

## RAW CAPTIONING TRANSCRIPT FILE

### ITU WORKSHOP on Enhancing human life using e-services GENEVA, 25 MARCH 2019, 1430~1745 HOURS CET

Services Provided By:

Caption First, Inc.  
P.O. Box 3066  
Monument, CO 80132  
800-825-5234  
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.

\*\*\*.

## SESSION 2: Addressing new frontiers to enable Accessible e-Services

>> ANDREA J. SAKS: Is everybody ready? Okay. Welcome to the afternoon session of enhancing human life, using eServices. I have quite a long list of people, a nice list of people who are here and as I introduce them, they are going to indicate who they are. I am first, Andrea Saks, Chairman of the Joint Coordination Activity on accessibility and human factors. I run through all of the sectors trying to get them to talk to each other to prevent duplication. On my far left, we have Masahito Kawamori, who will acknowledge himself. There he is. He is the Rapporteur for question 26 in Study Group 16, which is accessibility, accessible standardization work in ITU-T. He comes from Tio university in Japan. I have also on my near left, Khalid Choukri. I got it, my gosh, I'm excited. Chairman, ISO, IEC, SC35, and the ELRA Secretary-General and ELEBCEO in Luxembourg. It's ISO IEC SC35 current and future standardization use on interfaces which is what his specialty is. At the far end, we have Seth Bravin, he uses a sign language interpreter and he is profoundly, I don't want to call you hard-of-hearing, he is profoundly deaf and he is from strategic alliances accessibility in Washington, D.C. USA, he is one of the people that work in relay services for people with disabilities who are deaf, hard-of-hearing or voiceless, and he is going to be talking about the Telecom relay services and their importance and their evolution. Then we have Sabine, Sabine Lobnig, Deputy Director of communications, regulations, mobile, wireless, MWF is what its a little thing is, shortening, from Belgium. And we are going to have the pleasure again of having EA Draffan, did I say that right, who is a member of the European Disability Forum, ICT expert group, so that is our team here today. We have 90 minutes. I'm going to watch the clock, that is my job. You don't have to listen to me very much now.

And I'm going to start with our Rapporteur for the accessibility question, Masahito Kawamori, so I'm going to allow everybody ten minutes, and that might include, and we will have a question and answer period afterwards.

Mr. Kawamori, you have the floor.

>> MASAHITO KAWAMORI: Thank you very much, Madame Chair. My name is Masahito Kawamori, I'll be talking about accessibility standardization work in ITU-T and future outlook. Next, please. I do it like this, okay.

Accessibility is, I can say is part of SDG, Sustainable Development Goals, as the United Nations has set out, and it's a very important work. So, we are trying to standardize accessibility. Why is it important? Because standardization will improve interoperable so products will be operable with different companies, products, or across countries and especially important in times of emergency, because noninteroperable devices or products will not work in other situations. And this interoperability will ensure lower cost of operation and purchase. And the competition will be made more and the competition will make prices even go down further. So that will make products affordable to the user. Market entry and development of products will be easier. That will make more availability for, especially for persons with disabilities.

Question 26 of Study Group 16 is the group specifically designated to deal with accessibility to multimedia systems and services for persons with disabilities. We are responsible for developing or assisting in the development of multimedia technical standards addressing accessibility needs for persons with disabilities, our work is done with direct participation and contribution from persons with disabilities. So we are following the motto, nothing about us without us. We cooperate closely with the persons with disabilities organisations, such as World Federation of the Deaf, as well as with other U.N. agencies, for example, W.H.O.

Now I'd like to introduce some recommendations we have developed. We don't talk about all of them, but we have an accessibility terms and definitions for global standardized vocabulary, we have H.702, which is accessibility profiles for IPTV systems. We also have F.921, which is audio based network navigation system for persons with vision impairment. And F.930, which is multimedia telecommunication relay service. I'd like to take F.930 first and talk about that slightly because Seth will probably be talking about telephone relay service. Anyway, so F.930 is about telecommunication relay service, and it is the newest standard in the world about a relay service.

Relay service itself, if you don't know already, it enables deaf and hard-of-hearing person to make a voice call with a hearing person, as you can see in the diagram on the right-hand side. And communication assistance mediates between the callers and with a sign language or with text. It is an absolute necessity in inclusive society for deaf and hard-of-hearing people.

This ITU-T recommendation was edited and contributed by, as I said before, deaf and hard-of-hearing professionals, engineers, telecos,

university professors and as I said it's nothing about us without us. It describes current widely available service types of telephone relay service, sign language, text relay, caption telephone and so on. A important principle of functional equivalency of telephone relay service is emphasized in this recommendation.

The next important recommendation is an audio-based network navigation system for persons with vision impairment. Unlike the previous one, this is about blind people. It describes how audio based network navigation systems can be designed to ensure that they are inclusive and meet the needs of persons with visual impairments. Targeted especially for indoor navigation, which cannot depend on GPS, just like outdoor, targeted especially based on contributions from Wayfinder which is currently used in London underground and other places, and more follow up documents are expected. So I will show you some samples, I will show you briefly how it is done, about video. This is Wayfindr. It tells you how this navigation system works. It is a spoken instructions, audio, so that people can listen to the prompts to navigate. Yeah, can you put the microphone .... (pause).

(microphone feedback).

>> Welcome to station, follow the ramp to the ticket hall. You are halfway down to the ticket hall. Turn left and walk down the stairs. There are nine steps. Bear right and walk forwards to the ticket barrier. You are approaching the barrier. The down escalator ...

>> MASAHITO KAWAMORI: That is how it works. There are some other drafts that we are working on, I'll introduce some of them now. One is requirements of information service system for visually impaired persons. This I introduce as sort of a system that would help visually-impaired person with very detailed information about the environment through volunteers which help the blind person to move around. So this is the diagram of the system.

The next one is framework for audio sign for persons with vision impairment. The reason why we are working on this audio sign is since Braille is not currently widely used by the blind people. So for example, in the United States, fewer than 10 percent of the legally blind people use Braille. In France, only ten to 15 percent of the blind people use Braille. In the UK, fewer than 1 percent use Braille. In Japan, about 10 percent of the blind use Braille. So it means blind people do not use Braille so even though it's important to teach Braille to blind people, still blind people need accessibility to information right now immediately. A obvious choice for such means is through audio. That is why we are creating this kind of an audio signs which is two-dimensional data matrix code which allows to encode data as dots and to apply the coded data on a surface as fixed image, automatically optically readable form. It is much like QR code but audio sign can contain much more information, can be colored or black and white as you can see on the slide.

The use cases are like on a package, or pamphlets or name cards, receipts, things like that, and gives the blind audio access to information which have not been available so far. It has been already

implemented and used by many agencies and companies, as you can see in the real use case.

We are working on hardware, software, coding, printing device as well as API and collaboration with NFC and use cases for accessibility, for example, how to give orientation to the blind, standards on printing and positions. Lastly I would like to speak about FSTP.ACC, guidelines on use of AI for ICT accessibility. The technical paper voice the use for AI for ICT accessibility such as automatic recognition for captioning are described with pros and cons. It describes parameters and criteria for objective and quantitative assessment. The emphasis is on use of automatic speech recognition. We are planning a workshop or workshops on ASR inviting vendors, manufacturers and stakeholders so that we can have appropriate benchmark and metrics. That is the conclusion, so we have been working on this and currently work, for deaf as well as hard-of-hearing and blind people. We are more emphasis on accessing information and current work includes AI for accessibility. Thank you.

(applause).

>> ANDREA J. SAKS: Thank you, Masahito Kawamori. You are right on time. We are going to do questions at the end because we want to make sure everybody can get what they want to say in. Hold your questions, don't forget them. We will have that at the end. The next person to speak will be Khalid Choukri. Almost there, please take the floor.

>> KHALID CHOUKRI: Thank you very much, Andrea. Good afternoon, everybody. I'm Khalid Choukri working for the European language resource association but I'm here as the Chair of SC35, that is dealing with interfaces.

From the ISO G TC 1 definition, coupled with SC35 is as you can read here I have tried to highlight a few key words, user system interfaces information and technology and communication technologies, accessibility, specific needs, cultural and linguistic adapt ability. These are key words in what we are doing. I'm grateful to ITU and Simao for the opportunity to be with you today to show you that there are other organisations working on these topics, the way W3C, ITU and others, organisations that we work with.

In framework of workshop of today, SC35 is about user interfaces and accessibility. If we look at the title of the workshop human life and eServices, and the boost of artificial intelligence, using in our environment, we are talking about speech recognition, machine translations, speech to speech translation, all these are topics that have been already introduced this morning, and I'll just mention a few project working on in SC35.

The general scope, I tried again here to show that what we are dealing with are how to control and navigate within systems and devices, what kind of input and output we can have to make sure that they are accessible for many users.

What we are dealing with in the area is a number of modalities that I'm listing here, speech input output using speech as a modality to interact with systems, text, including what we can find in document

management, sign for sign languages, handwriting, gesture, images, biometric data, else, etcetera, and of course, we try to put this in a multilingual framework.

I will come back to that, because that is really critical issue that we would like to consider as one of the key aspect of accessibility. Let me just mention a few key contributions that we are doing within SC35 and one of the important documents that we have been developing within the group is the user interface accessibility, code of practice for creating accessible ICT product and services. I think this is one of the major contributions, and the idea is really to set up the grounds for the practices that we have to comply with in order to create products that are accessible. Another document or another type of work is the user accessibility needs, this is a report about kind of overview of the needs, and again what we would like to do is to put that into a framework, where we have all these modalities for input and different modalities for output. So you can imagine that input would be speech, could be text, could be sign, image video, and some of the technologies that we are dealing with are dealing with transcriptions, the way that we are captioning right now, audio descriptions, subtitling, and translation.

Let me move to that, given my time, I just try to take you through a few things quickly. This is one of the last piece of work that we are trying to address, sign languages for use in video content, I'm happy to see that Dr. Fourney is with us today. The idea is to make sure that all the video content is accessible, through a number of modalities including sign languages, and we are working to make sure that this is achievable. Another topic we would like to work on and that we started working on this is easy to read. Easy to read is really critical aspect of today's digital words, and we come up with guidance on making the content easy to read, and you can think of it from different perspective. It could be linguistic. If my knowledge of a given language is very poor, I need to have something that either translates information to me, or can access to dictionaries or simplify syntactic aspects, etcetera.

It could be also interfaces and devices, maybe I need different contrast of characters, maybe I need to have it spoken to me instead of reading, etcetera. This easy to read is really one of the important pieces that we have within SC35.

There is another topic that we have started doing, this is the affective computing user interfaces. We would like the interfaces today to consider emotions, sentiments, moods, in the design of interfaces. I might need different interfaces if I am upset, or frustrated, or happy, that should be considered by the people designing these interfaces.

We have also a number of activities in face-to-face translations and simultaneous interpretation, etcetera and I'll be happy to get to questions afterwards.

Let me go to my conclusion, we are running out of time. But there are basic things. If we look to a very simple issues like the use of languages in some of the most important services and applications

today, I check today if you are on LinkedIn they are using 24 languages as interfaces. Twitter in 2015 was using 48. It went a little bit up, but this year it's still low, if you are familiar with Google translate, I checked today, we are about 100 languages and you can go ahead with this.

You can see even for basic things that we need access to, most of these services are dealing with a small number of languages, compared to the 76507 languages that exist in the world.

The challenge is really quite important.

This is my conclusion. I think we have, we consider that accessibility is really essential, and accessibility means also a very high degree of customization and personalization of interfaces, which might require a lot of data collection, data compilation, within the IA or data driven paradigm. This involves somehow all the privacy issues, all the data management issues, and as some of the speakers said this morning it requires some trust, can we trust a black box, do I have some input and output but you don't know what is inside. How can we make this more transparent and how can we make it more fair, and how can we bring in some more ethics. This is part of what SC35, hopefully some of the other groups will be working on. Thank you very much.

>> ANDREA J. SAKS: Thank you.

(applause).

I'm going to, Seth, you are next, as soon as the interpreters trade places. I'm going to ask one question of one of the interpreters for me, when I get to two minutes, I'm going to do that, so you can signal, okay, that is great. Keep an eye on me. Seth, please go ahead.

>> SETH BRAVIN: So, I'm going to stand up, just because I'm signing and I want to make sure the other signers in the audience can see me. I sat on a plane all night and it's nice to stand up for a little bit.

So, hi, good morning, or good evening, whatever time your body is telling you it is right now, I'm Seth Bravin, I work with Sprint, I'm a part of a new frontiers programme which is international access to relay services, relay services as we all know it's not new. Many countries don't have relay services. For the countries that do, there are still certain challenges in terms of international accessibility to relay services. Next slide, please.

The first part of my talk I'm not sure if everybody is familiar with the UNCRPD, it's the United Nations Convention on the Rights of People with Disabilities, there is over 150 countries that have ratified the treaty, the convention. There are some, of course, challenges in terms of implementation and provision of services, a good example is five years ago, I was working with IBM before I joined Sprint and I was on a field mission in Indonesia, anyone here from Indonesia? No? Very beautiful country, I recommend it. It was a life changing experience for me, I was working with a disability organisation, supporting them, bringing some best practices from IBM to their

organisation, and in the middle of my stay, there was a volcanic eruption, two hours east of where I was staying.

I was okay, it was quite a scary moment to have this ash fall, so I was trapped in the hotel for three days, with a kind of dust mask, and I couldn't make any phone calls. I was isolated. There is no relay service in Indonesia. And even if they did have relay service, I probably couldn't have used it because I'm not a citizen of Indonesia. It is the same thing here in Switzerland, I can't make phone calls while I'm here, Switzerland has a relay service but I can't use it.

The systems aren't there to allow globalized citizens, so I was in Australia a couple years ago, and I had to make a change to my flight itinerary, I wanted to fly out of Melbourne instead of Sydney and I couldn't do it, I had to go to the airport myself and I thought this isn't really fair because it's only for Australian citizens. I didn't have access to accessibility there, it's a government funded programme and you understand the reasoning behind it. But right now, ITU is, I know looking into some of this international interoperability. It's a new topic for us.

So I wanted to bring this up at this high level workshop, to make sure that everyone, and I know that Andrea is going to be speaking at the World Federation of the Deaf Congress in Paris which is a very big, their biggest congress in July and she will be bringing up some of these topics as well.

So, when you look at international conventions, such as the CRPD, there is still a lot of the practical work left to do. Now, the SDGs, as we are becoming familiar with, so where do relay services fit into here? Some of the leaders of the disability movement say, it's number 9 which is industry, innovation and infrastructure.

I won't go further into this. I'm just giving you an idea of where this is going. Masahito just talked about how the relay services work, and there are different forms of relay services. This is a text-based relay service model. We have video relay service models. We have captioning telephone relay service, we have speech to speech service. Interoperability is really the key challenge here. For countries that have relay services, it's incredible the amount of platforms, incredible the amount of standards that we don't have internationally.

That is where I think ITU comes in. On a national level, there is no international standard to follow, and that is I think the work that we need to start doing in the next couple of years in this building. We have made some really great progress but we are not there yet.

If you look at this matrix, another challenge is the call centers, so the confidentiality and security, so the complexities involved with international access to relay services involves all of these challenges. We need to overcome them. Masahito mentioned last year we published a standard for national level access, and the guidelines don't include anything about international access to national relay service providers.

So, we don't only have to look at this as a gain for either public or private sector, we need to bring in the tertiary sectors, so Sprint is

working with the university in New Zealand, for example to develop a pipeline or to increase the pipeline of interpreters who are being trained, because there are not enough sign language interpreters in New Zealand, and so we are working with academic partners to make sure that innovation can be accelerated with the power of human resources.

I will finish off by looking at some take away message, looking at the roadmap, looking at national and international level best practices, so that I'm proud to say that ITU has played a big role in pushing us to this point, and I think, I mean I'm here to try to push us even further. And we will grow, so that deaf and hard-of-hearing people can make calls in emergency situations when they are not at home. This, we are now, this is a global economy, this is a global everything.

So we are all becoming more connected, and let's make sure that connection is accessible. Thank you.

(applause).

>> ANDREA J. SAKS: Thank you, Seth, yes, I am working on that. Well, I'm not going to talk about that. I'm going to move to our next speaker, which is Sabine Lobnig, you are on.

>> SABINE LOBNIG: Thank you, Andrea. We had already in the morning the lady who talked about the content, she mentioned all this, device is accessible, if you use it, if you don't see so well and also the telerelay service, of course it's wonderful to have but it's one part of a ecosystem, and of course our access points to many of the services are not well designed. That is something I will talk to you about today shortly. Who we are, we are the mobile and wireless forum, the association of telecommunications equipment manufacturers, both on the [inaudible] as well as networks. As far back as 2008 manufacturers became interested in better promoting accessibility of devices. They notice they integrate features in devices but information about the features never arrived at the consumer level.

The users might buy those devices, but they didn't actually know what the devices could do for them or even worse, the blind person or deaf person would go to the telephone shop, to the network operator and say I need a device for me and the shop person would say it doesn't exist.

In order to remedy that, the manufacturers put their efforts together and created an on-line database. The idea was to present all the information about accessibility features included in the devices. It started out with only mobile phones. It considerably grew over the past ten years and today you find information on accessibility features of over 1500 devices, including mobile phones, tablets, apps, connected wearables and recently also smart TVs.

This database is accessible on-line. If you go to your browser, you come to the home page we see on the screen. There you can make your choice, what kind of device you are looking for. The device will give you different option of searching for device. Either you have already very specific idea in mind, say you are blind and you absolutely need a screen reader, or you are a deaf person, you want to have a device that has enough resolution and can support sign language communication, or maybe you are a elderly person and you have tremor



in your hand and you are looking for a accessible device. On the other hand, it could be that you are not well-informed, you just know that you are not seeing so well and you want to see if there are any devices out there for you.

The database will give you different options to look for that. In the database, you find currently information, over 120 features for mobile phones, those are wide reaching from screen readers to support of closed captioning, to all sorts of different accessibility features. We have then of course a few lesser ones for tablets, for smart TVs and also for wearables. In terms of reach of the project, we have over half a million page views per month. That only captures the people coming to the website. But there is a good number of organisations which take the data and integrate it into their own websites, including new regulators who put GARI into their website as a service to their own citizens so they can push the information about accessibility on a national level.

We have to date 25 companies participating in GARI, those are not only big ones in the market but also some smaller ones like (indecipherable) in France and Japan. The database is available in 18 languages.

In terms of where accessibility features come from, in the beginning they were developed together with the disability community and accessibility experts. They are not set in stone. We are currently preparing the gift GARI feature review where we invite all the stakeholders to look at the features and tell us they are happy with them, if they feel there is something missing, they think there is something obsolete. We adjust the database accordingly.

It makes sense to participate in the feature review, it is shown on the next slide, so on the right side we have the feature emergency services and location, this was one feature that was suggested by the European Disability Forum in 2017, and that we then included in 2018 in the database. Since then, so we started with devices having [inaudible] in a year it grew to 110 devices supporting this feature.

This steadily grows. As we see with the screen reader between 2016 and 2018, the percentage of devices having a screen reader grew by 24 percent. It does make sense if you feel there is a feature missing that you let us know, and we can include it in the database.

To the question of who should use GARI, we think everyone, in particular consumers who are looking for device, but also governments to push the mobile accessibility on national level, Telecom providers and device retailers, but then also disability organisations, therapists, universities, really everyone who has anything to do with accessibility and mobile devices. Beyond the database we tried to promote mobile accessibility by creating communication materials. I have here a few feature guides where we try to explain in a very simple way and concise way what kind of devices and what kind of features we have in the market. If anyone is interested, please come and see me afterwards.

On this slide is really just a short summary of what is the GARI, what the database has to offer. It is a vast set of accessibility

features, which can be used for governments to help fulfill their obligations under the UNCRPD. It is a easy or supposed to be a easy way to get information on accessible devices in the market. It should definitely increase the awareness in the general public about those features. This week we published the GARI annual report 2018, where you find a lot of statistics about how mobile accessibility features have evolved over the past ten years. And what people are looking for in different organisations, and so if you would like a copy, even better if you would like to participate in feature review, I invite you to come see the presentation. Thank you very much.

(applause).

>> ANDREA J. SAKS: Thank you, Sabine. Right on time. (pause).

>> The digital accessibility standards new frontiers, I think I'm very brave saying this, on behalf of the European Disability Forum, because we have just heard again a series of amazing talks about the standards of which I am not the expert. I have to say, the European Disability Forum have worked very hard to make their users the experts in this field. In other words, not just those of us who work in universities and teach computer scientist students like I do, to try and look at the standards, this is a extremely difficult thing to do. I'm hesitating saying that. You try teaching a group of master students about standards, and you can guarantee if it's a 4:00 lecture, you won't have many there.

So I admire European Disability Forum and everyone else involved in this work tremendously, because it's not easy to explain, what a standard is, to someone who is trying to make a mobile phone, unless you send the students to the GARI database to go and say these are the features, now go and look at the standards. There is quite a lot of complexity there.

Very often what we end up doing is saying, standards are crucial, and ITU has a wonderful explanation for this. They are the key vehicle, I want you all to imagine the tap in your bathroom, the washer goes, if the washer goes you have water all over your bathroom floor. Nine times out of ten you can ask a plumber or somewhere and they will giver you a washer that will fit that tap. That does not always happen for those of us trying to work in the accessibility world. In English, we made up a acronym, because I know ITU loves acronyms, I'm sorry, I'm not very good with some of the acronyms but anyway we made up one in English, I'm going to explain that. We put the user central to this. We then looked at standards as a way of trying to help our students.

But also, as a way of explaining what organisations like the EDF are trying to do, this is a foggy day in Scotland, you are on the road, you can't see much, it's misty. You are suddenly presented with 90 pages of accessibility needs, this is ISO IEC, whatever. I happen to know the people who wrote that and I admire them tremendously, because it's a very long document. But try to make that easy for people. What we did was we said, look, don't look at the disability so much, look at the strengths of that individual. What can they do with your technology, that you are trying to build to a standard.

What are the tasks they are going to be doing, what are the resources that are being brought to those tasks, environment in which they are working, the expertise around them, and then the technologies that they are actually using, their assistive technologies or their ICT technologies. Street works in English, I tried to do it in Dutch. I came a cropper when I came to the two As and tried to do it in French, rue, it is not multi linkage. The difficulty we have is interoperability between our countries. I'm on the British Standards Institute for accessibility, which happens to work with the ISO and all these other organisations, really we do need to do exactly what has been said before, which is to get together, try and make it easy for things to work.

Otherwise, we have a load of stuff on one side, whether it's documents, devices, whatever it is, and we now have artificial intelligence in all its flavors, and on the other side we have this myriad of acronyms for standards. Somehow, we need to be able to explain to people how these are going to work.

One of the ways that the EDF has done is to produce a design for all approach. This is something that I feel very strongly about, because I think if we don't design for all, we are going to leave out people. So one of the things we want to do is to include AI in the standards, and we know there are standards now out there for IA, AI, sorry, but they are not necessarily considering the diversity and all disabilities.

So we really need to plug and pray, as far as the EDF is concerned, they have already produced a document that has recommendations. It will be published on their website very soon. I ask you to read it, because it does have some strategies. I'm going to end on that note in the hope that we can bring us all together to have some strategies.

(applause).

>> ANDREA J. SAKS: You gave me two extra minutes. Thank you very much. Everybody stuck to time. The questions are now open. One second. I don't want a speech, I don't want your beef, I want a question. So I saw Christopher's hand go up. I also saw Mohanad. Christopher, your question.

>> Christopher Jones, I'd like to address the lady about GARI. I've known about GARI because my deaf organisation needs to promote that, but the most difficult part of GARI is the salesperson in the shop, who has no information about what is available in the devices. So what is there that we can do about that? Because the information available is enormous and vital. (pause) but it's not reaching its destination. Thank you very much.

>> Yes indeed, that is one of the issues that we are struggling with, is really to basically I agree with you to get every single telephone operator shop to have GARI on their web browser and when ever anyone comes into the shop to ask for a accessible device, just pull up the Internet. We have not been tremendously successful so far. We have some operators on board, but the problem is that like always, you have one advocate and he pushes information in private company and the advocates moves on to somewhere else and information gets lost.

So what we are trying to focus now is really get the information directly to the consumer. So bypass the operator, and really try to work with the organisations of persons with disabilities but also senior organisations, consumer organisations and find a way directly to the consumer. The idea would be if they find the device, no, you don't agree? Okay. (chuckles).

>> No, that doesn't work, because most hard-of-hearing people, most hard-of-hearing people do not belong to any organisation. That is the biggest problem. Your approach will not work.

>> Okay. So we still need the operator, then I hope that at least we get Sprint on board (chuckles).

>> ANDREA J. SAKS: Thank you. There is one, European Federation of the Hard-of-Hearing, and the International Federation of the Hard-of-Hearing. So they do exist, Christopher. Lidia, if she was here, she would smack you. The point is it does exist. But there is no organisation, and at that point you are correct. You had a question.

>> MOHANNAD ELMEGHARBEL: Thank you, Madame Chair. My question also to miss Sabine, the first question that you are listing the features that are found in different mobile phones, but do you check that they are standard based augmented or just that the feature is there because maybe they will be different from one vendor to another so it's not always the case.

My other question is, though your website is providing some different languages, I'm not sure how many languages do you provide for everyone, to connect different persons all over. Thank you.

>> Can you just repeat the second part of the question related to languages? What exactly --

>> How many.

>> So, I start with this answer it's 80 languages for the moment and we are happy to expand that further. The criteria for that is that we need at least one key stakeholder in the country who commits to help us to translation. We do the translation but they do the quality control and help us and also push it on a national level.

To the first part, so, if the manufacturers themselves uploading the information, so we don't really check that. That's, as they are competitive, they check each other. So at least for that, to make sure that the information is correct that they upload, that is peer checking, peer control I would say.

In terms of how it relates to standards, we don't check that. But in the accessibility working group, the manufacturers do agree what they mean with the feature but we don't as organisation as such, we don't check that this is, that this relates to the standard.

What I would also say is that, for example, manufacturers use GARI to report on national level, for example, they can issue [inaudible] GARI, they need to be careful that what they indicate in the database is up to reality, because otherwise they will have problems afterwards.

>> Quick comment about the complexity of standards. Do we need to have complex standards. I know by experience that they have to be complex, we are dealing very often with complex technologies, with complicated scenarios. They have to be reflected in a very easy implemented for the users but for technologies and for people who want to implement they have to be complete, not simple.

>> ANDREA J. SAKS: Thank you. That was Khalid Choukri, forgot to say that for the captioning, get smacked. Next person who wants to ask a question is David Fourney.

(microphone feedback.)

>> This was a very interesting.

(microphone feedback).

(sorry, all I'm getting is microphone feedback).

>> Okay. Interpreters are happy now, their ears aren't ringing? So, a few comments plus some questions, because this was a rather heavy session with very little down time. First, Khalid, thank you for mentioning me. It is always appreciated.

Secondly, I was wondering with respect to GARI project, whether or not there is work being done to have salespeople trained in some way on the presence or existence of Gary. So that when customers with disabilities are asking about this stuff, the salesperson at least has some training in this stuff. So going back to his comment earlier, in Canada, the hard-of-hearing association has a roughly 300 members, and a population of several tens of thousands of hard-of-hearing and deaf people.

In terms of people being aware and knowledgeable, some populations will have that within their community and many won't, my next question is for you, I noticed your comment on the complexity of standard as well, and by the way, thank you for the reference to the user needs summary. The user needs summary is a massive piece of work, that had been going on for several years, and involved a huge ...

(audio breaking up).

People with disabilities. I wonder if you can comment on ways in which we might communicate better about all these different layers in organisations with regard to standards. Thank you.

>> That will be a short answer. The answer is, we push the information, most try to push it to the accessibility teams of the network providers, so that they can trickle it down to their salespeople. We as a association don't have the capacity to reach out to their salespeople. We also don't think that we should do that. It's something the network operator needs to decide to do.

We know that, for example, we hear back from some of the network operators that they do it mostly it's at the international level, for example, from Qatar, happy to use GARI as training tool for their staff and we hear from other network operators, but it's not general yet but we try to get that.

>> ANDREA J. SAKS: EA, please.

>> E.A. DRAFFAN: Yes, David. I'm interested in this business of trying to make the complexity less complex, because I'm, I maybe have 40 students of which 30 are international and don't speak English when they come to our university. We use personas. So we are taking some of the elements of each of the standards and trying to make them real. In many ways, what Andy and Rory did and I had to read that document, was to try and make that come together in to real people and what real people need. Very often we will have lecturers who come in who have disabilities themselves and are willing to share their experiences. It is the only way we can do it. But it is not easy. It really isn't. Especially as you may only have ten weeks in that course to try and make computer scientists develop apps that actually work.

>> ANDREA J. SAKS: Thank you. And we are on time. If you have further questions, we have a coffee break, and the people who have been on the panel, I'm sure, will be happy to talk to you on a one-to-one basis.

I want to thank Masahito Kawamori, Khalid Choukri, Seth Bravin, Sabine Lobnig, and EA Draffan, thank you very much. I'm sorry we didn't have a longer session because all of you could have gone on longer. Yes, the leader over there, go ahead.

>> One notification. We have 30 minutes. Yes. We are happy to ... we are happy to continue ...

>> I'm Chair of SC35, Khalid Choukri, I'm happy to hear comments for professor to make sure that the people take that and implement real application, and I think this is a very good feedback, that we rarely get during our meeting and discussion. Please feel free to have a

look to what we are doing in SC35, 36 and other bodies, because that impacts really our daily life.

If there is things that we can do to make this easy or whatever, we will be happy to do that. In our last meeting, one of the resolutions that we took is to try and convince ISO to apply our recommendation for its own work, to make the meetings accessible, to make the report accessible, etcetera. We feel that is where we should start. Thank you.

>> ANDREA J. SAKS: Thank you. I'm going to go down the line. Seth, you have got some extra time. Is there something you would like to communicate about international relay service access?

>> SETH BRAVIN: No. This isn't really related to my talk, but I saw one of you mentioning sign language to video content. For me, I would prefer captioning, actually. And this is just to show that there is individual preference, for one thing. If you look at WCAG, AA, the web content accessibility guidelines, it requires captioning. AAA requires, or encourages sign language. It's nice to have. I don't want to put unnecessary burdens on the suppliers but if you remember, sign languages are many, right, so we don't have one sign language for the world. There is a different sign language in basically every country, sometimes more. So captioning actually is a more, is better baseline. It helps everyone, not only deaf and hard-of-hearing people, it helps people in noisy environments, it helps people in airports, it helps people who are learning the language. If you add sign language interpreting, that's great.

So for meetings like this, yes, we need sign language interpreters. But for TV and videos, it's very individualistic in terms of what the preference is. I can't speak for everyone. But you have things that are more required than others.

>> ANDREA J. SAKS: Okay, so different --

(off microphone).

Christopher, do you want to talk about -- (pause).

>> CHRISTOPHER JONES: Christopher Jones. I'd like to address, we now have a problem in that we don't have many relay services around the world yet. Even in Europe, we can count the number of countries on one hand, or possibly two at the most, so how do you think we might be able to promote this to the rest of the global countries, so that they choose to adopt relay services? Because it's important, A, for improving employment prospects, B, to enhance social integration.

So how would you imagine we could promote this to other countries?

>> Great question. I asked myself the very same all the time. So A, ITU, being a leading force, B, on a national legislation, at least regulation, and C, we have to look at the business case. So if governments fund the programmes and people with disabilities, deaf and hard-of-hearing people are more likely to find jobs like Christopher just asked, creating employment opportunities is the carrot and in turn deaf and hard-of-hearing people, people with disabilities become taxpayers. And I mean, governments kind of, it's a win/win situation in the end.

So it may not seem like the right thing to do, until it makes business sense. So I think I'll leave it at that.

>> ANDREA J. SAKS: Thank you. I hope nobody minds, but I want to jump in here for one minute, because of the fact that I was mentioned working on the international access possibility for relay services, and this is what is going on in Study Group 2, with World Global Telecom where they have asked for a country code to be able to be used for international access for persons with disabilities. So there wasn't going to be a charge.

The idea behind this, regarding relay services is one of the practical applications, and this is something that I'm working on with this company, is that wherever you were with that access code, you would be able to dial into this particular, imagine a space through this country code which is all that they call it at this time, get another series of numbers to get to your very own relay service in your very own country.

This is a possibility, and this is what I'm trying to work on now, and nobody really knows I'm doing it except now you know I'm doing this. But it is in another Study Group. It is not in the traditional Study Group 16, question 26, because it's in numbering in Study Group 2, and so just for your own information, I will speak briefly if there is time to mention that in question 26, so I hope that information is useful.

Now, does anybody want to talk more about relay services? Because -- you do, David. Go ahead.

>> (pause).

>> So I agree with you. I think using an interpreter for video content, I would prefer subtitles, like you said. But I think we have about 140 sign languages worldwide now. So, if we want to create a international relay hub, how then will that work for VRS, video relay services? Would it mean it only works for text based relay services? Or only speech to speech? Or who knows? So what's your, how do you imagine this working?

>> SETH BRAVIN: Seth here. Just a disclaimer, I had two hours of sleep on the plane. So when you are saying VRS, it's video relay service, how video relay service works is that there are interpreters who facilitate these calls. Text relay services, you have an operator typing the calls. So I understand your point, video relay services have different sign languages they are dealing with, and American Sign Language is different than British sign language. That is a great question. And maybe it only has to be text-based at first, or .... maybe we have a international sign video relay service, not many people know international sign is the main problem. But for, don't have a hearing loss, might say this doesn't apply to me, but think about your parents who likely already have a hearing loss or might have a hearing loss or your children who, or your neighbors' children, so people often have somebody with a hearing loss in their environment or in their family.

So they are going to want to communicate with you. Okay? So don't, so it's a two-way street. It is not only for deaf people or



hard-of-hearing people who can't, who want to make calls to hearing people. It is the other way around but I think this is another discussion for us to have on the sideline.

>> Remember my country has three different sign languages as well. That just adds to the issue, creates further problems, a country with multiple sign language would have to have multiple sign language interpreters at relay service.

>> David is from Canada. So you have LSQ, French Canadian sign languages, American Sign Language, and then one other.

>> ANDREA J. SAKS: Thank you, Seth, thank you, David, I'm glad you discuss the situation of the different sign languages. It's very important. I have Shadi first, or is this on relay service.

>> DONAL RICE: Donal Rice from Ireland. Thank you, Andrea, I sit on a national committee with our national regulator and a year and a half ago there was a text relay service introduced, I found that the number of hours has been cut recently. And I'm looking for information on two things. I don't necessarily need an answer now but if people could assist me, that would be useful. I'm looking for data on the number of hours and number of users for text relay services in other countries, if anyone knows the source of that information, it would be useful. If anyone has ideas on strategies to promote the use of the text relay service by end users and by potential end users, I'd also be used in learning about experience in other countries. Thank you.

>> ANDREA J. SAKS: Thank you. Donal. Anybody want to add to that? Go ahead, Masahito.

>> MASAHITO KAWAMORI: This is Masahito Kawamori. Actually, currently we are trying to get some statistics within ITU on, with a work item called KPS -- KPI, key performance indicators, asking for information through some countries, we are collecting from currently primarily English speaking countries. But I hope we can get more information. You have some information? No. Okay. That is the current situation. We will let you know.

>> ANDREA J. SAKS: Is this about relay service?

>> This is Khalid Choukri SC35. A few months ago, exactly 11 September 2018, in Europe, the European Parliament voted what they call language equality programme. They urge the European Commission to make sure to implement this. Part of the recommendation of the European Commission, I'm just reading from the European Parliament statement, it calls on the commission and the Member States to develop strategies and policies action to facilitate multilingualism in the digital market.

Then it said, as language technologies can make communication easier for the deaf and hard-of-hearing, the blind and visually impaired and those with dyslexia and whereas for the purposes of this report language technology refers to technology that support not only spoken languages but also sign languages.

I think at least for the European Union, we have this recommendation that was voted almost unanimously by Parliament, but we should take it from the political decision and statement, some implementation by the

European Commission. If this happens, I'm sure that it will, then it will be more easy to try and evangelize the rest of the continent but it is still a lot of work to do to bring it to fruition.

>> ANDREA J. SAKS: There is one group of people we have forgotten, the voiceless, those who are paraplegic, those who don't have a voice that they can speak for physical reasons, and who are not understandable. One of the relay services that exists is voice to voice, where an operator is trained to understand difficult voices that people, that they want to speak, and this exists. It has not been around that long. We always leave them out, and they are important too. People who have problems in actually communicating and using the phone, not because they can't hear, but because they cannot speak. I want to make sure we begin to include those people. Go, EA.

>> E.A. DRAFFAN: Can I thank Andrea for saying that as a speech and language therapist, we also forget symbol users who have real difficulties, discussing any subject on the Internet, can't use symbols that somebody else is using. I mentioned it in my talk this morning. But it's rather like a relay system, that only works for the individual because their symbols are one type of symbol and someone else uses another symbol, don't talk to symbols in Spain, you have to use the text in between. I don't know if anyone realizes but trying to translate a symbol to text, text to symbol, is extremely difficult, unless we can get the natural language processing working better. So we have a job there to do.

>> ANDREA J. SAKS: Thank you for that. I shall start adding that to symbol speakers, can we call them that or symbol users, symbol users. Thank you, we have a terminology. Shadi is okay, Shadi and I are talking. We know where we are, because I worked with him for years. I think we are going to be finished with relay services now and Shadi has been waiting patiently on another subject. You have the floor.

>> SHADI ABOU-ZAHRA: Not wanting to use up the half an hour (chuckles).

No, but I wanted to come back to the point on the complexity of standards, and this is indeed an issue, and I think part of the thing also to think about is, it's not only the technical standards but there needs to be a lot of work on education, training, awareness raising, capacity-building and so on, so different views on the technical standards, I think, who is using the standard for what. It's very different than advocacy person needs to know what is in the standard and what to communicate to the outside, versus somebody who needs to implement that maybe needs much more technical details. So the different kinds of audiences that we have around the standard, and it is something that is difficult and I think as was mentioned, the complexity of the technologies nowadays, which shouldn't be a get away for standard organisations. I think WCAG is one example, the Web Content Accessibility Guidelines, of a standard that seriously needs improvement in terms of, I'm saying that on record, the web content accessibility guidelines, the web accessibility standard which I will mention in the next hour I will describe a bit more in the next session, but I think no matter how much it's simplified or improved, it will still be a need for technical aspects.

We need to think about here how to reach different audiences that need to work with standards in different ways.

>> ANDREA J. SAKS: Thank you, Shadi. I see another hand that went up. Christian Vogler. Would you like to take the floor, please?

>> CHRISTIAN VOGLER: It's Christian Vogler speaking. I wanted to connect to the web accessibility standards. You mentioned that they should be simplified. In my perspective, I want them to be more simplified too, of course, but we have to realize that accessibility can be complex, because disabled people are so diverse.

I think if we forget about simplification and we look at the experts who are developing content management systems, because the experts who are developing the authoring tools focus on, if they are focusing on that and making sure that the content management systems and the authoring tools are both as simple as possible for people to actually use, then I think you solve the problem, rather than working backwards.

>> ANDREA J. SAKS: Thank you, Christian. We have Masahito Kawamori and then E.A. again.

>> MASAHITO KAWAMORI: Thank you, Madame Chair. My name is Masahito Kawamori, Rapporteur of question 26, Study Group 16, ITU-T. I have comments about the complexity. I think we at ITU at least in question 26 and other questions, we are trying to do something like a multiple track approach, because we have basic standard and then we developed guidelines, we also developed technical papers as well as conformance testing specifications for example.

So, recently, we compiled, we published a joint publication, a joint standard with W.H.O. on safe listening devices, and we published that last year. Then W.H.O. took the same text and they pretty much take the same text as a whole but they packaged it in a different way, so

that the standard will be more accessible to the general, more general public in a sense, yeah, less technically oriented people in a sense, in a more friendly way.

And also, during that discussion, when we published that specification from W.H.O. as a joint standard from W.H.O. and ITU, there was a mention of creating some more documents, for example, implementers guidelines, as well as more technical details testing specification or some kind of brochure and pamphlet for CEOs or CX O's, for more not technical proficiencie.

I think this is one approach that we can take, rather than making the standard itself simpler, we can take multiple track, we can have a very simple description of the standard itself, and then we have guidelines, for more general public, things like that. That is what we did with W.H.O. Thank you.

>> ANDREA J. SAKS: Thank you, Masahito. E.A. please.

>> E.A. DRAFFAN: Yes, can I say thank you for those guidelines. As I said, I'm actually working with students who will be your future developers. Many of them go out in the world a lot more than we do.

I have to say that the guidelines are absolutely invaluable. One of the things with another hat on is the WCAG task force and we are looking at design patterns, we are looking at producing easy to read ways of trying to support these guidelines, because they are so important.

But it is very very difficult because as you have just said, the complexity of what the developer has to do is one thing. But the complexity of what the assistive technology has to do with that guideline is another. When you get them both together, we somehow have to get our computer scientists to understand that interoperability between the two.

>> ANDREA J. SAKS: Thank you. David, you would like to --

>> David Fourney speaking. I'd like to speak again to the issue of standards complexity. For a moment I'm going to take off my hat as a delegate of ITU and speak more in terms of my background and knowledge as a technical expert with ISO.

(microphone feedback).

I've been working with ISO for close to 20 years. One of the things that I want to mention is that the government of India actually asked ISO, just a couple of years ago, to actually write standards in simpler English, because many countries, particularly countries where English is not a commonly, well native language, struggle with not just the implementation of these standards, but understanding what was desired in the first place.

Now I know many people who are actually paid, they are employed to help companies interpret and understand standards. There is, there are good reasons why standards are hard to read, it's because they get people jobs. But nonetheless, when a state comes to an NGO like ISO and says, can you please write simpler English in your standards, I think that is something that even we within ITU .... should probably be listening to.

In terms of the education of standards, the teaching of standards to students, a course at the university of Saskatchewan in Canada some years ago and for the sake of the captionist, I will spell out that word, Saskatchewan. She got it. I'm impressed.

(thank you!)

: -)

We developed a programme at the university of Saskatchewan for computer science students, and this was one of our leaders in ergonomic standards, Jim Carter, is a professor at that university, and within those courses, what we do is, we don't just introduce students to a standard, we get them to read the standards, and in some cases when a ballot is up we actually ask students to provide comments on standards.

That is part of how we teach standards. I think the more students see this stuff, and understand some of the stuff and is taught the stuff, the more they are immersed into the stuff, the more they will be able to at least get a sense, we have these things, why they are there and what they are for.

But I completely agree, the way that we have set up our ecosystem for standards is far too complex. We don't even know when we are writing something somebody has already written, it's gotten frankly ridiculous. I'm hoping that one of the things that come out of this wonderful conversation today is more conversation at SC 35.... around the complexity of standards. Thank you very much.

(applause).

(microphone feedback).

(audio breaking up).

>> ANDREA J. SAKS: Because this is something that we often don't have time to do, which is to discuss amongst ourselves different aspects and different questions.

Now, we actually now have officially two and a half minutes. I'm amazed. Anybody else would like to say anything else? Simao. You got me into this mess. Come on. (chuckles).

>> SIMAO CAMPOS: Thank you, Simao Campos speaking. Thank you, Andrea for the floor and I think it's important that we take the time here, one of the objectives of this workshop ...

(audio breaking up).

Help us with standardization work as we are planning for the future activities.

Accessibility is very important area, have been very active, want to push the frontiers, I hope discussions today gave us ideas, further work and progress, this is important area. We had also in the morning from Christian in disability area, AI challenges. I think we should reflect on this. Hopefully, this will encourage people to have ideas, think about it and bring ...

(audio breaking up).

Help us move forward this cause. Thank you.

>> ANDREA J. SAKS: Thank you very very much.

One thing I would like to ask, we have one minute, I was being really respectful so everybody could have their coffee break, do we still have a coffee break? Or not? Go ahead.

>> Thank you very much, indeed I was mentioning in the morning there is no prebreakfast and the coffee was welcome, coffee incent networking exercise. The coffee is on your expense, very sorry for that. But it doesn't mean that it will be worse coffee than you had in the morning. The coffee quality is very nice, but once you gave me the floor, I wanted to make other contribution.

As you know, in my capacity as the regional Director working very much on the accessibility in the region, our aim is to make sure that the European level at least we have very much created community of people, professionals, those who are working in ICT accessibility and we are aiming at the new edition of accessibility in Europe in December in Malta. Thank you very much, colleagues from Malta for offering the hosting of this important event which will be co-organized with European Commission. This is the heads up intervention which also will be integrated in the workstream, having accessibility in the ITU, the standardization sector as well as development sector, which is going into the level of the development of standards but also the level of making sure that the capacities, the accessibility [inaudible]

(audio breaking up).

Also that we are not having the diversity of the communities talking the same issues but getting very much frustrated because there is a lot of talk but no action. Our objective is not only to talk. We have also proposals for concrete actions to support the countries and their way of advancing implementation of accessibility. So we have some of those issues addressed in the next session, what accessibility in terms of procurement, we hope also to advance more in this direction, however also to take a look how to [inaudible] reason why I'm speaking about innovation is that we are interested in [inaudible]

(audio breaking up).

That is why last year, we kicked off the process of getting submitted to our community innovations, digital solutions efforts for Europe. We are aiming also at doing the same this year, and the proposal is twofold, on one hand to see what is happening in terms of the newest developments in terms of the accessible technologies and accessibility and supporting persons with disabilities, but on the other hand also to encourage those who are innovating and to be from the beginning

with those who are setting development standards and those to exactly contribute to our discussions like those which we have today and to have this confrontation which is necessary like relay services which is relying on the traditional infrastructure and traditional most popular service provision and those innovations which maybe challenge structure, provision of the important services to those who are in need.

Therefore, we are encouraging you be part of this effort. We hope to have all European institutions working in accessibility with us and have on the programme and this is not a show of ITU or European Commission, this is European disability community. We hope to have your collaboration in the future. Thank you very much. And coffee will be delicious as it was in the morning.

>> ANDREA J. SAKS: Thank you very much Jaroslov, since you changed the schedule, can somebody tell me what the schedule is? Because I don't have it. I can't see it. I'm bloody dyslexic. It's not there. I can't read it. It's too small.

>> We will have now 15 minutes of the coffee break, from 16 to 1615. Then after this, we will go ahead with the last session of this workshop but very important session, as mentioned at the beginning. There was effort to prepare the draft background letter on the procurement of accessible ICT services and products, and those who had still two short slides to read the material, and then we encourage you to have strong coffee to be able to during the coffee break go through the material and be part of this very important discussion which can have potential to progress the work on the procurement and accessible ICTs. Thank you very much. Enter the website where you will find the digital copy of this paper and draft which will be presented.

>> ANDREA J. SAKS: Thank you very much. I'm not going to reintroduce my speakers because we have done explaining that we have this paper. It's on the website of the workshop. Thank you very much. Enjoy your coffee. We have cut in five minutes. Are you going to make them run up there and have ten minutes or what?

>> Yes, 20 past.

>> ANDREA J. SAKS: 20 past. Thank you very much. 20 past. Enjoy your coffee. Thank you.

(break).

(standing by).

### Session 3: Standards and procurement of Accessible ICT Services

>> ROXANA WIDMER: I would like to invite you all to take your seats, and try to begin our session and hopefully to finish on time. We are already 12 minutes late. Ladies and gentlemen, I know that everybody is tired at the end of the day. But I will assure you that we will have a very interesting session, and with me here, I have the pleasure to present to you one of our consultant and expert, Mr. Donal Rice. Most of you perhaps you know Donal. And of course, Mr. Shadi Abou-Zahra from Worldwide Web Consortium. I will invite you for purposes of the timing to consult the very extensive biographies with

all the related experience and contact them for further information. So, the purpose of this session is to understand a little bit the standard and procurement of accessible ICT services, and I would like in particular at the end of the session that each of us understand why, how, and what we can do to make this happen. So, for the why part, why it's really needs to have standards in procurement of accessible ICT, I would like to mention that on our opinion from ITU perspective, there is a win/win for everybody, and I will even say a triple win, means industry wants a global consensus about what accessibility requirements are, to be able to apply for standards and government contracts but also for the government perspective, this is very important, because as you know, governments are one of the biggest buyers globally, and they want to have better equipment, and of course, they definitely want to ensure that through the equipment acquired, they also have the opportunity to provide for persons with disabilities but in particular this person have access to their products and services.

To this I will add another win, which is one of also the most important, is persons with disabilities itself because if the equipment and services are accessible for them, this will enable them to have access to social and economic development, access to job opportunities, of course, education and definitely this will together contribute to the country's growth. Last but not least based on the discussion that I have with my experts here, actually can be even quadruple win, because also the standardization bodies, they want to implement the standards.

So if everybody is on the same page and if we manage to pull together this implementation actually it's definitely a win for all.

Having said this, I will invite Donal who is also from the National Disability Authority in Ireland, and also in the national university of Ireland in Galway. So he was also involved in the mandate 376, and in particular, in the development of the EU European toolkit in procurement Donal, the floor is yours. Thank you.

>> DONAL RICE: Thank you very much, Roxana. Thank you for the opportunity to speak to this distinguished room of standards developers. Last Friday I finished teaching a module I teach in the university every year on disability law and policy. Most of the students who take my module are disability advocates and some of them come from a legal background, and very often they come to the module wanting to know how to sue, how to sue governments and businesses for not making their services accessible.

When I teach the module two things I tell them they will learn about are procurement and standards. I get blank expressions. I know I don't need to convince anyone in this room about the value of standards development, but maybe I need to convince you a little about the value and the role that procurement has and the relationship between standards and public procurement.

That is what I'm going to aim to do over the next ten minutes or so. We look at some of the global overview of legislative and policy context, that supports the use of standards in public procurement.



Some trends, challenges, and opportunities. And everything I say is based on that background paper that Jaroslaw mentioned so it would be good if you can look at that and if you think there is any deficiencies or omissions in it, please submit your comments by the end of this week.

At this stage in the day we don't need to go into a definition of what accessibility is, which maybe just to provide a little context around accessibility policy and law which is really my area of knowledge, we can see in the connect 2030 agenda, for global telecommunication and ICT development, goal 4 on inclusiveness includes a target or enabling environments to ensure accessible telecommunications and ICT for persons with disabilities, and that should be established by all countries by 2023, and of course this is the ITU strategy I'm referring to, to here. Of course there is a link, a relationship between accessible ICTs and the Sustainable Development Goals, with number 10 on reducing inequality in amongst countries setting a target that by 2030, and the empowerment and promotion of the social, economic and political inclusion of all, including persons with disabilities. In today's world, it's impossible to achieve such goals without technology, and technology we use every day being fully accessible.

The third piece of the global context I want to refer to, of course, is U.N. Convention on the Rights of Persons with Disabilities, article 9 of which relates to accessibility, it puts ICT accessibility on an equal footing with the accessibility of transport and the built environment, and elsewhere in the convention are articles related to international cooperation, the development of shared standards, and government programmes such as public procurement that should consider accessibility for persons with disabilities.

This is very brief overview of the global context which is covered in further detail in the background document.

What is public procurement? Essentially it's a function of governments that involves using public monies to obtain goods, works and services to meet the needs of the government as it carries out its responsibilities, to the citizens. I'm not going to lecture you on public procurement. But when I teach it to my students, I introduce it to them as one way that governments can nudge the market, the ICT market to produce more accessible goods and services. The WTO estimates that a average public procurement accounts for about ten to 15 percent of GDP, and in EU that figure is as high as 16 to 17 percent of GDP. I always enjoy coming to Geneva and including a image of Swiss army knife in my presentation, because really, for me public procurement is the Swiss army knife of policy interventions that a government can make to try and achieve certain outcomes, whether it's for accessibility or for other social considerations, and I know Immaculada Placencia Porrero in her presentation will be talking about social considerations in the context of the EU directives further.

But suffice it to say the public procurement is a very powerful tool in terms of using public money, our money, tax money, to influence certain agendas, such as accessibility.

We have evidence of that from regions such as the United States of America, where the Rehabilitation Act of 1973 was amended in 1998, and one of the lessons to incorporate reference to the accessibility of ICT by federal agencies for procuring, and one of the lessons from America is that in the absence of standards, public money can be spent and wasted in inappropriate ways.

So while federal agencies for many years were required to buy accessible ICT, because there were no defined and agreed accessibility standards, the experience was that an employee might be able to use assistive technology with the software that they needed to conduct their job on a Friday, and over the weekend the software vendor might push out an update to their software, and then the Monday, the interoperability between that software and the employees' assistive technology would be broken.

And no one was at fault, because everyone was, all suppliers were meeting the requirements set out in the procurement, but because those procurement requirements weren't standards based there was a lack of understanding and interoperability between the assistive technology and mainstream technology that the federal agency was using.

The Section 508 standards that many of us are familiar with became effective in June, 2001, and they covered a wide range of mainstream ICT products and services such as computers, printers, software, and websites, and these were refreshed in 2017. I think we can safely say that it's certainly nudged many large companies in the United States to improve the accessibility of their products and services. The Section 508 standards developed by the U.S. Access Board are by no means perfect, but they certainly had an impact on the market in terms of producing a base level of accessibility, that any company that wished to sell to the federal government in the United States upgraded their hardware and their software to meet, and arguably, we in Europe had been enjoying the fruits of that, because it is not sensible for IT companies to produce one version of a product to service for America and one version for Europe. I think we have been benefiting for many years in Europe in receiving accessibility in mainstream products and services that was incorporated because of federal procurement regulations.

And this approach has been supported broadly by industry, and but it's the work of standardization bodies such as ITU, such as ISO, CENELAC ETSI and W3C that enabled governments and government agencies like the U.S. Access Board to develop procurement rules and accessibility requirements that are commonly accepted by industry.

Some of the trends around standardization as it relates to public procurement harmonization is, I suppose a key trend, and there are significance in place to harmonize the accessibility standards. After weeks of teaching my students how standards interrelate and influence each other, last week I produced the following infographic on the screen, which I'm not sure if it confused my students or helped my students. But I promise to walk you through this infographic, what it shows is at the bottom left corner is a reference to the web accessibility directive that was produced in 2016 by the European Union. It requires Member States to improve the accessibility of

their websites, based on essential requirements and conformity with those essential requirements can be met by meeting the standard EN301549 or the relevant clauses of that standard, which was developed by CENELEC and ETSI under the mandate from the European Commission. However, EN301549 is an amalgam of other accessibility requirements defined in other standards. Clause 9 incorporates success criteria A and AA from the Web Content Accessibility Guidelines version 2.1. It also incorporates normative references from some of the recommendations by ITU-T and I think ITU-R as well, but also includes many informative references from work produced by ISO JTC 1SC35, some members of whom are here today. There has been efforts and very conscious efforts by the commission and the U.S. federal access body to ensure that this European standard is harmonized as much as possible with the Section 508 requirements.

So you can see that it's a global effort. There is no one big dog in the room in terms of who is developing the ultimate accessibility standard. There is a global contribution I think we made. And again, this is covered in more detail in the background paper, and Imma is going to cover the EU perspective, I already covered the U.S. perspective in terms of regulation and standards, but it's interesting to see how other countries have adopted accessibility standards in regulation or as standards to be referenced in public procurement. Italy has the Stanca law which referenced Web Content Accessibility Guidelines version 2.0. We saw the accessible Europe conference in December how Sweden is using EN301549 in public procurement specifications for telephone directory inquiry service, text relay service. Australia adopted EN301549 as a Australian standard and is referenced in their updated procurement rules.

To finish on opportunities and challenges, I think some of the opportunities for standards developers is that there is an increased awareness by governments of the advocacy of using technical standards, and I would hope that very few governments go down the road of developing their own sets of internal regulations and specifications for accessibility, because I think standardization bodies and such as those that you represent are best place to do that. There is new and future legislation coming on line, and Imma will talk more about that in the European perspective shortly, that require current standards to be used and are probably going to require new standardization developments.

Of course, standardization bodies are best place to keep pace with technological developments. Some challenges I think that there are harmonization is certainly trending, but the question I ask is, who is leading, and one area I think that we haven't seen good leadership amongst the standardization bodies, if I can be so bold as to suggest is the involvement of persons with disabilities in the standardization process, particularly with those standards are then used as a presumption of conformity with legislation. I think we will encounter a Democratic deficit should the standards that we develop be used for regulation, for presumption of conformity with laws, if persons with disabilities have not been adequately involved in the development of those standards. There is always greater awareness and opacity needed. I was talking to the government agency in the U.S. that is in

charge of the process of public procurement before Christmas, and they said to me we don't have a technology problem, we have a people problem, to get people to consistently use and understand the standards, Section 508 standards is their biggest challenge.

The global population trend means that more people are going to benefit as we move from accessibility to universal design or design for all, for all, approach.

The last couple of slides I have mention how accessibility can be used, sorry, they mention ITU resources that are available in this space, ITU-D, a key resource is the model ICT accessibility policy report that describes how policy can be developed to use accessible ICT for public procurement, and the ITU academy have an excellent self based on-line training, ICT accessibility course, and that is complete self promotion there because I developed it. But it provides three, two modules on ICT accessibility, introduced ICT accessibility standards and the use of those standards in public procurement. I'm going to cut my presentation a little short there. And enable next speakers to speak further on issues I've highlighted. Thank you for your attention.

(applause).

>> ROXANA WIDMER: Before passing the floor to the next speaker I'd like to know if someone has particular question to address to ... yes.

>> Hello. This is Masahito Kawamori. I have a question about -- thank you very much, by the way, your extremely brief presentation, and I'm wondering, and interested to know how the procurement standard is being used by the Swedish government, about text relay service, if you know the details. Thank you.

>> DONAL RICE: It was specified very simply, specified in the request for tender for the contract of the tender document that went out requesting the text relay service to be used.

So I believe it was used, say to reference the level of accessibility that is going to be required for the app for the website that is going to be used for the service and other components of the service.

>> MASAHITO KAWAMORI: Sorry, I don't quite understand, the procurement is the system or the app or the device.

>> DONAL RICE: Procurement was for a, my understanding was the procurement was for a entire service. The entire service would have been, is comprised of a website, is comprised of a app, other information and systems all of which need to be accessible, and the level of accessibility specified or those components of the service was the European EN301549.

>> MASAHITO KAWAMORI: That included, includes text relay service?

>> DONAL RICE: Yeah.

>> MASAHITO KAWAMORI: On the web.

>> DONAL RICE: Yes.

>> MASAHITO KAWAMORI: I see, okay, thank you very much.

>> DONAL RICE: Okay, thank you.

>> ROXANA WIDMER: I want to ensure everybody that the purpose of the session is to be interactive. Definitely, we will get back to questions. But I want to know if we can hear from remote participation. We will have with us Immaculada Placencia Porrero, deputy head of unit provides of persons with disabilities Director General for justice European Commission, very much involved in this, and so Imma, are you hearing us? She has a presentation. Okay.

>> I can see on-line but I don't seem to be getting any response.

>> ROXANA WIDMER: Be sure she can hear us because this will enable us to have a interactive discussion.

>> She can hear us, I believe. The sound system is okay.

>> ROXANA WIDMER: We will try to hear about the European Accessibility Act and European procurement directive, in particular will appreciate to share with us a little bit more insight on the article 42.

So with this, the floor is yours. Okay. To leave enough time to the colleagues to solve this problem, Shadi. So Mr. Shadi Abou-Zahra, is accessibility strategy and technology specialist from the Worldwide Web Consortium. He has a very very extensive experience in web accessibility, and will very much like to know from you how do you think that the work that you are doing can contribute to the standards and procurement of accessible ICT services and products.

>> SHADI ABOU-ZAHRA: Thank you. Okay. So this is a little bit out of order. I'll try to be brief. So this, in this session I wanted to give you a bit of a deeper glimpse on web accessibility standards, dipping into the framework of procurement.

Now, I don't want to go too much into details of W3C but last week, was the celebration, 30th year of the invention of the Worldwide Web. W3C was launched in 1994, so a few years after that, so it's about 25 years old now which is very young, I think in relation to ITU, and other standards organisations. But the mission of W3C itself is to develop the standards to evolve the web through its full potential and to continue evolve the core technologies of the web, standards like html, CSS, and so on, and is operated by four internationally MIT in the U.S., European research consortium mathematics, long name, the Keio institute in Japan and university in China. Part of the Web Accessibility Initiative, part of W3C is the Web Accessibility Initiative, WAI, which focuses on making the web accessible to people with disabilities. There are a number of efforts that we do here, and basically I want to point out that besides technical work in terms of developing technical standards and ensuring core accessibility, also lot of work on education and awareness raising, capacity-building, which I think is really essential, really important, particularly in the field of accessibility. Very often some of the issues that we see are not only technical issues, but they are also of societal nature, and basically, yeah, gaining skills on these accessibility matters.

To illustrate the work that we do and I think this relates to how do you make a technology accessible, some of the very important work that we do is what we call core accessibility, so building accessibility

features into the core technologies of the web, like html itself has accessibility features built in. So it's important that it's not always accessibility standards or standards specifically on accessibility, but also accessibility for mainstream products need to include accessibility features in it. So you can on top of that build accessible products and services.

So that is kind of the bottom layer on this illustration here, are the technologies that are being developed by W3C are all cross reviewed for accessibility and make sure that we bake in accessibility features into them.

On top of that, we have three sets of accessibility guidelines, which are also W3C standards, but they address different aspects of the production of content, so most of us these days are web accessibility producers, we use content management systems, we use authoring tools like editors, word processing editors where we say save to html or we use social media, all these are tools in which we are producing content. All these tools and this was mentioned earlier, I think, that was a very important point, in ensuring accessibility in the production chain, but at the same time also ensuring accessibility in the access and interactions, when we define what is accessible content, a very strong relationship is also what do assistive technologies provide, and that changes very quickly. So, when you have, let's say, assistive technologies or browsers that don't support the audio description track of a video, then the definition of how to make such a video track accessible or video accessible changes according to how the technology supports this.

Most well-known is the Web Content Accessibility Guidelines, WCAG was mentioned several times today. But I want to emphasize also the authoring tool accessibility guidelines, this was a point that was raised earlier today. If we want to achieve accessibility and maintain a level of accessibility, we need to ensure that all these tools are used to create content, have accessibility built into them. Most people developing content are first of all nontechnical. Second of all, have no idea about accessibility. Maybe they do not need to know about accessibility. They just need to know how to produce content correctly and tools can help them there. We don't need to be accessibility experts. Right? Finally also user agents, browsers, media players, and mobile apps in a way are sometimes miniature browsers. The W3C process is publicly documented as on-line, we have a iterative process model where the documents go through different maturity stages. The final stage published web standard is called the W3C recommendation, and that is what these guidelines also are. They are the same normative level as say html or any other standard in W3C.

In this process, we have an open multistakeholder participation, where we work a lot to try to ensure involvement from industry, from disability organisations, government and research, particularly in accessibility. This multistakeholder approach is really important. We follow a consensus process to try to balance out these perspectives and find the consensus that comes out of that, and in this process, so for example for the development of the Web Content Accessibility Guidelines, typically thousands of comments from the public will be

received and will be processed in creating the standard. It's all happening in public space, all in the open to ensure community responsiveness and also, sorry, a word is missing. Anyway, to ensure that we have community responsiveness and that we have, we are representing the perspectives that come in. Briefly to the Web Content Accessibility Guidelines currently we have two versions that are concurrently operational. They are both active. We have the version 2.0 from December, 2008, which really defines a very important milestone in terms of standards harmonization. Before WCAG 2 we had in many different countries different kinds of derivatives of the previous version of WCAG 1.0. This was a big problem, particularly for procurement. Imagine you are trying to sell something in one country, and you have a different set of requirements in another country. You can't sell something across borders, particularly within Europe or within trade borders and so on, making it really difficult to exchange not only tools but also knowledge and skills and know-how. WCAG 2.0 was adopted as ISO standard 4500 in 2012. We are looking at updating that potentially to WCAG 2.1, has not been yet so ISO 4500 is still WCAG 2.0. It is also available under the J I.S., Japanese industry standards, in Spain it has been adopted nationally in Spain, and as mentioned earlier by Donal it is included in EN301549 version 2014. Version 1 of that EN standard, included WCAG 2.0, and also the Section 508 technical standards used WCAG 2.0, not only for web and I'll come back to this point later on, but importantly, but also for electronic documents and for software.

They started to apply the requirements that were initially developed for web also more broadly to other contexts.

WCAG 2.1 is hot off the press, just launched in June, 2018 and has already been adopted in the 2018 version, version 2.1 of the EN301549, and I think all standards developers here so numbers and standards references are not a issue. WCAG 2.1 is fully backwards compatible to WCAG 2.0. It is actually a super set, that has additional requirements to improve accessibility for people with cognitive and learning disabilities, or people with low vision, and most improvements have been in the area of mobile devices and applications in that standard.

We are looking at a potential version 2.0, 2.2, and also looking at the third generation of these guidelines are currently in exploration as well. These things keep evolving. I know time is short. I wanted to mention the WCAG to 2 ICT note is when we started seeing this update of WCAG to other contexts, to nonweb documents, nonweb software which makes sense. Imagine you have a document, you have a USB drive and you are sharing on your intranet, you would have a different set of requirements than if you put it on line. Many of the requirements because WCAG was written to be technology agnostic, like it defines color contrast, color ratio, this can be pointed to software.

When we start to see this use actually a lot of stakeholders approached us and said, we would like more guidance on how to actually apply WCAG within this context. So this is basically the guidance that is used as the basis for Section 508 and EN301 to use WCAG in these contexts, not only for web but for documents and so forth.

The last point I wanted to make is all this is a moving target. The web is rapidly converging, you all probably remember a few years ago how static the web was and document oriented. Now it's very application oriented. You have very rich and dynamic applications on line. You have it on your mobile phone. You have it on your fridge and on your toaster. It's all getting connected. It is all converging these technologies very quickly.

There is a lot of work happening at W3C, for example, on mobile web, where we need to embed accessibility as part of that, so accessibility is not something static, mobile is already in many areas, and I think many of you know that, has already overtaken access through desktop, and so ensuring that this means of accessing the web is accessible is extremely important, and we have come a long way.

But there is also work at W3C on realtime communication, and this is also very relevant, where a lot of the teleconferencing applications, a lot of the interactions are moving to be natively web based, you don't need to install an application anymore but you can actually run it peer to peer in your browser. We have accessibility requirements that need to be built into these frameworks on to the web. Immersive technologies, and I know there is work here happening in different standards organisations, and we need to work together on this, to address accessibility comprehensively, because all these technologies are converging very quickly. Even in the automotive system, actually a lot of html 5 is being used, not only for entertainment parts in your automotive but actually for more significant areas, and generally the web of things or the IoT, one of the thoughts here is just like the web is the predominant interface to the Internet, could the web of things be the predominant interface to the IoT Internet of Things.

Here this would allow a universal platform just like the web is, with ensured accessibility parameters, so there is a lot of work on ensuring accessibility in what we call the web of things. That's it, Roxana.

>> ROXANA WIDMER: Thank you very much, Shadi.

(applause).

For all this rich information provided. With this, we will try to connect with Imma. Are you hearing us this time?

>> Yes, I am.

>> ROXANA WIDMER: Excellent. Yes. Imma, welcome first of all. Would you please like to share with the audience about the European Accessibility Act, in particular the European procurement directive, perhaps you may wish to refer in particular to the article 42, and well, to set a little bit the scene with regard the standards and procurement of accessible ICT products and services in Europe. The floor is yours.

>> IMMACULADA PLACENCIA PORRERO: Thank you very much. Let me tell you it is a pity for me not to be able to be there with you. I hope that you can hear me well. I have prepared a presentation describing what is the latest developments on the issue of accessibility and public procurement in Europe.



I would like to start by telling you that there is a lot of support from the public to include accessibility in public procurement. Already back in 2012, when we did one of the barometers in relation to accessibility, 96 percent of the respondents agree that when public authorities provide goods and services, they should be obliged to ensure that they are also accessible for persons with disabilities. They agree that more money should be spent to that end for the elimination of barriers to accessibility. Can I have the next slide?

Already Donal gave you an idea of the huge importance that public procurement market has in terms of economic figures. Europe, there are estimations, and around 16 percent, 17 percent, 15 percent, depends on the year but that is a huge percentage of the Europe domestic product is bought through public procurement. A large percentage of that is the ICT sector, about 6 percent of the total GDP, total value of ICT market. The average spending is 0.8 percent of the GDP of the public sector in ICT.

You can see that public authorities and Donal gave you examples of the U.S. but also in Europe, public authorities spend a lot of money on ICT. Since recent, if I can have the next slide, since recent, the public procurement directives have been revised, and they are required, they are requiring that public authorities basically buy accessible. What is in fact required by this directives, let me tell you that there are three directives. Two of them have accessibility compulsory, the third one on concessions allows the possibility of use accessibility but it is not compulsory. Let's go back to the main article in the directive 42 that requires that in the technical specifications, accessibility is to be included, whenever the subject matter of the construct or whatever is going to be bought is used by persons and these persons could be either members of the public or they could be employees of the public administrations.

Those cases then accessibility must be included in the terms of reference. In other words, public authorities need to say that they are going to buy accessible and how are they going to buy, they need to say the characteristics, accessibility characteristics, required accessibility characteristics of what they are going to buy. This really, the main article that we consider that is going to have a big impact in the public procurement of accessible products and services. But it is not the only one.

We also have got the article 62, that reference to quality [inaudible] this means when there are certain processes ongoing in the purchase, that is the subject matter of the purchase, then it is possible, it is possible to use quality assures standard for accessibility of persons with disabilities. This happens when constructing authorities might require the production of certificates and drawn up by an independent body, stating that the economic operator complies with certain quality assure, quality assurance standards.

For example, if a processor would like to have the certainty that the economic operator is competent on accessibility, there is a very interesting development that I will refer later on, of the European standard mandate 473 could be considered, it is not compulsory but could be considered.

Let me now then move to article 67, which is the award criteria, that are used in order to decide which of the bids that have passed the first step of the selection process are going to be selected. There the most known criteria is always the price, but besides the price, one could use accessibility. Let me link with presentations before.

Imagine that you are a public authority and you want to buy an accessible website so you can say, okay, I have a standards that could be WCAG 2.1 today, or the EN301 that contains the same reference to WCAG. You could say I'm going to buy a website that is in compliance with WCAG 2.1 level AA.

If the bid is not providing that level of compliance, the bid cannot be, it is not compliant with the requirements of the technical specifications. But imagine you have ten different bids, five of them would have that level of, provide that level of accessibility, AA. Then you come into the process of awarding the contract. So which one of the five I'm going to select? On one hand you have the price. But you could add, I'm going to have a ratio between the price and the additional level of accessibility. So even organisation would offer for example level AAA or certain criteria AAA in addition to AA, then you could give them extra points. They would have a better chances to be selected. I'm not going to enter into the other two points I have in the slide, article 76 because they are referring to specific conditions for the award, the social contracts, that get special treatment under the directive. I think we are two or three slides too far already. If you could go back a little bit, I would like to go to the slides on objectives, socially responsible procurement, still back, one more back. Yes.

There, what I would like to say is that the objectives that this new or revised public procurement directives have really been enhanced to address better, in a more demanding way the compliance with social matters, social legislation, social policies, and for example, they require that the bidders would have to comply with applicable legislation. If you are not compliant, if you have a obligation for example to comply with certain labor conditions or some environmental laws or some accessibility laws, if you do not comply, then you would have a problem in the application of the current public procurement directive.

It expands the possibilities to use social considerations in public tender so it makes it easier but also it, for example, it responds to the award criteria, to the use of award criteria, as I mentioned before, but also on the process of developing services, where accessibility could be required. It makes accessibility compulsory, as I said already. This leads to facilitating social inclusion.

If I can get the next slide, you could see that for the use of article 42, as I mentioned before, this is the technical, putting accessibility in the technical specifications, there are some conditions. There is the conditions that the accessibility needs to be linked to the subject matter of the contract, and the article says also that if you have already mandatory requirements in EU law, then the law has to be used to define accessibility there too, with reference there to. This means for example in the recently adopted

European Accessibility Act, there is an obligation for certain products and services to be accessible. Then public authorities will have to buy those products and services with the reference to the accessibility requirements that are in the accessibility act, at the moment that it will be applicable. It is still a couple of years, six years to go, but they can start already preparing.

The requirements do not need to be technical. They could be performance based. They could be functional requirements. That is what we are trying to do. We have tried to do with requirements also in the accessibility act, and in the European standard. If I can get the next slide. In the award criteria I mention also that, already explain with example of the web that it is very, it is possible, this is spelled out, it is possible to have the best price quality ratio and accessibility is one of those quality criteria that can be used. It also can include factors related to the specific process or production and provision.

It is, for example, possibility, that is possible to award points for requirements of personalization of services, you can also award points for additional long term employment requirements but also things related to improvement of accessibility. I mentioned already the label requirements and where possible and reference to all the standards. It is very well possible to combine the use of the technical specifications with contract performance clauses for example. It will be possible to say how the development of, if you are contracting a service, how to put some conditions for the, how the performance of the contract is going to be taking, to be taken along.

If I can have the next slide, once more for contract performance conditions, they need to be linked to the subject matter of the contract. That is really very important because we cannot use the public procurement directive for to have a side effect that it needs to be a link of what we are buying and the accessibility requirements that we are putting in the performance of that contract, and they have to be indicated in the clause or in the documentation, we cannot introduce them later on. It has to be clear so the economic operators would know what they have to provide or what is expected for them once they submit, they submit the bid. Of course, it have to comply with European law, rules and principles in procurement in terms of transparency for example.

In terms of the next slide, you can see it is not only the accessibility, not only accessibility is a obligation of public procurement but also in European funds and structure of funds and many of the money of the European structural funds is used by having public procurement. This means that we have a obligation of process and obligation of results. You have to buy accessible, but also what you produce after you buy, it has to be accessible. This kind of combination we will see those for example with the web accessibility directive, that the web accessibility directive requires the results, the website as you see it to be accessible. But it does not require the process of buying when you buy the development of a website, directive does not require that you have to buy it accessible. That is where the public procurement directives ended and the European

Accessibility Act ended because we refer, the legislation refers to the process of buying and by doing that by having the same requirements in EU law that puts accessibility obligations as sold and EU law puts accessibility in the process we will have consistency of which requirements --

>> Excuse me, could we conclude? Because we are a little bit running out of time and the interpreters will only give us ten minutes. Thank you so much.

>> IMMACULADA PLACENCIA PORRERO: Quickly, just to say that for that process, we have got in the accessibility act one article that says that when products and services have compulsory requirements in the act, those compulsory requirements also apply in public procurement. For other products and services the use of the accessibility requirements for a specific functions elements and features would provide presumption of compliance in other words. If you buy transport service, and you have in the act requirements for the website, requirements for provision of information, then if you use those requirements, the provision of information and website will be fine. This does not mean that the whole service would be accessible, still there are elements in the transport service like are no covered under the accessibility act and might be other piece of legislation that are there. The next slide to finish is telling you that, making a reference to number of accessibility standards that we have developed, Donal already mentioned the mandate 376, that resulted in the standards 301549 in the area of ICT. Also in the area of the built environment we have a mandate 420, the standard resulting for that is currently open for inquiry votes. So I encourage all of you to go and look at it, and hopefully vote positively. Finally, the mandate 473, which is the one I referred to for having the process, what a organisation needs to do following a design approach to ensure that the outcome whether product or service is accessible. The standard has been adopted a couple of weeks ago. The number is 17161. It is available to be used for that.

To finish to say three things, that we are --

>> Thank you.

>> IMMACULADA PLACENCIA PORRERO: We are providing training for in the context of the structural funds and we are developing a new or upgrading the guidance on social responsible procurement, that will be soon and will be next year hopefully available. Thank you for your attention.

>> ROXANA WIDMER: Thank you very much, Imma, for this presentation.

(distorted audio).

Since I understood we only have 7 minutes and before taking the questions, I will just quickly wrap up for the purpose of what we discussed before. Why it's important, it's win/win for all, good for business, government, social inclusion, how, through policy and regulation and standards. We heard about the U.S. 508 section as well as European standard 301549. We heard about the mandate 473, accessibility following design for all, in Europe, also about ISO, the Web Content Accessibility Guidelines, and on what, accessibility, we

heard that is not a statistic. We have to consider the core accessibility. So what Shadi mentioned about build accessibility features within the products and services. We also have to ensure accessibility in action and interaction as it was said, and to develop and produce accessible content in addition to accessible websites, because the content is also part of the website, and if the content is not accessible, the information cannot be accessible in the website.

I will also very briefly remind the resources that we have currently available in six U.N. languages so we do have the model policy report in particular module 6, which was actually led by Donal. It is in procurement. We also have training, we do have ITU programme in Internet for all, training, we also have 15 video tutorials in content development and of course the training that were mentioned by Donal which are available in our ITU academy, and two of the modules are in procurement.

Having said this, I would have a last question, if possible, to conclude our session, please.

>> CHRISTIAN VOGLER: Christian Vogler speaking from Gallaudet University. Thank you. This is not a question, rather a challenge to W3C, from the perspective of the deaf and hard-of-hearing community, we have had huge issues with the process of how W3C is becoming accessible. Of course I'm working in various standardization work and I'll tell you honestly that W.C. 3 for deaf and hard-of-hearing people has been the most frustrating experience I've ever had. I've worked with other people who have said the same thing, and oftentimes, we just give up.

So the web standards have some serious gaps that need to be fixed to address deaf and hard-of-hearing people. And those, and I don't know how to fill those huge holes. One example is WebRTC. Has no support for realtime text.

We can't ignore that. Now phone companies in America are now requiring realtime text to be set up, T Mobile is going forward with WebRTC. We have no standards for RTT over WebRTC. EN301 now will require RTT, any time you have voice. What about technical, what about the technical standards. That is the responsibility of W3C but I don't understand how it's going to be involved if it isn't right now. My question is, is there anything you can bring to the table or any advice you would have for us to make sure that deaf and hard-of-hearing people are even considered in these W3C standards. Thank you.

>> Absolutely, thank you for your candidness. Challenge accepted. We are actually looking at a updated version of WebRTC. We are collecting use cases. RTT and quality of service for voice is part of the thing that went into that. And so I do want to follow up with you separately, because we don't have time on these specific challenges that you are observing, so to hopefully try to address them to make sure we have more involvement and thank you again, very much.

>> ROXANA WIDMER: Thank you, Shadi. Thank you for the question. Thank you for the speakers. And with this in mind, I think this presentation were really very educational, and I would invite you all,

considering that to take advantage of the platform and bring together all related stakeholders and try to harmonize the standards for the benefit of all. Thank you for your attention.

>> Ladies and gentlemen, please remain seated. We will be proceeding with a very short closing of the workshop. We are welcoming on the podium Mr. Noah Luo, Chairman of the ITU-T Study Group 16 who's just approaching the podium. And the floor is yours.

>> NOAH LUO: Okay. Hello, everyone. So, I think the time is 5 :35. It is time for us to have the closing. I will give you a very brief closing remark. First of all, I would like to say, my commendation first because after two days discussion, people are very engaged, and there are excellent ideas, results exchanged effectively through our discussions in different sessions. First of all, I give each of you my sincere commendation for all of you and my thanks for all of you experts, organiser and also our caption experts and also sign language translators, for everyone.

Such a workshop is very productive useful, because I'm the Chairman of Study Group 16 I'd like to say a few words about Study Group 16. We are one of the oldest organisations which launched studies, standardization for accessibilities, so since a group of experts led by madame Saks and others, their names I won't mention right now but they lay the foundation for what we have today, as a huge building, magnificent building for this accessibility standard. Also as the end of the study period, current study period approaches, the consideration for the WTSA 2020 and preparation for next already appeared on our agenda. We are seriously thinking about our unique value and strength. We believe accessibility is one of our most unique values for now and forever.

I also want to mention we are now in one of the best ages of times for accessibility, I mean in the broad sense enhancement of human life through different technologies, through eServices. I think I have some reason for saying so, but first, I think the level of attention of interest from different sectors, from the whole society is unprecedentedly high, much higher than before. Also with great delight I can see the interest from industry, the commitment from industry is much higher than before. I can see a lot of companies are involved in today's workshop, as well as they are involved in many of our discussions, and question 26, and many other relevant activities. Also we witness a new wave of technologies, very exciting. So name a few of them, AI, big data, ARIA, high definition video and many others. They will drive a lot of application, for example, speech to speech translation as well as innovative accessible eServices. So we have promising future. Let's come back because we are one of the earliest organisations doing accessibility issues, I think we can still do several important things for this human life enhancement through technologies programmes. We can still contribute a lot to this fundamental multimedia technologies. Also, I can see the combination between multimedia technology, and AI is some opportunities we need to grasp. Of course, with the help of our accessibility expert, taking inputs and requirements from you as a community. Servicing, eService is our trademark so we are known for

our eServices. In the future, in design, in new services, we need to take into account different considerations, business consideration, technical consideration, consideration for accessibility, special needs. I think basically that is all I'd like to say as Study Group 16 Chair and I want to say such kind of workshop is very useful. I myself have been fully engaged, and I think many other people have a similar experience, healthy discussion.

In the future let's have more frequent meeting of this kind, of this nature. Thank you very much, everyone, for your efforts. Thank you. Thank you for everyone, including our expert for captioning and sign language translator. Everyone, thank you.

(applause).

>> ANDREA J. SAKS: The workshop is over so the captioner can quit. Thank you!

(you're welcome! Have a good evening!)

(end of session at 1743)

Services Provided By:

Caption First, Inc.  
P.O. Box 3066  
Monument, CO 80132  
800-825-5234  
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.

\*\*\*

---