CR - TLD Universal Acceptance
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NADIA SOKOLOVA: Hello, everybody. We are going to give it another minute and then we will start.

KURT PRITZ: Welcome, everybody, to this session on universal acceptance of TLDs. I think it's going to be a very informative, important, and interesting session.

But for those of you that remember, back when we launched the sTLD round, the trial round of TLDs in 2003 and 2004, there were very specific questions at that time pertaining to the acceptance of TLDs.

People came to public forums at ICANN meetings and said some TLDs, domain names using some TLDs do not resolve in browsers. Some browsers screen out addresses as right or wrong, and many of the longer TLDs just don't resolve or e-mail doesn't work. ICANN should undertake some effort in that regard. And some effort was undertaken. ICANN was a lot smaller; did not have any significant communications wherewithal. Nonetheless, we embarked on certain efforts that are going to described by this panel today.

Again, as we get ready to launch new gTLDs, just a personal anecdote, I received an e-mail from somebody that had a name registered in one of the TLDs that was delegated in 2003, 2004, and they went to a big corporation's Web site and tried to register in whatever tool they had. And he typed in his domain name and was told, "Sorry, you're not real."

So he wrote a letter to ICANN saying please call this big multi-billion dollar company up and fix this.

So, actually, we did. But the more important thing is that this problem still persists. And so it's important for us to discuss it and decide, you know, what ICANN's role in this is and how we can use the entire big ICANN, all of you sitting here and everybody walking around outside and those listening on the phone in these different meetings, and

marshal these resources to do what we think is propose to solve this problem.

So this panel, which is a really cool panel, is convened to discuss just those two topics. They're going to describe the history, and the issue with great specificity. But also discuss what ICANN's role should be and how it can be best go about and most effectively go about working on this issue.

This is sort of a fun project because everything we do is good, I think, if we're careful in the way we go about it.

So it's about push communications and education.

And at the end, the DNS, the ability is the DNS will be better.

So with that I want to turn it over to Nadia who is our ICANN's project manager on this and she is the one who arranged for this session, has led the ICANN team on work thus far and has assembled this esteemed panel.

So thank you, Nadia, for taking this on for us.

NADIA SOKOLOVA: Thank you, Kurt. And thank you to all on the panel as well to all who are joining here physically in Costa Rica and remotely.

So quickly I'll ask all the panelists here to introduce themselves and mention in what capacity they are here.

Please, starting with Anthony.

TONY HARRIS: My name is Tony Harris. I am vice president of the ISPCP constituency.

MINJUNG PARK: Good afternoon, everyone. My name is Minjung Park. I am with the KISA, the registry for dot KR and dot hangul {?}, the Korean ccTLD.

MOHAMED EL BASHIR: Good morning. My name is Mohamed El Bashir. I am the manager of Qatar domains registry, an IDN ccTLD registry.

CAROLYN HOOVER: Yes, I am Carolyn Hoover and I am CEO of the dot coop TLD.

ANDREI KOLESNIKOV: I am Andrei Kolesnikov, the head of the dot RU and dot RF, the largest IDN to my name.

NADIA SOKOLOVA: Nadia Sokolova, ICANN.

KIM DAVIES: Kim Davies, and I am here as ICANN staff providing technical support to this project.

WANG WEI: My name is Wei Wang, deputy director of CNNIC. We are dot CN, dot China ccTLD. We are applying for Chinese new gTLD.

RAM MOHAN: I am Ram Mohan. I am the executive vice president of Afilias, also the CTO, and we had the fun of launching the first four-letter TLD that didn't get accepted literally anywhere.

MICHAEL YOUNG: I am Michael Young, CTO of Architelos, which is a management services firm for TLD operators, registrars and so forth. And I had the pleasure for many years of actually working with Ram on that dot info launch and experienced firsthand the pain of dealing with that.

NADIA SOKOLOVA: Okay. So --

EDMON CHUNG: I arrived late. Sorry. This is Edmon. This is Edmon Chung from dot Asia, and also as co-chair of the JIG, the Joint IDN Working Group between the ccNSO and GNSO which is looking at this issue of common interest as well. What was a gTLD issue is now a ccTLD and a gTLD issue with the introduction of IDN ccTLDs. And of course from dot Asia we experienced interesting results as we entered the root as well.

NADIA SOKOLOVA: With that we'll start.

Today's agenda. We are going to give a brief overview of the project as there has been some confusion on exactly what we mean by universal acceptance.

We will provide you with a few examples that we have observed. And thanks to the feedback that we received from the current TLD registry operators, we'll touch on the past work that had been done in the past by ICANN and its stakeholders, and we hope to leave the rest -- most of the time that we would have left to discussing these issues with the panel and with the audience.

The issue. Internet software has compatibility problems as it checks user input against expected behavior. What expected behavior are we talking about?

When you submit -- when you have an e-mail or you are trying to look up a Web site, the Internet software performs some sort of a validity checks. And most common validity checks include the verifying that the provided string has a TLD that is currently in the hard code, at least, or it checks the top-level domain, the string by its length.

So the typical length of ASCII ccTLD is two characters; most commonly used gTLDs, three characters; newer gTLDs are four characters and more; and IDN ccTLDs are mostly more than three characters long.

What's ICANN's role in this. ICANN is a multistakeholder technical coordination body, and while we realize that this problem -- it does not concern the technical ability only, it relates to the people's acceptability.

We also realize that ICANN alone cannot make a huge difference here, and we need to work together with our stakeholders as well as community overall to make a significant change.

Also, to clarify, here we are not talking about what should or should not be added to the root zone in the future. What we talk about is what currently is in Internet's DNS should be working.

Do you have questions on new gTLDs? This is the wrong session.

We also don't raise a question on the policy. If there is a certain TLD that is being blocked on purpose by a certain organization or a country, we are not here to discuss that.

What are the typical acceptability issues that we discovered on our own? We did a list testing, and also thank to the current TLD registry operators.

When you type a URL in certain mass media sites, you expect it to be actually converted into applicable link. However, that is not currently the case. This is an example of a Skype session. So if you do http link with a dot com extension, yes, it becomes a clickable link. If you do that with the more recently added ASCII gTLD, no, it does not.

Same applies to the IDN whether you type the U-label or A-label in the chat.

Here is another acceptability issue. So if you go to a Web site and you are trying to register, here is actually quite visible hard code at least. We don't know what the logic is used, why the certain -- the specific TLDs are selected here, but obviously this is a minor fraction of what is currently in the root.

As I mentioned earlier, the domain validity checks that are being performed are mostly due to the improper domain checking logic, and also to certain extent especially when it comes to IDNs to browsers not being updated. So obviously with browsers, it's a common solution. And by upgrading the browser, you can actually resolve the issue.

However, this is much harder when it comes to fixed TLD lists. So here is an example of one open software project which uses list of TLDs, and this is a list -- there is in the comment section, there is a reference to IANA list which is being updated regularly, obviously. However, the hard-coded list is significantly shorter. So that one interestingly not only is missing some of the -- all of their IDNs and some of the gTLDs, it also misses a couple of ASCII ccTLDs that have been added recently to the root zone.

Here is another example, and there is a reference stating that this list includes all the currently officially delegated TLDs. And again, ASCII TLDs are not included.

gTLDs list actually is missing some of the real gTLDs that are currently in the root, and it also has some extras, which are not in the root.

Here is example of a regular expression. So some of you might be familiar with this. There is a formula that is used. It does not validate domains; however, it checks for properly formatted e-mails. And as you can see in one of the requirements here, it shows that it expects to find an e-mail address which has from two to four characters TLD string, which obviously is okay for all the ASCII ccTLDs, some of the gTLDs, and not okay for IDNs.

Activities to date. So there has been some work that was done in the past, including SSAC publishing a paper on the issues that came up when the new batch -- the first batch of newer TLDs came out in 2001, you 2001, and SSAC provided certain recommendations which were followed, including publishing of an informational RFC 3696 on this topic.

Now here we have ICANN activities, and I'll pass this on to Kim Davies.

KIM DAVIES: Thanks.

One of the areas we worked on, and this was quite some time ago, about five years ago, is tackling this universal acceptance project primarily with those new gTLDs in mind that have been launched in the last decade.

One of the things we did is we launched a discussion forum, a discussion Web page -- sorry, dedicated Web page, and on that Web page we explained what the issue was and we provided some guidance as to how to address the issue.

Another thing that we did is we, as a proof of concept, deployed some beta code that explained how you can implement domain checking in a way that wouldn't be so fragile as to fail with new TLDs. Recently, we've taken that beta code and published it on an openness code development Web site, github, and you can find the latest versions of that code on there.

Incidentally, just since we posted it a couple of weeks ago we have already received submissions from the community on how to improve it. So without even announcing that it had been posted there, we have already received some positive improvements.

So what is our technical recommendation for software implementers when they come across domain name checks?

I think it can be brought down to a few simple questions. Firstly, software implementers should think about why are they checking domain name validity. Fundamentally, I think a lot of implementers that are doing some kind of domain name check, whether it's on length or so on, don't need to do it. So they really need to assess why they are doing it and if it's not a requirement of their application, the easiest answer is simply to strip that check out.

If you think about, for example, accepting an e-mail address on a Web form, commonly a Web application will send a confirmation e-mail to the e-mail address to confirm that that e-mail address is valid.

Now, if you are doing a check like that, doing a domain validity check on that same e-mail address is not going to get you anything extra. It just adds extra ability for the system to fail.

So firstly consider does your application actually indeed to check the validity of a domain name.

Now, if you come to the conclusion that, yes, my application does need to check the validity of a domain name, we have an online, regularly updated accurate database. It's called the DNS.

So if you have the ability to have your application online, the easiest way to check if a domain name exists is to check the DNS.

It's really a last-case scenario to rely on some sort of fixed list or algorithm.

Now, there are applications where this might be applicable, for example, you have an application that's off-line or the notion of checking domain names through the DNS is a real performance issue, but those applications are very likely quite limited.

So if you exhaust those first two recommendations, you might need to use a fixed list. If you do, those tool kits that I mentioned earlier provide you with some methodologies you can do to do it in a proper way.

And this is just a screen shot of that repository that I just mentioned. We have five languages already posted. And again, they're more proof of concept at this stage. But one of the outcomes that might come from this meeting is a feeling that this is useful work to carry on. And if we get that guidance, we may invest more effort into continuing to develop these, both in the languages we have already provided and possibly in additional languages that we've seen demand for.

Another thing that we might see as a potential outcome of the discussion today is increasing outreach materials that we have. Right now, we have a basic Web page with some of the history of this project, but, you know, just brainstorming within staff, we've considered what's the best way to reach the audience that needs to fix this problem. And one of the approaches might be simply that expecting them to navigate the ICANN Web site to solve a problem that probably never interested them in the first place is not the best way to do it.

Instead, how can we find a targeted way to explain the problem in simple terms, provide them with simple solutions and guidance on how to implement those solutions. So it could involve developing a simple fact sheet dedicated to the topic or a microsite solely dedicated to educating vendors on how to do domain checking.

But those are just some of the ideas and I'm sure you have many more.

I will pass back to Nadia.

NADIA SOKOLOVA: Okay. To wrap up this presentation because we are running out of time, the join ccNSO/GNSO IDN working group put together an initial report raising a lot of very good questions and providing considerations on the issue of universal acceptance of IDNs.

It is currently posted for public comment, so we invite you to please review and provide your comments on that report.

As a result of the consultations we conducted with the current TLD registry operators, we are here today.

We, once again, want to stress that the current problem is not just ICANN's problem or TLDs problem. This is a community problem, and we are inviting you to comment, suggest, and participate.

TLD-acceptance@icann.org is the e-mail where you can contact us if you have any other questions or comments.

Thank you.

Moving on to discussion points. And we'll start with all the panelists. We'll give them opportunity to share with us what existing issues they have or had in the past, and please everybody try to stick to the time. I know it's really hard. I failed myself, so let's start. What are the existing issues? Anthony, if you will please start.

TONY HARRIS: Yes. My name is Tony Harris again.

I just want to briefly mention the historical fact that in the Montreal meeting in 2003, we were sitting on the GNSO Council and were informed with a very stern face from somebody in the audience that ISPs were filtering new gTLDs that were more than three characters long.

This bucket of ice fell on us. We didn't know what was happening. And basically in Latin America, where I am the executive director of the Latin American Federation of the Internet and Electronic Commerce, I asked ISPs in several countries like Mexico, Brazil, Argentina, Chile, Uruguay, to see if they could test these new more than three-character TLDs and what they came up with. And their response was, in a couple of days, this is an application problem. It's not being done by ISPs.

I think that's probably one of the first things that happened with this.

And to not make my comments too long, I think somebody just, a previous speaker said what would be a good strategy to outreach on this particular subject which is not entirely an ICANN problem, but I think it does behoove the ICANN community to move on this. And one

of my suggestions would be make presentations on this in the Regional Internet Registry meetings. We had, for example, a LACNOG meeting in Argentina which I organized last October and ICANN made a presentation on new TLDs, a generic presentation, and I brought this subject up.

And in these type of meetings, the audience is all ISPs and connectivity providers, basically. And they are the people that I think need to be made aware that this may re-emerge as a problem when you scale up to a lot of new domains and IDNs.

Thank you.

NADIA SOKOLOVA: Okay. Thank you so much.

Minjung.

MINJUNG PARK: Hello, everyone. This is Minjung from KISA. I would like to first thank ICANN for preparing this important session and for giving the opportunity to discuss on ways to improve the currently limited usability of TLDs, especially IDNs.

I would like to talk about the case of Korea. We have launched our IDN ccTLD which is called dot hangul {?} last May, and now we currently have about 220,000 registrations under dot hangul.

The number of registrations were more successful than we had expected in the first place, which is good. But as the number of registrations grew, we started receiving more and more complaints from the users. And most of them were about mobile browser problems.

We used to have some problem with PC browsers in the past, such as IE version 6 not supporting IDNs, but nowadays it's more about browsers.

We found that the -- according -- based on the internal research that we've conducted, we found that the mobile Internet Explorer provided by Microsoft was not supporting IDNs on their browsers.

In case of Korea, we have a very high penetration rate of the Internet. And 60% of Koreans are found to use wireless Internet in Korea, and 94% of Koreans in the age of twenties are using wireless Internet.

Most of the Internet users -- more than majority of the Internet users in Korea are accessing Internet via mobile. This is a big problem in Korea. So we have been holding meetings with these global application vendors and software developers throughout the year, last year, 2011. We had meetings with Google Korea, MS Korea and also mobile manufacturers such as Samsung, but had some difficulties in persuading the global companies, such as MS and Google, to change their current version to provide the mobile -- current version to support the IDNs.

Especially we had some difficulties with MS. They told us that they could not do it on the Korean version because of their internal policy, but they said they'd try to update their browser on their next version. But we have many users in Korea using the IDNs, so we would like to shorten that period to perhaps encourage them to update their current browsers.

So this is the situation in Korea, and hope to share more incidents on the other countries who have adopted IDN TLDs like us.

NADIA SOKOLOVA: Thank you.

Mohamed, please.

MOHAMED EL BASHIR: Thank you.

I will just talk from the experience of an Arabic IDN ccTLD registries which has been delegated between end of 2010 and early 2011. Most of the IDN ccTLDs using Arabic script were publicly operational mid to end 2011.

There are lots of issues that are facing users of Arabic domain names. For example, browser support, as my colleague said. And we had to be proactive after our IANA delegation, for example, approach Mozilla and report our new IDN string as to be included in their TLD white list. And that took some time, actually.

But luckily, we did manage to do that before the public registration. Still, users have issues with other browser vendors like Microsoft. IDN e-mail submitter has issue as well. Still we don't have an operational, maybe commercial operation product out there in the market. Standards have still been under development in this area.

Social media is also an area where still there's a lack of support for new TLDs. If you write an IDN ccTLD, for example, in Arabic in Twitter or Facebook, that URL is not clickable, so it's not active.

Application database, there's also a lack of support in that area. For example, the hosting control panels still don't support Arabic IDNs. So there's lots of, lot of areas that needed some work to be done in that regard.

I'm not sure I if can answer the question about.

I'm not sure if I can answer the question about who should address this issue.

NADIA SOKOLOVA: Not yet. Thank you.

MOHAMED EL-BASHIR: So this is a brief. thanks.

CAROLYN HOOVER: Yes. Carolyn Hoover with dot coop. We were one of the early pioneers, one of first three sponsored TLDs, which were authorized in 2000. So we went through many of these problems over the last 10 years. We just celebrated the 10th anniversary of our launch. And, unfortunately, some of the issues still continue to exist.

Initially, we had our problems, such as Tony mentioned, with ISPs not simply not passing the domains through. But, luckily, with their help and the help of the ISPs, that issue has, basically, not resurfaced for many years.

We do still have the problem, however, of dealing with the non-acceptance of valid e-mail addresses in e-commerce and I call them e-service sites where people are buying things, where they're looking for services.

And I won't name specific names. I have them on my sheet here, but I won't name specific names. But, certainly, people trying to make airline reservations, people trying to download music, people trying to make restaurant reservations, dealing with government agencies. All of these are, basically, stopped because the domain name coop is not accepted. So that's one issue. The other issue gets to the heart of supporting the community, which is user confusion. A lot of users, when they have an e-mail problem, simply assume that the problem is with the dot coop TLD, not that they've set up their e-mail improperly or not that someone has not added them to their favorites list or something like that. But they expect that, because it's not a 3-character TLD, that it's the problem of the TLD.

So we have to continually educate users. And, in many cases, people just expect these things to work. And so, when they don't work, they make that negative assumption about the TLD.

So we certainly need to work on that, which will be covered in the next -- thanks.

NADIA SOKOLOVA: I just wanted to make a quick comment. So with the e-mail acceptance, probably in that case, what we're talking about, we don't know for sure, unless we go ask, if the blocking of a TLD is being done not knowingly or on purpose. And, of course, if it's not knowingly, there's something that we can do and educate. If it's done on purpose, that's another question what ICANN can do in that regard. Andrei, please.

ANDREI KOLESNIKOV: Thank you. The Facebook was down 10 minutes ago, and I hope that they will improve their IDN support. But they didn't, unfortunately.

So I would probably repeat the same mantra. Of course, the -- for the IDN, for the big IDNs, which we represent -- in Russia we have, like, 700,000 domain names -- the major issue is e-mail support.

And we already talked to our colleagues from CNNIC. We probably will do some complaints together in order to try to push it forward. It takes time, but I think it will be resolved soon.

And the social network support, especially the Mumbai applications, yeah, IDNs not -- they're not supported. They're not supported in Twitter. They're not supported in Facebook. They're not supported in the local social networks, which we have one in Russia. And I'm sure there are some in China. But I hope in China they do support IDN. Not in Russia.

Another issue is the search engines, but I think it's just a matter of time. As the time goes and we have more and more content located on IDNs, I think this issue will go on by itself. Because there's no need for technical improvement of this thing. It's just a matter of the marketing approach. So these are, basically, issues -- e-mail, social networks, search engines. Some browsers, by the way, still have some problems with the IDNs. But that's it.

NADIA SOKOLOVA: Thank you. Wang, please.

WEI WANG: The issues for the Chinese domain name TLD in China is about the four stop, actually, the full-way stop. Actually, CNNIC started providing the Chinese domain name service 10 years ago. And most of the browser support, Chinese domain name works well, including IE7, IE8 and Firefox. But, when it comes to Opera and some local Chinese browsers, it will block the domain names with full-way stop, that is a circle and red dot, and redirect it to the search engine. And there's another interesting phenomenon in that, even IE7 support all kinds of Chinese domain names, no matter it contains full-way stop or half-way stop. Some blocking software, for example, the Google toolbar, when you install the Google toolbar, then IE7 will start a block and redirect the Chinese domain name.

Okay. Another big issue about the Chinese domain name is also about the e-mail, e-mail address. CNNIC focused on the e-mail address internationalization work for a long time. And we just published a RFC about the SMTP extension last week. And the part extension standard will be published maybe in August. But we didn't see any e-mail in software supporting the standards so far.

Thank you.

NADIA SOKOLOVA: Thank you. Ram, please.

RAM MOHAN: Thank you. So just a little bit of history for us, perhaps. We started off with dot info in 2010, and then we started working with dot aero around 2005, dot mobi 2006. You see a trend. Four letters, not more than -- all more than three. And then IDNs in 2010. And, you know, most recently dot pro. So I thought perhaps give you a little bit of perspective.

Before I do that, I wanted to acknowledge help and assistance from my friends and collaborators in what I'm saying -- John Klensin, Greg Aaron, and Tina Dam. I consulted with them. And I really valued some of the perspective that they provided to me. So one of the biggest problems we had in dot Info was Web site registration as well as e-mail forms. For example, as late as 2007, you could not e-mail an article from a popular Web site, the "New York Times," for example -- you could not forward an existing article to anybody with a dot info e-mail address, which was actually fun for some. Because they would try to send me articles and say, "Oh, you didn't see it. Maybe you should get a com."

But part of the thing is that some people's code -- some of the programmers who were using these -- these sites, their code checked against a hard coded list of top-level domains. And, when new TLDs were added to the root, the old code that they had, it simply rejected attempts to send to those new TLDs. Some other code allowed all extensions of two or three characters and, in those cases, e-mail to, say, a dot biz or a dot pro or a dot cat worked perfectly fine. And it didn't matter that they were new TLDs. But mail to dot info or dot coop or dot museum would fail on a consistent basis.

Now, in the info case, over time sites have solved these problems. And for the -- maybe the last four or five years we've, basically, seen almost no complaints.

But what it meant for us was to try to figure out why -- what might be some of the motivations. And I have a couple of hypotheses to offer to you. I believe that in the past non-acceptance of domains, of domains of the TLD level, it resulted from the desire of application developers to provide a better user experience.

So it was focused on how do we make it better. And they figured the way to make it better was to say -- in validation of forms, to say, if it's not two or three characters in an e-mail, then the e-mail is invalid. Right? That was intended truly not to restrict and block TLDs. That was intended to make for a better user experience. In parallel, there's also this phenomenon of automatic correction. There are now services that do automatic type of correction in the DNS. So, if you type in something dot CO, it thinks maybe you wanted to type in dot com. If you type in, you know, potentially, dot COO, it may end up saying you want to type in dot coop, as an example. But automatic typier correction and automatic name completion, for all of this, application developers needed to find a -- either a reliable set of rules and the two- or three-character rule, I think, was a useful heuristic to work with.

But today I think the problem is because developers, application developers, they're protecting their users. It's not any more just a user experience problem. They're in protection of users from names that people may not understand, IDN names, from domains that may have hostile intent, as well as a determination made -- I know, for example, some browser manufacturers make a determination that say that, if a TLD does not have sufficient rules to protect its users or does not have proper policies in how they use the domain name or how they allocate the domain name for registrants, the browser window says we don't think you're safe; therefore, we're not going to accept the IDN piece of it.

So inside of our company now we've come to what's being called inside Mohan's three rules of TLD acceptance.

Rule number one: And old TLD will be accepted more often than a new TLD.

Rule number 2, an ASCII-only TLD will be accepted more than an IDN TLD.

And rule number 3: A 3-letter gTLD will be accepted more often than a longer string, even if it's a gTLD.

So, if you take that as the current state of affairs, then everything that we do is to work to overcome these rules. Right? And we've done a significant number of things, including, for instance, writing letters to some of these big companies from the office of the CTO, which was

really me and Michael, saying we would like for you to do the right thing and actually accept names. And Info has had success. And as the size of Info has grown, the size of the problem has reduced. But I really think it's a significant issue going forward. Thank you.

NADIA SOKOLOVA: Thank you, Ram. You almost made me realize my promise to you. But you actually did very good with the timing. Thank you.

Michael?

MICHAEL YOUNG: I'm actually going to build a little bit on what Ram said. So I, actually, live in Toronto, Canada. And it's a really good place for having a conversation about this issue. Particularly last week, because it's normally subzero weather in March this time of year. But we had 17 degrees Celsius, which for you Fahrenheit people is almost no coat weather. And the patio has opened up. So I sat out there with a large conglomerate of global, shall we say developers. Because 55% of the people living in Toronto were not born in North America. So it's a great place to get different perspectives and multilingual developers talking about these issues. So we sat out on the patio for about -- intended for about 45 minutes. And it turned into way too many beers and three hours later.

So we kind of came up with two tracks here. Universal acceptance and then -- I'm going to coin a phrase, maybe, towards what Ram was saying about active choice to not accept TLDs. And I'm going to refer to that as universal choice. So let me talk for a second about universal acceptance.

We started -- these are pretty savvy developers I was talking with. So, for the most part, they're well aware of IDNs. They're well aware of newer TLD issues and the upcoming new TLD issues. But they were self-admittedly lazy. And they said, typically, when they go to do domain name validation or something, particularly if they're switching off a language they don't usually use, first thing they do is Google code samples and grab what they see. Now, if you go and do that right now, take Ruby, for instance, and do a little Google search, for those of you that are techies out there, you'll see that the domain validation examples are actually -- right at the top of the search results are wrong. It actually doesn't work and has no consideration for IDNs. So, really,

what you'd like to see is a Punycode conversion in there to make the IDNs work. This is not what we want to see, and we don't want to encourage developers to go down the wrong path right out of the gate. So their advice was run an SEO campaign, provide, you know, good code samples. And I think we could see that Kim is already working in that direction pretty heavily. So maybe expand that to more languages and run an affiliated SEO campaign to make sure, when developers go out there and they throw up examples, look for examples for their code, they're seeing stuff that is valid and actually works in proper conformance with the RFCs.

Now, the other thing we could be doing is linking back to these good code samples by doing postings in forums on things like stackoverflow.com and places where, you know, github and other places where developers like to lurk and hang out on. So that's a suggestion on helping the development community move in the right direction and get it right more often. Because I think they're willing.

But now let's go into the universal choice issue. Absolutely right. A lot of times it's a business decision or a policy or even a fear-based issue why they don't accept, you know, the entire IANA list of TLDs. And that's going to get worse with new TLDs. Because, you know, let's face it. Not all TLDs across ccTLDs and gTLDs are operated equally. Not all of them have the typical same amount of abuse hits or issues in them. So, therefore, they're not treated by application makers equally either or people running online services from a business or policy decision.

So how, with all these new TLDs coming out, how, with the existing ones, are they going to easily determine which ones have operating policies, abuse mitigation policies that make them okay to operate with their environment. To Ram's point, I can only write so many letters asking application makers to go out and do the right thing. So how can I make it easier for them to determine whether a TLD fits into the spectrum of what they think is acceptable so that they make a universal choice towards it? I'm going to suggest that maybe a good thing for the overall community would be to work on a common format repository where TLD operators, especially the new ones, can post their operating policies, their abuse mitigation policies in a common machine parsable format so that those people making decisions around applications can consume that and very readily know or make their own judgments about how safe or how reliable working with a particular TLD is. That's my thoughts.

NADIA SOKOLOV: Michael, thank you. I just wanted to do a quick comment. It looks like you touched on the first question and the second and the third. And thank you. I think it was, actually, a very good suggestion. Also talking about -- you mentioned the Ruby program and language and posting it on github.

As Kim pointed out earlier, we do have tools in five languages. And this is one of the newer ones that we were considering adding/ So we'd like to raise that with the community. If it is decided that it's a good language to have, we'll definitely put our efforts into working on adding that language as well. So, Edmon, please.

EDMON CHUNG: Thank you. I'll first speak a little bit about the experience from dot Asia and some of the findings or some of the initial thoughts from the JIG discussion. Dot Asia -- I think Ram and Michael and others have mentioned that, when we first launched, we also experienced a number of issues. One -- I won't repeat what was said already, but a couple that was really interesting. One of which we're seeing we saw certain browsers, basically, when we first launched, it redirects it to search. Because, you know, basically, in the browser, they somehow try to detect whether the TLD is relevant and it redirects, you know -- if it thinks it's not, then it redirects to search.

Why that is important, I think, it's also an issue that -- another issue that -- of background, I think people need to think about is the -- I guess some of the incentives for doing that. There are certain incentives from the industry to redirect things to search. I mean, that means we should not ignore those type of incentives as we go along our discussion as well and how to address them.

The other one is, when dot Asia launched, a key sort of market or a key area for us was small, medium companies. And often, especially when they set up a new Web site, they want to put it on search marketing. The problem was that, like Google ad or Yahoo! ads, does not allow, actually, you to put in a new TLD. And, even if you -- so when a small company registers in dot Asia domain and wants to put an ad -- it wants to create a Google ad, it becomes a problem. And it -- and it requires a -- you know, a period of time before, you know -- after we brought it up to them and, you know, over time it was resolved. Now, I'm happy to know that it's resolved.

But to -- at least what we probably don't know, whether it's resolved in generic form so that future new TLDs will be accepted or it was sort of an ad hoc addition, workaround. So these two -- I think both of which point to interesting incentives. And I think -- you know, I keep coming back to incentives. Because one of the most difficult things to push universal acceptance, we found, is there isn't enough incentive for those application programmers to make changes, unfortunately.

And how we create that, hopefully, the new gTLD program, with an onslaught of new TLDs, might create that incentive. But I think that's one of the things that this community should think about. So that was the experience from dot Asia.

And just to point out a few things, the JIG report that I point out for public comment also identified -- I think there were three areas that I want to highlight, which I think is very relevant to the discussion. One of which is I talked about when dot Asia was just introduced, it was -- for some browsers, it would be redirected to search. That actually comes to a point that I can't -- I think a policy of the unique authoritative root. That is also -- sometimes people don't -- when the JIG first discussed it, this issue was raised. And it was debated whether it was part universal acceptance. But, after more discussion, we realized it is. There are two reasons. One of which is that, if the TLD lists are out of sync, that, essentially, means that we lose the unique authoritative root. Second part, which is even worse, is it potential to -- you know, if these static lists or emerging industry standards, like the -- even like the Mozilla public suffix list. If, in the future, it not only becomes out of sync but additional TLDs are added, that becomes, certainly, an issue of unique authority, you know, that related to unique authoritative root.

And in that -- the JIG -- you know, in the JIG discussion, one particular thing that came up I think was interesting. I think Kim mentioned that looking up the DNS, of course, is probably the easiest.

But there are certain -- the reason for what we found is that the reason for certain lists to be created, emerging industry standards like the Mozilla public suffix list, there are possibly services that they provide that is beyond the DNS. And, whether those services or some of those services should be provided by IANA, for example, is also of -- I think of value for this community to think about. Because in perhaps simply

providing the root zone file is that enough? IANA already provides the WHOIS, the root WHOIS. Is there -- are there additional pieces of information that might actually fill the gap for the community, the developers, so that they can actually use those services from IANA and ICANN? So that's one.

The other one is we keep coming back to whether there are policy aspects that ICANN can look into on this particular issue. And we at least found one. One of which --

NADIA SOKOLOVA: Edmon. I'm so sorry. The JIG report is open for public comment. I believe it ends on the 23rd of March. Edmon had very good points summarizing what's in the report. So please take a look at this.

Also to point out from the comments that Edmon made. So I think there's a question for -- when talking about acceptability issues, he mentioned the incentives that e-commerce Web sites or developers see in making sure that TLDs are accepted. So I think there are two things -- incentives and also awareness. So do they really know that that is the case? So I think that needs to be differentiated. Thank you, Edmon. I'm sorry. We have to cut it short, so we can move on.

Before we move to second and third questions, is there anyone in the audience who has something to comment on the current issues? As I mentioned earlier, we talked to TLD registry operators. And we collected their feedback about the current issues. But we were also informed by some end users about the current acceptability issues. So, if there's anyone, please speak up.

ANDREW SULLIVAN: My name is Andrew Sullivan. There is one issue that hasn't been touched on here. And that is that you're going to have static lists in these applications. And there's no way to get around that, because a lot of those applications don't have a way of looking things up. They're not online. And because -- or they're mobile applications, and they're not going to do it in real-time all the time because turning on the radio is expensive. So there's no way to get around static lists. And we're just going to have to live with that fact. What that means is that sometimes, when you have a new TLD launched, you've got this long tail. You've got deployed software, and people are not going to upgrade their software just because we decided to expand the name space.

NADIA SOKOLOVA: Thank you. Is there anyone on the panel who wants to comment on that?

RAM MOHAN: Andrew, thanks. I think that's exactly right. I guess we're moving into question 3, what are things that ICANN can do. One of the things that ICANN can do is not only update that list, but to maintain some sort of a validated place that both the mobile application developers or the mobile applications as well as other applications that want to take the list and keep it up to date, they can keep coming and getting it. Because I don't think there is actually a validated spot somewhere. And that's something concrete that ICANN can do. I know there is currently a particular repository. But, you know, my perspective is that the search list or a cache list, for example, would be a useful thing that ICANN can do.

NADIA SOKOLOVA: And, Michael, did you want to say something?

MICHAEL YOUNG: Well, I think Ram covered pretty much my thoughts. I might add these are considerations of a new TLD operator that's preparing for launch should consider in their communications efforts and their marketing efforts and so forth. Because they're going to have to think ahead of these things, rather than be reactive. If we could do dot info over again, there's a lot of things I would have done proactively that we learned the hard way.

KIM DAVIES: Just commenting on Ram's suggestion, what we provide right now does provide some of that functionality. As I mentioned, we do recognize that there are applications that are not suited for real-time lookup in the DNS and do we need to check the validity of the certain TLDs.

The approach we've taken is we've published a dedicated list of valid TLDs, updated in sync with the root zone. It means the software doesn't need to understand the DNS zone master files but can get that list. And the approach in that proof-of-concept software does speak to things like caching. Ideally, if you need to have a list, it's better not to compile it statically into your application where it's kind of fixed. But, where possible, get the latest version, cache it in your application, and use that cached version whenever an application is offline or it's undesirable to

make that kind of application. But we can certainly do it on what we've done. And I think we'll take guidance on what we've done, and we can channel the resources in bolstering the approaches that we have, whether it's public suffix list or improving the SDK or what have you.

NADIA SOKOLOVA: Okay. Are there any questions in remote participation?

>> Hi, yes, my name is Natalie (saying name) and I'm reading a comment on behalf of someone from the chat room. And I didn't ask the name but I think it's -- it's -- the handle is dicy8. The comment says, existing registries should communicate their plans to native users who still don't know IDNs existing gTLD will ever get its native transliterations and be 100% in the native language. Knowing that may motivate towards solving acceptance/application issues.

NADIA SOKOLOVA: Okay. We appreciate that comment. Moving to second and third questions, and you can see, who should be addressing the existing issues and how can ICANN promote universal acceptance of all domains effectively? So we're kind of working the two together, and we'll start with our panelists, if it makes sense to go in order or if -- how does -- what does everybody feel? Tony.

TONY HARRIS: Yes. My concluding remark would be, I think we have to be very attentive to what's going to happen from here on. It doesn't look like everything is resolved.

NADIA SOKOLOVA: Okay. Thank you. Mingjung.

MINGJUNG PARK: I would like to first say that I'm very pleased to hear that the dot Asia case about the online ad has been resolved because we're still having the online service not supporting IDNs in Korea, in the case of Korean ccTLDs. So I'd like to ask ICANN to encourage the participation of the -- all the stakeholders to engage in this kind of discussion because it's really hard for us to approach to these global companies and to find the right person to talk to and we've been trying to do it for the last two years. But we've had some positive changes, but we're still facing some

difficulties. So I think it would be better to have a discussion and inviting all these participants in one place, perhaps, and to share our cases around the world and that's what would help in shortening up the time to upgrade their browsers and to update their services to benefit the users of the IDN TLDs in the world. This is my closing remark, and thank you.

NADIA SOKOLOVA: Thank you.

MOHAMED EL-BASHIR: Thank you. Regarding question 2, who should address this, I think the community with ICANN should work collaboratively in this area. Specifically registries. Registries could engage locally in awareness and capacity-building activities within their territories. They could also engage in research and development. Either themself or partnering with other stakeholders like academia or research centers. Because it's important for registries also to ensure that their TLDs are -- are used in a friendly way and a civil way by the users. So this is from -- from the registry side. There's work that needs to be done and we need to be proactive in handling this issue.

ICANN role, I think ICANN could play an important role because ICANN has the global reach and amid your software and application vendors definitely they will be listening to ICANN, not only listening to individual registries complaining about out -- our TLD issues with our applications. So ICANN need to work with the community in that regard.

I think also ICANN needs to establish some sort of a communication with those major providers or software application developers. For example, I can name two in terms of social media, Facebook and Twitter, and various others and ensure that the whole developers' communities are aware about the development of the DNS site and how we can work in terms of ensuring that they have the information, that we haven't also -- they could work proactively in resolving these issues. Thank you very much.

NADIA SOKOLOVA: Thank you, Mohamed. Carolyn.

CAROLYN HOOVER: This is Carolyn Hoover, again. I think the points that have been made already about how ICANN can help coordinate this activity and the point of individual registries trying to reach out to these large corporations, having ICANN on our side or coordinating that would be very, very helpful. But a lot of the comments, I don't want to repeat them in order to give people time to ask questions, but in moving on to how ICANN can actually promote universal acceptance, I think one thing is to look at using the new gTLD publicity vehicles to make programmers and technical people aware of this. I actually do, being -- handling all facets of a small TLD, I actually do talk to programmers from time to time that are working with people setting up Web sites. They've never heard of dot co-op. Ten years later they've never heard of dot co-op. So I think that the new gTLD publicity should talk about these issues so that people can begin addressing them on a technical level.

Some of this technical information that was in the presentation, I was even not aware that ICANN had been doing even more work in that area. So again, making that information more accessible on the ICANN Web site would be very helpful as well.

Another point would be that if people do have problems with this besides reporting it to specific registries that perhaps ICANN could have a facility to let people report that non-support of particular TLDs at any level, whether it's IDN or gTLDs so that that can be funneled through a central resource.

And then finally, I think another thing to do is to -- through the publicity and through ICANN is to focus on the value to businesses that are, you know, having these issues about the value to them of accepting existing TLDs as well as new TLDs and including IDN TLDs where it's appropriate because it makes sense for their business. So I think that's one way to address, you know, the whole value proposition of why someone would accept it.

NADIA SOKOLOVA: So basically raising awareness, raising awareness, and so on. Thank you. Okay. Andrei.

ANDREI KOLESNIKOV: Thank you. Well, I believe that -- well, I do believe in the marketing approach, but it's a chicken and egg problem. There will be no heavy usage of the IDNs until the IDNs are completely supported by the

application. So there are probably some -- some methods of addressing these issues to particular companies like this. You know, we know some of the IDN countries have certain specifics. For example, Russia. It's maybe a good idea to put the requirement of IDN support for the big vendors of the telecom software and the applications, including the mobile phones is collect from a three-year match. You know, just not give certificates to the mobile devices which are not supporting the IDNs. Or the mobile applications that are pre-installed on the mobile phones. I know it sounds maybe weird, but it may help.

Another good idea -- well, it includes like this, maybe the general secretary of China and Russian president can jointly address this thing to the -- to the vendors, but to be seriously, maybe this -- this issue can be addressed through GAC, by the way. Why not? I mean, this is -- this is important. This is important thing to do. The IDN in ICANN community is a very important topic.

So why don't, you know, the GAC make the joint communique here and, you know, it will be replicated through the different media and, you know, press releases, because it's -- in many cases it's a matter of awareness and marketing. That's what I think.

NADIA SOKOLOVA: Okay. I think Andrei mentioned GAC, so if other panelists can probably comment on what Advisory Committees or other ICANN stakeholders should be involved in this, that would be helpful as well. Please. Wang.

WANG WEI: I'm sorry, I think ICANN can play a more important role than for this, you know, to coordinate this software vendor to adopt existing standards because I always asked -- I always ask myself a question, who cares about the, you know, the domain name check and to be redirected by the brother or some other software except for the audience here and the people sitting here. I think that registrants that cares about the -- that cares about the issues often get a phone call from my friend or some other colleagues as myself, okay, one of my friends has registered a domain name under a new TLD or under IDN TLD but he has no idea how to make it work.

So if the developer community can, you know, have a -- can get aware about the information of the TLD and domain name procedures and the registries and the registrars will choose a -- can choose a certificate file

developer as their corroborators and will encourage their registrants to use the software to build out their own system I think they will help the community. Thanks.

NADIA SOKOLOVA: Thank you. And Kim Davies will comment as well.

KIM DAVIES: So I'd actually expand on that comment and say, I think more software vendors or implementers that need to fix their software don't care about this issue and will not care about this issue. And I think once you accept that, it's all about how can we convey to them in the shortest amount of effort to implement because their attention span is low. Clearly domain names are not central to their application or they would know about this issue already. They don't care about ICANN. They don't care about what we do. They probably never will. The fact that they're doing it wrong is a testament to that. So -- and that's perfectly fine. But if we want to convince them to address the issue, we need to do it in a simple way that's focused, that explains how in the shortest amount of time, the least amount of cost they can address the problem. And I think if we can work on that, so we're not asking them to understand the entire IDNA protocol to fix this issue, we're not asking them to understand how ICANN, IANA, or TLD registries work, but provide simple guidelines on how to improve their systems. We have the best shot at getting the small amount of time that they can devote to this subject and get it on their radar and get things fixed. So that's not to say I have the solution on exactly how to do that, but I think we just need to be mindful that any suggestion that ICANN can tell these companies here's how it should be and they're going to listen to ICANN, I think that ICANN probably holds little sway with them. I think they need to be convinced by their customers, the people that pay their bills, that this needs to be fixed, and if they can fix it at low cost, I'm sure they will. If it's hard work for them, they probably won't.

NADIA SOKOLOVA: Okay. Thank you. Ram.

RAM MOHAN: Thank you. So I have four suggestions specifically. First is what I call -- what I'd call the external acceptance test. You know, it's kind of derived from our own experience with the "New York Times." So a few months ago ICANN approved the dot XXX TLD into the root, and there was an

interesting test case for multiple reasons but the fundamental thing was this was a three-letter TLD. And so one of the things that I did was I spoke to the CTO of ICM registry, Len Bayles is a good friend. I said I'm going to send you an e-mail from the "New York Times." Let me know if you get it. And if you get it, this is literally a couple weeks after XXX got launched, right? And in that case it actually worked. So it's an example but really it's a -- it's an external acceptance test for a TLD that goes in. Pretty straightforward and not, expansive, but it's a clear solution. Obviously over time if the "New York Times" realizes that they're being used to do the test, they'll fix it and you have to find some other site. But the problem remains and there's a way to find it nevertheless.

But second is, I think it's important to figure out the motivation and work to address the motivation. Kim was talking about least cost and fastest way to get code to ship. And I think actually a primary motivator now for application providers is user protection. You know, malicious used poorly defined policies, no record of proper enforcement of policies, and those are things that ICANN can actually help provide documentation. There's an Internet page that ICANN maintains that provides information about TLD registries, but it's often informational about some basic information but there is more data that can be provided, specific data that an application provider who is responsible may be able to go and look at and say, here are well-defined policies that are actually enforced. So I think that's an important thing.

The second -- the third idea is, perhaps code promotions or code competitions. You know, maybe working to large well-known programs, you know, Google has a summer of code, for example, and that might be an interesting way to say here's a competition for domain-related improvements and try to spark some innovation.

And the last suggestion is ICANN itself, with qualified staff, perhaps ought to be thinking about participating and informing in other events that are focused on application layers and that has people from the application side there. It's -- it's a first good step to have a session on acceptance at ICANN. But as Kim, you said, the people who care don't care about what we're talking about here. Right? So we've got to go to them and be present where they are listening and where they're thinking about the issues. Thank you.

NADIA SOKOLOVA: So thank you, Ram. I think that was very good, the four suggestions that you made. We -- we -- as Kim pointed out, we are aware and if -- with your help we can better identify not just the type of the audience that we are trying to reach out but who exactly, you know. Not that you have to name A, B, C, D, but actually yes, that might be very helpful. So Michael, please.

MICHAEL YOUNG: So I think I inadvertently tried to cover all three questions the first time I talked, but let me reiterate the points that I think are relevant to 2 and 3.

One, you know, at the end of the day it's the TLD operator, I think, who is most motivated in addressing the existing issues because it's their opportunity, right? So their communication outreach plan needs to be developed well in mind and started well in advance of their launch. Now, that will help them probably hit the major software vendors and get on their -- get their attention, maybe get on their next release, if changes need to be made and so forth. But the bigger problem, the thornier problem, is in this day and age, thanks to Android and Apple iOS and the mobile world, we have a larger population of independent garage programmers, if you will, than we've ever seen before and they represent a lot of the working Internet right now. So again, those free code samples and libraries and an SEO program backed by ICANN to really push the attention to the top of the Google search, to push the attention to get hub, to places where developers hang out, live, will make another huge difference.

And then again, you know, for number 3, I go back to another thing that ICANN has within their venue that maybe they can help out with and that is, universal choice is universal choice, right? People are going to make a decision based on their business opportunity and their security policies and maybe their payment gateway company, right? And they don't want to accept certain TLDs because of past histories with those TLDs. Whatever their reasoning, what you don't want them to do is say no by default because they don't understand whether or not a TLD is a good TLD or not in their view, whether or not it matches up with their policies. So if we had a consistent formatted repository where TLD operators could all post their policies, their commitments, their practices, in a consistent, digestible method that there could be some automation around for application developers, makers, providers, then

maybe they'd say no by default less often and maybe they'd say yes by default a little bit more.

NADIA SOKOLOVA: Thank you, Michael. Just a quick note. Tony wanted to comment. Please.

TONY HOLMES: Yes. Just building on what's just been said, I guess a lot of you know that -- well, at least I'm expecting a huge explosion of the use of the Internet with the deployment of 4G infrastructure from mobile devices and the -- the mobile phone manufacturers and the carriers have clubs of developers with hundreds and thousands of independent developers and hold two or three seminars a year for them and these -- these are not too many actors, these companies, who could probably be factored in to alerting all these developers to this -- this issue.

NADIA SOKOLOVA: Thank you, Tony. I think this is exactly the type of information and directions and help that we need from you and the -- the community altogether that if we determine that this is a problem and it can be addressed in a collaborative manner then we need your help in identifying and creating a proper plan so that our actions can be effective and efficient. Edmon please.

EDMON CHUNG: Thank you, Nadia. I think, you know, we can -- in terms of this particular aspect of who should address the existing issues, of course, you know, there are a lot of things that ICANN itself or ICANN community can't directly do. But we have to understand that, I guess, from my point of view, at least, even though that is the case, there is a role that ICANN should play and there is -- and that role is important, very critical for raising the awareness and advocacy. You know, one of which -- the thing is, if we don't think it's important and if we as a community don't prioritize it as important, you know, why should anyone else care? I think that's important. And I think -- you know, one of the things I observed. Right now we're having an interesting photo session here. I hope the reason for having a photo session in this is to bring the GNSO counselors to this discussion as well, you know, and that shows the priority that I guess this particular subject has in -- you know, in ICANN's point of view.

So I think prioritization, you know, is important. And advocacy. The other thing -- in terms of what ICANN can actually do, people often say, you know, we can't control -- can't control software developers and those kind of things. There's a -- actually one of the things that we found out is there's at least one thing that ICANN can directly do and that is pertaining registry software and registry and registrars. At least registries and registrars in their systems should support TLDs and IDN TLDs. I'd like to perhaps ask, you know, Afilias or VeriSign or Neustar, do you currently for contact information -- not VeriSign actually but the thick registries, does it support IDN TLDs at this point for contact information, for Nameservers. You know, those are -- at least in terms of the registrars and registries, their systems, this is one thing that ICANN can, you know, directly do. If it requires a PDP, let's start it. If it doesn't, the problem maybe doesn't then, you know, it's an implementation that ICANN can bring about.

If it requires a PDP, let's start it. If it doesn't, the problem, maybe it doesn't, then it's an implementation that ICANN can bring about.

So again, it comes back to prioritizing it and making it something that is important for the community. And I think the other direct aspect is to set aside some funding for a consistent program to outreach and how to engage the global community on this particular issue.

Kim mentioned about a set of materials, and I agree very much with Kim, what Kim said in terms of the short focused materials.

One thing added to that, I think ICANN could play a role in, is to create sort of a checklist for new gTLDs and new IDN ccTLDs.

Because it would be very important for those that are coming in to the new gTLD program and coming in as new IDN ccTLDs to know what they might bump into.

So that might be, you know, another area that ICANN can contribute directly.

NADIA SOKOLOVA: Well, that probably speaks to a good exchange of information, and probably creating some sort of repository where people and the current TLD registry operators can share their previous experiences that newer

TLDs can get some exposure to and probably see if the same methods that were applied in the past work for them now.

So the main concern probably is now that we're talking about this and we're not just trying to take one hour and a half of your time here, we would like to get some feedback so we can better determine if there is a decision that work needs to be done, what type of work, and with whom. We can talk as much as we want, and you probably would listen, but we would like it to be effective.

So are there any comments, additional questions?

Tina.

TINA DAM: Hi. I thought I would be quick up here in case there is a long line.

I think this is a really great session. There are two things I wanted to mention. One is all of the outreach and communication all that stuff you guys are talking about. I think that is really useful. And I will tell you at the last couple of years I have been at several events or conferences that has been for application layer focus.

And I guarantee you there is nobody in this room and there was nobody at the ICANN conference that was there. There was, in fact, really nobody from the domain name industry.

So everybody I spoke to there, and I guess I shouldn't really say who they were, but big application developers, the biggest ones we see on the Internet today had no clue whatsoever about new TLDs, IDN TLDs, nothing at all.

And they were actually really excited to get the information.

So, Nadia, I would love to share with you what events I have been at. Name them A, B, C, D afterwards so we don't take time, and you can hopefully get a budget and go there and communicate with them as well.

The other area I want to mention -- and I think is an area that you guys have been maybe a little too polite on today on the panel, in my mind. I

think it's really unfortunate to see application developers decide what TLDs they think are safe and which are not safe.

I think it's really unfortunate because that gives the user a very different experience depending on where they go. And it's not that I am naive enough to think that problem can go completely away but I think that ICANN as the organization, not as the community but as the organization, has a larger role in explaining a little bit more about all the good things that you guys do and especially around compliance, you know, specifically on IDNs, on the IDN guidelines and maybe other things like that so that we can try to get away from individual application developers sitting with their internal technical staff deciding what they think is safe or not.

And I agree that they had a need to do that in the past. I really hope that they won't have a need to do that in the future because that's going to be a problem for all of us.

NADIA SOKOLOVA: Thank you.

Thank you.

Okay. One more comment.

JORDYN BUCHANAN: Hello. I am Jordyn Buchanan from Google.

So, yeah, I notice --

NADIA SOKOLOVA: That's the guy we need (laughing).

JORDYN BUCHANAN: I noticed a few people mentioned interaction with Google during the panel today and I want to make a couple of points. Certainly, one is I think we are very interested in trying to work through these issues with everyone.

As with -- I think in addition to there being a lot of very small development shops in the world, there's very big ones as well, and even when you solve the problem in one place in a big development shop, it

doesn't necessarily mean that it's going to get solved everywhere, which may be some of the experiences that you guys are running into.

But I think more importantly, I do think the notion that was mentioned from the Korean representative of having some sort of convening forum where we can get together and talk about these issues is really important. There is just no way for us to have productive dialogue with the TLD community today. So all of you have to come and have individual interactions with tons of companies and being able to have a broader discussion about it, I think would be really productive.

NADIA SOKOLOVA: I'm so sorry to cut you short. There are a couple people who would like to comment but don't go.

Next one, please.

DENNIS JENNINGS: My name is Dennis Jennings, and just a suggestion. I'm interested that this session and the comments are all focused from a technical perspective.

If I bought a product that didn't work, I would send it back and demand my money back. So you should be talking to the product managers, the marketing people and hit these so-and-so's where it hurts. Don't pay for these things. Send it back.

If I got a phone that didn't work, by my definition of work as I had been sold, I would want my money back.

Thank you.

KIM DAVIES: I think part of the problem there is you think the domain doesn't work, not your software.

NADIA SOKOLOVA: Okay. Patrik, please.

PATRIK FALTSTROM: So you would send back the domain; right?

[Laughter]

RAM MOHAN: Within the first five days.

PATRIK FALTSTROM: Patrik Faltstrom, chair of SSAC. I would like to thank you for this session that I think turned out really, really well. We also showed a lot of the problems that exist regarding, for example, like the static list and stuff for domain names.

One thing I do see is also what Tina pointed out, the discrepancy between what the ICANN community and the ones who participate in this process do feel, for example, what kind of domain names are, for instance if you look at the international domain names are safe or not and what is happening in the software development community where currently there are some discussions also in the IETF, comment that they thought) that the Web browser vendors and others try to coordinate, for example, what characters should be allowed in domain names in display and when should an A-label be displayed instead of a U-label.

So that kind of like cross-communication between the ICANN community and software community is extremely important. Because as what I see today is an increased number of sort of interest or developing a subset of the characters that we think are safe is what the software community is currently developing.

Whether that is a sign that we in the ICANN community has been too nice and allowed too much or not, I don't know. But the biggest problem, as Tina pointed out, is the lack of communication.

Thank you.

NADIA SOKOLOVA: Thank you, Patrik, so much. We would like to get more feedback from SSAC and help us better define where to go.

We are wrapping up. Thank you, everyone, and please e-mail us and or contact us and work with us. Thank you.

[Applause]