on my computer and it will read out the audio on the screen reader or display on the Braille display.

So benefits both for content providers and for users there. So some important things that we shouldn't forget are you don't -- it doesn't matter what standards we created. If people don't use them, if the content is not created or the editorial guidelines don't require productions to be accessible. We see issues like burned in translation titles, they make them white text and put them on a snowy background scene and then people can't read them quite reasonably. But I think there is a slight change. Certainly in the UK we see this where advertisers for a long time have subtitled commercials but now they are beginning to audio describe them as well. And they are doing that for a

good reason. And it is an important reason that comes in to my wish list. So I will come to that in a few seconds because I am running out of time.

Another point the consumer has to find content that's accessible. User experience design must be accessible for them to get to it. I think it is being covered well enough over today and yesterday that the legal and regulatory environment is very different across the world but the -- this is the really important point here, the biggest driver of uptake in usage is business benefit and that's where advertisers are audio describing. Regulation is important and it has helped encourage people. But what encourages people to spend money they see a return on investment and evidence needs to be gathered more clearly. Probably overall you might need a carrot under stick but the carrot is more effective. I asked my EB time text group if they had any particular input. And I asked my W3C group and they didn't respond. The key point is the broadcast industry has got a lot of knowledge of subtitles gathered over about 40 years. The Web is younger and has great accessibility improvements that is broad. But what we need to think about is not losing some of the good stuff and getting the best of the old and the new. This is a specific plea because I see practices on the web always making subtitles being white text on the bottom of the screen. Sometimes there is important stuff in the video there. And if people don't implement that then they make something slightly less accessible. So that is my plea. And I think that's my last slide as well. Yes, it is. So that was my presentation. Did you want me to talk about my wish list?

>> DAVID WOOD: If you could do it in a sound byte style, yes.

>> NIGEL MEGITT: I have a lot of wishes. Everyone has been good and come down to one.

>> DAVID WOOD: You are the BBC. You can do two.

>> NIGEL MEGITT: It is a great time of year for wishes. Hope for a sudden emergence of Santa. So I think it really makes sense for the ITU and EC to encourage adoption of IMSC not in equipment, but this is a -- there is a key point of divergence in subtitles where there are far too many different ways of doing it. But everybody can agree works and meets accessibility requirements and then that will remove a lot of barriers. So that would be a really important one. I want some EC or the EU or perhaps the UN even to research and publicize the business benefits of making content accessible. I think that's something that would really help drive adoption. And there are some technical things as well, like text-to-speech standards, IPR, things that prevent members of the W3C from progressing APIs like web speech API. Shadi is probably well aware of this. And

all kinds of technical issues that we could help the accessibility output, the accessibility of output by removing some of those barriers. And, of course, I would encourage everybody to participate in the audio description community group as well.

>> DAVID WOOD: Okay. So please join the groups of which Nigel is the Chair. I am not quite sure where they wanted that. What I am going to do now I am going to drop my own presentation because of time but I hope it will be on the website so you can see it there. But I did want to move on to Karen Peltz Strauss' presentation which is a video presentation. Don't start it up yet. My colleagues, the presentation that she sent is great. But it was rather long. So my colleagues have insisted that we cut it down to ten minutes so that we can have some discussion afterwards. What we have done is to cut off the beginning of Karen's presentation. The whole thing will be there in its glory on the website. She explains what is happening about subtitles in the United States. Karen is a luminary of access services and has worked for the FCC for about 20 years. And believe it or not she is retiring in a few weeks' time. Very sad. Hope they find somebody to replace her. We are joining the tape after Karen has explained about what has happened with subtitling in the United States. And she talks about the audio description and a wish list of things to do. Can we roll the tape which is called Karen No. 2 I think? Please.

>> KAREN PELTZ STRAUSS: We also have laws for video or audio description. It is called either one. In the CVAA, it is called video description. I will use that term. I may be familiar with these. They are narratives provided in natural pause that explain what's going on during the program. And they are generally used by people who are blind or visually impaired. In the United States you can access these on the secondary audio channel. And our rules require 87.5 hours per calendar quarter. The video description is only required however on the largest foreign national broadcasters, NBC, CBS, ABC and FOX as well as their affiliates in the top 60 markets. And we constantly have proceedings to ask about that. Also the five national nonbroadcast top networks as determined by Nielsen rating every three years must contain video descriptions. That covers USA, Home & Garden TV, PBS and Discovery and History. We have requirements for that ensuring that when emergencies are discussed on television, when information about emergencies such as hurricanes and floods, earthquakes, tornados, terrorist activities, even school closings, whenever those are conveyed in news programs or a break-in news programs on television, the information provided must be both visually and orally accessible to people who are blind and for visual, for people who are deaf.

More often than not for people who are deaf and hard-of-hearing it is provided through closed captions. It can be through any visual means and for people who are blind or visually impaired it is provided through video description over the secondary audio channel. In addition we have requirements for cable, satellite and other multi-programming distributors to pass through audible information via the secondary audio stream on second stream devices. So if you are using a tablet, for example, to reach one of their networks and an emergency is conveyed in -- on the show that you are watching, that has to come over the tablet as well.

So just to recap on video devices, I mentioned already the video devices must pass through captions. Must pass through the emergency information, and also they must pass through video description. But in addition it can't be hard to access all of these access features. So you have to have a button, key or icon that makes activating closed captions and video description easy. In addition a simple and easy mechanism must be provided to access emergency information orally on the secondary audio channel.

In addition when a blind person watches television and they are using menus on the screen, the CVAA also requires that user interfaces, this is not only the access to menus, access to recordings, access to programs, all be capable of completing without visual input and output. Typically this has been done through remote devices that are called talking remotes where a blind person can receive the information orally from the television and give commands through a remote. Again this is a great example of an accessible feature that everyone can use. Individuals who are blind and visually impaired have to be able to control the volume, the output, sound output. Any user interface with the TV must be -- they must be capable of going through the CVAA's requirements. And compliance can be achieved through an external device, like a tablet or a software or solutions. And must be provided free to the requesting individual within a reasonable time. I don't have a slide on the gaps, but I want to mention a few things because I was asked to do this by David. Hi David. Sorry, that I can't be there.

I wanted to mention a few of the gaps that still exist. I mentioned before that closed captioning is required on all television programming that eventually moves to the Internet. However there is no requirement in the CVAA for Internet originating programming to be captioned. So, for example, Youtube videos or anything that people are creating just for the Internet, there is no -- there is no requirement. Many of you I think are going to be talking about automatic speech recognition. That's helping a little bit. There are -- you can



actually use automatic speech recognition for videos except it is not perfect. It still has problems. If you are going to use that you want to check it and make sure that the speech recognition is correct. It is definitely getting better than it used to be but it is still not perfect.

I will note that Netflix, Amazon and Hulu are all captioning their programming, even though the CVAA does not require the captioning of all of their Internet based programming. There was a lawsuit a few years ago by the National Association of the Deaf I believe it was brought under the Americans with Disabilities Act. It was settled. There is no firm law on it. There is a good argument to be made, it has to be done under the Americans with Disabilities Act. There is gaps in video description. Only seven hours a week on television are required. And it is only on the top four major broadcast networks and five top cable or satellite distributors. That's a gap. There is a lot more programming out there than seven hours per week on those stations. There is also no requirement that video description remain on the programming when it moves to the Internet. That requirement, what applies to closed captioning doesn't apply to video description from the CVAA. What we are finding is that some of the major streaming, video streaming program services are providing video description anyway, which is fantastic. We don't need regulations if the market is going to take care of things. And finally, we have rules here at the FCC that require that closed captioning, I should say that viewers watching closed captioning be capable of changing the font, the size and the color and the background color of the captions. They are called display standards, but sometimes they are really hard to find on a television. I know that on my television they are almost impossible to find. And for that reason most people don't use them. I consider that a gap as well. And I would love for the industry to take it upon itself to make it easier for consumers to be able to access those very valuable features. And they are extremely valuable for people who have impaired sight such as people who are both deaf and blind or people who have some diminished vision to be able to change that color, that font and that size.

So that pretty much concludes my presentation. I have a slide here that lists some consumer guides that you can visit. Again I am available also to expand on any of these issues if you would like. But these guides will give you some background on some of the subjects that I talked about. And finally some contact information. You could feel free to contact [dro@fcc.gov](mailto:dro@fcc.gov). My e-mail is [karen.strauss@fcc.gov](mailto:karen.strauss@fcc.gov). Thank you very much for giving me the opportunity to be with you today. I hope you have a wonderful conference. And I hope to be with you at some point in

the future. So thank you. Bye.

>> DAVID WOOD: Should we have a pseudo clap for Karen? I promise I will come to you in a minute. So we just have six minutes left. If I may what I will just do is to read out what I thought were the wish lists of the people. And then I'll ask you to comment first, go in to Andrea, of course. What we heard was, first of all, from Paulo who thought that there was a lot of work to be shared between the EU and the ITU that may not be being shared at the moment. One might call it duplication and some small Working Group to look at what is done and whether they could discuss any sharing. Then we heard Dejan who said what the EU needs to do is some regulation for the private media sector as well as public media as well. And you have your own views on that. We had the views of Pilar which were let's have a campaign for standardized icons, maybe using the Danish symbols and have a campaign to encourage the use of more audio subtitles. Then we had Nigel Megitt who thought that there should be a recommended reference format for streamed subtitles for Europe and he said what it should be.

What I thought was the research program and the business benefits was particularly interesting of access services. It is very true. When we did a survey in the EBU the No. 1 barrier for the introduction of more access services is funding. Wanted people to take part in the W3C and other work on audio descriptions. And he thought should be a research program on the best ways to convert from text-to-speech. Karen asked for encouraging captioning of a nonbroadcast origin. There is a rule about captioning of streams which are broadcast origin. Nothing to do with nonbroadcast origin. Encouraging captioning of all streams and encouraging audio descriptions on all streams and encourage easier adjustment of color and size in television sets. Andrea, you have the floor.

>> ANDREA SAKS: Thank you, David. For those of you who don't know me my name is Andrea Saks. I run the joint coordination activity on accessibility and human factors which is in the ITU-T, even in the standardization but now through the Plenipot does human factors all the way through the D sector which is development and through the radio sector which is broadcasting where you guys used to hang out. We do do human factors all the way through standardization. Vocabulary, Pilar is not going to get away. She helped me with this definition document. We worked very hard on it together. So I'm not going to take the credit. You helped me tremendously. We decided because we are global we decided to do caption scope, subtitle or subtitle/captioning. The subtitles started in the movie industry. My deaf mother's father was a cinematographer. I know from my own personal life where subtitles started. Captioning

was created specifically for use for Persons with Disabilities. David and I agreed one day we would put them together because of the cultural differences in languages. And that document is F.790. Standardized by the ITU.

Now the other thing is captioning is also standardized by the ITU. And Lidia Best worked on that document with us. It is something that we can update and change and improve. So when I'm saying to people I want you to use the same language, it is not that anybody is using the wrong language. It is that we have to speak the same language. So definitions are extremely important.

So there was something else but I think I don't want to take everyone's time, but the point of Study Group 16 and Question 26 does do technical standards, but it has Persons with Disabilities who work with us, some of them are here today to help us get what they want, what they need, what they think and many of these people are technically proficient. They are engineers, professional people and people who are just users. So that whole expression of Nothing About Us, Without Us is alive and well and working in the ITU. I am pleased that EBU has accessibility so seriously. You are partially responsible for that vocabulary document. So there is no one way to do something, but we have to try and structure things that we do -- can have global access and compatibility. We are talking about Europe. But we are going to have my thing on relay services which is slightly related.

>> DAVID WOOD: We are short of time.

>> ANDREA SAKS: I am going to close right now and say we want to have a global view. That's all I was going to say. Thank you, David, for the time.

>> DAVID WOOD: Makular, you have the floor.

>> As you ask about wishes I would like to have one of your wishes come true. As quick as that. It has taken some time. But the audio visual media service directive, and I am talking on behalf of my colleagues that are responsible for this directive, has just been revised. And we have a new text that was adopted this year. And with reference I would give you the reference in case you would like is 2018/1808. Okay. That directive requires Member States to ensure that and without undue delay that service provided by service -- okay. Audiovisual media providers continues and more accessible for Persons with Disabilities through proportionate measures. So it changes the let's say encouragement from the previous directive in to an obligation. And it covers, and this is what I say, that your wish comes true, meet all media providers which have natural or legal persons who has an editorial responsibility for the choice of audio media contents and determines the manner in which it is organized. It is not only the public sector but

anybody that would fall under this definition would be covered. And let me say that some of the issues, there is an Article, the Article 7 contains some new requirements. So not only as I mentioned the continuous and progressive improvement of accessibility but also the recent obligation of reporting regularly to the national authorities. Also Member States have to report every three years to the European Commission and an obligation to have action plans.

So to see that it is progressive implementation. There has to be an online contact point in order for the users to contact their responsible services. And what is very new is that there is an obligation to have emergency information also being made accessible. And finally, the European regulator is charged for exchanges of experiences and best practices on accessibility. So there has been an improvement in the regulatory area which we hope will trigger and enhance accessibility in Europe very soon.

>> DAVID WOOD: So anything in the point from -- more could be done in terms of regulation for the private media sector?

>> As I said private media sectors that would fall under media providers would be covered.

>> DAVID WOOD: Okay.

>> If you fall under this definition, then you are covered.

>> DAVID WOOD: What about that idea from Paulo, some kind of informal Working Group that looks at the work that the EU has done and the work of the ITU has done and see if there is common areas? Is that an interesting idea, do you think?

>> I think that the European regulators as I said who has this -- is charged to have a stage of experience and best practice would be in a very good position to have this dialogue with ITU, but I am going beyond what is raised in the legislation. If they are going to have best practices at the European level and exchanges of information, they will have the big amount of data to share with ITU. I assume it is a good starting point, but as I said this is beyond the directive.

>> DAVID WOOD: We are out of time and I know the organizations are going to fine me. You wanted the floor very quickly and then you quickly.

>> So Donal Rice, I won't ask a question but request for assistance. We have an issue in Ireland where access services seem to be breaking down somewhere along the pipeline as they are being provided by the TV service providers and our national broadcaster is using the Titanic excuse, it was all right when it left our building. So if anyone has experience of this where access services, it is basically an efficiency in the regulatory environment where access services are not being carried by other providers I would be interested to find out not really what the technical issues are, but really what the regulator could or

should be doing in that space.

>> DAVID WOOD: Okay. Lidia you want to come in?

>> LIDIA BEST: Thank you. Lidia Best from the European Federation of the Hard-of-hearing. I echo my Irish colleague's request as well. We would like to find out because too often there is a disconnect between what comes out from the access services and what comes in to the actual user's equipment. So I think we need to look at it. But I wanted to ask, wish about campaign on symbols. I think campaigns alone is not enough. Extremely standardized. And I really welcome to that. Thank you very much. This wish will come true.

>> DAVID WOOD: Okay. Sorry. Would you like to comment here? Just the final two points and then Nigel and then we will have to close because otherwise I will be shot.

>> Thank you. I just wanted to compliment and actually say something about the wish of having common symbols and so forth. With the Accessibility Act coming we have not officially seen the text but we know that for sure it will cover the transmission of accessibility services and the gateways to content and information about this, about these services, which is not covered by the audiovisual media directive. There is a possibility to put these symbols and kind of standardized way of informing the user forward in the development of the standards for the Accessibility Act. I see a window of opportunity with the development of standards of Accessibility Act to accomplish some of the wishes we were discussing.

>> DAVID WOOD: Let's hope there is a report of this meeting and those things are in there. Nigel.

>> NIGEL MEGITT: I wanted to come back on the issue of it broke somewhere on the chain. And I take your point that you wanted a sort of regulatory type answer. I mean obviously you need an engineer, I would say that. But it is a real good motivation I think for trying to drive adoption of common standards because the cause usually of this kind of thing is because different systems take different standards and especially the world of subtitling and captioning is littered with unbelievably large number of different ways of what people think is the same thing and there is overlap. But this is one of the things which I have been trying to address and fix over some years. And I think it has got to the point now where we have enough stability in terms of requirements and understanding of those, and in terms of how we should meet those requirements with solutions that we can actually move towards say guys, you know, Japanese or U.S. standard or European standard. We can all move on to a single global thing now. That will increase the quantity of content and also equipment that's out there. And increasing quantity is a key point in terms of -- by increasing

scale then you make it more likely that technical issues will get resolved and also it is good for the audience.

>> DAVID WOOD: Just final seconds from Makular.

>> Two different points. First of all, to say, to clarify that the Accessibility Act covers services providing access toward audiovisual media services, the content is regulated by the audiovisual directive. We need to work closely on whatever is happening in the world. And we will be doing that with the sector. But I don't want to anticipate yet what is going to be in the standard. And so far it is a bit early today, but we welcome your participation and all these inputs. So that's the first thing I wanted to say.

The second thing is answering to the question of Donal to say that I hope my colleague Stefan Lechler is here today. He is going to provide a speech at 11 in the session on equal access to telecom because there is a provision about must carry obligations. So that is something that we could explore. Electronic communication now code in the future. But you could explore with him the situation in Ireland.

>> DAVID WOOD: Okay. I know there are lots more things to raise, but we have to close the session. Thank you very much to you all for getting through the whole session without mentioning Theresa May or Donald Trump in particular. I hope we can have some notes on the session and that something happens as a result. Ladies and Gentlemen, the session is closed.

(Applause.)

>> ANDREA SAKS: David, you did great.

>> ROXANA WIDMER-ILIESCU: Ladies and Gentlemen, we are a little bit late, behind the program and we will try to start immediately the session 6 on the procurement of accessible ICT and universal design. And I invite you all to take a look at the bios of our distinguished panelists. And having said this I already give the floor to Imma to set the framework of the procurement of accessible ICT in universal design in Europe.

>> IMMACULADA PLACENCIA-PORRERO: Can I have my slides, please? Okay. While the slides are displayed, I would like to start introducing the -- my presentation. Not from Sweden. European Commission. So what I'm going -- this is not the presentation. Sorry. So what I am going to do with the presentation is, first of all, give you an overview of the new legislative framework at a European level related to public procurement. And second explain the link with the Accessibility Act and the European structural funds and finish with some comments about the standardization.

So let me start by saying that the public procurement directives have been there for many, many years. And we started that revision several years ago. And in the process of the

revision we were dealing with the disability policies we asked -- we had a pool survey that asks individuals in Europe what do they think about buying accessible. And, you know, we had a really overwhelming response. 96% of the responses -- respondents told us when public authorities provide goods and services they should be obliged to ensure that they are accessible for Persons with Disabilities. It was a very strong message because this was not only Persons with Disabilities. This is the general public.

So in revision and we have to realize that the public procurement market in Europe is huge. We are talking about 60 to 70% of the EU gross domestic products. And when it comes to the area of ICT, I mean it is 78% of the GDP. It is a huge amount of money.

So we took this in to consideration with the revision, within the revision of the legal framework. And don't try to read the slides. You have a link there. When you get them you can go to the revised text of the directives. So there are three directives now that entered in to force in April of this year. There is -- the general public procurement directives that is one for entities, and there is one for concessions. Okay. And they contain, and I have listed here the Articles that relate to the public procurement directive, but you have more or less equivalent requirements in the other directives except for concessions which they have a lighter regime. But basically there is a request of technical specifications to contain accessibility in Article 42. There is a possibility of use of accessibility quality assurance standards in Article 62. There is the possibility, not the obligation, the possibility to use accessibility as one of the criteria for awarding contracts. And there are specific provisions for social services in relation to also Persons with Disabilities. And there is the obligation to report on accessibility.

As I said the big difference between the two first procurement directives on public procurement and entities, one buys, basically related to supplies and which are products and services and works which are buildings, for example, is that in those first two accessibilities compulsory and the technical specifications while it is a possibility in the concessions, it is not a compulsory. So the directives, the revised directive, they have one new objective is to ensure and promote socially responsible procurement. It deals with many issues. Compliance with social legislation and allows to use social considerations in addition of the obligation of having accessibility.

So I will briefly go -- I'm not going to address all the elements of -- that can be done in relation to social procurement in these Articles but give you one example related

to accessibility. So in Article 42 we could ask, for example, and define in the technical specification the accessibility characteristics of the products or the service to be bought. Something that describes is related to the subject matter of the contract and it describes what the product of the services has to provide.

So the procurement directives also say that when you have got mandatory provisions for accessibility in other acts, those requirements become mandatory. When you buy, for example, Smartphones, TV equipment or a certain website, then you will have or the procurers will have to use the requirements, the functional requirements of the Accessibility Act as mandatory. And remember here we are linking with the Web accessibility directive because we have exactly the same functional requirements. So we will -- we have the obligation to buy, the obligation of delivering in the Web accessibility directive. In relation to award criteria, so the public procurers after having defined in the technical specifications I want to buy and I will give you an example related to a website. They could say okay, I want to buy a website that complies with level AA of WCAG 2.1 at this moment. But they could also say now I am going to give extra points when I'm looking to the award phase in which I look to the prize, for example. I can say and I'm going to give extra points to the ones that deliver AAA or elements of AAA. Our prime, and I can make an equation between the prize and these additional accessibility -- accessibility features. Then there is a very -- it is a very interesting clause about contract performance condition in which, for example, we could ask okay, I'm going to buy a service. I want that service to be accessible. Technical specifications but I wanted staff involved in the execution of the contract using accessibility training. How the service is going to be implemented and this is very good news.

To almost finish, this is -- there is a link as I said with the structural funds legislation, for example. So when the EU, the funds that the EU provides that require accessibility like the special funds do now, many of that money of that funds are spent through public procurement. So we have now established consistency between the obligation to deliver, the obligations to the process of buying and the obligations of ensuring compliance with the money that you get at the EU level.

Being conscious of the time I am not going to enter in to all the details. So in summary, the link with the Accessibility Act is that the requirements of the Act for the products and services in the Act is compulsory. For other products and services when the -- it is compulsory to buy accessible, but the requirements of the Act are not compulsory but they give



presumption of fulfillment of obligations. In other words, if you have an obligation to buy accessible it says device which is not covered by the Act. If you use the provisions of the user interface which are in the Act to buy those -- that device, then you know that you are buying an accessible device. And you fulfill the obligations of buying accessible. The Act states that we can use standards and technical specifications to define fairer accessibility, the requirements in the Act. But the Act does not change the voluntary or compulsory nature of accessibility.

Remember concessions, I said at the beginning it is not compulsory. It remains noncompulsory. The Act does not change that. But it allows that -- that accessibility that Member States in -- when they use accessibility in other union acts they can go beyond what is defined in the Act. And finally to say that the link with the standardization it has been mentioned throughout the conference, we have already a standard on accessibility of ICT which can be used by public procurement. It is not a public procurement standard only. Standards are standards. And then you use them forever. It is written so that it can be used as a natural language, for example, and so forth.

We are finalizing a standard on the built environment that is based on functional requirements. It could be used in procurement. And we have the recent standards on process oriented organizational oriented issues addressing how to ensure that you take design for all in the process so that the result is accessible.

This is -- provides an overview of the current legal framework in the EU. And I remain available in case there are any questions. Thank you for your attention.

(Applause.)

>> ROXANA WIDMER-ILIESCU: Thank you very much for setting the scene with regard to the legal perspective that the European Union is called to respect. And let's see from Donal some practical steps that public bodies can contain during a procurement exercise to include accessibility. I will also appreciate if some of the resources can be shared with the public.

>> DONAL RICE: Absolutely. Thanks. And good morning again, everyone. My name is Donal Rice. I'm with the National Disability North in Ireland. I would provide just some really practical steps. So if you are a regulator, if you are from a public body, if you are from an advocacy organization, there is a lots that can be done today to incorporate accessibility in public procurement. There is two main resources that I would like to refer straight off. One is the accessible ICT procurement toolkit available at Mandate 376. And the second is

a guide from the commission called Buying Social. And both provide really practical step by step guidance in incorporating accessibility in to public procurement processes. Imma has provided an overview of the public procurement directive.

I want to provide some consolation and some agitation at the same time in terms of what can be achieved and why it should be achieved. When I engage with public procurers I very often get reticent because this sounds like rocket science. Gosh, we couldn't do that. The market would not respond to our request for tenders. But many of what we call commercial off-the-shelf products mainstream ICTs already contain accessibility features in part because this has been mandatory for federal procurements in the United States for nearly 20 years now. This is not new news.

In Europe we have the legislation of standards to support this happening across Member States. And when I talk about Member States in Europe I also want to refer to countries that are represented here today that are outside the Member States within the EU. This is possible in your countries as well. There is nothing that we are talking about that isn't practical and that isn't achievable. So many of the products, in fact, any product that you are typing on right now contains accessibility features. Okay?

So that's something I suppose to console public procurers with. And the second thing is that we have standards in this area. They are mature. And they are industry approved and achievable. And for the most part the accessibility requirements set out in them are inexpensive. And many cases for the organization they will save the organization money in the long term in terms of providing accessible channels and websites that more people can use. We are familiar with that rationale. Imma has provided some figures on how big public procurement is and that's why we and people like me keep talking about it because it is where the rubber hits the road. It is where legislation standards and money come together and nudge industry in to providing accessibility features. And as well to say many countries are now looking at their monitoring framework.

Ireland is a late comer to ratifying the Convention. Even though the UNCRPD text itself. The Committee on the Rights of Persons with Disabilities have been very clear in some of their general comments around the importance of public procurement and how it is a way for Member States to improve accessibility for persons with disabilities.

So let's look at some really practical two or three really practical things that can be done. If I was to sit down right now and write a specification, a request for tender for technology that I wanted my Government to use, put in selection

criteria to choose people who can bid and be considered for this work. And it is allowable that I could ask for previous experiences of a contractor. It is allowable that I could ask for evidence or at least disqualify suppliers who have previous experience of not fulfilling accessibility obligations in previous government contracts and allowable for me to ask do you have the capacity to provide accessible product solution or services.

When it comes to the technical specifications that's where I get a little bit excited because I have seen in many public procurement exercises where accessibility has been specified as a kind of nice to have and suppliers respond with things like we are really committed to accessibility, which means nothing. And the scoring on that really means nothing. But what we now have in terms of the public procurement directives and standards are as I said mature and agreed technical standards that can be used for the technical specifications, the mandatory must have requirements in a request for tender and a procurement exercise. And we can now reference standards like EN301549 to provide that level of assurity to the public body and suppliers and bidders of what we mean by accessibility.

We got a very good overview from Klaus Peter yesterday. It has these things called functional performance statements which are high level statements that say what are the characteristics that users need. And then we have the real hard maths, hard sums part, the technical accessibility requirements. And between them they enable a public procurement body to either specify in a very detailed way what the accessibility requirements are, if, for example, they are buying something like computers or other commercial off-the-shelf products. Or in many cases a public procurement body doesn't know what is the technology solution that they need. They know what their business needs are. And in that case the functional performance statements provide a series of statements that a bidder can then show how they are intending to meet those performance statements perhaps by referencing the detailed accessibility requirements that refer to their particular product, solution or service. So the standard provides quite a bit of flexibility.

What is always very important, of course, is asking for evidence conformity. My experience has been in some cases accessibility might be very well specified but no check to make sure that the public body gets what they asked for. There is nothing to some degree peculiar about accessibility. It is another characteristic that a public body can ask for. And in the same way as it asks for assurity that other things like safety are met, it can also ask for assurity and evidence conformity that accessibility and the accessibility standards

that specified can be met. And some options there are self-declaration of conformity which tends to be primarily the main way of asking for assurity that quality specified and a tender is reached and a higher level called third party certification. This is to assure public bodies what is being proposed here is normal day-to-day business in public procurement. It is just taking accessibility and adding that in to the procurement exercise.

And what's quite exciting is accessibility can also be used as a ward criteria. So these are the criteria that are specified that allow suppliers and bidders to compete with each other on perhaps additional features or innovation that their products have in terms of accessibility. So it goes beyond the minimum standard that is set by something like EN301549. And the buying social guide provides some good advice on that, but could be the additional criteria for a particular type of goods or products that allows bidders and suppliers to compete with each other and to innovate and to show how their product or service is more accessible than their competitors.

Two resources to finish with. One is a policy resource from the ITU. It is the model ICT accessibility policy framework. But essentially what that is is a series of chapters and different technology policy advice pieces that any country can use in either assessing how their policy framework is or if there is nothing in place considering how to put a new policy in place. One of those chapters relates to public procurement. And the last resource I am going to leave you with is a relatively new resource from the ITU on buying, using ICT accessibility standards to specify accessibility and public procurement. It is actually three self-paced online learning modules. One introducing ICT accessibility, so that might be of interest to people in your organization. And for advocates it might be something that you could recommend to Government bodies that they undertake this type of online training.

Second is on ICT accessibility policy regulation and standards. And the third is the harder part which is looking at achieving ICT accessibility through public procurement. If you have done the first two modules the third module should be a breeze. That's on the ITU academy website. Free of charge. It is available for anyone to take and do it at their own pace and is a tutor led module that goes in to further public procurement and ICT accessibility. Thank you very much. If you have any questions I would be happy to take them at the end of the session or at the breaks. Thank you.

(Applause.)

>> ROXANA WIDMER-ILIESCU: Thank you for these examples. And with your permission we'll take the question at the very end

of the session just to hear first all of the panelists' presentations. So let's see how the Swedish Telecom Authority set up the procurements of universal telecom services in order to procure successful solutions.

>> ANDREAS RICHTER: Thank you. We have a case where we used the EN301549 standard. And I will give some details what we procure and what we wrote in the call for tender.

Okay. This is the long version. So we procure services as part of the universal service of the EU. And among those services the case I am going to talk about today is the text relay service and the telephone directory inquiry service. We have other procured services which are the video relay service, speech-to-speech relay service. And we have as we are the Postal and Telecom Authority, we have the postal services, postal services for elderly and Persons with Disabilities in rural areas. The text relay service, it is a service relaying calls from hard-of-hearing or deaf users unable to use their voice of any kind and users of ordinary phones. So at least in Sweden it is a person texting between persons. A person using a text phone or text interface, text and voice interface and a person using an ordinary landline or mobile phone.

In Sweden the specifics of the relay services it is accessible for users using the text site with the ordinary legacy text phones, text telephone terminals, total conversation terminals, specific web application. And there is also a downloadable app for mobile phones. So there are different ways of accessing the service. And the service is also relaying calls to the emergency number 112 with priority. So you are passing the queue.

It is free of charge and open 24 hours a day. The other service, the telephone directory inquiry service is -- if you can't look up phone numbers on the Internet or in the phone directory we don't have any phone -- printed phone directories anymore in Sweden. But this is the legacy of the service. So there is illustration of a person sitting in a wheelchair with a headset speaking on the phone to another person with a headset sitting in front of the computer saying in Swedish can you relay me to and the other person says oh, the dentist, Swedish surname. Of course. Here you go and they relay or put the call through.

And it is also free of charge up to 1,000 calls per year. I think you can have exceptions from that if you call more and you just register on the website and say that I need this because of this and that. And while procuring these services the technical specifications we used in both services, it is up and running but the new contract has not started for the telephone directory service. We referenced the paragraph in the Swedish Procurement

Act, technical specifications need, including accessibility for Persons with Disabilities. That is Article 42 of the procurement directive.

And we said tenders need to specify which requirements of the EN301549 that are applicable to the offered solution. And then they had to tick the box whether the solution is compliant to the applicable requirements.

But we have been running this service for awhile. So we had the specific accessibility requirements anyway. So there is an overlap between the requirements of the EN standard and other requirements. For example, we required that WCAG 2.0AA applies for websites of the text telephony service, text relay service and/or both services. And also for the Web application, for example. And then we have some specific accessibility requirements for adapting to user needs in certain ways. For example, using cap locks only for deaf-blind users who prefer that. Summarize the shortened text for Braille display in order to catch up to speed.

And for the telephone directory services there are a lot of similar specifics. For example, you should access the service directly, not by any dial tone menus. The language should be clearly spoken and perceivable. You should respect the user's needs for calls. We are adapting now. We are putting some of the requirements from WCAG 2.1. And since we are governed by the Web accessibility directive it is one of our services. So on the 23rd of September 2020 we need to apply all of WCAG 2.1 requirements. But this is an example. These services need to be accessible. They are services for Persons with Disabilities. I can't represent all of Sweden when we are procuring accessibility. Part of why we actually use this -- the standard and refer to it was that we were involved in the making of the standard. We know about it. Not many procuring bodies do in Sweden. As far as we know there are no in-depth Swedish studies of the use of technical requirements in procurements. The only number I have heard of is that from Swedish, from participation they make service every year among both national, regional and local authorities indicating that 28% of the national authorities have included some accessibility considerations in their policies for procurement. That doesn't mean that they always include accessibility though in their procurements.

Okay. When the first version of the EN301549 was published we made a guide on how to use it in public procurements. It was produced in Swedish but we translated it as well to English. It is a link to that. We haven't yet decided on whether to update it because I have heard some jokes about it and I can agree that there is a need for a guide to the guide or a guide to the guide to the guide because the standard is complicated. The guide is

complicated. And it is hard to start using it in my opinion.

That's it. Thank you. Questions for later.

(Applause.)

>> ROXANA WIDMER-ILIESCU: Thank you very much, Andreas. Let's now hear from Roberto how Agenzia per I'talia Digitale has experience with this procurement policy.

>> ROBERTO SCANO: Thank you for inviting me for this event. I will talk about the Government agency. I have followed accessibility since 2002. So it is a lot of years that I work in the accessibility field, especially in the Web accessibility and now inside ICT accessibility. And also note interest in the field that is not yet well defined. And that I think will be the foot field also related to accessibility. The inclusion of older people with technology because when we talk about accessibility, we need not only to think about disabled people but also to the wide range of people that are older than us, more older than us. And then are difficult to interact with technology.

So also with the Italian agency I work since 2003. So I see the law of failure. So I can -- I hope to give the experience to do the things better with the produced file that we have had in Italy, the Italian since 2012 but evolution of older Government activities. So I don't want to say a lot about agency. It is inside the slide that I think will be available. I made them accessible in light of the theme of this session.

So we do coordination, guidelines, digital literacy, innovation, research strategy planning, monitoring. We are -- we have the role of monitoring of the web accessibility directive. So the agency will do the monitoring provided.

A little history about what we have done. We have done the first law, I think one of the first in Europe about accessibility. In 2004 the Stank Act. They refer not only to web but to all the accessibility. We have talked for the first time about the accessibility of working hardware and software for people that work inside public administration. We said in 2005 technical requirements. We have not used standard. We adapt at this time, this is the failure. WCAG 1.0 adopting to the actual market. So 2005, Shadi will remember WCAG 2.0 in a draft status. So we tried to do something for to give Italy something that they can be happy. We do it wrong. We understand that the standards must be made by the standardization body and organization. A Government is difficult to set standards because Government make politics the standardization involved market, market representative. And they have implemented the standard in their products. This is important -- why it is important to have European standard. Help the national Governments, national companies to buy products that are accessible.

In 2012 we updated a document that in Italy is called for

digital Italy. It is a main code that defined the steps about what we want from the public administration forego accessibility service to the user. In 2012 we put the requirement that all documents must be accessible. This is in the paper. In reality it is only a law. We need to make education, education to the public employment to use correctly the tools. They don't need to become accessibility experts. They must use correctly the tools that they have in their hand. Now the products like the suite of our office have inside the evaluation tools that help you to check the accessibility of your document. You can use their tools. You do two time check and third time you do directly. We need to have accessibility by cost. Something more you must do accessibility documentation, information and content and products. We have updated in 2013 the Stank Act with the WCAG 2.0. And then in this year we have updated the Stank Act for the accessibility directive.

What we do also with previous experience we know that a lot of talented people don't like to study in English documents. So they want to have the translation. So we do the optional translation. This summer as Shadi showed we work a lot because WCAG 2.1 was published on the 5th of June of this year. And as of the 1st of September we have had the first worldwide official translation of WCAG 1.0. Another success of the work that we have done we have already translated the last version of EN301549. It is official translation because we have done inside the national standardization body and it is important because I personally ask to the national transaction board as Government agency they accept to have this free of charge. Because this is a social norm everyone needs to know it. So it is important to have this for free. I think that this is not like -- it is not impressed by the standardization body. I discuss a lot with them, but I think if European Commission refer to a standard, the standard must be free in every language.

(Applause.)

>> ROBERTO SCANO: Some Italians in the European Parliament have requested translation to have this for sure in the next activities. So we go to e-procurement. So how we buy. Actually the public administration in Italy love requirements to make ICT products accessible. Italian law says you need to refer accessible products with respect to other products. You need to buy the accessible products. Why this? Because referring to the new standard, to the EN if I buy something that is accessible already, it is good for all. I can put in the plug in eventually or configure for the steps guaranteed to disabled people. If I buy a product that respects accessibility I have got a product for everyone. So why today? I don't buy something that is accessible? Another problem is education outreach. As told



before we need to work a lot. I think in every country for educate the public employer, to work with accessibility in mind, to work directly for documents, having also tools that help them. But having accessibility in mind. And also we are working in Italy is about from 2016 officially in the standardization body but -- is about ten years that we work about this. We work for defining the competences of the experts in ICT fields. In Italy we have set a national norm by unit that defines the Web professional competences. And we have also the Web accessibility expert but not only do only these. We have put the accessibility in every figure that works in the Web. Because we cannot have only the sheriff at the end that says this is not accessible, please fix it, but we need to have the front end, the Web developer, the server side, web content manager that must know about the accessibility. The social media manager that tweets without putting the alt text, the people that make the lifelike video, don't put the subtitles. So we need to think with accessibility as the default.

We don't say accessibility is something we do after. And at the end I have got -- I usually put two slides in my presentation. This image should be animated but it is not. It is from the film Frankenstein, when they say it can work. We can do it. Accessibility is possible. We have a lot of examples that say it is possible. They may represent an old lady trying to delete the text from a monitor. This is the registrants to the change, to correct use of digital. So I think that. And I close that our problem with accessibility is that we have enough knowledge how to use correctly the ICT. Thank you.

(Applause.)

>> ROXANA WIDMER-ILIESCU: Thank you for this very, very nice presentation. I very much appreciate that. In particular you also shared the challenges, very often people are quite reluctant to share the challenges. And actually this is most profitable experiences.

So let's conclude the presentation with Mia Ahlgren and let's learn a little bit about how EU legislation ensures the rights to Persons with Disabilities.

>> MIA AHLGREN: So I'm the last speaker and I was hoping we were going to have an interactive discussion. And I will do my best to speed it up. I am very grateful to be here today because I think this year we can celebrate a lot of the planning that has been made in the European Union that has for decades. And I congratulate Imma as the great architect of this policy. And I congratulate the European Union for inviting stakeholders like representatives of organizations for Persons with Disabilities in to the dialogue. And in Sweden, I represent the Swedish Disability Rights Federation. It is a federation of 41

organizations. We are members of the European Disability Forum. And since the adoption of the UNCRPD much of our work is rounded -- around the CRPD to find gaps that prevent fulfilling the Convention and to improve and strengthen State Parties to implement and strengthen the CRPD. We are trying to help monitor the issues that we find.

So in legislation, in standardization and in procurement we all know that words matter and should I say verbs matter especially. And when we saw the public procurement directive of 2004 when it said you should use the technical -- the accessibility criteria whenever possible, should, I mean for us we saw all the possibilities. So what's going to stop you. You can see you can start working. But then again I think you should really look at these words because the words of Article 42 it talks about all procurement intended for use by natural persons. How can you spell it out more clearly than that? For us using the CRPD for Article 3 where we should embrace and accept human diversity. People with disabilities are a part of the human diversity. And this should be accepted. But when we come in to the transposition in to your own legislation, in your national state what happens? Of course, things happen. The words will not be the same. But Andreas, in your presentation that I thought you were going to make you had the presentation of the Swedish text but it is not the same words just let's say that. There is nothing about staff, for example. And something gets lost. So I encourage you all to look at how is this text transposed in to your own national legislation.

In 2014 Sweden got a wonderful, I think Donal mentioned that the CRPD Committee gives recommendations and listened to the recommendations since thematic inclusion of accessibility requirements in all public procurement agreements. We don't have to bother about thresholds or anything. This is all public procurement agreements. This is what you are saying Roberto, accessibility by default. Yes, we want it everywhere.

So what can we see when we look at what has happened after 2014? We can look at the national public procurement strategy from 2017. And I looked at the Irish one which is a bit better. It doesn't -- not a word about accessibility actually. What it does bring up is the principle of University sign and look at the words here, should think strategically, but then it is quite good because it talks about that many people should not be excluded. And that is the risk we -- people from the organizations of Persons with Disabilities are at risk. That is exclusion in the society and that's what we want to avoid, isn't it? So there.

So what can we do about it? What can we see if we can see from the Web accessibility directive an increased demand of

accessibility experts or somebody was talking about. And support on how to write the actual tenders, the text. People want to exchange the text of the tenders and where are they? They are not there out in the public so you can find them. You exchange them in direct messages. That's one thing we see demand for. But we also see a discussion on whether the Web accessibility directive only -- where are the exceptions. What do we have to do. Do we have to look at intranets. Do we have to look at staff things. That is a discussion that is being done. We can also see the thing with universal design as mentioned in the strategy. Do we have any guidance on how to do that? Not really. But I think that the standard that was mentioned earlier EN171161, accessibility following a design for all approach that will be published next year it is designed to help the suppliers let's say, but I would say it would also be good for the buyers because it is talking about what you are saying that you have to get something in it to the system of your organization. You have to get it all out to everyone. And it also introduces a word that is new. It is talking about the nonusers involving the nonusers. Because usually when you, for example, if you buy something in your workplace, and you have an in-house administrative system, you ask the users in that workplace where they are. If there are no Persons with Disabilities there, then the criteria will not be mentioned. You have to look at the persons that are outside the nonusers and involve them in the first part of the procurement process, that is the planning when you do it, the needs analysis because then you can have a dialogue. Usually you have the dialogue with providers. But here you could have the dialogue with the people that are at risk of inclusion. And it could also be something that we do when you follow up the contract.

So the conclusions, do we have a systematic inclusion on the requirements? What we find is that accessibility falls under social considerations. It is a consideration. It is an ambition. It is not a requirement. And the main focus I would say in social considerations of public procurement is promoting employment for disadvantaged groups through suppliers. But the overall main focus or sustainable procurement is buying green. There is not really much guidance in Sweden. More guidance in Ireland I think about how to mainstream accessibility requirements. It is more on the disability specific services as we heard from Andreas. And it is optional even there.

Usability and framework agreements, when you can do call-offs that is a good possibility when we are working for many years. But the standards are standards for usability and not for the excluded users. But we can get them in there and then we have a good chance of getting forward. And as Andreas said there is

lack of meaningful data. It is the disability authority that asks for data. And then you kind of want to look good. So you say yes, we do that. But maybe it is more of an ambition. That's my experience. So I was actually catching up on your thing, David, before you even said it. I want the wish list for future actions. So I was going out there and hoping you would contribute on the UN level. I know because I worked with sustainable procurement that is -- there is a great network within UNEP, that's the environmental program, where you worked on before green public procurement. Now it is called sustainable procurement. We have to get in to the networks and have to get in the -- I was hoping Daniella Bass was here today but I don't see her. We need monitoring of national transposition and deep studies and more researchers. Maybe we can wake up Pilar over there and do a study.

And then I have something that is really specific and I guess something for the wish list would never come through. Do you know there is a TED, that's the tender database? What if we had an accessibility market there? So when you load up your tender there is this check box, accessibility. Because I looked at TED and I got about 67 hits for accessibility just looking at the word. And I would say the vast majority came from the UK and what will happen soon. That's one wish list. And what we can do on all national levels is to try to extend our family. I mean we are here. We are very committed but we have to reach out to politicians. They make decisions, procurement professionals, academia. And we have to empower organizations of Persons with Disabilities to become a true partner in this process. I had an image. I wanted to mention that this image is a black and white image of a corridor. We can see the notion of a person sitting from behind in a very old-fashioned chair with wheels in the bottom. This was an image that I got when I clicked -- searched for disability in a very big clip art free archive ten years ago. And at the same time we did media analysis of the -- how people with disability are portrayed. And they were invisible. Helpless and dependent on care. In this room we know that is not the case. I'm not saying that ten years after is the same image, but I think that some people that do not have the same knowledge we have in this work, this room are still seeing that in front of themselves and we have to change that. I also have more things in the presentation with the statistics and so on that you can look at afterwards.

>> ROXANA WIDMER-ILIESCU: Thank you very much for this.  
(Applause.)

>> ROXANA WIDMER-ILIESCU: And very shortly, so we will give Andreas the possibility to react. And we assure you that later on we don't have here Daniella, but we have Jorge Araya from

CRPD and he will convey your wish to the necessary body.  
Andreas.

>> ANDREAS RICHTER: Translation to national laws, it is in my presentation but it is hidden. So if you download it it should be in there.

>> ROXANA WIDMER-ILIESCU: Please take a moment. We try to do our best effort to present you all this information. I think it is important for you all to have clear the different perspectives. And I would like to know if someone would have some concrete questions or wishes. Andrea, please.

>> ANDREA SAKS: Thank you. This is directed to Andreas and Mia, I didn't recognize you with your long hair. Andreas, what's happened to Gunnar Hellstrom? Gunnar Hellstrom started the first relay service and he was the standard creator of Total Conversation. Now I have -- I have just wrote him an e-mail. I have not been following what's been going on in Sweden. So I'm pleased that you can maybe fill in. Do you have more than one relay service? Did telecommunications take over the relay services or does Gunnar Hellstrom still exist?

>> ANDREAS RICHTER: Gunnar Hellstrom still exists. He is not running his company providing the service anymore as far as I know. But at least -- I met him in the conference.

>> ANDREA SAKS: He is retired. He started the relay services for Sweden. Is his original relay service in existence in addition to yours?

>> ANDREAS RICHTER: I have been in the business for a few years. It is not his company providing or his former company providing the technical side of it. I have a representative from Anri that supplies the technical platform for the relay service.

>> Hi. I just want to make a comment. We met quite awhile ago. But Gunnar is active in standardization. He didn't start the relay service in Sweden. He was the telecom operator Telia at that point called telecom operator. It was a monopoly in the 1980s. He started with Total Conversation, that's very correct and with the standards of Total Conversation he adopted by the technical suppliers in Sweden. So he is working very -- a lot internationally not only in a discussion that we were having. It was a discussion last Friday but in the U.S. as well with RTT specifically. So he has been very active in that area. His company works with end point and still exists, the company. The company is still active.

>> ANDREAS RICHTER: We have the relay service. And we have provision of end user equipment through the regional authority.

>> ANDREA SAKS: Are you using Total Conversation or are you strictly text and voice?

>> ANDREAS RICHTER: We are using Total Conversation. Using the video relay service. The text relay service you can call it

using total conversation, but then it is not video in there. If you use the sign language, the video relay service it is using total conversation.

>> ANDREA SAKS: Yeah, I needed that. Thank you.

>> ROXANA WIDMER-ILIESCU: Anybody else would like to ask questions? I see Alejandro and somebody else. I don't know who was first. Please.

>> Hello. The question for the panel, is there an overlap between a general push towards diversity and employment and procurement side of things? And is there a way that we can sneak or slide the accessibility side of things in to kind of diversity more generally and kind of move it away from the medical model of disability? Because sometimes that puts people off because they will sit up and say we don't have any disabled people in the room, we don't need it. I forgot my glasses today, and -- is there a way we can leverage that?

>> MIA AHLGREN: I think it is a good question that you -- I think we need to -- I struggle on that. Because I agree with you, the medical model still exists. But we have to make them understand unless you have accessible procurement, if you don't buy accessible, then you exclude people. And that is the message we have to get out there. And there are discrimination cases that have happened. And I know that there are organizations in Sweden where they try to push for discrimination, when the procurement hasn't been done correctly. So I think we have to push for that. Without accessible procurement you stand the risk of excluding people from employment.

>> ROXANA WIDMER-ILIESCU: Thank you. So Alejandro.

>> Thank you very much. I just wanted to compliment what Donal was mentioning which I think is very important for procurement and the use of functional performance statements/criteria because for media, the European Disability Forum we had a lot of discussions about this and battles with some other stakeholders in the standardization process of this EN301549 about the functional performance statements. Because in the EN these are statements which actually -- we didn't agree because they put the burden on the users. It is like a list of user needs. It doesn't say the ICT shall provide nonvisual mode of operation. It says something like some users may need a nonvisual mode of operation. So it is a different approach which from our opinion puts the burden on the user. But still this functional performance criteria that puts on the middle the characteristics of the ICT can indeed be very useful for -- be very useful for public procurement. And that is why I mean in the future the Accessibility Act, this will be also a possibility when the requirements that are laid down in the directive, the specific accessibility requirements do not apply

or who knows in the future. We have to have technologies that we cannot even think of nowadays. Then those functional performance criteria will be useful for public administration, public procurement to use to kind of convey an approach to accessibility that can come up with innovative solutions. So it is very important to keep in mind when we promote procurement we need to use this reference to the standards and so forth to specific accessibility requirements. But not to put the focus on the user needs because then we will be shorted. We will be short for sure. So I just wanted to say that. Thank you very much.

>> ROXANA WIDMER-ILIESCU: So thank you. Just to confirm that the Accessibility Act contains functional performance criteria. The current act and those performance criteria use the language that ICT shall or products or services shall provide. The Act talks about the characteristics of the products of the service. And if I may just one little thing to compliment the answer that Mia gave to the gentleman sitting here on the right side, I would like to say that the procurement directives provide several opportunities and possibility and one obligation. So buying accessible is not any longer an option. I mean unless you have a duly justification and this means the product, for example, is not going to be used by people. You buy oil, for example. Does it need to be accessible? Yeah. But if it is going to be by people you need to buy, you have to buy accessible. That's one thing, but we should try to use all the other opportunities that it gives us. The possibility to have reserved contracts for Persons with Disabilities.

So if you have some particular services you can require that there is carried out by organizations that employ a lot of Persons with Disabilities. And that the service remains accessible. So it is not choosing one or the other. It is maximizing you the use of the opportunities that the directives give you. Thank you.

(Applause.)

>> MIA AHLGREN: And to add to that I would like to make a small clear thing, you cannot choose between universal design and accessibility standards. It is both.

>> ROXANA WIDMER-ILIESCU: Thank you. I know that this is another very important and hot topic of this Forum, the public procurement. So I will also invite you to continue all this discussion offline and during the network opportunities that are offered. And with that in mind I would like to ask you all to give a round of applause to these excellent panelists.

(Applause.)

>> ROXANA WIDMER-ILIESCU: And thank you very much for all your interventions. Thank you.

>> ROSHEEN AWOTAR-MAUREE: So we'll be starting session 7.

Ladies and Gentlemen, we will be talking about implementation of equal access in telecom. And we have a great group of speakers here. And without further ado because we are running a bit late on the program, we will start with our first speaker, Mr. Stefan Lechler, head of electronic communications policy unit at DG CONNECT who will be telling us about the policy aspect of implementing equal access.

>> STEFAN LECHLER: Thank you. Good morning, everyone. Thanks very much to the organizers for giving me the chance today to present to you the European Electronic Communications Code. It is a brand-new new legislative instrument. Been adopted last week by the Council on the 4th of December, a few weeks earlier in November by the European Parliament. And it will be published next Monday in the official journal of the European Union and will enter in to force three days later, before Christmas next week. It is a brand-new legislative instrument. Thank you.

The code really modernizes the current framework which as you might know consists of four directives; the framework directive, the access directive, the authorization directive and the universal service directive. And the current framework has been around for quite some time. It was drafted more than four years ago. The first iPhone came out in 2007. Difficult to remember a time without these things. And the various mega trends which we talk about, gigabit society and other trends were not even there yet. 4G was a glimpse on the horizon. And that's why we created these four directives in to one new large directive and streamlined it and modernized it. It is not a revolution but an evolution. And some of the objectives of the current framework are maintained, but there is one new objective which is promotion of connectivity and access to and takeup of very high capacity networks which are very important for all the economic sectors nowadays.

I will not mention the various aspects of code covering access, regulations, spectrum management and any other aspects. I will focus today on universal service and end user rights. And this is an objective, an existing objective of the current framework which has been strengthened now in the new code consumer rights.

Also the aim and the objectives of the code focus now much more than before on end users with disabilities. The code applies to all end users and goes without saying that end users with disabilities are fully part of that. But the code still makes many references to end users with disabilities to ensure that they are -- they have equal access to the services on an equal basis with others. And also in the general objectives of the code, the needs to special social groups in particular.



Elderly and end users with disabilities are at rest. And also there is an obligation for Member States to consult end users. This underlines the importance to engage with end users with disabilities and their representatives. So this obligation highlights to consult and to consult about the equivalent access and choice for users with disabilities.

So I now move to universal service. One of the two main aspects of code covering issues of end users are disabilities. Universal services is not just a new concept. But it means that all users should have access to basic communication services at an affordable price. This should be secured by the public sector. Submitted to rights to Postal Service and electricity. But the code focuses on affordable, adequate broadband and Internet access. And concretely this means that the public sector needs to cover the costs that arise from ensuring affordability or availability.

So the new universal service rules focus on affordability. So the National Regulatory Authorities together with other competent authorities will monitor the market and look if retails are not affordable and then measures can be taken. Such measures could be voucher schemes, for example, direct support or it could be special social tariffs or a combination of both. Also the code obliges Member States to ensure that equipment and services for consumers with disabilities are available and affordable.

So what does this mean in practice? This could mean that this Article ensures that equipment like Braille terminals and services like retail services are, first of all, available and secondly that their use is affordable. Also total conversation and which means simultaneous video, voice and text services in telecommunications that talk is explicitly mentioned also.

But the obligation is on Member States. So Member States need to provide support. This is a key provision in the code and electronic communications for end users with disabilities. The current telecoms framework merely obliges to encourage availability but this becomes an obligation for Member States.

I'll move now on to end user provisions. Briefly all three requirements, so information for contracts, transparency and information, quality of services require the information to include also aspects concerning accessibility and end users with disabilities. The provisions of Article 102 and 103, that's information requirements for contracts and transparency and also require that information as such is provided in accessible format.

So for electronic communications contracts, the contract information needs to be in an accessible format and include information, often the design for end users with disabilities.

The extent to which products and services are designed for end users with disabilities is also part of the obligatory items that the commission will prepare by the end of the next year. And transparency for information means that information for all end users should be so that they can compare the terms of different electronic communication services. This information is to be provided in a clear, comprehensive and readable manner and accessible format for end users with disabilities.

So this information is also to include function, practices, policies, procedures and alterations in the operation of the services specifically designed for end users with disabilities. And there is also an aspect which is important in the code which is emergency communications. It requires that Member States should ensure that end users with disabilities can have access to emergency communications which is equivalent to that enjoyed by other end users.

So there is also a requirement for Member States to ensure that end users with disabilities who are traveling can address directly the public service points abroad without having to preregister for particular services.

Then just to be brief, there is an important Article together with the universal service obligations which is Article 111 which is basically ensuring equivalent access and choice for end users with disabilities. So it is a very wide reaching obligation because contrary to the current provisions in the current framework we have extended the scope of applicability of the code to electronic communications services that's classical Telco provisions, providers and also so-called over-the-top layers. So all of those providers which provide messaging apps, for example, or VoiceOver IP they have to provide equivalent access and choice for end users with disabilities.

Then just briefly must carry obligation which was mentioned earlier today, indeed is an obligation for Member States. This needs to be complimented with particular services to enable appropriate access. This is a choice for Member States. They provide for, must carry and then they have to compliment specific access for end users with disabilities. I would conclude at this point. Thank you very much.

(Applause.)

>> ROSHEEN AWOTAR-MAUREE: Thank you, Stefan. One thing I would like to hear later on is the enforcement mechanisms, whether the commission yourselves would be able to do something about it. I don't know if you want to say a few words now.

>> STEFAN LECHLER: The code is a directive just like the current framework was a directive. The directive which has to be transposed in to national law in the Member States in the next two years. It was to be transposed in to national law. So the

enforcement will be under the national provisions. So it will be National Regulatory Authorities and other competent authorities that enforce the national provisions of the code. The conditions that monitor the implementation of the code and in case there is a wrong implementation or wrong application which would then be against EU law we would, of course, then have just like any other EU law a situations possibility to bring infringement proceedings against Member States. The actual day-to-day enforcement is for the Member States.

>> ROSHEEN AWOTAR-MAUREE: Any questions for Stefan at this point in time? If not we will move to the next speaker. Yes, so I think we will move to our next speaker. Mr. Michal Milligan will talk about equal access.

>> MICHAL MILLIGAN: Thank you very much. And thank you to all of you for your attendance and for the invitation from the organizers for the mobile and wireless forum to speak at this event. We very much appreciate it.

And the topic today is, of course, an important one. And I wanted to just briefly introduce, some of you may not be aware of the GARI project. So I'll give you a quick, brief overview of the project and how it operates and also then just to sort of give you a little bit of an overview, a snapshot of some of the emerging and changing trends within the accessibility features within the devices.

So for those of you who are not aware of the mobile and wireless forum we are an international association that represents many of the major manufacturers, the device manufacturers. We deal with a number of issues on a global basis for the industry. And one of them is the project that we call GARI which is the Global Accessibility Reporting Initiative. So this is GARI project is actually celebrating its tenth anniversary this year. So we thought it is also a good time to take a little bit of a moment to reflect on where we are and where things are going in accessibility within mobile devices.

So in terms of GARI itself, we have a range of products within the database. And, of course, the website for those of you who don't know it, it can be accessed at [www.gari.info](http://www.gari.info). And from there you can select a number of product types including mobile phones, tablets, wearables, smart TVs as well as accessibility related apps that will work on those devices as well.

So we -- and within that we are reporting information on about 120 features within mobile phones. 67 features on -- within tablets. 60 odd features within smart TVs. You saw Richard Moreton talk about the different features within the Samsung yesterday. And you can find the devices that actually support those smart TVs support those. And then we have just

over 50 features that we are reporting on for wearables. And when we say reporting on, we work with the manufacturers actually for them to actually fill in the database and to self-report on their products. The criteria is objective criteria with guidance at the back end for them with reference to the applicable standards or other types of material that we have worked on so that we can ensure a degree of consistency on manufacturers on the information. And then in terms of the actual usage of GARI, we are pleased to say that we are getting about 650,000 page views per month which has been really increasing over the period of the project.

We are very, very pleased that about 25% of European regulators are also using GARI within their own websites. We are extremely pleased with that level of cooperation. And we are certainly open to expanding that with other bodies or organizations. Not just in Europe but around the world. We have 25 companies participating in the GARI project to date. And the website itself is offered in 18 different languages.

So we are really trying to expand the breadth and reach of the GARI project, make it available to as many people as possible. And within those languages, for instance, we also take account of those people who may be in other countries where the national language is not their first language. We don't restrict the availability of languages to specific countries, that it is actually available anywhere in the world. So I think that's an important way to also facilitate access to the information for the users.

So in terms of where things stand today, I just wanted to show you a number of charts from the data within the GARI database. And the first one here is looking at screen readers. Now as many of you will remember, you know, ten years ago screen readers were an expensive add-on to the mobile phone. They didn't come in the device. They were often very expensive. That was an issue that many users would have liked or benefitted from. 80% have a screen reader embedded in them. That's increased by 24% over the last two years. So and these are, of course, all the devices within the GARI database, but we are reflecting, you know, a fairly high proportion of the actual marketplace.

So screen readers I think is a very positive story in terms of a feature that is basically gaining very widespread acceptance and availability. Now the next one is the feature that I -- and I would like to acknowledge the contribution here of the European Disability Forum. As some of you who have been involved with the GARI project over the years, every 18 months we go through and undertake a stakeholders' review. And we invite organizations from around the world to give us feedback

on features that they and their members would like to see the industry report on.

Now this feature that emergency services and location is a feature that the EDF recommended to us at the beginning of the year. And we have incorporated that within GARI. So now we are tracking the availability of that feature within models. So the starting point for the graphic is really a little bit erroneous because it reflects our starting point within our database and collection, but we can already see today that there is 110 features within GARI, 110 mobile phones within the database that already support this important feature. For those of you who don't necessarily know much about this feature this allows the user to preconfigure a set of usage conditions such as three clicks on one of the buttons on the outside of the phone. And it will immediately trigger an emergency message to the National Emergency Services or SMS messages to families and friends to indicate that you may need assistance.

And the last feature that I just wanted to discuss here today was voice recognition for dialling and accessing features. Now again that's seen an impressive takeup. Again this is obviously mostly dependent on Smartphones because of the processing requirements, the processing power requirements that are required in the device to be able to use that. And then today, you know, we have already 565 phones that are available with this feature. And that's in comparison to the 702 phones that are available currently within GARI. And the difference there is basically those that are feature phones versus Smartphones. So I think this is again very useful to see how the takeup of these features is definitely increasing over time and that they are widely available.

So what does GARI offer in conclusion? It is a set of accessibility features. And that's been one of -- the heart of the GARI project is for the industry to consolidate all the existing requirements and then go beyond that so that in every country we are providing more information than what was required. It is certainly a tool that for Governments it can help fulfill the obligations under the UNCRPD. And that's why we have been working with so many Governments over time, over the years to incorporate GARI in to websites. For those of you who are not aware, we actually do make the entire dataset available as an XML file free of charge and so that it can be incorporated in to your own websites and configured to display in whatever way that you believe is best for your national circumstances or for your members constituents.

GARI also offers an easy gateway for consumers to learn more about the accessibility features within these devices whether they be fines as we talked about today or any of the other

products. But also as a way for them to learn more about the features that are available which they may not have been aware of which assist them with their particular needs. So I think we have certainly been very pleased with the takeup of GARI. It is a project that I think brings -- serves an important need and meets an important need for consumers. And on that point I would like to say thank you very much and, of course, happy to take any questions. Thank you.

(Applause.)

>> ROSHEEN AWOTAR-MAUREE: Any quick questions on GARI to Mr. Michal Milligan? Okay. No. I would have one thing about whether you are working already with ITU or EU to reach more toward Government because we have different groups within Government that we reach out to. And if it is a free and unique tool, platform, I believe you would be doing that already.

>> MICHAL MILLIGAN: We certainly are. And we remain open to further collaboration. I think the biggest challenge that we overcome is that people think well, what's the catch. It is free. There is no catch. And the XML file is provided and yes. So please contact us if you would like to discuss. Or even just to look in to how other countries and other organizations have incorporated it in to their websites. And we believe it is just the way that we display the information within the GARI website is one way that you can present this information. And so we want to just increase the awareness of consumers and make it more available. So we are happy to do that. Thank you.

>> ROSHEEN AWOTAR-MAUREE: Thank you, Mr. Michal Milligan. And speaking of information, our next speaker will be really taking implementing equal access from an information perspective. So I have the pleasure to request Ms. Barbara Operschall to do her presentation. She is the CEO of Speech Code of Austria.

>> BARBARA OPERSCHALL: Thank you. Because I'm going to talk about the gap between analog and digital information. As you know the CRPD includes the access to information on everything; products, services and facilities because we live in an information society. And the European Accessibility Act therefore is suggesting that information is available by more than one sensory channel. However as we also all know the European Accessibility Act currently is applicable only to ICT products, websites, communication tools.

So the question is once that is actually implemented will all information be accessible. And the answer unfortunately is no. At the moment we are at 6% and that is increasing. But still it is a very low percentage. Why is that? Because a vast majority of information is still provided in an analog format only. You see here in the pictures whether it is products or tourist

information, contract signage, et cetera. And the question really is how do we get that -- how do we marry that with the digital world. As you see this is a list and the list of analog information actually could be endless. And that information is available only for people who are able to read it.

And in some cases we get information especially on products where we have the legal requirement that the information is there. But we seem not to have the legal requirement that people can actually read it. Right?

Because I have brought this in originals and Rosheen can give it a try if she can find out what it is and what it contains. And see on top of the picture that is their compared size, font size. It is for font size 4. So have fun with this one. In other words, that is not something that is a matter of accessibility for blind and visually impaired people only. They are just the tip of the iceberg. We have people who are aging in a few years. The quota of the European population will be over 65. We are functionally literate with problems comprehending what they are actually reading. We have people with language deficits. At the end of the day it is probably half of the population that can understand product information in particular.

And this data I just collected from the Euro statistics and from the various ones and then put them together. And when you tell people half of the people have problems reading information nobody wants to believe it. But it is truly the case as you can see here.

So obviously for all these people whether they are elderly, have difficulties reading or they just don't like reading like many young people do there is a benefit in offering the information in visual and in audible formats.

And then the goal is that this left-hand column eventually also gets the add-on of audible information. And when we consider why these things happened, it is really that print was the only way to provide information. That is compatible with the requirements. In the sense what is the big advantage of print, that it -- the content cannot be changed once it is printed. It is available without the need of any connectivity. And it is free of charge for people to access the information.

So how we do with -- do we do digitally? And this is what was our thoughts when we were developing our product Speech Code. It needed to be two sensory channel information median that still contains the advantages of print in terms of accessing it and in terms of not having dynamic content, because obviously a contract that one party can change after you have signed it electronically would be a bit of a problem. Speech Code as the name says is talking code. There is, you know, data

codes are nothing new, but what is unique with Speech Code is that it can contain the entire information in the code itself.

So when you print the code on a document, you have the entire document in the code. So the code content is as unchangeable as the printed version. And you don't need any connectivity. You need a free app, yes, but once downloaded you can use it offline. There is no issue with data privacy. But obviously we want to make an impact. And we want to solve this for everyone. So it needs to go on -- it must be feasible from mass protection. That's the second thing in terms of size and especially in terms of costs. And since you can print that code with your package or your document you actually have no extra costs except a small license fee to us because we charge those people who want to sell their products and not the people who want to read the content. It is not the consumer who must pay for accessibility. It is the provider obviously. And the people who want to benefit from it. Because I believe very much that making information comfortably accessible to everyone is a good business opportunity, apart from rules and regulations and apart from social responsible.

There is an opportunity to make life easier for customers. It is about usability and customer centricity. It is about added revenue through additional consumer groups. And therefore my wish is that everyone who is in accessibility tries to go out to conferences of other sectors and give people their presentation on what chances and challenges can be found in accessibility.

And that was it. And then eventually my dream is that we will have two channel information on everything and everywhere as a standard. And then we can just easily kick off this bullet point in the UN Convention and make life easier for everyone in terms of accessing information. Thank you.

(Applause.)

>> ROSHEEN AWOTAR-MAUREE: Thank you, Barbara, for this enlightening and very passionate conversation on something that you are very passionate about. You mentioned challenges. I don't know if we have any questions or -- I know we are pressed for time as well. But if there is one question for Barbara she would be happy to take. No. Okay. Just one thing from me is the challenge for the industry to adopt this. What's the issue here?

>> BARBARA OPERSCHALL: They don't have accessibility really in their focus. That is one. And the second is that especially for us moving consumer goods manufacturers are known to be very, very slow in terms of innovation, in terms of changing things and adopting things. But we are making progress. So I hope one day I will be able to present to you products which are already using this.



>> ROSHEEN AWOTAR-MAUREE: Thank you. I would move to our next speaker, who is Dr. Tom Pey, the chief executive of the Royal Society for Blind Children from the UK. And he has a very positive outlook on the whole thing. He told me his intervention can be summarized as user power can change the world. So over to Dr. Pey.

>> TOM PEY: Thank you. I have just got one -- one of the earlier speakers spoke about the accessibility of mobile phones. And when Apple were thinking of bringing out the iPhone Steve Jobs told them if it worked for a blind person it would work for everyone. That's the reason why Apple built disability in to the iPhone at the time. And it became and still is one of the most successful telephones, Smartphones in the world. But just -- that simple one statement and that simple design brought about something even more important across the world which was that it gave blind people in particular but disabled people in general the attitude that they actually counted and there was something now that could work for them. And that perhaps they could begin to take control of their environment and not have things done to them but have things done with them. So I'd just like to play you a very short video. Hopefully it works.

(Video).

>> In 2015 young blind people in London wanted to find a way to travel independently in the London underground. WAI Finder was born.

>> Welcome to Houston station. Walk forward and take the escalator down to the ticket hall.

>> The main issue for me about traveling having to ask for assistance. I would remember attempting the journey myself.

>> After the gate, walk forward.

>> I want to find a way of developing an IP standard. And we hope to share through the open standard. So that when a visually impaired person moves from environment to environment can have consistent, seamless experience.

>> It made me feel more like a Londoner. I feel like what is happening in London is all about. We can be in the midst of things a little bit more rather than having a person guiding us and making sure, you know, we keep away from everyone. I think it just made me feel included in this traveling.

>> Won't be underground. We can use it on our own as well. Because I travel outside of London as well. And I need assistance for that as well. It would be really revolutionary and change our lives I think. We wouldn't need any assistance to get anywhere. If we had WAI Finder if we -- it would bridge the gap.

>> Yeah, what she said. Yes.

>> TOM PEY: These seven young people got together and

because Apple and because other mobile phone manufacturers were building in accessibility upfront, they really believed that an app could change their lives. And we are lucky in London that we have quite a lot of technical people who are prepared to give time freely to help change the world for the better. And we got together with a digital design studio and they helped us to build an audio-based navigation within the London underground system in conjunction with transport for London.

The other thing was that all these rail accessibility and safety regulations and everything didn't really allow for this to happen. But again because the young people were driving it with such enthusiasm all these regulations got out of the way and it happened. And that was quite a miracle. Then we began to understand that the problem was bigger than blind young people getting around London underground. This was a worldwide problem. The piece of research I did some years ago when a person goes blind, 30% of members will make a decision actively, make a decision not to go out alone ever again.

So freedom of movement for blind people is although a right, is something that isn't attitudinally available. So we decided to develop an open standard, something that we could share and help the world to bring about the change that was required to help blind people. And we approached the ITU ourselves along with the Metropolitan University of Oslo. Put together the world's first standard on audio-based navigation for visually impaired people and they agreed to do it. It has been published as Standard F921. That was a great milestone. And indeed having a world body such as ITU doing something like this is amazing when you put it in to context, this was a dream of seven young people. But the problem then became that and again people you are talking about is a lot -- is that here is something that would help a lot of blind people across the world, but actually to make it work blind people have to make it work for everyone. And it is okay to have a navigation system that is friendly to blind people but it doesn't solve the problem for sighted people and nondisabled people. And if not a demand for that type of service, then this will go no further than a beautiful standard on a very nice piece of paper in a very August Body's library.

So Dr. Tim Murdock and myself decided to take this on as a challenge and actually the problem was bigger. It just technologically is based on how to work within the mobile telephone system. And we set up a company called way Map Limited which we just launched to build the world's first F921 compliant audio-based navigation system with a level of accuracy in it and a level of flexibility within it that would allow everyone to use it. And the more we talk to Governments, the more we talk to local authorities, the more we talk to commercial bodies, this

is a solution that they really want. And we are delighted and we see that this audio-based combined indoor and outdoor navigation using other systems other than GPS is going to be something that will change the world for everyone, but most importantly will free up the 30% of visually impaired people who decided never to go out alone. So the driver from my presentation is that you know when we are disabled, and we have a dream, that dream can change the world. So thank you.

(Applause.)

>> ROSHEEN AWOTAR-MAUREE: Thank you. We are running really short of time. And I seek your indulgence to take questions maybe during lunchtime so we can give the last speaker a chance to intervene. Our last speaker is Mr. Wolfgang Kampichler who is going to talk about emergency service accessibility. Something that was touched on by some of the speakers before. Thank you.

>> WOLFGANG KAMPICHLER: Thank you. I am talking about the emergency services accessibility latest technologies, but first I'll give an overview of the current situation, the landscaping in Europe. You see there are different solutions around. And I think a very good example is Sweden because in Sweden they have great accessibility not only because of Gunnar Hellstrom and we did a lot of good stuff together.

Back to that one, you see a Get SMS service for accessibility. There is no number for that in Europe. In Austria there is a specific one. And not every one of you knows the number you need to use if you'd like to send an SMS message to emergency services in Austria. If you have an incident in the Western part of Austria it still gets to Vienna. All the solutions dealing with the next generation need to cope with that. And I am going to tell you how that works and how far we are with that. Yeah, that's the example with the single numbers. There are a few countries supporting one or two. But as far as I know I think that gets to the (inaudible). So the problem again is that there are nice solutions around. There is accessibility services around.

The problem is that they are different. And if you are traveling around, then it might be the case that it doesn't work in the same way. But the good thing is that we will have some organizations who are working on standards and defining some architectures and one important one is the Internet engineers task force. A specific group dealing with emergency context resolution or equipment. And they released very good documents and they were taken by the national emergency number in the U.S. And they are an SDO. And they are working on the i3 document which is an architecture and standards to define the core elements that are -- we have originating networks in the telephone networks. If you dial an emergency number in Austria,

you get connected by the telephone network. But in the future around also to get additional features like multimedia total conversation you may have to use the Internet and for that different things are required. So we need some core services. And we do the same in Europe.

So the European emergency number is aligned with NINA and defining the same core elements. Here it is a support. So there is a special Committee, emergency telecommunications and we are working on a standard describing those elements necessary to get access to emergency services and also have the multimedia services for accessibility.

Do they look alike? Just a brief overview. It is not the technical details. What you need is some solution that helps define the correct emergency center. In Austria it is a responsibility of the federal states. It needs to go to the emergency center for Altberg and not Vienna. And this is done using service boundaries defined by polygons. It is not the area codes but something independent of originating network. But what you need for that is a location that can be used in order to find out where to route emergency calls to. And in order to route we need the protocols. So IP-based, there is protocols around and those things need to be defined and standardized because as I said before just traveling abroad and you have your mobile phone or Smartphone with you and you have a nice app for accessibility. It may work in Austria but not in Germany. The other services that we need is managing location information and for sure support multimedia. Total Conversation is also part of these standards. And for sure we also need security because those systems connect to the Internet. And we have to protect the piece of security infrastructure.

Yeah, this is just summarizing what we get in terms of media. So we have audio/video realtime text. It could be an SMS replacement. But it would be at the end very good to have this Total Conversation in place. And that's actually based on what Gunnar Hellstrom has standardized or specified years ago.

Yeah. In Austria, we started a pilot for accessibility. We call this deaf emergency call in volume 2. And it was not very easy to get some funding, but at the end AT&T from the Internet service provider Austria they provided us a grant. And we were able to implement standards based chat application for the deaf and hard-of-hearing but it is not only the app. So if you consider emergency services as the app, it is perhaps the device you are using but you have to get this -- your text or all the information to the PSAP. And the PSAP also needs to be ready for that. In order to get to the right one you need routing elements and also part of the project. It is not just the application. Within the project it is more the routing and mapping functions

in between.

If you would like to read more about this project and there are some websites, from Net APP which is the official one from the granting body, and the other one is from the project. Our aim is to support this -- federal and state in Austria. I think it is a very good reference because it would work in different European states countries as well. Sorry. Where they have the same model. So it might be very easy in the UK. So everything gets to British telecom control rooms or contact centers and then they forward the calls to the ambulance or fire brigades. In Germany or Switzerland you have the piece that is responsible for the location the caller starts to call from. Yeah, we also provide GPS location. And just an example of how this works. So if you GPS is enabled on the Smartphone you can track people even if you kind of -- Slot Canyon I was in a few weeks ago just testing that application.

Yeah, that takes me to the last slide. So here is just an example of how this works. And it is being now tested by the Austrian Association of the Deaf and Hard-of-hearing. I see one person in the room who is actually testing that application. So on the left side you see how it looks like. We have the number of Austria. We are changing this to the symbols with the next release. Numbers are different throughout Europe. And when the technology is behind we don't need a specific number. If you need the fire brigade, then you press the symbol for the fire brigade. It looks like water, if you are (inaudible) it is pretty much the same. So you get some indication, what we do we send an automatic message providing the information location. And then you get the response back from the emergency center. And then you can chat and talking about the situation.

Yeah, that's it from my presentation. And I am happy to take questions. Thank you.

(Applause.)

>> ROSHEEN AWOTAR-MAUREE: Thank you. Thank you. I don't know if we can take questions. Unfortunately there are a couple of questions. Maybe we will have to take it offline. I am getting -- I know there is questions there. I would ask you to probably connect with him offline just right now. We are supposed to have another actual intervener after who has graciously moved his intervention to the start just after lunchtime. It was a special address by Mr. Araya. Right now I would request you to talk to Wolfgang on one to one. And we go for lunch and we are back here at 1355 because we have that special address. My apologies not take questions here.

(Session concluded at 12:38 p.m. CET)

\*\*\*

This text, document, or file is based on live

transcription. Communication Access Realtime Translation (CART), captioning, and/or live transcription are provided in order to facilitate communication accessibility and may not be a totally verbatim record of the proceedings. This text, document or file is not to be distributed or used in any way that may violate copyright law.

\*\*\*