ICANN68 | Virtual Policy Forum – At-Large Policy Session: Aligning UA and IDNs with the Multilingual Internet:
End-user perspectives
Thursday, June 25, 2020 – 08:30 to 10:00 MYT

MICHELLE DESMYTER: Good morning, good afternoon, and good evening to all. Welcome to Day 4 of our At-Large session of the ICANN68 Virtual Policy Forum on Thursday, the 15th of June, at 00:30 UTC: Aligning UA and IDNs with a Multilingual Internal and User Perspectives. My name is Michelle DeSmyter from At-Large staff, and I am the remote participation for this session.

Please note that this session is being recorded and follows the ICANN expected standards of behavior. We will not be doing roll calls during ICANN68 but will note attendance for all sessions. During the session, questions or comments submitted via chat will only be read aloud if submitted in English using the proper form, as I will note in the chat momentarily. I will read questions and comments aloud during the time set by the Chair or moderator of this session. If you would like to ask your question or make your comment verbally, please raise your hand and we will unmute your line and you will then be able to speak. When called upon, we will unmute your microphone and you may take the floor. Please state your name for the record and the language you will speak if speaking a language other than English.

Please note that this session also includes interpretation in French and Spanish. To hear the interpretation, you will need to download the interpretation application. More information can be find in the sessions details on the event schedule, and the instructions will be in the chat. We have also posted all the details on the At-Large ICANN68 wiki page. The link is posted in the chat as well.

A kind reminder to please speak clearly and at a reasonable speed to allow for accurate interpretation. Again, please state your name each time you take the floor.

With this, I will hand the floor over to Satish Babu. Please begin.

SATISH BABU:

Thanks very much, Michelle. I am Satish. Welcome back to the ALAC sessions at the Virtual ICANN68 Policy Forum. This session is looking at the issue of universal acceptance and related areas from the perspective of end users. I'll briefly go through the questions that have been posed to the panelists. The panelists, of course, could cover anything they think is important. This is just a very broad guidance for them.

Now, the fundamental problem in universal acceptance—I'm not covering the basics here because we already had a prep session on the basics—is a catch-22 situation vis-à-vis the demand and supply, as it were, of universal acceptance. Until the time that users start demanding, the service providers are not likely to do so and provide these services. But until the services are available, users are not going

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to pick it up or start asking for more or use it extensively. So this is the situation that needs to be addressed. Universal acceptance—the initiative from the community has been addressing this, but we would like our speakers' perspective on this.

Another question that came up in the prep question is, how can the best practices and success stories be shared across communities and regions? How do we involve universities and students in the universal acceptance initiative? There was this question: can UA be achieved before the next round? I think this is a good point that came up in the At-Large discussions earlier on during ICANN68, and we would like our panelists to comment on how much we can expect to be achieved before the next round.

The other aspect of this particular session is very broad in the sense that it steps outside—very briefly, though—the remit of ICANN because we're talking about the multilingual Internet and about linguistic communities. There is, of course, the concern that there are many communities that are minorities and marginalized in terms of the language. So bringing on board these linguistic opportunities is important. So how can these linguistic communities, as well as the governments, advocate for IDN[-based] UA?

The three components of the multilingual Internet are IDNs, universal acceptance, and multilingual content. Again, content is, strictly speaking, outside ICANN's remit. From an end user perspective, of course these are intertwined and we cannot keep out content from our discussions. So we would like or panelists to comment on how we

can encourage the creation of multilingual content. How can At-Large end users and the language communities be better involved?

A critical component in the universal acceptance is the support from developers and the industry, whether it is large IT giants or open-source communities. There is a certain amount of reluctance that we have to overcome, and we would like to get a perspective from the industry side of things.

There are also a few technical questions that came up during our prep session, as well as from outside. One is about the non-ASII e-mail address. If an e-mail comes to us with in a script that I can't read, then how do I make out who's this person sending an e-mail to me? Is there a universally readable representation for this e-mail address?

Another question that came up was about search engines and how the IDN-based domains fare in the search engine rankings. Is if there any penalty for being [on] an IDN domain? How do we fix that?

Finally, there is an almost universal concern over security addresses regarding IDNs, homographs, and various other kinds of issues. Where are we on security and how do we go forward addressing these kinds of things?

So these are the questions. Of course, the panelists can also comment on things besides these questions. All the panelists, except for the two universal acceptance ambassadors, who are going to report to us the [fee level]and their experiences from China and Brazil/Latin America … All the other presenters have ten minutes each. The ambassadors

have five minutes each. Please time yourself. We would like to have a discussion, so you'd like to ensure that the time is very strictly adhered to.

With this, we will move on to the first presenter. It is Hadia, who's going to speak to us about UA and EAI (that is E-mail Address Internationalization): Challenges in African communities. Over to you, Hadia.

HADIA ELMINIAWI: Thank you, Satish. My name is Hadia Elminiawi. I'm an At-Large members, and I lead the Domain Name System Entrepreneurship Center, which was founded to help develop the domain name industry in Africa and the Middle East.

If we could have the next slide, please. I should go swiftly through this slide. What is the problem with the new gTLDs, IDNs, and internationalized e-mail addresses? In many cases, applicants and systems do not know how to recognize longer top-level domains, internationalized domain names, and internationalized e-mail addresses. Many systems do not accept, [process,] validate, and display domain names and e-mail addresses in a consistent manner.

If we could have the next slide, please. What is the end user experience in this regard? End users' e-mails fail to send or receive. Domain names and/or e-mail addresses or not accepted by online services and applications. Hyperlinks are not automatically created. In short, users cannot use their new e-mail addresses in the same way they use their

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traditional e-mail addresses. To that end, Internet users are reluctant to have non-traditional e-mail addresses because they cannot use them. This gives less value to the expansion of the domain name space and less value to the existence of the internationalized e-mail addresses. So users' experience is really what matters because it determines the [voice] of the new gTLDs and internationalized e-mail addresses.

If we could have the next slide, please. Whom does this problem affect? Market acceptance is widely affected by the technical difficulties due to the lack of universal acceptance adoption, leading to a poor number of registrations under new gTLDs and IDNs and contributing to registrars being reluctant to carry new domain extensions and leaving the registries of gTLDs and IDNs with a problematic business model. So it definitely affects the industry.

It also affects users. Users' experience with new gTLDs, IDNs, and e-mail addresses is not the same as their experience with the traditional domain names or the ASCII e-mail addresses. The new values that the new gTLDs and internationalized e-mail addresses are not being realized.

So, generally speaking, it affects the entire community because the values that the new expansion in the domain name space is not happening.

However, there's a point here. If major players—industry players—start being universal-acceptance-compliant and update their

products, the rest will need to catch up in order not to lose their market share or customers.

If we could have the next slide, please. So what's the solution to this process? It's a technical solution. The solution would simply be to fix the user experience and allow for all domains and e-mail addresses to be used in a consistent manner by all applications and services. Old applications and systems need to be updated to be universal-acceptance-compliant, and new application should adopt the new standards.

Another part of the problem is that, while registries and registrars are trying to sell their domain names and finding difficulties in doing that due to the technical problems, software developers and system administrators say that there is no demand. "So why we would we invest in updating in our systems?" Raising the awareness of the registrants and users about the opportunities that the new gTLDs and IDNs bring is important.

I would say that one of the other main challenges with . masr registry, which is the IDN ccTLD in Egypt, is related to user awareness, marketing, and advertising.

If we could have the next slide, please. Let's take a look at how the Internet and universal acceptance looks like in Africa. According to the digital trends 2020, about 3.2 billion people worldwide are still unconnected. That is just over 40% of the world population. Countries in Africa account for 27% of the total unconnected people, with 870

million from Africa to still come online. There are 115 million people in North Africa still to be connected, 138 million in middle Africa, 252 million in [inaudible] Africa, 27 million in southern Africa, and 339 million in eastern Africa. The COVID-19 pandemic has emphasized the digital divide in Africa with more people working from home. The offline world is isolating people in Africa economically, socially, and educationally. If we're talking about connecting the next billion, those are mainly going to come from southern Asia and Africa.

So how important are new generic top-level domains and IDNs to Africa? New generic top-level domains speak to users' affiliations and interests, catering to users preferences, and giving the way to new business ideas. New generic top-level domains could give rise to e-commerce platforms in Africa, increasing the e-commerce adoption rate across the continent, and giving Africans a recognized place on the Internet. Internet services offered to the local community often require using local language. Universal acceptance readiness stands in the way of governments and private sector offering services to the community entirely in local languages. Using internationalized e-mail addresses contributes to creating a digital entity. E-mail addresses are not only used to send and receive e-mails but to register to social media networks, online services and business, like e-government services, logging into your bank account of buying an online ticket—

SATISH BABU: Hadia, you have one minute more.

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HADIA ELMINIAWI: Okay. So, given the population that is still to come online from Africa and what the new gTLDs and IDNs bring to the communities of Africa, from a commercial and economic point of view, investing in universal acceptance makes sense.

If we could have the next slide, please. I'm skipping this slide. It basically speaks about the number of gTLDs and IDN ccTLDs in Africa.

If we could have the next slide, please. What are the challenges for universal acceptance in Africa? The ICT infrastructure is a powerful, economic, and social driver. However, most of the countries in the continent lack the financial resources to update their systems and also sometimes lack the technical resources. The lack of web content in local languages is also an obstacle towards the expansion of IDNs in Africa, leading to lack of interest in investing in universal acceptance in relation to IDNs, lack of awareness about the existence of new gTLDs and IDNs, leading to affecting the demand and discouraging software developers from updating their systems, leading to the chicken-and-egg problem. The public sector also does not have universal acceptance as a priority.

If we could have the next slide, please. That would be the solutions. There are several solutions here. Many of them are related to governments. If governments consider internationalized domain names as a public good—because they promote digital and economic inclusion—the nation's digital inclusion strategy should include a

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universal acceptance readiness. Also, governments could start creating incentives to private sectors to become UA-ready: contracts with suppliers could have some clauses requiring universal acceptance readiness [and] governments considering promoting internationalized e-mail addresses in collaboration with the private sector [and] also e-government services increasing local content and could encourage the chief technology officers in charge to update the systems to be universal-acceptance-compliant.

And I would say the Domain Name Entrepreneurship Center, in this regard, and similar bodies, actually, could do the same thing. We've been trying to engage the academic sectors, students, and researchers, and the community and also providing a platform on which experiences could be shared. So I would say, in each and every workshop or session that the center conducts, regardless of whether it is a technical workshop or a business activity, we always mention IDNs and gTLDs.

Finally, though it's a global problem, the solution also lies locally. So creating local initiatives that could work with the government, the community, and groups working on universal acceptance readiness, like the UASG … They could all work together to develop the skills of the IG people, developing open source, and providing materials and documentation, which I already a lot of it already exists, raising awareness and mostly—and most important—listening to the African community and listening to what they see as problem and what their needs are.

With this, I conclude my presentation. Thank you.

SATISH BABU:

Thank you very much, Hadia, for that report from Africa. I would like to apologize in advance to all the speakers for being intrusive with this one-minute warning. We do have a large number of speakers and we want to be fair to everybody. So please bear with me if I interrupt you with a one-minute warning.

We know move on to the European experience. We just had EuroDIG a couple of weeks back, and IDN was a topic there. We know move to Roberto to hear from him about the European experience on universal acceptance.

ROBERTO [GAETANO]:

Hi. Thank you, Satish. Thank you all for joining this session. Before getting to specific European issues, I would like to go back to the title of this session that says, among other things, "end user perspectives." I would like to make sure that, here in this session, we are addressing specifically the perspectives for end users.

Basically, this is the question: What do the users want? In my personal opinion, what the users want in terms of interaction with the Internet is to be able to talk and listen to other speakers in their own language. They want to be able to write and read things using their own writing system. I think that we should never forget this because there's a tendency, when we talk about universal acceptance, to focus on what

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is the technical issue and what is the technical challenges of having universal acceptance on the Internet.

But we should not forget what is the priority and what is the strategy behind this. Satish has mentioned EuroDIG. I was presenting in a panel at EuroDIG and, during the chat, I had an exchange with one person that is in the best practice forum for local content. In the chat, we agreed on the fact that what the purpose is is the local content and the interaction of the users in their language and using their writing systems. As a matter of fact, universal acceptance is really a tool for achieving this, and it's not the purpose in itself. By the way, it's only one of the tools. It's one of the ways in which we can achieve the strategic purpose of having everybody at ease on the Internet. So we have to make sure that we make the distinction between what is the purpose and what is the tool. What is the strategic issue and what is the practical approach?

Basically, I want to go back to what I assume the vast majority of us believe—that the Internet is for everyone—by asking the question: are we all equal on the Internet, or there are some people or some communities—some part of the ICANN ecosystem—that is at some disadvantage? Are there any obstacles that we need to remove in order to achieve equal opportunity of access to the Internet? That should really be the point.

One example that might be out of context is, as you probably know, it's 3:00 A.M. in Europe, and when I joined, my first thought was, "Those friends who are in Asia-Pacific or even in Australia and New

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Zealand and so on have to bear this problem of odd hours most of the times during teleconferences." It's good to be able to share the pain by having this now the other way around. This is a fundamental concept about equal opportunity of access to the Internet.

Another point that I wanted to touch on was specifically about Europe. The UASG has been running tests about what is the level of acceptance in different countries of, for instance, internationalized e-mail addresses? However, I see that Sarmad is having a presentation after me, and I think that he will be talking about the report: UASG 027. So I'm just briefly saying that, even in supposedly technology-advanced Europe, there's still a very scarce acceptance of internationalized domain names. We go from, [in average] Europe, an acceptance that is about 100% for what we consider a "normal" e-mail address. We go down to even 90% for addresses that are on a TLD that is longer than three characters. You would expect that, after having introduced .info in 2000, twenty years later we would have adopted to this. But this is not the case. The problem is that, when we go to IDNs, the acceptance rate is going, even in Europe, down to less than 20%. So we have huge technical issues in implementation, but I probably better leave that, in the interest of time, to Sarmad.

IDNs in Europe. We have nine ccTLD IDNs in Europe under the program of what was called the fast track. Over the 62 total IDN ccTLDs, those are not very much used, probably with the exception of RF in Cyrillic for the Russian Federation. That, according to my information, is about three-quarters of a million domain names. But all the others are

running between a few hundred and a few thousand domain names. So it's not very much used. The reason is what Satish and Hadia have underlined already: we are in a catch-22 situation that we need to break. So that's something that we need to do.

Another topic—

SATISH BABU: Roberto, one minute.

ROBERTO [GAETANO]: Thank you, Satish. We also have generic TLDs that are mostly in Cyrillic in Europe. I'm not going to talk extensively about that in the few seconds that remain.

What I would like to say is something that is peculiar for Europe. Since we are talking also about multilingualism, in Europe the European Union has 24 official languages. I know this is just a drop in the ocean compared to India, but one important thing is that, at the European level, those languages also all have equal status, which means that, for instance, the European Parliament has huge interpretation and translation costs because we need to give to every language the same opportunity and put them all on the same level, whether it's English, which is widely spoken, or other languages which are used only by one member country. I think that this is another aspect that is important about giving/providing equal opportunities to everybody.

I think I'll stop it here. I will put in the chat maybe the URL of a couple of documents that could be used as [evidence]. That's all, folks. Thank you.

SATISH BABU: Thanks very much, Roberto, for the report from Europe. Roberto has been together with [Liana], one of the organizing members of this particular session.

We now move on to Dennis [Tanaka] from the IDN and UASG Program and the Vice-Chair of the Universal Acceptance Initiative. Dennis will be speaking to us from the perspective from the industry as well. I'd like him to look at us and tell us what At-Large and end users can do for universal acceptance. Over to you, Dennis.

DENNIS [TANAKA]:   Hi. Hope you can hear me okay.

SATISH BABU: Yes.

DENNIS [TANAKA]:   All right. Hello, everyone. Thank you for reminding me and having me over to share the experiences and telling the point from the UASG. I was tasked to talk about the universal adoption by industry vis-à-vis enablers and impediments and what we can ask the At-Large to do here. I want to take a slightly different angle. We're not hear to talk

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about what's the UA adoption by industries but to talk in general. Some of the items that we're going to talk about may be repetitive from what Hadia and Roberto have already explained to us, but if anything, it only emphasizes the key aspects of these challenges.

To talk about enablers and impediments is really to talk about two sides of the same coin. On one side, there are technological, economical, cultural, and social aspects that serve as a platform for universal acceptance adoption, to enable a multilingual web. On the other side of the same coin, we can see these same factors becoming an obstacle to our wider interoperable, universal-acceptance-ready ecosystem.

Let me elaborate on those three items there. On the technology side, as you may know, there are standards and protocols that establish and enable the fundamental technological framework for these technologies:[inaudible] IDNs and internationalized e-mail addresses. While browsers have come a long way to where they day in terms of universal-acceptance readiness, major browsers so a decent job with all types of domain names—browsers, not websites. However, the electronic mail system, which is a major application, is still working its way to fully support internationalized e-mail addresses. The problem here—maybe I'm at risk of oversimplifying it—is interoperability across major systems.

So one of the side of the question cannot do it alone, so coordination here is key. I'm not just talking about the Gmails and the Outlooks of the world because that's one component or a few components of the

e-mail ecosystem. We're also talking about several layers of other antispam software or servers and you-name-it. All those components have come together in order to bring you an e-mail service. So all of these players need to really come together and bring a solution because one side alone cannot just do it because it will break the other at the other end.

On the cultural identity and social value of universal acceptance, for example, internationalized domain names and international e-mail address enable people and organizations to identify themselves with their own script and languages. Hadia earlier today explained that about in the African communities. The [2019] IDN World Report claims that IDNs enhance linguistic diversity in cyberspace. However, more than 50% of the online content is in English. So this is a challenge.

Thirdly, the economic side. The UASG Commission, which started back in 2017, if my memory is correct, found that the economic opportunity for a universal-acceptance-ready market was valued at $10 billion U.S. But what might be a good business case for one organization may not be good enough for others, so what is one to do? So we see opportunities but also challenges at the same time. This is what many describe—we already heard about it—as the chicken-and-egg problem, the catch-22 situation. There is this negative feedback cycle of poor user experience, low demand, and therefore low incentive to innovate by the software providers. Hadia talked very clearly about that and very specific to the African communities. So we need to disrupt the negative cycle loop. It is urgent if we want to fix and enable

the multilingual [web]. So the answer [is] maybe at your hands—the end users' hands, the At-Large community.

Here I'm going to shift a little bit to what can the At-Large do to help move the needle to the right direction. So we need the strength of the At-Large community to raise awareness among organizations, especially public organizations—education—about challenge and opportunities in and around the ever-evolving domain name system vis-à-vis the multilingual Internet. This is exactly what Hadia proposed and suggested we do. I 100% agree with her. Public organizations are important buyers of software, so this could be used as leverage to influence a roadmap of a diverse suite of software application from content management systems to locally [sessioned] services, to e-mail clients, and servers.

Today the Universal Acceptance Steering Group is working and supporting several local initiatives/working groups. They are groups that have formed themselves in their own communities. We have one in Eastern Europe. We have one in China and another one in India and I think [also] Thailand. I know the Latin American communities are also working on something. We look forward to working with you and supporting you with the technical knowledge that we have at the Universal Acceptance Steering Group to empower and amplify your local reach to local [governing] stations and local software developers. You can talk to them at the same level and push the message forward.

With that, I want to thank you for your time.

SATISH BABU:	Thanks very much, Dennis, for your intervention. Please know that you can raise questions to the panelists. So please note your questions as the staff have directed in the chat.
	We now move on to another veteran, Edmon, who has seen IDNs in universal acceptance from the both sides, as a registry operator as well as from the At-Large and end user sides. I request Edmon to speak to us.
EDMON CHUNG:	Thank you, Satish. This is Edmon from DotAsia and, as Satish said, At-Large from ISOC Hong Kong as well. Always excited and enthusiastic to talk about IDNs and UA, but I guess I'll start on a little bit of a down note.
	IDNs started in the 1998/1999 timeframe, and new gTLDs came along in 2001 with .info, .biz, and so on. That's, like, 20 years. That's more than 20 years, really. If you look back at the history of the DNS itself, which started in 1983—this is 37 years on—it's more than 50% of the time. We have been trying to push for IDNs in UA for more than 50% of the history of the DNS itself. So clearly we failed. Well, I certainly failed in the advocacy.
	But there is hope. I'm not giving up. Seeing the people around here, I know that we're not giving up. Earlier in the week, we know that domain names are here to stay in a 5G world, an IoT world, with IPv6.

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So this is very important. I do think it's very important and critical in the next few years to make this work because of all these new platforms, because of these technologies. If we're not fully embedded into those platforms, we lose a very important juncture in the development. But there's hope. I think that, especially with the ICANN strategic plan with IDNs and UA squarely in part of the plan, there's hope.

But I think we really need to rethink it with the community as a whole. This is not just about advocacy because, with all the work that we've done, we know that, really, there is a market failure, as Satish mentioned and others mentioned. The supply is not coming up with the demand. The supply is not revealing the latent demand. That's really what I want to say. That's why market or policy intervention is going to be important.

I know what I'm going to say is probably not going to be popular. What I'm really saying is that we need to get our own community UA-ready—registries and registrars. ICANN has forced certain policies on new gTLDs: IPv6, DNSSEC, not to mention URS and PIC—hordes of policies. Why not UA? I think ICANN has been forcing on these policies. When registries talk about registry agreement rules, why not UA readiness. So I think this is something that we need to do. It's not just about IDN registries. It's about ASCII registries as well. Think about registrant contact e-mails and nameserver records. ASCII ones should be able to support IDN and UA readiness for nameservers records as well. And it's not just about accepting and storing processes, the UASG documents

show. It's almost very much about display. Is it displayed in the right form? So it's the full user experience, as many have mentioned.

And there is the IDN variant issues as well. Speaking of that, I have to say that I'm slightly disheartened to see some of the reports coming out to talk about IDN variant TLDs as a completely separate application of new gTLDs. That really is making IDN TLDs that need variants have to potentially pay double the amount of even more. That's making IDNs a second-class citizen. That's not something that is, I guess, good for helping promote IDNs and UA in many ways.

I also think that, in terms of registries and registrars, our ability to influence might be a little bit more than what we think. Many registrars and even more resellers provide IT and SI system integration services. I think, when registrars are fully UA-ready, it can further push it downstream to resellers and system integrators, and they can also become UA-ready. That's something that we can create as a trickledown effect.

I'm also not just talking about gTLDs but also ccTLDs—again, not just IDN ccTLDs but also ASCII ccTLDs. Registrant contact e-mails, again, nameserver records—do you accept IDNs in those fields? Do you store them properly? Do you display them properly—customer support e-mail forms, registration systems, user profile registration systems? It's difficult, but that's something I think, if we as a community really think that this is something important for us and we believe in multilingualism, we need to do.

After, really, more than 20 years of advocating for this and perhaps a little tainted by the situation now in Hong Kong, I start to see it a little differently, not just about advocacy. But maybe this has to be looked at more as a movement. And, as a movement—as a social movement—we always need new blood. By that, I mean universities and high schools. The first time students learn about networking and DNS, they should know the concepts of IDN, EAI, and UA so that it's just natural. It needs to be native. And, like social movements, we need something called prefigurative communities. For us it means they semi-closed communities. We know that, as Dennis mentioned, it's difficult. We know that all parties need to be embracing the new system for it to work completely, especially for EAI. But, in semi-closed communities' environment, we can be fully UA-ready—for example within universities, within schools, especially during COVID. Many teachers, many schools, are sending assignments to students. Students are handing in their homework by e-mail. Here at ICANN, ICANN staff members themselves—APAC Hub, lots of people with names in their own languages—can start to use with registries and registrars. We could be, in many senses, our own prefigurative communities.

Most importantly, I think this would give ICANN the kind of ammunition to not only just show the world that we can do this but also strengthen the compelling-ness of its message to the governments around the world. ICANN have really often been battered by governments on various different things in the past. This is an opportunity to, in effect, counterpunch. We have a moral high ground and a universal value in multilingualism. Earlier speakers have already

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said that the governments are very much part of the solution as well. Once we get our act together, this gives ICANN a counterpunch back to the governments and says, "Hey, what are you doing with IDN, EAI, and UA?" and for them to implement in their procurement systems and their systems and so on.

So, to me, the biggest challenge really is it doesn't look like this will happen organically or, if we leave it to the market on its own. It's more than 50% of the history of the [UDS], and it's not working yet.

So I think we need almost a social movement. Like many successful social movements, I believe that, when it happens, it might look like an overnight success, but that doesn't mean the persistence and the perseverance of the years of cultivating the environment for the groundswell success to eventually happen is not important.

So the challenge is that this is not a hot tech adoption, like the iPhone or like Facebook. It's not like that. We have an opportunity. We have a community with a moral high ground social cause that we can start a movement. The question is, are we prepared? Is ICANN? Is the ICANN community prepared to be a torch bearer for this movement for the whole Internet? Thank you.

SATISH BABU: Thanks very much, Edmon, for these insightful comments, especially regarding the IDN variant application issue. I know that we have a question on this topic, but we will take the question later.

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We now move on to Sarmad, who's been the ICANN Org staff who's been leading the IDN and UA initiative. He'll be speaking to us about UA readiness through analysis training and remediation. Over to you, Sarmad.

SARMAD HUSSAIN: Thank you, Satish. Hello, everybody. Next slide, please. I'm going to just introduce what the problem of universal acceptance is a bit more [concentratively] and then how, I guess, we can call contribute towards addressing it. Of course, what universal acceptance means is that all domain names and e-mail addresses should work also for applications. It promotes consumer choice, improves competition, and provides broader access to end users.

Next slide, please. Universal acceptance as a whole is a bigger problem. I guess we can look at it as smaller and more specific problems, which, I guess, span both domain names and internationalized e-mail addresses. Within those categories, we obviously have subcategories where domain names of certain kinds and e-mail addresses of certain kinds should all be not only accepted by software and applications but also successfully validated, processes, stored, and displayed.

Next slide, please. Just looking at some of the work which has been done to quantify the extent of the problem, this is a study which was also alluded to by Roberto. We went out and looked at globally the top 1,000 websites and also, in the latest study, country-wise, the top 50-

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60 websites in different domains—so the extent of how much these websites support different kinds of e-mail addresses. The results are shown here. Even though the results are not exactly comparable because obviously we're not comparing exactly the same websites, it does give you a trend of where we are. Over the last three iterations of such work, it shows that there is obviously some potential improvement. But I think the general takeaway from this slide is that, when you have e-mail addresses which are totally in different script, like Chinese or Arabic, the acceptance rate of those e-mail addresses as valid contact e-mail by websites is as low as sometimes less than 10% or around 10%.

Next slide, please. Similarly, we did another study, not of websites this time but on e-mail servers. What we did was we went and pinged different e-mail servers which have their MX records or entries in zone files under gTLDs and some ccTLDs and checked whether the mail server associated with the domain name supports internationalized e-mail addresses. What we found out was that, when we sample about 10,000 mail servers across all the different gTLDs and ccTLDs in the study, we find that only about 9.7% of the mail servers go to internationalized e-mail addresses. That's obviously quite low. You can see the detail and methodology in the link, which has been provided.

Next slide, please. So it's certainly a problem, and it's a problem that has been obviously highlighted significantly by the ICANN community. The ICANN community has organized itself into the Universal

Acceptance Steering Group. We also have the At-Large focus and GAC focus on UA. It's an issue which has been highlighted as something that ICANN Org also wants to focus on. ICANN Org has included this as part of its strategic plan from 2021 to 2025, focusing on increasing awareness and encouraging readiness of UA. The ICANN Board obviously also realizes the significance of this work, and the Board IDN Working Group has extended its focus to include UA to oversee work in this area as well. So there is obviously considerable work and focus within the ICANN community, ICANN Org, and the ICANN Board to address universal acceptance.

Next slide, please. I guess, even though there is focus within the ICANN community today, I wanted to focus more on what we can do as a community at-large because UA is not a problem which [we] can solve in solution when. We are communicating with each other for internationalized e-mail addresses, for example, the work of not only my e-mail server needs to support internationalized addresses, but your e-mail server also needs to support internationalized addresses. Otherwise, it's not going to work. So, at the end of the day, every one of us actually has to contribute to make sure we are UA-ready on our side. That will eventually make everybody ready universally.

So I guess the question is then, how do we get ready as a community? I think one of the things we need to do is raise awareness of these technical challenges within our community and make sure our community understands that there is gap which needs to be filled. We should obviously train our community to learn how to address this

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gap [inaudible] as a technical nature and how the fix can be done. We should motivate the community to actually do that fix within our community. So it would be, for example, a local ISOC chapter. It could be local ALS/At-Large chapter. So we really need to work at our community level. So it's starting to fix these UA problems and make sure that our own systems are able to accept all these different kinds of domain names and all the different kinds of e-mail addresses. Then, when we are ready and we've done our learning, it's good to share that experience and challenges and details of the journey and the rewards with others to motivate them to follow suit and then obviously advocate this more broadly, for example, as already talked about, to make sure that the e-government services are universally accepting these different kinds of domain names and private organizations are supporting UA. So we actually have a role to play ourselves in promoting universal acceptance.

The ICANN community is also providing support, technically and otherwise, through local initiatives, UA ambassadors. Obviously, if that support is needed, please come back to UASG. Obviously, additional support may be provided.

Next slide, please. Talking in terms of support, there is a lot of technical training which has not been developed and is being rolled out through UASG and through ICANN Org. We currently have three training courses, one which overviews the technical issues. Then there's one each focused on how to fix the e-mail side of thing or e-mail servers or the system administrative side of things, and one

focused on how to fix things like websites and applications using programming. We are already training people across different countries. We just recently rolled out a Train the Trainer program. We'll be training more than 40 people across 17 countries. This will be repeated, so if you're interested in training, please reach out to us. The training is also being rolled out locally through the trainers and UA ambassadors with the collaboration of local initiatives.

Next slide, please.

SATISH BABU: Sarmad, you have one minute more.

SARMAD HUSSAIN: Mm-hmm. Thank you. So, basically, we need to talk about, when we talk about updating our applications, how do we update our application? The UASG has also developed testing frameworks to test what the issues are with one's applications. There are certain test cases that are published to check, I guess, UA-conformance. ICANN itself has been working towards improving its own systems. And there was a case study that was published to show how we can engineer UA readiness into our systems and, I guess, where ICANN is at this time.

Next slide, please. So we actually would want to encourage all of you to get more involved, to contribute to UA readiness on your end. If you all start contributing on UA readiness on our end, we obviously make the whole ecosystem ready. There's a lot of documentation which has

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been produced by [UASG]. Please come and visit UASG.tech to see some of the technical and non-technical documentation.

Next slide, please. I'll conclude by saying, please come and contribute to UASG, get more involved. We actually have very focused technical working groups and outreach working groups which you can find links to join and get more involved here. Please let to us at [input]@uasg.tech or UAprogram@ICANN.org if you have any questions. Thank you.

SATISH BABU: Thanks very much, Sarmad, for that very informative presentation. We now have two universal acceptance ambassadors who will report to us about the work at the grassroots. First we have, from China, Walter Wu. We have five minutes each. Walter, please go ahead.

Walter, are you muted?

MICHELLE DESMYTER: Walter, I see your microphone is unmuted. Can you please try to speak?

Satish, maybe we should go on to the next presenter while we fix his audio issue.

SATISH BABU: Right.

MICHELLE DESMYTER: Okay. Thank you.

SATISH BABU: Thanks. So we will get back to Walter. So we will now move on to Mark from Brazil, who's going to talk to us about the Latin American experience. Over to you, Mark.

MARK DATYSGELD: Thank you very much, Satish. Can I have the slides up? I know that it's a little bit of trouble because we changed order, but I do want to show some figures.

                            Very briefly, I will start introducing while the slides put up on the screen. Mark Datysgeld. I'm UA Ambassador for Latin America. I have been thinking a lot this past two years about how to make UA simply work for the end user. That's one of my missions.

                            Next slide, please. Something that has emerged from that is that I've assembled a small team out of youth that come from the NextGen program and the Youth at IGF. We started in some small projects. They are now scaling up. We are actually working together with the UASG to put some of these projects into motion.

                            So I will be talking about two current initiatives that I have been leading. The first one is about open-source code for projects. Sarmad mentioned this before. We are identifying the usage of libraries with

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domain names and e-mails and testing them for UA readiness. That is also useful in terms of us understanding if the [IDNA] libraries are present, which are the internationalization libraries. So this is something ongoing. I have a little bit of data to show you.

The second one is something that comes from research that we made last year, which is about the HTML5 standards. One key conclusion that we arrived at is that the support [on] websites is very complicated due to the fact that there are so many approaches that developers can take, that it becomes a bit of a nightmare to try to support every solution. A simple way to address that would be if the HTML5 standards themselves already had this support baked in. We don't want to break the current tag, which is the e-mail tag, but there could be an EAI mail tag that does the validation.

Next slide, please. On the open-source code project, what we are doing is we are looking at GitHub, which is the biggest open suppository in the world. We are looking to [Java]/Python. They are the top languages as far as open-source is concerned. We have been crawling for the past few months their database to try to figure out how we can help the coders in a massive way, on a massive scale. If the coder is using a library that is incompatible with UA, it's unlikely that there's software that will work with UA. But, if we find the correct libraries and we actually fix them at the source, we are fixing the software. So, in this way, we would give the end user a piece of software that is compatible with UA, and, at the same time, they

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would have to do nothing but update to the latest version of the software they use.

Right now we are very early, but I wanted to show you some statistics just so you guys can see that there's active work being done on this. We have 20% of the database crawled. It's a three-million-strong database, so give us some time. But, on Java, we have already started to identify some libraries that we will analyze. I put this list right here. The ranking in terms of usage that they have—we're particularly interested in #5: [inaudible] mail, which is one of the most used implementation libraries in Java, but there are also some other available ones.

In Python we have a result that we don't know is good or bad yet: when the [IDNA] library is ranked #102 in terms of being part of ICANN software. It, of course, is in almost 2,000 projects. That's very good, but we don't know two things: is this enough, and how does that compare to the broader Python environment? This is something we'll be analyzing during the second semester. But I was pleasantly surprised to see that almost 2,000 software out of this 20% have already shown that this library present because this does give me hope that we are not facing an uphill battle that this might already be incorporated in to some degree.

Next slide, please.

SATISH BABU: You have one minute to go, Mark.

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MARK DATYSGELD:	Thank you. Next slide, please. In terms of HTML5 standards, this is what it looks like right now. If a coder uses the default field for e-mail, you will see this list of acceptance and rejection. This is [inaudible] of high standards. It is what most coders who are up to date will be using and relying on.

So a lot of conversation has been started within the EAI Working Group to reach out to the [inaudible] who are the maintainers of the HTML5 code for us to try to revamp the standard. So this is something that I feel is very important. It's something that I have been fighting for a long time now. I think that it's starting to pick up momentum. I would like to invite anybody who has contacts or is interested in this to talk to us more because this will be something key that we'll be trying to lead next semester.

Next slide, please. Finally, please feel free to reach out to me from the Americas region. I try my best to work together with everyone to make this more accessible. I've been giving a lot of talks to ALAC in the past year. Very happy to always be with you all. You're very good to me and inviting me to things. Whenever you need me for anything, I'm available. Thank you very much.

SATISH BABU:	Thanks very much, Mark, for sharing your work with us. It is indeed interesting and is impactful as well.

Are we able to get Walter back?

MICHELLE DESMYTER: [Walter], can you please speak?

SATISH BABU: Walter, please go ahead. You have five minutes.

MICHELLE DESMYTER: Hi, [Peggy]. If you can please unmute your line.

WALTER WU: [Sorry?]

MICHELLE DESMYTER: Hi, Walter. Yes, we can hear you.

WALTER WU: Okay. Actually, as the China UA Ambassador, I work with several colleagues and other China ambassadors and also colleagues from the China local initiative. In the last couples, we visited some big Internet companies, like [Bai Du], [360,] and [Fogel]. The major purpose to meet with them was to have them realize the IDN and UA issues and hope to improve the UA acceptance, such as the browser issue or search engine issue—something like that. It seems that, of course, the pandemic situation affected some of the progress, I think, to

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communicate with Internet companies. It seems that the progress is going well.

But, on the other hand, we also began to talk with some associations to help them realize the value of IDNs. For example, we talked with China's trademark association, and we also talked with China's advertisement association. The major purpose to talking with both traditional brand or advertisement communities is that we hope to let them realize the value of IDNs, and the value of IDNs to support registrants and the brand and advertisement achievement.

So we believe that one of the problems for the current UA and IDNs is that the registrants do not really understand the value of IDNs because a lot of registrants register IDNs and just register for general brand protection or even the domain name investment. But they didn't realize the value of that IDNs can bring[:] a direct connection between their customers and that they can use their core brand name in the Chinese native language as their domain name. I think that is one core value that IDNs can help with the registrars.

As the UA Ambassador, my work is not only to support or to educate the Internet companies to support the IDNs but is also to help more enterprises or individuals [realize] the value of IDNs because the brand customer, only when they register IDNs, proactively use the IDN in their advertisement in their package, in their manual, educational paperwork. [Only that] kind of a promotion as a value for IDNs can really be accepted by their potential customer. That's a real value of an IDN that can help them.

So I think talking about the IDN education and helping Internet user awareness is a very important thing.

Just now I heard Edmon mention about the general challenge of IDNs or new gTLDs, I think, in the last 20 years. It seems that we met a lot of problems. The next step, I think, is we work with the At-Large to help end users realize the value of IDNs and help enterprise customers to realize the values of IDNs. It's very important, not only to talk with the Internet companies to create the IDN supports.

That's all. Thank you.

SATISH BABU: Thanks very much, Walter, for that update from China. Before we open the floor for questions, I'd like to invite Abdulmonem, who's also an UA Ambassador. He's been recently recognized as well. Now, Abdulmonem had some comments during our prep session, especially on the sharing of best practices across regions. So, Abdulmonem, you have two minutes to speak. Please go ahead.

ABDULMONEM: Thank you, Satish. I hope you can hear me well. Actually, I started here in Egypt using it for two sectors: academia and the government. For academia, I started to look for which institution is having the priority to develop the caliber for information technology engineers for the [marketing in Egypt]. So I started working with the Information Technology Institute, and I already managed to add universal

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acceptance amongst their training there in their nine-month training program for one day for universal acceptance. I am looking for [inaudible] to add e-mail address internationalization deployment among this training for this program as well.

Also, for academia, I have led one of the graduates' projects for the faculty of computer science and information technology. It is for a medical healthcare system. It is universal-acceptance-ready and uses two types of e-mail servers—the first e-mail server for Arabic language—to make contact with Arabic users and also accept all e-mail addresses in Arabic. The other e-mail server is for French people, targeting most of the French language speakers here in Africa. This is for academia.

For government, we are reaching out to the software enablers and software companies to make some decision about universal acceptance and somehow training about EAI deployment and how to enable EAI at the current [testings]. Also for government, we are a part of the visual inclusion projects here in Egypt. Also, I believe that, if the end user looks at and feels (also the developer looks and feel) what the problem is, this will be the message.

So I worked with Dr. Sarmad to develop the EAI training environment to make its own training and [since] then we received e-mails offline relating to the root server resolver and DNS server. Also for Java developers, we'll make an environment for a hands-on exercise to practice making this application UA-ready.

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Last year, we conducted the Universal Acceptance Hackathon in Cairo. Around 75 participants/developers were engaged from the faculties of computer science. To have good results, we have submitted some issues to Microsoft regarding the .net framework. We have some issues with Java mail. Now we have a new version of Java mail with is EAI-enabled. We didn't use Python or other open-source software. I am looking engage more with the government in the next two months. I will be happy to share all of this. Also, I am not [inaudible] not only in Egypt but of course for the Middle East and for Africa. Thank you, Satish.

SATISH BABU: Thanks very much, Abdulmonem, for that update. We are now open for questions. We have a couple of questions from the floor already. I'm not sure if the participants can see the questions as well as answers. The first couple of questions were from [Ashley Jeffrey]. Edmon has already answered it in the Q&A pod. I'm not sure if we have to discuss this further.

What I'll do is I'll go to Justine's question and then, after it is answered, we will take up … Justine is asking, "Would any of the panelists wish to comment on the level of UA and EAI readiness demonstrated by ICANN Org?"

Sarmad, would you like to respond to this? Or anybody else?

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SARMAD HUSSAIN:	Sure. I trie[d] to respond in the chat or Q&A pod as well, just to let you know that ICANN is actively working to become UA-ready. We actually identified three stages for UA readiness. The first stage looks at accepting all the long and short top-level domains in ASCII. The second stage looks at supporting IDNs, and the third stage looks at supporting internationalizing e-mail addresses. Stage 1 was completed in 2018. Work has already been started on Stage 2, and we are anticipating completing that this year. Stage 3 work has also been started at the e-mail server, which is based on Microsoft technologies. It's already EAI-compliant. We're working with our providers for additional services like spam filters to make them UA-ready. That work is actively/currently going on. We anticipate, as soon as those additional technologies become UA-ready, we will be Stage-3-compliant as well.
	I've shared the link of the case study, and I'll share that in the chat as well. Please do take a look at the case study for the details.
SATISH BABU:	Thanks very much, Sarmad. We will now move back to Edmon with a question about the IDN variant issue. Edmon, your hand is up. Please go ahead.
EDMON CHUNG:	Sure. I actually put my hand to add to what Sarmad said. I actually have been very impressed with ICANN Org's work on UA and IDN, especially within the Org systems. I recall a few years ago especially

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Ashwin's presentation. It first started probably underestimating a little bit the efforts for UA but then adjusted and created a roadmap and now is becoming a lot more methodical—this case study that Sarmad mentioned. I think continuing through the experiences is very valuable for other organizations looking at UA-readiness. So I just wanted to add that part.

I see a new question. So, quickly, I didn't support [by] search engines. I think many of these search engines do support IDNs and somewhat favorably as well. So, if you search a certain phrase in Chinese or Japanese or whatever, and if your domain matches that well, it actually helps you [interpret] the search engine ranking. I'm not sure what the situation with [Bai Du] in China is, so probably others— maybe Walter—can add to that. Thank you.

SATISH BABU: Thanks very much, Edmon. We also had a question on the internationalized e-mail addies: what do if a person gets an e-mail addy that she cannot read. Is there any way to convert it to a universally-readable format? Would any one of the panelists like to answer that?

MARK DATYSGELD: I could if nobody else wants to pick this one up.

SATISH BABU: Please go ahead, Mark.

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MARK DATYSGELD: Currently, in the—oh, Mark Sv is actually better to answer this. I was going to talk exactly about the work we are doing in the EAI group. Please, Mark, take over.

SATISH BABU: Yeah, either of you can answer. No problems.

ABDULMONEM: Satish, could I jump in?

SATISH BABU: Yes, Abdulmonem. Go ahead.

ABDULMONEM: The first point is we should separate between translation engine and the e-mail engine. Currently, inside the Universal Acceptance Address Internationalization Working Group, we are discussing this point. We the first direction we are going is that you may have multiple display names—the one in your own local language and the other one for another language. Maybe it is English, according to the user you are sending the message to.

The second point is we are discussing the first point and the [inaudible] and security issues that will be related to this. Maybe another person will have the same local language name/display name

for another e-mail address, [even if] the e-mail message is to the other recipient.

So we are discussing that currently in the EAI Working Group. We will keep you all updated as to what is going on with regards to that. Be sure that it may affect the protocol itself for changing the display name to be attached to the e-mail address. Thank you.

SATISH BABU: Thanks very much, Abdulmonem. We are running short of time and we have one more question. I'll request Mark to answer both the questions. And there's a third question from Jonathan as well. Mark, can you answer two of these questions—one regarding the e-mail, the other regarding the Spanish characters?

MARK SVANCAREK: I don't see the questions. I'm sorry. Regarding the e-mail, as Abdulmonem mentioned, there are ways that you can have various aliases or change the display name on the e-mail to make it easier to see, to a person who doesn't use your script, who the e-mail is associated with.

But I think we focused on this far too much. The utility of EAI is not for people like us who know multiple languages or who work with people in other countries to share e-mails and exotic scripts. The purpose is for someone who knows one script to talk to someone who also knows

that same script. You would imagine that the body of the text would also be in that same script.

So the odds that you're sending an e-mail to someone who can't read it, I think, are going to be relatively low because that's not the purpose of EAI. I hope that that helps.

Now, as Abdul mentioned, there are some various workarounds. There is no universal workaround. There's no universal downgrading translation, for instance. That's just the way the protocol is set up. But I don't think we should worry about this so much. If people are encountering EAI addresses that they can't read, please let me know. I think that's probably a good problem because that means they're being useful.

What was the second question?

SATISH BABU: Sorry. I don't see the question. It's been answered already, I think.

MARK SVANCAREK: Okay, great. Thanks.

SATISH BABU: Thanks very much, Mark. I also know that Google Translate does translate e-mails as well into any other script. So the quick and dirty solution is to stick it into Google Translate and you can get it into whatever language you want.

Unfortunately, we don't have time to take up Jonathan's question. It is a very valid question. It is in the talking point as well, so I hope we can come back to this question offline.

I'd like to thank everybody for a very lively and interactive section, and informative as well. It's back to Michelle to close the meeting.

MICHELLE DESMYTER: Thank you so much, Satish. Thank you, everyone. The meeting had been adjourned. Thank you so much.

[END OF TRANSCRIPTION]

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