

# IGF 2016 - WS19: ENHANCING LINGUISTIC AND CULTURAL DIVERSITY IN CYBERSPACE

12:00, Wednesday 7 December 2016

>> GIOVANNI SEPPIA: Good morning. Almost afternoon, everybody, and thank you for coming to this workshop about enhancing linguistic and cultural diversity and it's also about launching the IDN2016 on internationalized domain names.

My name is Giovanni Seppia, I work at EURid. EURid is the registry operator for .eu, and .europa and we work with the European domain. And we are in cultural and linguistic diversity. We have to support our operations in the 24 official languages of the European Union which is quite a tough mandate, but we love it. It's expanding the way you know and engage with stakeholders, by knowing them in their own mother tongue language.

To the we are going to launch the World Report on internationalised domain names. The report has been produced by EURid with UNESCO and Emily Taylor and the producer of the online version of the IDN world report, which Emily will speak about.

So that said, I would like this to be an interactive session. So feel free to raise your hand whenever you don't understand something, because there are quite a lot of technical elements when we go through what we like to speak about today. But also, I would like to give the floor to Emily Taylor who was the author. The entire exercise started six years ago. And it has become a yearly, let's say a yearly meeting for us. Something that we do every year. But instead of having now something that is done once in the year, it's regularly updated throughout the year.

So thank you, Emily, and if you can please also introduce yourself a bit, thank you.

>> EMILY TAYLOR: Thank you, very much, Giovanni. I'm delighted to be here and as Giovanni said, we envisioned this as a roundtable chat with all of us and so I encourage you to join in the conversation, to ask questions but to also make intervention because this was the original vision.

I will set the scene on the [World Report on Internationalized Domain Names](#) but I would like to emphasize that this session is about cultural and linguistic diversity in cyberspace. So it isn't only about domain names but also about the importance of multilingualism.

This is the front page of the new [IDN world report.EU](#) and dot-com website which presents our research findings as they come. So you can please feel free to look up the domain. We just want to take a few snapshots to give you a sense of how things are going.

Okay. As of - - so our data is all taking a snapshot from December of 2015. And at that time, to the best of our knowledge, there are approximately [6.8 million internationalized domain names in the world](#), and that includes both at the second level under an ASCII ending like dot com or dot- EU or all the way through the domain. So that's impressive.

We have seen a pretty good growth of [8 or 9%](#) since last year but we should reflect that that's [only 2%](#) of all of the world's registered domain names.

This shows an analysis of what scripts make up those 6.8 million domain names and we can actually see when we reflect that there are, what, 6,000 languages spoken in the world, that [only three scripts](#) actually make up 90% of the world's IDNs at the moment and they are Latin script, Han scripts and Cyrillic scripts. One of the things that we have seen as we tracked IDN development over the years is how closely IDN scripts map to the languages and the scripts spoken and used in the different countries and territories throughout the world. So this diagram shows or this map shows the [distribution of IDN scripts](#), and it's more or less exactly what you would expect. So in the Middle East and the North Africa, you see Arabic scripts and in the Russian Federation and countries where Cyrillic script is used, and that's what you find, and China, Han script and you see - - and in places like the United States, Canada, the UK, where you have strong hosting and registrar activities, you see a mix of no particular sort of nexus to any particular language.

But in this region, Latin America, Latin script IDNs is what you find.

What we look. So part of what we do each year is we crawl all of these domain names and look at how they are being used and the language of content associated with those IDNs. When you look at the [language of the web content](#) associated with IDNs and go back and look at what script is there in domain name, again, it's exactly what you would expect. So if you have Arabic language content, it's Arabic domain names that are pointing to it. If you have Russian language content, it's Cyrillic and so on. You.

Now, one of the things we want to develop in this conversation today, is a sense of how it's going with the cultural and linguistic diversity online.

Now [this diagram](#) shows three things. The top bar looks at the primary languages of languages spoken the world. There are the major languages if you like, and then the other end is the 6,000 languages that UNESCO has tracked. You see a huge linguistic diversity. And when you [look at languages online](#), you see it's a different picture. The second bar looks at the most popular - - I think it's looking at the most - - the 6 million most popular websites in the world, primarily looking at ASCII traditional domain names and what we see here, the story here in the second bar is the dominance of English language online, [over 50% of websites are still primarily in English language](#). That's better than it used to be. There's definite progress but it's still dominant.

When we look at the [primary language of the internationalized domain names](#), the picture is of greater linguistic diversity. So it's still nowhere near the 6,000 languages that UNESCO has traced in the offline world but it is much more like the proportions of languages spoken offline. So English goes down to 8 or 9%. Chinese is well represented and so is German. Arabic language is still very, very poorly represented in both IDN space and the traditional domain space.

So what's happened this year, just a very quick look at some launches from our partners. EURid has finally launched [the.EU in Cyrillic script](#), that happened in the summer and Verisign, as I'm sure we will hear from Keith has launched two dot com equivalents in Korean language and Japanese.

We have also launched [our website](#) to try and make our research a little bit more accessible and a bit more as something that one can dip into and look at a lot of [charts](#) and graphs and [different sections](#).

IDNs, although they are only 2% of the world's registered domains, they do seem to signal of the language of the web content. They lead to a more diverse language space than the traditional online space.

IDNs are accurate predictors of what language you are going to find on a website that's associated with an IDN and we think that's quite exciting but there's a lot to be done.

IDNs still [don't work very well](#) in the way that traditional domain names do and until they work in every context, whether this is certificates, browsers, email, in [things, cars](#), and so on, then we can't really expect the mass adoption that we think should be there as the next billions come online.

So I will leave it at that, and thank you very much, Giovanni.

>> GIOVANNI SEPPIA: Thanks a lot, Emily. Is there any - - really first question, including from remote participants and I'm looking at our remote moderate, Sebastian. Any questions? Yes, please. Two. Okay. Three. Okay.

>> AUDIENCE MEMBER: Hello, I'm not sure that you are aware that recently there was some threat by IDN domain, if I understand well, it was similar no Google.com, but it wasn't Google.com. So they were taking advantages of IDNs to misrepresent Google.com. And I don't know it was Cyrillic or some other alphabet, taking advantage of these similarities to trick people into going into their website. So how can we prevent this kind of issues. I know the danger is all around everywhere, and it's not only in the online world, but how can we prevent people that are beginning to get familiar with IDNs to make a distinction or to - - to help them navigate safely in this world of IDNs?

>> GIOVANNI SEPPIA: Thank you. It's indeed, an interesting question, security on IDNs, I know are a sensitive element. Anybody in the panel would like to take it up and answer?

Yeah? Okay.

Let's go for the other two questions and then we'll try to answer all together.

>> AUDIENCE MEMBER: Hello, I'm from Japan. When you talk about IDN, are you talking about IDN at the top level or the second level? Because we don't have - - we have chosen the IDN operator, I'm a top level operator for Japanese but they still do not provide us the service yet. I just wondered.

>> EMILY TAYLOR: So I'm talking about both. Thank you for raising that and making that distinction. So IDNs can exist, as you know, both in the second level, i.e., the label of the domain name, under a traditional ASCII, if you like, ending, like .com and .eu and so on and they also exist all the way through at the top level. So when I'm giving data for the overall numbers, it's both.

>> AUDIENCE MEMBER: Yes. I'm Janis Karklins, Ambassador of Latvia with the UN Geneva. So first of all, congratulations for the next edition of the World Report. I think that's a good thing that you are doing.

The question is the following: At the beginning when IDNs were introduced, one of the underlying reasons of that was a hope that those people in developing world, who do not master English would use IDNs to get online. Do you have any evidence that that assumption was correct?

Thank you.

>> GIOVANNI SEPPIA: Please.

>> EMILY TAYLOR: Maybe I could address both questions. Leon, yes, the sort of - - the so-called homograph, homoglyph question is one that's been around and known for quite some time, but I would probably caution about panicking on this because we know that people misrepresent and trick people in almost every context online and that that shouldn't - - that fear of those security issues should not prevent widespread

adoption. However, it needs to be backed by strong [dispute resolution mechanisms](#), which the gTLD space has and [many ccns also have](#).

And in some cases, such as EURid, they have chosen to have bundling so that different combinations or mixed scripts cannot be used.

But Janis, to your point, when we look at the [density of IDN registrations throughout the world](#), what we see is a real clustering over in not so much in developing countries but in the countries which are really well served by IDN scripts. So in China, Russia and so on. So we see that the density moves sort of eastward.

When you look at where all of the rest of domain names are registered. It tends to be in Europe and North America. We do see a shift and I think that's encouraging, but obviously there's a lot more to be done so that, you know, the spread of all the domain names is much more even throughout the world.

>> GIOVANNI SEPPIA: Thank you, anybody else on the panel like to complement or say?

No?

For completeness of information, I have to say that Janis Karklins has been one of the pioneers of this project. A big thank you, Janis, for all of your work in the early years of IDN report.

Thank you so much.

>> GIOVANNI SEPPIA: Thank you. I would like to give the floor to our representative from UNESCO. They are looking at the support of languages. Online and also in reality, and it's really great to have UNESCO as a partner in this project and it's really great the work that [UNESCO is doing to support linguistic and cultural diversity](#). So the floor is yours.

>>> INDRAJIT BANNERJEE: Thank you very much, Giovanni. We are very happy to be on this panel. In fact, before I begin, I must say that you should blame ambassador Karklins for all of, this and not put the responsibility on me because he was really the person who moved this project as far as EURid is concerned.

And we firstly welcome the report, for this very brief presentation. We can already see how much insight there is in such a report, not only about IDNs but you can connect this to the whole language situation in the world.

I must say, I'm very surprised after all of these years of talking about access, that we never really paid much attention to the whole question of multilingualism in cyberspace. I mean, recent statistics are quite appalling, that among the [6,000 spoken languages of world](#), 50% are going to disappear by end of the century. That's quite tragic already.

But UNESCO looks at this whole question of multilingualism in a rather holistic manner. We believe that on the one hand the Internet constitutes a very fundamental tool an extremely powerful tool to ensure that languages can be promoted, languages can be learned and shared online, with almost half the world's population.

On the other hand, as all national things evolve and cultures evolve, languages are bound to disappear. And the question then is how do we use these technological platforms, the Internet and other tools we have in order to preserve languages and record them for posterity. So it has a two-pronged approach. One is promoting [language learning](#), language sharing, [promoting languages online](#), and the other thing [preserving languages](#) to the extent possible. And this is why UNESCO has launched very recently. As you know, we had for many years

the [Atlas of Endangered Languages](#) and already by 2001, [we have listed 800 endangered languages](#). And so, of course, it helped to create some alarm bells. There were governments that were getting very concerned, the languages in which they themselves know existed were on the verge of disappearance, but it also shed light on the fact that something must be done urgently. That's why UNESCO came out with the [Recommendation on Multilingualism and Cyberspace](#). The whole idea was to ensure that governments did everything possible to make sure that languages thrive on the Internet and languages are protected, languages are promoted and so on.

Now we move to another level, because the general feeling was that, yes, we have listed endangered languages but, of course, there could be more endangered languages as we go along. Some of the language which are not endangered today will be endangered tomorrow.

So then we had experts from around the world meeting in Paris and their conclusion is that we need to create an atlas of - - [World Atlas of Languages](#), all languages endangered or otherwise. This is a very significant project that we launched. And we have launched a series of initiatives to increase linguistic diversity and contribute to human development around the world. Better respond to the development challenges to the application of inclusion of ICTs. Developing innovative and scalable ICT supported models of expanding access to multilingual content and knowledge, and development of the World Atlas of languages, stimulating collaboration through awareness-raising campaigns.

So in this project, I will be brief, we have managed to create a global task force on multilingualism where we have invited various organizations, major linguists around the world, universities, and others to join in terms of identifying what is a way forward. How do we identify these languages? How do we take stock of them? How do we preserve them, more importantly? Because so far, I think in the past, we have been listing languages that are in danger, listing languages *per se* but I think we can do much more with the technologies and the tools we have today. We should have a global map where we can touch on any country or region and be able to see what are the languages that exist. Listen to the language, [listen to songs, music and plays](#), whatever, the content, so even if one day it disappears, we will have a [good memory](#) of this rich linguistic heritage that we have been privileged to have.

So I think overall, we are delighted at UNESCO that not only EURid's work but many other organizations, institutions, universities, they are now getting more and more aware of the fact that multilingualism is not just a slogan. The disappearance of languages and cultures, especially at a time when we have such a platform which cuts across borders and boundaries and nations, is a wasted opportunity if we don't promote language, we don't promote culture and we don't promote diversity in all of its forms.

>> GIOVANNI SEPPIA: Thank you, Indrajit. It's really indeed, we should not lose all the culture that's in so many languages that are around the world, because the languages are, indeed, a synonym of culture. So, inside a language there. There's so much of a population, so much of history and culture of those people who are speaking that language. And so we are really happy to continue to partner with you and also one of the long-term projects that we have - - we have started to look into is how to - - let's say, investigate endangered languages online. That's an element that's in the pipeline as part of the IDN world report.

Do we have the question from the remote participant?

>> Wafa DAHMANI: So I will be - - I was expected to join you, offline but I couldn't make it to Mexico. I will speak a little bit about [our experience in Tunisia](#). So I will begin by introducing myself. I'm Wafa Dahmani from Tunisia. Tunisia is in North Africa. I think that today in this workshop, we are discussing relevant subject, which is cultural diversity into the cyberspace, considered for me one of the key areas for increasing connectivity.

In fact, the digital divide has two important aspects. First, everyone should have access to the Internet; and second, the access to quality content created not only at international or regional level, but especially locally in the local language. We believe that the Internet is multilingual and culturally diverse and every culture and language has its own space.

When it comes to our experience in Tunisia, we opted to get our IDN in 2010, being sure that not only are we preserving our identity on the net, but also we are giving the opportunity for people who only can read and write in Arabic that they will be able to express themselves in a meaningful way and create their own cultural content in local language. And share their thoughts in cyberspace, without being marginalised.

But the reality was different. Today we count only about [300 IDN registrations](#) in a country of 10 million people. We are still waiting to see the content we expected, the different content, the different - - and non- English content, and more enabled users. So we ask ourselves today, what's wrong? What's wrong with this IDN? What's wrong with this content that you can't find it today from Tunisia?

So, from my little experience, I think we dealt wrongly with this issue, and providing the IDN resources only is not the solution. We need also, from my perspective to make [some awareness and campaigns](#). People are not aware. They don't know about the IDN. They don't know that we have these resources today in Tunisia and we provide them. We need to provide the adequate applications and talk about universal acceptance.

We need to work on this issue and why not try to set policies to promote these resources which are essential in my opinion for the initiative divide.

Our experience in Tunisia is similar to other countries in the region (and sometimes better!) - - to conclude my brief intervention, I think at local level, at a certain level, especially among the government and the governmental institutions because we know seeing a specific specification on this region, we are governmental led in the Internet governance. We are aware about the importance of enhancing this language and cultural diversity and we provide the resources in terms of IDNs. Our work is not completed. We need to push more in the open community to benefit from these resources and be able to benefit the non-dominant language to express themselves, and create their own contents and share their thoughts.

And they think also to acquire applications. I have some successful experience and from them, I hear that in [India there's a significant experience](#) and I hope there are some welcome and you can give us some suggestions - - on the speaker and speak about their experience on IDNs. Thank you very much.

>> GIOVANNI SEPPIA: Thanks to you, Wafa for sharing your experience and for bringing up to the table some elements that are key for moving on with IDN with multiple levels including [universal acceptance](#).

Is there any question to Wafa, because - - yes, there's one because best practices and best practice sharing is indeed crucial at some point for promoting IDNs. So there is a question from the floor. Is that to Wafa? Yes.

So Wafa if you can stay on the line. There is a question for you.

>> AUDIENCE MEMBER: Hi, I'm from Mexico. And I have a question. Why we are talking about linguistic and diversity in English. So me, that seems controversial.

>> GIOVANNI SEPPIA: Do you want me to speak in Italian?

>> AUDIENCE MEMBER: No, we are in Mexico. Spanish. And the transmission is not working. We are talking about these issues and speaking all in English and there is no translation.

>> GIOVANNI SEPPIA: Yes, I think today English is a sort of lingua franca. Wafa, would you like to say something, or anybody in the panel like to say something?

>> Wafa DAHMANI: You said there was a question. I didn't hear a question.

>> GIOVANNI SEPPIA: So Houston, again, we have a problem.

Please.

>> INDRAJIT BANNERJEE: As far as the latest point being you can choose English, French, Hindi, Tamil and Bengali, and I'll respond to you in these five languages. So I think that's besides the point.

To come back to what Wafa was taking, I think it's extremely important. I just had a chat with Emily before the session. I think one shouldn't confuse things. The IDN has a certain *raison d'être* and the IDNs are not going to solve all of our problems when it comes to multilingual content. It's absolutely essential and we have seen this even from the country where I come in India. Whenever there's locally relevant content, the update in terms of access is very high. The moment there's lack of relevant content, we don't expect to pull a poor rural farmer to check out the BBC. It's a complete waste of time.

I think the more we - - the sites, once we have the IDNs and once we have the space with local content and locally relevant content, I'm sure the access will take a dramatic turn and people are not only going to access for access' sake. We will have a connection to the Internet. So I better go online.

But they will access it and leverage that access for enhancing the livelihoods for communicating with people, for going on social networking sites and so on.

So I think this is a point you make Wafa, but I don't think the intention of the panel, nor the report was to prove that any point in time that IDNs would solve our problems in terms of enhancing content to multilingual content.

>> GIOVANNI SEPPIA: Thank you. We have an answer from Wafa, yes?

Another participant would like to ask a question. Okay, yes, please, and then we have another question from the floor here.

>> AUDIENCE MEMBER: This question is from Manal Ismail, with the Egyptian government who would like to agree with what Wafa said. She said I think wide spread adoption of IDNs at least for certain scripts is impeded by [weak DNS industries](#) in general but most importantly by lack of universal acceptance which holds back all of what IDNs promise.

>> GIOVANNI SEPPIA: Thank you. Many of us, we know how much she has been working hard to [promote IDNs](#). But in the [GAC](#) where she participates as a representative of the Egyptian government. We have another question from the floor. A comment, a statement.

>> PETER VAN ROSTE: My name is Peter van Roste. I'm the General Manager at [CENTR](#). It's not a question. It's a couple of contributions to the debate. So linguistic and cultural diversity which is the topic here, is not really a significant problem in Europe. We have plenty of websites, the content and local languages. Speaking

as a Belgian, most of the websites that I regularly visit are multilingual. You just choose the language and the magic happens.

Most scripts are Latin based, Greek and Cyrillic are the exceptions.

And typically the introduction of IDNs, which started in 2002 and some ccTLDs, introduced IDNs as recently as 2015. These introductions just add 20 some characters to the standard character set of 26 Latin characters. When they were introduced and especially given that they were introduced so late, there were several signals that were not seen as a necessity, but more as a nice to have.

They were quite often pushed by the markets. I don't think that they were always demand driven which explains sometimes a lack of success, and you see that some of the most valuable IDN domain names when we talk about the second level in some of the European ccTLDs were picked up by investors and they are not even visible in the day-to-day use of - - of IDNs.

So penetration remains low on average. And I don't think you had a time in your presentation, it's probably in the study, to zoom in, it's 3 to 4% across the European ccTLDs with two highs. I think Portugal is around 10% and Latvia is quite high too.

And as mentioned by Manal and a couple of other speakers universal acceptance is a significant problem. It explains why there's a high drop rate for IDN domains. People are just annoyed that they can't send out emails. They can't receive them. There is also still problems with the web forms. So it's not just the universal acceptance issue with mails and mail servers, but you can't use your address to - - to register a plane ticket, for instance.

So we at CENTR have contributed earlier, I think the last one was last year. There was a survey on IDNs and part of it is public, so anybody who's interested can find it at our website.

>> GIOVANNI SEPPIA: Is there anybody from the panel who is brave enough to pick up the universal acceptance? Because we are speaking about universal acceptance, but when we started and I asked people here in the room to raise their hands about their knowledge about IDNs. So they may not know either what universal acceptance is. So what is the brave person?

Baher. He works with ICANN. Thank you, Baher. Baher Esmat is a Vice President at ICANN and he has worked a lot on the universal acceptance and support of IDNs. Baher.

>> BAHER ESMAT: Thank you, Giovanni. I'm Baher Esmat, I'm at ICANN. For those who are not familiar with ICANN, ICANN is the Internet Corporation for Assigned Names and Numbers. It's the global body that coordinates policy and technical issues pertaining to the Internet naming system. So universal acceptance was mentioned by many speakers and participants. [Universal acceptance](#) in a nutshell is a concept whereby to ensure that all domain names are treated equally by applications and online systems in general.

That is when you go and do any online transaction, eCommerce or you want to do an online booking and you provide your email, for example, that the online system that you are dealing with does recognize, validate and accept this domain name.

Currently, there are many online systems that for different reasons, do not recognize or accept new forms of domain names, whether they are IDNs internationalized domain names, domains that are not in ASCII or Latin scripts or new generic top level domains.

So, again, for those who don't know ICANN has a few years ago introduced a program to add [new generic top level domains](#) to the sort of legacy domains, like .com, .net, .org etc, and we currently have over one thousand of those new top level domains in the DNS system or the Domain Name System. And a part of the universal acceptance project is to get those systems, as I said, recognize and accept those new domains. So ICANN has been leading a project with - - a community with the Internet community called universal acceptance and they have [Universal Acceptance Steering Group](#) and the - - the primary objective of this group is to work with software developers, application providers, on making their systems universal acceptance ready or enabled.

So the steering group is a community and a group of experts from multiple disciplines from technical community from academia, from business, and they have been working on a number of areas like communication and outreach, like documentation, and also they have been doing some measurements. So on communication part, they have been issuing documents, white papers, sort of facts of explaining what the issue is and explaining how to deal with the issue, explaining to software developers how to make their systems, "UA" (universal acceptance) ready.

There have been a lot of documents available on the website called <http://www.uasg.tech/>. So the group is using one of the new top level domains .tech to try to promote the use of those domains.

On the measurement side, there have been some experiments on - - measuring how many online systems and popular websites and online applications, how many of them are UA enabled, how many email systems also recognize emails with the new domains, like having an email in Arabic or in Chinese, whether those systems will accept those domains. And of course, there are details on the findings of those measurements available on the website, but I can say that the majority of over 90% of the most sort of popular websites and systems, they are sort of UA enabled and yet there's still a lack of acceptance of those domains at the level of email systems, especially with IDN emails. And also the website, the sort of application kind of systems, the acceptance of new ASCII domains, the acceptance level is higher than that of the IDN domains or the domains that are not based on Latin script.

The - - the steering group is open for anyone to participate and it's an ongoing effort. There's a lot of work to be done. If you go to [the website](#), you can also see that there's a mailing list where people can sort of subscribe to and engage in the discussions and also contribute to, you know, how to address - - because there are many issues, it's not one issue under this heading of UA, there are multiple issues, so people from different regions, different experiences and backgrounds can contribute to this work.

Thanks.

>> GIOVANNI SEPPIA: Thanks Baher. Is there any question to Baher?

>> LUCIEN TAYLOR: Hi. I'm Lucien Taylor, I'm the product development director for Oxford Information Labs. We have been very much involved in the statistical background, and gathering the data, and big data mining for the IDN world report. Baher, I'm really interested in what's happening in these - - in these universal acceptance projects, particularly the thing about email, because that to me is turnkey, I believe, for IDN adoption. The email platforms are - - the email application is the biggest application in the world. That's the one that has to be fixed and just work for everybody before we have that huge adoption that we can anticipate.

I'm not quite sure about the sort of CENTR type view of the market led, well, there's not much use. There's not much demand. To me, it seems so obvious, the IDNs are going to be a colossal market for the people that are going to really benefit, are the money makers, the domain name providers, who will have a huge opportunity if

this system is fixed. But a lot of what is happening at the low level is to do with the post-fix servers, the sendmail servers. And these are quite academic open source systems. How can we get the people with the money, who have the real interest in making IDNs work, and these kind of more esoteric kind of academic groups who are developing these systems and have no real interest to kind of fix - - I mean, I don't want to focus on post-fix, but I know these kind of systems are critical for relaying these emails. How can we get this complex job done and get - - you know, what is the stick and what is the carrot here?

>> GIOVANNI SEPPIA: Thank you, Baher. Complex question.

>> BAHER ESMAT: Yes, it is, and I'm afraid I'm not sure I have the answer. It's a complex issue and this is part of the challenge that the - - the steering group actually has been facing, how to get to, you know, the right - - the right people, whether among with the decision making sort of group or the technical group, or the business groups. So it's - - it's a complex thing, and that's why also part of the communication and outreach, that the group has been doing is to approach each of those groups in slightly different messages.

So those who, like software developers, they're not interested in changing their code, unless there's a significant and very pressing issue. For them, sorting this UA thing is not a pressing issue. And the same goes for investors, for CIOs and so forth. So it's a complex thing.

>> GIOVANNI SEPPIA: Thank you, Baher. You raised a question. Yes, please?

>> AUDIENCE MEMBER: Hello, I'm from the government of Lakapaka, I have an annotation about post-fix and sendmail. The open source communities are doing great efforts for this thing - - for multi language, because they are open and so any developer in the world can do the fixes and upload the changes and make these things work - - so it's some kind of lucky, that post fix and send mail are the most distributed and are open source software.

So maybe if encourage companies to invest in open source solutions, we can do really good work in multilingualism. Here in Mexico, we have an Linux distribution for Hispanic languages and they are getting people in the North of Jalisco, working in their own language.

>> GIOVANNI SEPPIA: Thanks alot. Very good point. Very good point. Because it's a good point, I would like to pass the floor to Michael and Marcel, who may complement what has been said about universal acceptance and what can be done to make sure that there is enough support technically speaking to IDNs and linguistic diversity online. Thank you.

>>MARCEL LEONARDI: Thank you for having me here. I work for Google in Brazil, the public policy team. And I would like to move a little bit away from the IDNs discussion, especially as because the very first question that this panel presents is "How are the major platforms encouraging diversity in cultural and linguistic expression. I would like to give two very specific Google examples, one of them is more global, a curated platform and the other is more local to my reality in Brazil and I will make some connections that maybe haven't been done before, and I will appreciate questions from the audience and my fellow panelists.

The first one is a platform that not everybody knows, despite Google having kept it for quite sometime. It's the Google cultural and arts platform. It is maintained by the [Google Cultural Institute](https://www.google.com/culturalinstitute). I encourage you to visit it at [Google.com/culturalinstitute](https://www.google.com/culturalinstitute). It's basically a curated website. Google has partnered with over 1,000 institutions across the world from over 70 countries. The website showcases more than 6 million photographs, over 400,000 works of art and pieces available in museums and essentially it digitizes all the content free of

charge and basically puts that for the preservation for future generations. It's an ad free website. There's no money to be made out of it. It's essentially a way to preserve all of these materials for future generations. One of the most interesting parts of this website is we have developed technology called [gigapixel](#) which essentially makes incredibly high resolution images of famous works of art to the point where we can actually see more detail, and actually being present, in front of the very piece of art, the very picture, the very object.

So it's very interesting and the reason that this is a way to obviously amplify and diversify culture is one of the most major hassles that we still have throughout the world, that if you want to know more about the culture of different places, usually you still have to travel. Traveling is great for everybody but not everybody can afford it. So having these pieces, digitized, in partnership with museums that decide what kind of content gets online and what does not, this is a way that Google is promoting this kind of diversity.

The other thing I would like to address and it raises the point of why sometimes we don't see as much diversity as we would expect is one thing that we have noticed in Brazil, my home country.

So Brazil loves YouTube. Basically we are probably the second, if I'm not mistaken, in terms of traffic, Brazil is like second only to the United States in the amount of [users that watch videos on YouTube](#), but it's only the ninth in producing content for YouTube in general. So there's a clear gap there. Besides the obvious gap, there are a variety of reasons why that happens. Not everybody can afford cameras and not everybody has access to the Internet in the first place.

What we have also noticed is some kind of self-censorship mechanisms working, especially regarding minorities and specific groups in Brazil.

If you take Brazil and produced content on YouTube, it tends to be from the same kind of gender, the same kind of ethnical profile in general and we wanted to address that. So one way that we try to address that was actually by empowering people and creators that actually were ashamed because of the harassment they sometimes get online for putting their messages out there, to not be afraid of that type of scenario.

For example, 45 days ago we did an event in London. Actually, in September we did an event in London called [Creators for Change](#), which was to show the power of videos to foster some of these issues that I believe people were facing the line on extreme content and things like that. In Brazil the situation was particularly different. What we have noticed that African Brazilians and those from different ethnicities other than white, were not actually producing content for YouTube because when they did so, they would get harassed and attacks on social media.

So we started producing events down there with that goal.

So it's essentially inviting, for example, the top 25 African Brazilian YouTubers to have a conversation in partnership with an NGO, called [Mídia Etnica](#), which essentially was trying to showcase the importance of being online and fostering cultural diversity within a specific country. This is sometimes not getting captured these debates. In countries as large as Brazil, and I'm sure it's the same for several different countries around the world, who have different groups, that maybe are not present, even those - - that are supposed to be the same culture, the same language, the same people.

So these are the two top issues that I wanted to highlight, and, of course, I am open to the floor for questions.

Thank you.

>> GIOVANNI SEPPIA: Thank you, Marcel. Are there any questions?

Please?

>> AUDIENCE MEMBER: I work for Global Voices. I wanted to say first that I'm glad we shifted a bit from IDN conversation. I want to ask if the photos in Google arts and culture are licensed under creative commons.

>> AUDIENCE MEMBER: So it's up to each museum to decide how they want the partnership to happen. And most of them want to preserve their copyright rights on that. So no, not necessarily. They are licensed, but not necessarily under creative commons, just to clarify. Of course they are all licensed otherwise it wouldn't be there.

>> AUDIENCE MEMBER: My name is Wong. I'm from China. I have a question. When we talk about culture, our culture is something including many, many, things and when we talk about the cultural diversity, so how many aspects or how many issues should be included under this topic, and under this culture diversity online or maybe even Internet cultural diversity? So among all the aspects, which one is the critical one? So that's my question to the panelists. Thank you.

>> GIOVANNI SEPPIA: Thanks a lot. That's a good point. Let's try to optimize and prioritize.

So panelists, all of you? The two most important and critical?

>> EMILY TAYLOR: Personally, I think that language is a critical enabler because it gives access to content in the different spheres. The examples that Marcel has given, bring this conversation wider out of domain names into works of art and key aspects of cultural civilization, these are enormously and enriching aspects of humanity. And in some cases, if you don't have the language, you don't have the key to unlock those riches, whether they are dead languages or languages that exist for now in the world. For me, I suppose I would say, that wouldn't I? I don't think there's a single truth on this, and I'm sure Indrajit will have something.

>> INDRAJIT BANNERJEE: If we start discussing that question, we need a month in this room as to what constitutes culture. I think the question is very relevant because you can't - - you can't grasp all of culture in one sweep, but I think what is happening increasingly today is that you see different communities of interest and practice, focusing on different dimensions of culture.

And we think our approach at UNESCO is that you be inclusive. So, for example, I recently got a letter from a museum in France, which deals with puppets. And I, who don't know anything about puppets, what is the big deal, you know? But then I realized when I saw some of the shows, how those puppets are used, not only in terms of how they are made, but how they are used to tell stories, how they are used to share traditions of past times is amazing. So somebody has taken an interest in puppets and created a museum. Somebody is interested in song. Somebody is interested in dance. Somebody is interested in language. So the strategy here should not be to reduce culture to one or two critical points or aspects but to say we embrace everything. Bring it on.

So inclusion is absolutely key to dealing with culture. (off microphone comment).

>> GIOVANNI SEPPIA: Can you please speak in the mic.

>> AUDIENCE MEMBER: In China, PC games or mobile games are typical kind of internet culture. But I don't know the general idea of, you know - - your view on - - the PC games future or something. I'm not - - I'm also not sure if the Internet culture should include this specific topic such as PC games.

>>INDRAJIT BANNERJEE: I will give you a worse example than PC games or a better example, rather. We are now at UNESCO on the verge of creating - - because, you know, we protect cultural heritage and documentary heritage and now we have a huge project to protect software heritage. All the softwares that have been invented which have slowly brought us to where we are, we are going to start protecting software heritage. Why not?

>> GIOVANNI SEPPIA: Okay, as Indrajit said, we can go on for a month, but we don't have a month.

Marcel, would you like to say anything to wrap up this part?

>> Marcel: As an incredibly hard core fan of video games, I would say they are art but people may disagree with me. But then again, we look at the effects of that, take something as silly as when we originally created like Angry Birds, it's part of an industry. The Finnish company, Bravio, made a lot of money out of them with all the licensing and things and it's undeniable impact culturally in general. It may be pop culture, but it's culture nonetheless.

For example, the Library of Congress, I'm not sure that everybody is aware that they actually archive all tweets. And I'm sure we all agree that not exactly all tweets are worth archiving.

>> GIOVANNI SEPPIA: Okay. Let's keep the archiving and privacy matters for a while. Michael.

>> MICHAEL KENDE: Hi, so I'm Michael Kende, I'm working with a consulting company called Analysys Mason and just as a bit of pre- advertising, we are working with the universal acceptance steering group on a project to kind of create awareness - - increase awareness of and show the benefits for website owners and others for accepting the new domains including the IDNs. I'm not sure when that will come out, hopefully early next year but we're really trying to create the case that there's a benefit to accepting all of these domain names, including the IDNs.

But what I wanted to spend a few minutes talking about was a project I did that recently came out with my previous employer, the Internet Society, and what we are doing we are trying to start looking increasingly at content as the way to get people online in countries where mobile broadband is not ubiquitous but getting close. You know, one of the things keeping - - one of the things people mention is that they just don't see an interest in the internet or it's not for them and a lot of that is because the content is for us, and speaking as someone from Switzerland and not necessarily for people in their local communities.

So we started doing this and the paper is called "[Promoting Content In Africa](#)." It came out a few months ago and I wrote it with a colleague Bastiaan Quast from the Internet Society.

One of the real learnings for me was we looked at Africa that the official language of a country like Kenya may be English but not everybody speaks English or is comfortable in English. And the best data that we found on that was the [Pew Internet surveys](#). **People were much, much more likely to own a SmartPhone if they spoke or read English. Even in Senegal, which was really surprising, since it's not an English speaking country, even as the official language.**

So that really suggested, you know, looking at how to promote the creation of more content locally, and because that's going to be in the right language, and on the right topics.

And then just one other piece that we found that we were quite surprised about with that is if you were creating content and you want to monetize the content and you want to make some money eventually. One of the major

advertising platforms doesn't support any Sub-Saharan African language. So you have to advertise in English, and you are also not allowed to mix and match. Meaning, that you can't have Swahili website with English advertising. They have to match. So basically, you can't - - you can't advertise on any local languages or Sub-Saharan African languages. So we flagged that to the company and they are starting to think about it. It's not a technical issue. It's simply, I guess a business issue and they will hopefully start to support mixing and matching or support the local languages.

And the final point that I wanted to raise was [my coauthor was working on his thesis](#), and he came up with a quite interesting observation that in Botswana, there was a demand for using Google and they wrote - - some professor came out with the local interface of Google in the local language which is Setswana, I hope I'm pronouncing that right. And so that was in response to demand but there were some people in South Africa that speak that language as well. So suddenly they could get the interface in their language.

And what was interesting, they were doing a lot of surveys in that country and he was able to show and very rigorously document that, that as a result of getting this language, [suddenly into South Africa, computer ownership went up, the usage of the local language went up, just by measuring Google trends on the word for 'help', and then they can even show employment went up](#), quite significantly and statistically significantly because it was really something that was just dropped in and demand increased, usage increased, employment increased.

So it really suggests that the stuff we are talking about here has some real - - not just bringing people online but increasing employment, [increasing usage has some real practical and real concrete benefits](#) for everybody, if they can get online and hopefully start creating content, advertising in their language, and we'll make a business out of it as well.

>> GIOVANNI SEPPIA: Thank you so much, Michael, extremely interesting contribution. Very practical with some very good examples. Thanks again. Is there any question for Michael?

Yes. There's one there and one on the floor. Thank you.

>> AUDIENCE MEMBER: Hi. My name is Keith. I work with a project where we do cell phone deployment this Juaca. We are looking at whether we should in some way bring data to those communities. And my personal conclusion on that one is that for the moment, I don't want to do that because - - I guess I have been working with Internet - - I will try to make this short - - since before the Internet. In and the way I see it, basically if you excuse the grotesque generalization, the Internet so far has been made by white western males. We had the opportunity to develop it because we were there at the beginning and we have made all the stuff. And so anything that we bring to people who haven't had the opportunity to build their own Internet, is going to be a certain type of colonization. So the only way I can see to do it is fragment the Internet and implement Internet technology for those communities and allow them to develop what would come out of that.

And I - - I wanted to comment on something that was before, but we're now here. So let me take the opportunity to also say that as somebody who has been around for a long time, I'm - - on behalf of everybody else who I have already spoken to about this and who agrees with me, DNS is fundamentally broken and needs to be replaced, not fixed, but the question - - but the previous question stands.

>> GIOVANNI SEPPIA: That's a strong statement. Let's listen to the other question and I'm sure some panelists will - - you know, will be looking forward to answering. Please.

>> AUDIENCE MEMBER: Yes, my question is a little different. More on multilingual content. In a past life, I worked in the translation and localization industry, specifically in online content. And I would work on launching content in 100 plus languages and was a big advocate for the company to expand it to more languages to get into more markets. However, a problem that we ran into, once we would launch the content, we would go back and look at the analytics, we would have users from countries all across the world visiting this content, however, we would still see predominantly they were choosing to access the content in English.

And we tried to figure out what could be causing this. Is this, you know, the users are used to English already? Is it it was primarily business content? Maybe it's just the business community more already operates in English. I'm curious, does anyone on the panel have thoughts about why when there's multilingual local content launched that users are still choosing to use English many some context?

>> GIOVANNI SEPPIA: Thank you. So distinguished panelists.

>> MICHAEL KENDE: I will take a very small part because there's a lot packed into that first question. The Internet isn't just content from somewhere else. A lot of platforms allow interaction. Facebook, WhatsApp, all of these things can be written and allow interaction. And getting access to Wikipedia, you see the languages start to [increase in the local languages](#). So, you know, most or a lot of people - - I don't have studies on this, but we can all become creators as well as producers. So I would suggest that while you can't get away from the fact that a lot of the content is already there, people, I think, quickly start to develop their own, whether this is one- on- one, one to many, whether it's a blog, whether it's Wikipedia and build up from that. But there's a lot in there and I'm sure there's a lot of other comments on that point.

>> INDRAJIT BANNERJEE: I will cover the second question. It's an interesting question, but I think one has to break down the question, you say that there's a lot of multilingual content available. I think English language far outweighs both in terms of volume and in terms of quality, multilingual content. And this is what we are trying to advocate, as long as and until you don't have all languages, as many languages as possible, but good quality content. I mean, look at the movie industries. Look at the TV industries. You know, a lot of the majority of the content is in English. Yes, of course, you can dub it and subtitle it and so on, but the fact is, as long as the - - both the volume and the quality of content is at par with the English language content, which China has managed to do in a great extent. In both dimensions, I think you will still see a lot of people who will tend to lean towards the English language content.

>> GIOVANNI SEPPIA: Thank you, Indrajit. I would like now to give the floor, because we have two other panelists who have not spoken yet. First, it's Keith from Verisign. Thank you, Keith.

>> KEITH DRAZEK: Thank you very much, Giovanni and Emily for the opportunity to be here. My name is Keith Drazek. I work with Verisign. Verisign is the registry operator for all of the .com and .net domain names. I wanted to let everybody know that we actually applied during most recent round of top level domains, applied for 13 IDN strings ourselves and those IDN strings are transliterations of dot com and dot net. And transliteration is something that would sound like if you said it in the native language, dot com or dot net. An example would be in Cyrillic, we applied for dot K-O-M and it would be said in Russian would be '.com'. So, we have applied for 13 of these strings. We have [launched two of them](#), as I think Emily mentioned earlier. And we are very, very committed, as a company, to promoting launching and promoting our IDN top level domains.

To many years we have been supporting and offering second level IDN strings on dot com and dot net ASCII, but we are absolutely committed to moving forward with a IDN.IDN approach to our brands.

I will be brief. I know we are running out of time and I know there are some other things to be said. This has been a very, very enlightening discussion and I'm glad to see that it was broadened outside of just the IDN TLD question. I do want to compliment Baher for his overview or introduction of the universal acceptance steering group. I think ICANN has done a commendable job of coordinating effort in that group, bringing people from the domain name industry, together along with others coming from the technical community, to really raise awareness of the challenges related to the use of IDN strings.

And I want to make clear, there's nothing technically wrong or broken with IDN top level domains or second level domains or in fact the DNS. But I think it's important to note that there are real challenges still with availability, awareness, promotion, and importantly usability of IDN strings, and so Verisign is committed to continuing to support the efforts of the Report on an annual basis and also to engage directly in the universal acceptance steering group. I would be happy to take any questions.

>> GIOVANNI SEPPIA: Thanks alot, Keith. Can I ask Megan Richards so you know, say a few words about what the European Commission is doing about multilingualism and support to usability.

>> MEGAN RICHARDS: Perhaps if you stand here, it's nice to stand up.

>> GIOVANNI SEPPIA: But you have to come to the stage.

>> MEGAN RICHARDS: Okay. Good morning, everyone. I apologize for coming late and I will probably have to leave early. But so this is something that we support very much in Europe. I think some of you have probably heard me say in Europe, we have 23 official languages. 23. 24. Sorry. Because of the Croats. It's 24 now. He's absolutely right. Those are just the official languages which we have to translate legislation. European legislation into. But there are many other regional languages, et cetera, and we have, of course, all sorts of languages with interesting - - we're not supposed to say funny - - but accents that make transliteration difficult and interesting on the Internet and scripts that are not Latin, like Cyrillic for Bulgarian, and Greek for Greek. So just in Europe, [this is a very important issue](#) in terms of making sure that content is accessible locally. It's even more important in terms of broadening access to the Internet.

If we have 4 billion people who still don't have access to the Internet, they will never have access if the availability of top level domains or content or instruments is only in languages that they don't speak. So we think that this is one of the most important things that we can do not just in Europe. EURid is doing a very good job in trying to make this .EU available in all the languages that we have in Europe, and there's other scripts that are available, but I think this is an area where we have to really make a lot of effort to make sure that government services are available in local languages to roll out e- health, e- Government, e-Commerce, all the facilities and functions that people can use and have access to the Internet to help drive forward the digital economy and society in other parts of the world.

As some of you have said, this is something that's really important for access. Thanks.

>> GIOVANNI SEPPIA: Thank you so much, Megan. Is this any question for Megan or Keith? I know that there's also a question from a remote participant.

>> ANNEBETH LANGE: This is Annebeth Lange from Norway, ccTLD of Norway. It's interesting that the Report says that 2% of all domain names in the world are IDNs. When ICANN opened for the new gTLD round, one of the reasons was to open up for better availability for scripts. And it turns out that it was most of the domain names that were registered as top level domains were in ASCII. So now they are planning another round.

So one possibility would be to open up for scripts and IDNs first and give them a privilege to register a new gTLD and then wait with the rest of the ASCII. So, Baher.

>> GIOVANNI SEPPIA: Okay. That's a very big ball that was launched to you.

>> Keith volunteered to take this one.

>> GIOVANNI SEPPIA: Good.

>> KEITH DRAZEK: Thank you very much. It's a great question related to the new gTLDs and the next round of new gTLDs and I know there are a lot of different competing interests in terms of the types of top level domains that should have priority, or really it's an open question of priority at this time. There is an existing Working Group in the ICANN community. The next - - it's the new gTLD, Subsequent Procedures PDP Working Group, I apologize for the acronyms. But there is an existing working group looking at the many, many issues with regard to the next round of top level domains and I think that this is one of the questions that's being addressed.

There are companies who are interested in applying for dot brands. So, companies who did not get in the last round, whose competitors may have gotten a dot brand top level domain, who are very much now interested in getting in. There are exactly the questions of IDNs. There are other applicants who are interested in geographically specific top level domains for example a dot cities, .paris, .berlin have already gone. There are now others who are interested. So, there are many competing interests, but I would agree that IDNs could absolutely be considered one of those categories. So if anybody is really interested, join that group.

>> GIOVANNI SEPPIA: Thank you, Keith. You have a question?

>> AUDIENCE MEMBER: Yes. It's Chris Disspain. ICANN Board. Do we know - - and Emily, I apologize because I haven't looked at the report yet. Do we have an idea of split between g and c in the IDN space? And how is that reflected with the - - is the growth in the gTLD IDN space faster or slower than that in the ccTLD space?

>> EMILY TAYLOR: Thank you for the question. Yes, we do address those. At the moment, it's two- thirds of all the IDNs both at second and top level are in the cc space and about one- third in the g space but growth, which you mentioned, has been pretty flat across both the ccTLDs and the - - I don't like the word legacy TLD? Do you. The gTLD that people - - the older ones. And that growth has been pretty flat for the last couple of years but the growth that we see over the last year has been in the new gTLD IDNs both at top and second level.

>> GIOVANNI SEPPIA: Thank you. I have very quickly a question from a promote participant.

>> AUDIENCE MEMBER: So this is coming from Eddie Avila with the organization Global Voices. For the past three years, we have been inspired by working with young, indigenous Internet users across Latin America, who are taking advantage of the Internet and digital tools to promote and revitalize their language online. It's not only as simple as saying someone wants to start blogging and tweeting, producing podcasts, localizing free software or editing Wikipedia in their native language. Access to tools and to the web has always been an ongoing issue, as well as linguistic challenges where lack of consensus on writing, or the use of neologisms can be an obstacle.

However, the good news is that they are finding solutions to many of these barriers. Over the past three years we have helped to co- organize gatherings where these young people or digital activists come together to share

experiences and skills, demonstrating that there are others nearby who share the same mission in order to create smaller local networks.

These workshops were held in Mexico, Colombia, Peru, Ecuador and Bolivia and we are planning a few more in 2017. Based on these workshops we have a better idea of the ongoing needs and how groups like Global Voices and other like-minded organizations can help support their work. We have started to document on these projects on a site called [activismolenguas.org](http://activismolenguas.org).

Finally, I'm pleased to see this topic included in the Internet Governance agenda. Discussions surrounding policy is needed to ensure the conditions linguistic and cultural diversity online. I hope in the future there will be an opportunity for indigenous grassroots activists to take part in these sort of panels, to have the opportunity to take part in conversations with policy makers. This is one step to have greater impact with their work. We are more than happy to help connect different groups with those and some of the grassroots activists eager to share knowledge.

>> GIOVANNI SEPPIA: Thank you so much. It was a great contribution, and it goes really well with the fact that we need a lot of education and awareness.

We are running really out of time. I would like to give 10 seconds to each of the panelists. 10 seconds! And I will time - - no. Nobody. Okay. One second? You want to trade it?

>> EMILY TAYLOR: Thank you very much to everybody in the room for your participation and your contributions to this birds of a feather session. We really wanted it to be a conversation rather than a talking heads panel session. I think to take up Eddie Avila's point about the importance of - - involving grass roots activists and also youth in these debates is a very welcome point to make, and something that I would certainly support.

>> GIOVANNI SEPPIA: Anybody else?

>> INDRAJIT BANNERJEE: Well, I have to take the floor, very briefly because this last question was - - was a very, very important one. And as you may know, that there's a lot of work being done by UNESCO and by many other organisations on indigenous languages and indigenous cultures, and I think it's very crucial, this bottom-up, grassroots approach to the preservation of cultural and linguistic diversity. Because they are the people who live the culture. We are not there to go and preach to them about how they should promote their language, how they should preserve the culture. This is a welcome thing.

>> GIOVANNI SEPPIA: I would like to - - Megan, would you like it say a few last words.

>> MEGAN RICHARDS: One is I think we should continue the conversation and it's absolutely clear for local content and development of access, these IDNs and other scripts and other languages have to be really driven out and everyone has the responsibility to do this, but I think you have already covered most of these issues. Thanks for organizing also the workshop.

>> GIOVANNI SEPPIA: Thanks to all panelists. Thanks to all the panellists, to those who participated remotely and thanks to the local staff who helped us manage this workshop.

I would like to finish, there's a lot to be done. I would like to finish with a sort of saying ‘*Cuando el corazon habla, las palabras sobran*’. And the meaning is that there is a lot of passion needed by all those involved to make sure that we move forward to enhance linguistic and cultural diversity online, but not only online.

Thank you, everybody.

(Applause)

(End of session 1:30 p.m. Central Time)

*Corrected transcript, based on original published at the [IGF official site](#). Corrections include inserting missing or incorrectly transcribed text, correcting typos, proper nouns, removal of non-substantive sections such as problems connecting remote participation speakers, people falling over etc*