
BUENOS AIRES – Universal Acceptance
Monday, June 22, 2015 – 18:00 to 19:30
ICANN – Buenos Aires, Argentina

RAM MOHAN:

Good evening, everyone. Welcome to the Public Session on Universal Acceptance. We're just going to get started here in just about a minute. My name is Ram Mohan. I've been involved in this area for a little while, and it's my pleasure to introduce a bunch of people here. We've been working on universal acceptance for a little while. Edmon, you're sitting there. Do you want to stay in the audience or do you want to come here? Come on up. Come on up. Come on up.

We don't have enough space at the table but we'll squeeze you in. So the first thing that I wanted to say about universal acceptance is that it's becoming a little bit of an overloaded term. So we're going to try to set the stage at the start, try to explain a little bit of what universal acceptance is and is not.

But before we actually get there, I thought it might be interesting to show you a video that the Thai registry had put together. And that, in some ways, might present, in a very graphic and direct way, a sense of the challenges and the issues that occur with the universal acceptance topic.

Now, several registries in the world that are introducing, especially registries that are introducing internationalized top-level domain names, are putting together promotional videos and are putting together informational and infographics about why their TLDs should

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be used. But underneath all of that is a fundamental issue, which is that the way domain names are represented and the way they are used pose some significant challenges in the real world.

So before I get any further, let me just quickly go through what our agenda for the day is. If you can go to the next slide. Thank you. So I want to discuss the definitions of universal acceptance and speak a little bit about what is actually happening in this area and what various players' roles are.

On the next slide, which is, really, what is universal acceptance? How is it seen? The next slide will show you not all domain names operate equally. If you look at it, what the intention of universal acceptance is that if you have a domain name, if you have an identifier, that that identifier in the domain name should be accessible and should operate in applications in systems, in both hardware and software, etc., in an equal way.

The reality is that it doesn't work equally today. For example, if you wanted to have an e-mail address that was completely in your local language, it's likely that most systems in the world today would not be able to either understand what that [inaudible] e-mail address, relay it, or get responses back in an appropriate manner.

The same thing is true with domain names that are in ASCII, but [inaudible] are long domain names. Across the world, there are many systems that have, due to legacy reasons, hard-coded this idea that a valid domain name is one that is two or three characters long in an

ASCII. And while that is an outmoded concept, much of the technologies and systems have not yet caught up to that.

And all of this is exacerbated with the recently-added new gTLDs. There are hundreds of new gTLDs that are being added into the Internet system, and many, if not most of them, are more than three characters long. Many of them are not in ASCII directly. They are names that are represented and have meaning in a local language. And so the problem that existed for a long time is getting more focus and more attention.

The next slide. Let's look at validation upon entry. If you look at a web page, an app, or other applications, you'll find that today, not all domain names are accepted in all these applications. So this may be a valid domain name that is in the root, and that is accepted as a valid domain name except in many applications.

Similarly, e-mail addresses may also be rejected at the time of validation. There are some e-mail clients where, if you type in an e-mail address and you hit the validation function, the client comes back and says, "We don't recognize this as a valid e-mail address." And it's because of multiple reasons, and we'll have folks here explain a little bit of as to why this is not just a simple problem of telling the e-mail client, "Here is a list of names and you should recognize these as valid."

In a similar way, browsers – some browsers – interpret a valid domain name, or a domain name that should be valid, as a search term, because they don't have the intelligence in them as of that point in

time to recognize that that new top-level domain or that domain name itself is a domain name. Right?

And this is true for ASCII names, non-ASCII names, long domain names, new gTLDs, new ccTLDs. It crosses boundaries. It's not a gTLD problem, not a ccTLD problem, not an IDN problem. It's all of the above. Next slide, please.

If you look at storage, domain addresses could be stored as 8-bit Unicode characters in sort of the standard 7-bit ASCII characters. They could be stored as Unicode. But there really is no requirement for them to be stored one way or the other. And the text that is to the right of the slash in a universal resource locator, how should that be stored? What is this format? How should that be represented? That's not clear, either.

In addition, it's possible that the storage of the domain name or the representation of the domain name may have to be transformed both on the way into the system and on the way out of the system. None of these are really standardized.

On the next slide, if you look at processing, it's possible that some network devices exist on the Internet today that have firewalls or that have rules in them or the TLDs or what is a valid TLD is hardcoded in them. That's a possibility. But if that is true, [inaudible] have [inaudible] universal acceptance problem. If you had a home router that had this kind of a hard-coded definition of what a top-level domain is, then if you tried to add your host name in there, that might not work.

Browsers, as well. Browsers need to learn when an address is an address, and/or when it is just a search term. They need to understand that, and the mechanisms that exist today doesn't look like they have adapted to the expansion as well as to the increased technological additions that have been happening in the domain name space.

And it's a similar thing with other devices. Photocopying machines today allow you to scan documents and then send the scanned document to a specified e-mail address. If you had an e-mail address that was either non-ASCII, or even if it was a long ASCII e-mail address, it's entirely possible that that photocopying device would reject the input that you're providing for it because it doesn't know how to process what's coming in. Of course, if it was a non-ASCII address and that device only allowed for ASCII input, you have an even larger problem.

The next place is – on the next slide – is also on display. Software needs to determine what will display and under what circumstances will it display. Will it display it in Unicode? Will it display it in Punycode? And what if the device can't actually display the characters, and what if the right Unicode script to display them is not installed? As you can see on the slide right up there.

Next slide. Another interesting area that the universal acceptance, the Steering Group is looking at, has been speaking about, has been an e-mail. How are e-mail addresses treated? Are the servers that are critical in the chain of sending e-mails and receiving e-mails, are they compliant? What does compliance even mean?

What about the e-mail clients? There's a whole panoply of clients available on multiple devices, and do they know what to do with universal acceptance? And, also, what happens when mail encounters a noncompliant server or client? There are also questions about mixed script usage when you have, in some cases, you have left or right plus right to left. In other cases, you have Unicode plus ASCII and incoherent behavior from e-mail and e-mail systems.

Next slide. So we started to look at who's doing something about it, and one of the first things we thought about was, well, let's see what ICANN is doing about it. So we asked ICANN and we asked Ashwin Rangan, who is the CIO of ICANN, to put some thoughts together on what ICANN itself is doing about universal acceptance. Ashwin is here on our stage, and we thought it might be useful for you to get a bit of a sense of what it means to eat your own dog food.

ASHWIN RANGAN:

Thank you, Ram. It's a funky problem and we had to start somewhere. So let me start up by offering a few comments. When we started to look at universal acceptance readiness within our own services base, there were many considerations. First of all, is it code that's running in-house or is it code that's leased to run from somebody else where the code control doesn't lie with ICANN, but instead lies with the supplier.

If it's in-house code, then it's all about work that needs to be done. If it's code that we've leased, then it's more contractual in nature. Then when you get into the in-house code, what's the approach that we're

going to take? There are a couple of approaches that are now relatively being understood well in the coding community, although there is no standard approach. But given those two approaches, is approach one better than approach two? And, if so, why?

There is no standard RFC, for instance, that says, “This is the way it needs to be approached.” Ram touched upon other considerations such as is it a U label or an A label? And why is the one better than the other? Is it a database consideration or do we parse it in code? Or do we just display it and accept the display and parse it and send it across?

If it’s database, is it a gTLD at IDN.IDN or is it IDN.IDN.IDN? And if it’s IDN at IDN.IDN, then how do we store it? It’s all kinds of different permutations and combinations that we’re thinking through. And, in a sense, it feels like Y2K kind of work, where you have to have discipline and a rhythm to get through it. So what I’m going to share with you is a few slides about how we are approaching that.

Next slide, please. So our approach is to start with a complete inventory, and we’ve cut it with different knives. So we’ve got multiple cuts and shapes and we’re going through the assessment and dealing with what happens as a result based on whether it’s packaged code or is it a SaaS supplier, or is it in-house code? And we have challenges and timelines that we’re trying to adhere to, so let me take you through a few of those slides. Next slide, please.

I think we have a problem there. It’s okay on screen. So it’s an IDN. There you go. That number should say 84. Our inventory says that we

have 84 services that we currently offer to the community, whether it's the stakeholder community or our Board or our own staff. And that baseline number is fairly steady. Why do I say fairly steady? It's two different things. What do we consider to be a service, and is it indeed comprehensive of everything that we do?

So as we look at everything that we do in different parts of the organization, we're finding that there may be things that we're using in certain pockets that are not comprehended in that number. So we're trying to get a good sense of where are these pocket applications that may be used by five or ten people in the organization who are interacting with a specific part of the community. That also needs to be treated if it needs treatment.

Next slide, please. But with the 84, we've taken a cut and looked at how many are externally hosted versus internally hosted, and how many of those, then, have source code control versus no source code control. It could be that we have source code control, but it's externally hosted, and there's relatively more control over what we can do and when we can do it.

If it's no source code control and it's externally hosted, as well, there's not a whole heck of a lot we can do except to deal with the provider of the service. Next slide, please.

So quickly, it becomes clear that there is no one size fit all here. If it's in-house code controlled, there is a lot of work that needs to be done where we have to find every place where there may be reference to an e-mail like string or reference to documents where we may be

formatting the reference to the document itself with what's to the right of the dot.

So it's multiple things that we need to search for so that we're permitting the entire string to come across, as we wanted to with the gTLD program and the IDN requirement for universal acceptance. If, on the contrary, this is a service that is negotiated as a lease for use, then we get into contractual amendments. Because the moment we get to a vendor, whereas this may be a requirement that we're putting on the table, they might have a completely different set of requirements from a contractual viewpoint that they will bring out.

So suddenly, it's not about universal acceptance. It's about what's in your contract with the service provider. Sometimes, as we're going through our code base, which we control, we find that there is no UA connotation. So we can dispense with those relatively easily, and that has nothing to do with contracts because it's ourselves and we can dispense with those.

Now, when we deal with suppliers of leased code, some of them, very few of them as a matter of fact, have heard about UA. And that's part of the issue. Some of them haven't even heard of the gTLD program. So this comes as news to them, and we have to educate them and bring them up the learning curve so that they understand both the implication on the one side, and the business benefit potentially on the other, as to why they should become UA-ready and UA-compliant.

And, like us, they, too, have constraints. And many, particularly the larger suppliers, have their own mechanisms to figure out what should

be addressed and on what priority. They have user groups, they look at the user group pressures, and say, “Is this something of a request coming in from a multitude of locations or customers?” And if it is, then that tends to make their priority cut.

So while they understand the importance, the urgency is something that may or may not be reflected in their priorities. So these are all things that we’re seeing as we go through with our processes from a variety of angles. Next slide, please.

So whether it’s internal or external, the challenges seem to be the same. So whereas we may have a wind-down clock that says, “This is when time is up,” does it make the priority cut? And if it makes the priority cut, then how many resources are getting applied? Is it sufficient to make the time wind-down that we have in mind? We, for instance, internally are thinking that this is a year-long process. So inside of ICANN, as we talk this through – next slide, please – we see this as having gone through an inventory. We are just now approaching the end of assessment, and suppliers are being contacted in July. After that, we’ve had a couple of sample dialogues that we’re getting a lot of feedback just with that. After that, we’ll realize how big of a problem this may be, and what is that likely timeline.

So we’re thinking that it’s a year long. It could be two years long, three years long, depending on how quickly things get prioritized and addressed, particularly on the outside. Inside code is a different

matter. We have the ability to make our own priority decisions and resourcing decisions.

Not only is this about existing code, but each time there is a new service that's introduced, we now need to be sure that it is UA-compliant. And for doing that, we will have to share our story, not just the ICANN story, but everybody's story. Because some of the larger suppliers, if they don't hear the same story from a multitude of their customers, they will not prioritize this no matter how important we may think it is. So it's important that this story be told in as many forums as possible.

So in summary, there's no easy way out here. We have to look at this as a stepwise process of going through inventories and assessments. If it's in-house, we'll have to find it and fix it. We have to have an approach to do that. And if it's not in-house and the code base is elsewhere, we have to work with our suppliers to raise their level of awareness and raise the priority so that they take care of business for us.

So it looks pretty easy to say that it's IDN@IDN.IDN, but it's going to be tough work to get from here to there. Thanks, Ram.

RAM MOHAN:

Thank you, Ash. So that gives you a sense, from a CIO's perspective, of an over-\$100 million organization. I thought in the same way, perhaps, we could also get a sense of what some other organizations whom we've been engaged with, who are engaged in this process, are doing

about it. If you could just stay on the previous slide. I thought I would ask Brent London, who is to my right, and Mark, who is to my left, perhaps, to spend a few minutes just speaking a little bit about what is happening in their roles and in their organizations.

And if you wouldn't mind just introducing yourself and then speaking just a little bit, giving us a sense of what the priority of this topic in your organization, and then what you're actually doing about it.

BRENT LONDON:

Thanks, Ram. So I'm Brent London. I'm a Program Manager at Google, and I focus on universal acceptance there. And I think the clearest example of universal acceptance projects that we've worked on is in the context of Gmail.

So before I explain that, just in terms of levels of complexity. Accepting new gTLDs is relatively simple. And then when you move up in complexity, you get to internationalized domain names. And then when you get to internationalized e-mail addresses where both the left and the right side of the e-mail address contains Unicode, that's the most complex problem to solve.

So in the context of Gmail, we decided we want to support the new RFCs to work with not only internationalized e-mail addresses but, of course, all the new gTLDs and IDNs. So we started by going through the plumbing and making sure that we could properly support internationalized e-mail addresses at third party service providers.

So if you're one of those lucky few people who can go sign up for an internationalized e-mail address from one of the few providers that currently issue it, you can contact Gmail users. And if you're a Gmail user, you can e-mail those individuals.

In terms of prioritization, even internally, we experience the same type of chicken-and-egg problem that probably any organization that's trying to prioritize this has faced, which is it's a nontrivial amount of work to make these changes, and it has to be clear that there's a business reason to do so. And that's why, if you go and try to sign up for a Gmail address today, you're still restricted to an @gmail.com domain with an ASCII local part.

We're in the process of experimenting with fully internationalized e-mail addresses, but it's not like we're making a running leap just because it's such a substantial investment. And in addition, even though these technologies are defined fairly well in RFCs, there are gaps. Ram mentioned it earlier when he was going over some of the introductory slides. In the context of, for example, just ASCII e-mail addresses, there's a general convention that states that if you set an ASCII e-mail address to be entirely lowercase, that's a totally adequate way to standardize it.

But it turns out that's not compliant with the RFCs. And when you try to do that with internationalized e-mail addresses and rely solely on case folding, you run into problems. So part of the reason why we can't just flip a switch and make this work overnight is that we have to explore what are the implications of the various solutions to those

problems. Other issues involve right-to-left e-mail addresses and how those should be displayed, whether the domain name should come first or whether the local part should come first.

So I'm going to talk in a minute about why we chose e-mail addresses and how that fits into the context of this project, as well, in ICANN.

RAM MOHAN:

Thank you, Brent. Mark?

MARK SVANCAREK:

Hello. I'm Mark Svancarek. I'm a Program Manager at Microsoft, focusing on universal acceptance. Brent's already touched on what are the technical problems that we have to face. Microsoft faces the same problems, of course. What has changed lately, I'm sure you know, we are under new management, and we've made a lot of changes regarding how we support other platforms.

So we are very committed to working within this Universal Acceptance Steering Group to ensure that there are solutions that are convenient and resilient and interoperable and global to support all of these cases, regardless of what language you use or what website you want to go to, whether it's gTLD or a non-ASCII script.

I don't think I have much to add technically to what Brent is saying. We all agree on these fundamentals, that we should start with e-mail. It's the biggest superset. And Microsoft is addressing all of these things in collaboration with the Steering Group.

RAM MOHAN:

Thank you, Mark. So that gives you at least a vignette of some of the work that is going on. But if you join the mailing lists, it's open to all, and if you join the UASG, you will actually not only get to participate with everybody who is doing this, but share your own experiences and collaboratively learn and express how we can solve the various problems that exist.

We realize that the problems are not merely just linguistic or regional or geographic. It's all of the above. So we actually need as much of your participation and as much of your engagement as possible. And in many ways, just one person from an organization is also unlikely to be sufficient because the problem touches large swaths of large areas overall.

If we could go to the next slide, I wanted to spend just a few minutes about this group itself, the Universal Acceptance Steering Group, in time-honored format that gets into the acronym UASG, that the hashtag is #UASG. It's a community initiative. It's supported by ICANN. It's not an ICANN group. It's not run by ICANN. And inside of the Universal Acceptance Steering Group, there are four subgroups that are really doing all of the work.

The first one is topline and technical issues. The second is international. The third is measurement and monitoring. And the fourth is community outreach. So the work of the UASG is conducted, really, in each of these subgroups. Again, I recommend that you join in and vote, participate, listen, and engage in all of these groups.

The next slide will give you a sense of who, a little bit of how we got here. In January of this year, we kind of compiled a flash [inaudible], a flash panel. A few of us who were really interested in the topic got together and said, “This is important, and how do we get some traction?”

We met from 11:00 to 3:00 or 3:30, something like that, that day. But we went a long ways in that short amount of time, including getting to a mind map and some level of early ideas and priorities, and things like that. As we started to go deeper into it, we realized, A, there was strong interest from across the spectrum, but, B, that we had to make this more broad-based. That this couldn't be just a group of 10 or 12 interested people to come together.

So at ICANN 52 in Singapore, we suggested to the community that we create a Universal Acceptance Steering Group, and we solicited input from the community. We got a fantastic, a fabulous response from all of you with very strong endorsement of the initiative, and that led to the creation of the UASG at ICANN 52 in February of this year.

And soon thereafter, we began work on the basics of the formation. What is a charter? And then deciding who the coordinator should be. And in May, we started to activate the various projects. One thing to point out about universal acceptance as a topic in general, and about the UASG effort in specific, is that this is not a sprint. This is really a marathon. This is an endurance event. This is going to take quite a bit of time to get from where we are to what we can even conceive as a finish line.

So what is needed here is both patience but also a clarity of vision in terms of what “good” looks like and what the end goals are to be. But base that on a clear charter and build the structures and the processes that can actually help make all of this happen.

On the next slide, you’ll get a sense of who, what the structure is. The group at this time asked if I would take on the role of chair. I said, “Fine.” But I said that I needed help. And it was wonderful to see others in the community come up and volunteer to help. So we have Edmon Chung here, Rich Merdinger, and Christian Dawson as vice chairs of the group.

In addition, for the four project areas, we have project coordinators who, again, have volunteered or, in some cases, were volunteered to get to the tasks. So Brent is in charge of one area, Dennis and Dusan are in charge of another area. Rich and Christian of the third, and Mark of the fourth area. And they’re all going to be speaking here a little bit about what they’re doing and how they are bringing the efforts together.

Don has a self-designated title there, but really, Don in many ways is the glue. Don is ICANN staff, if you will, helping in the coordination of the work that is being done here. He does make sure that things stay on track, or at least on track as much as possible. And he usually heaves a big sigh of relief when I get to these meetings 10-15 minutes before the meetings are scheduled to start.

On the next slide, basic principles. It’s a community group. It’s supported by ICANN, and “supported by ICANN” means a few things.

ICANN is providing assistance by having Don help us. ICANN is also providing assistance in helping with all of the logistics, the secretariat function, if you will, the Adobe Connect, and the conference calls, and all of that stuff.

And we're also in the process of putting together a set of items that we think the UASG, for the community input, believes are important to be done. And we intend to present that to ICANN and ask for some budget allocation for that work to be done and for some sponsorship to come from ICANN.

But we anticipate that as time goes on, it will not be only ICANN that will be involved and engaged. As we saw, there are already organizations that are putting specific time and effort in the universal acceptance work. The other principle here is that this is intended to be a global solution, it's not just about one area, one region, one technology. It's intended to be broad-based.

And perhaps the most important thing is that this is not a policy development group. Our intention is that if we do find areas that have to do with policy, we will probably do some work in defining what that area is, and then handing it off to those groups that are chartered to do policy. And that is not just within ICANN, but also you could certainly imagine that it is outside of ICANN.

We say policy, but it's also, in many ways, it's also not about standards, either. We're not looking to go create brand-new standards or define brand-new standards. If we have to, I expect we will find

ways to engage with standards organizations and work with them, rather than stand up this initiative or this group itself to do that work.

Next slide. It's early days. We're just a few months from where we got started in Singapore formally and informally in D.C. in January. But you saw some of the slides at the very start about acceptance and validation, and storage process and displaying, which we are starting to think are components of defining whether you are UA-ready.

And perhaps over time, UA-ready is going to become a badge. Perhaps, over time, UA-ready is going to be a way by which you can look at a set of metrics or standards, or something like that, and say, "Do we measure up? Do our technologies? Does our software? Does the hardware? Does the systems that we use? Are they UA-ready? We think that might be an interesting avenue. So we've done some work in that area.

The technical specifications and good practices guide were in second draft. Again, all of this material is public, it's archived, it's available in the e-mail lists. Join the group and participate, and you can actually shape not only what's happening but the future of what's going to happen.

We're also beginning to build a knowledge base so that we can redirect complaints that come in about universal acceptance. So if there is an application that doesn't accept a set of names or if there is a website or if there is an e-mail system. So we're starting to create a knowledge base for it.

We're also starting to put together a catalogue of the relevant standards around this, and we're [inaudible] RFCs here, but what we really mean is standards because it's RFCs [inaudible] sense, but there are other areas when you look at Unicode, they don't call them RFCs. But the idea, really, is what are the standards and what are the things that somebody who is trying to implement and execute on universal acceptance, what are the various things they have to keep in mind?

We're also thinking about, and started to interconnect, organizations that are focused on internationalized e-mail addresses, to see if we can build some work with their testbeds and run some proof of concept and pilot projects with integrating internationalized e-mail address systems.

We've been invited to and we intend to participate at several Internet governance fora both at the global IGF, at the Asia Pacific regional IGF, at EuroDIG. And we're just starting to think about engagement at the national level, how to do it. We're experimenting, and we're thinking about it. New Zealand and Thailand are two examples, and we have folks here who can speak to that if you're interested in learning about that.

The organizational engagement model is why you see Ashwin here. We're starting to see if we can, over time, start to bring and provide some case studies of what's happening with universal acceptance in various organizations. ICANN is an easy example, but the intention would be, over time, to bring other organizations and to have them share their experiences, the challenges that they face in implementing

universal acceptance. So there's a lot of talking and a lot of thinking that is going on in this area.

The next slide. There you go. So on Sunday this week, we organized the first full-day workshop on universal acceptance here at ICANN 53. It was each of the four topics that were discussed, each of them underwent quite a bit of analysis and engagement. And I'm going to pass, if you go to the next slide, I'm going to pass the baton to each of those leads to express and explain to you what happened at the workshop and, also, what the outcome is and where we plan to move forward.

So first, let's go to Brent, who is in charge of the topline issues area.

BRENT LONDON:

Thanks, Ram. I'm going to wait for the slide deck to load up here. All right. So you're getting a preview of what the second slide is. Here we go. All right. So what we've done, thus far, is we've defined the problem. Mark Svancarek from Microsoft wrote a thorough document that's available on the mailing list archives explaining, in detail, what universal acceptance means and the problems that it poses.

We've done some internationalized e-mail address testing and it actually turns out we can get e-mail to go from point A to point B and back again, full round trip, without issues, when both sides support EAI. And we've identified the need for technical solutions, that gaps do exist.

Next slide, please. So when we approach this problem, one of the issues is that it's huge and nebulous. So we're trying to fix the fact that across the entire world, identifiers don't work in many different places. So the first task in identifying what we're going to focus on is narrowing the scope to something really specific and something with a high return. Because after all, we're just ten people or so, and we all have day jobs. So we have to make sure that the minutes that we're spending are going to have a high impact.

So next slide, please. In general, we've historically been approaching this problem, as how do users interact with domains, and we say domain names can't be validated, and it's tough to store them, and all sorts of issue along those lines. But really, if we look at this from the user's perspective, there's a slightly tweaked version of this question that helps us get to a better approach.

Next slide, please. And that is if you are an end user interacting with new identifiers, whether it's a domain name or an e-mail address, where do you run into the most problems? It turns out it's not really up-to-date Web browsers. If you're running one of the most current Web browsers with the right settings, internationalized e-mail addresses and new gTLDs tend to work. But, really, it's e-mail addresses.

If you try to sign up for online banking using a new gTLD or certainly an internationalized e-mail address, you're going to have problems.

Next slide, please. One more. Next slide.

So there are two different categories of e-mail addresses. There's standard e-mail with a new type of domain, as in the first case. And, like I said before, there's internationalized e-mail addresses where to the left of the @ sign you have non-ASCII Unicode characters.

One thing that's noteworthy here, next slide, is when you focus on solving the e-mail address problem, you also solve domain names, because domain names are in e-mail addresses. So we can cover all of our bases by focusing on e-mail.

Next slide. So our goal here is to reach a critical mass where this becomes a useful technology, and there are two separate parallel approaches to doing this. We're going to begin starting with the end of Buenos Aires. The first is that we're going to identify the top mail providers that currently do not support internationalized e-mail, and we are going to lobby them to become a part of this organization and get on board and start supporting it.

If we can get the top mail providers online, all of a sudden this chicken-and-egg problem goes from being very difficult to start up to, "Oh, we have billions of users who can automatically can work with these internationalized e-mail addresses." What that allows us to do is go to an online banking CTO, for example, and say, "Hey, you don't support over a billion users' types of e-mail addresses. It's probably worthwhile for you to undertake some changes."

As opposed to the current approach, which is the philosophical argument of, "Well, it would be nice if you actually supported these, it would be useful for the rest of the world." We can actually create an

incentive for other organizations to get on board with this. So that's approach number one, the e-mail providers. Next slide. One more.

And then the second track is to identify what those gaps are in RFCs and, not just RFCs, but Unicode technical specifications, as well, and fill them. So let's make it so that each organization that's getting on board with supporting new domain names isn't reinventing the wheel to try to validate domain names or try to store e-mail addresses or try to validate e-mail addresses. So these are the two main tracks of work for the technical and topline issues group for the next four months.

RAM MOHAN:

Thanks, Brent. I wanted to stop here for a few minutes and ask if there are questions from the audience. We don't want to make this just a whole set of presentations. It's intended to be interactive. So let's pause for a few minutes and just speak to the technical area with the current plan being these two. Do you have any thoughts? Any feedback to us?

Okay. If you don't have it here, you're welcome to add it on e-mail, on the lists, or on the Adobe chatroom, however you'd like to do it. But we really need your feedback and your input, as well. Thank you for that.

Let's go back to the next area. So we spent time after we spoke, after Brent had a session. Then Dennis and Dusan spent a bit of time talking about internationalization and the challenges and the issues that are

involved there. So Dennis and Dusan, what do you have to report back on what was discussed and what the community feedback was?

DENNIS TAN:

Absolutely. Thank you, Ram. So we're going to wait for the slides to come up. Brent going to be attacking the problem from a user end standpoint. And in the international group, we thought, okay, so if we're going to solve the problem from the end user, we also have to think about the small developers that are out there, the ones that are now, and maybe the future, the new developers soon-to-be. Where are they finding their resources in order to internationalize their applications or whatever?

Next slide, please. And we're going to be focusing solely on IDNs and the IDN ecosystem. And this extends to internationalized resource identifiers and also EAI. But EAI is mostly going to be Brent's work, but we're going to collaborate on it anyway.

And as it pertains to standards, practices, tools, and applications. So we are going to review all the stacks, if you will, and seek what are the good practices and the gaps, as well. So we can identify and provide information to the community. Next slide.

And again, our target audience is going to be the small developers. And these guys are in large numbers and everywhere. So when we thought, okay, so if I were a small developer, if I want to do something, I will go to an organization, standard organization like W3C or IETF. Or if I'm developing for iOS or Windows Phone, I would go to developer

forums in order to find information about how to do internationalization, anything from e-mail addresses to localization.

So we would use these organizations as proxies in order to provide this information and recommendation as to, okay, we need to update, for example, browsers. And many of you maybe are aware or not, but they are supporting IDNA2003 with a [inaudible] report for the six and not fully IDNA2008, which has some implications as far as how domain names resolve in the Internet. So we need to address that, and that's one of the long-term goals of this group is going to do. Next slide, please.

So we thought about this high-level frameworks. So how we're going to organize our work. Two things, basically. We want to identify what are the good practices out there. We don't want to reinvent the wheel. We want to identify what are the relevant RFCs, standards, etc., but also the gaps that are in between.

As a small developer, I don't have the time to start thinking about how do I do this. How do I ingest all this information? So we want to make it more digestible, if you will. And, of course, long-term is to have everyone adopt these RFCs and the end we have fully internationalized e-mail addresses, Web browsers have a standard way to resolve IDNs, and then there is no differences. Doesn't matter how language settings you have in Web browsers, etc., so on and so forth.

Next slide. And so in order for [inaudible] provide [inaudible] results in this group, we set ourselves near-term and long-term goals. And the

near-term goals is sort of in the next three months, something that we can actually do, and prove results of this group and that this process works, and with the hope that we're going to get more membership. And this is recruiting, as well, as I talk.

In one of the areas that we want to focus on in the next three months is on confusable characters. And why is that? Oftentimes, in my engagement with advocating for IDNs, I hear back, "Oh, IDNs, yeah. [Inaudible] spoof. You can do spoofing." And while that is true, you can perhaps spoof a domain name, in theory, there are guidelines and there are measures that both raise risk and [inaudible] applications can implement in order to minimize those cases.

And, in fact, the latest Anti-Phishing Working Group report stated that in the last seven years, only nine cases, in seven years, nine cases of homograph phishing attacks happened. So from nine cases, I think people are overblowing this problem of phishing attacks with IDNs. So we need to set the record straight and provide the tools and guidelines so that people can actually work on this and to not dismiss them because they don't know.

And then in long term, what we want to do, we have identified several initiative that we're going to choose as a roadmap items, and with a [inaudible] resources we're going to allocate those in a timeline. So for example, talking about how we want to standardize the browser behavior, next generation of IDN guidelines, if I recall correctly, the last ones were 2011. So we're planning to review those IDN guidelines, as well as how IDNs are displaying applications and so on and so forth.

Next slide. So like I said before, we need you. We need every minute that you can spare so you can help us. For now it's Dusan and I, we're going to do the work. Then we can do so much work as our time is available. So we need your help with a minute, an hour a week that you can spare, that will be helpful. If you can point us to resources that you have already built, please, welcome, because we want to build a repository of practices, examples, best cases, success stories, so on and so forth. So that's for me. Dusan, you want to add something?

DUSAN STOJICEVIC:

I don't have anything to add. Everything is said already.

RAM MOHAN:

Thank you, Dennis and Dusan. Another important area of focus, in addition to the topline issues and internationalization, is measurement and metrics. One of the things that we all know is that you cannot improve what you don't measure. And so that's a big part of what we're trying to do.

And Mark McFadden is the lead in that area, and Mark, over to you.

MARK MCFADDEN:

Thank you, Ram. Metrics and measurements, or it sometimes gets shortened to the candy, M&M, is an attempt to measure, measure how we're doing at this. And let me sort of talk about what Ram said very eloquently there, that without metrics, without measuring what's

going on, you have no idea how well you're doing or how poorly you're doing. Right?

And so what this group is intended to do is actually measure and support progress on universal acceptance. It's meant to help inform the work the two groups that you just heard about, but also to help inform the work of the outreach group that you'll hear about in just a moment. The Metrics and Measurement Group is really a group that is measuring how well things are going, what the problem space looks like.

It's not an outreach effort. It's sort of a testing effort, if you will. And as a result, it has a broader remit than, for instance, the top-level issues or even internationalization, which focuses on IDNs. What we have is very, very broad range of things that are getting tested or are proposed to be tested.

And so doing that is a real requirement to be able – finding a methodology for doing that and repeating that methodology over time is a way to find out whether or not you're making progress. And it's also possibly an important way to discover whether or not there are new areas in which research needs to take place and so forth.

At the workshop on Sunday, one of the things we did was explore some fundamental definitions for metrics and measurement. And as you can guess, one of the things that's very, very important here is that getting precise, crisp definitions of what it is you're measuring is extremely important here. Because what you want are repeatable

measurements. You want to be able to do it over and over again to be able to show that you're making progress.

One of the things that we agreed on Sunday was sort of the basics of the problem space. And I'll come to that in a moment, but it's a broader problem space than simply talking about a particular client like a browser or an e-mail client. Or even a protocol, talking about how you would support internationalized e-mail addresses and SMTP or POP or IMAP, for instance.

And so the idea here is to find a very, very broad range of items to actually cover, be able to measure, and report on. And that last part is extremely important. What the Measurement Group has actually talked about is one of the critical parts of this is not just to do the measurements, but to actually report on that transparently. And then not only report on that transparently, but to get input back from the community. "Oh, you did that test wrong. You should do this [inaudible] other test. We need more data on that." And so forth.

And so using that to adjust the tests that we do in the future so that the cycle of doing tests, reporting, getting community input, and informing our other groups is effective at actually making progress on UA issues.

On Sunday, we discussed the sort of basics to that problem space. But another thing we acknowledged, and I want to acknowledge here, even though it's late in the evening, is that there are some people who are already doing work in this space, and it's very important to acknowledge that.

EURid and UNESCO have done some wonderful work, especially in the IDN space, on acceptance. And, also, in the Middle East, in South Korea, in Japan, and in China, there's been some work on universal acceptance. And what we want to do is be a collaborator with that work. We're not taking over the work, that's not the suggestion here at all. Although we feel that we have sort of a broader problem space to address, one of the things that's important is to acknowledge both the past work that's gone on and the continuing work of those organizations, which largely has been excellent, excellent work.

And so we talked on Sunday about some of that previous work and where it had concentrated, where it had left off, and so forth. We also talked about categories of things to be measured, and I want to talk a little bit about that. I'm going to take my 30 seconds of fame to talk about this section.

I come from an engineering background and have a shirt pocket protector and largely don't get invited to parties. And so as a result, I tend to think of things in things that you can precisely measure. Does that browser do this? Does your e-mail client do that? And I think many of the ways that I think of things and measuring things are a little like the ways that Brent talked about. Can I take, yeah, can I take an international e-mail address and use it to send to a destination and get a response back? Right? And I think of that as, very much, yes or no, even though the world is much more complicated than that.

I imagine, in my mind, and in talking to other people, of having a palette of measurements like that for a variety of services. But during

the workshop on Sunday, I was warned that that's not enough, that those kinds of hard metrics where you define very crisply and carefully what it is you're measuring need to be supplemented by other metrics, metrics that talk about what are the qualities and costs of the barriers to deployment? What are the psychological and educational costs of deployment, and so forth?

And actually doing survey work and gathering metrics about that kind of data, as well. Those softer metrics are things that I'm not as experienced with, but one of the things over and over again in our workshop said, "You must collect those softer metrics," along with the hard metrics that I was talking about.

The categories of things that are to be measured, then, are quite broad. We talk about particular clients for particular protocols, but we also talk about infrastructure technologies, the DNS itself, things like X.509 digital certificates, and so forth. There is a broad range of things in the Internet that we count on and that we use the DNS for. Universal acceptance tracks all of them.

And even though in the Top-Level Issues Group, and in internationalization, some of those issues may be left until later in our work, we need to start measuring them early so that we're aware of them, so that they can inform our outreach work, and so that as we address other problems, we know we can move on to the next step.

So one of the things that I learned as the person who is sort of working on the metrics of measurement area, is that those categories, the

people who participated in the workshops said, “Let the 1000 flowers bloom. Think more broadly about the categories you’re measuring.”

Now let me say a few words about a roadmap for where we’re going and where we are. Right now, we know that one of the things we have to do is ensure that there is neutrality in that measurement, that people can be convinced that the measurement is neutral, it’s done by a third party that is trusted, that the work of actually doing the measurement is transparent and reported upon – and not only that, allows for a public comment process that says, “You made mistakes here. You need to correct that next time,” and so forth.

We also know that one of the things that this particular group, the Metrics and Measurement Groups, are going to need are going to resources, the very things that I talked about. And I’ve talked to the chair about those kinds of resources. One of the things I’m responsible for, this week, is coming up with a detailed list of those resources, when they need to be provided, and so forth.

Another thing that this group is working on that is a very difficult problem is establishing the metrics themselves. You might imagine that when I talk about the harder metrics – does the browser do this particular thing, does it show Punycode in the address bar, does it actually show the Unicode – we can actually very precisely define that.

Establishing those metrics crisply and precisely is a very important part of this. We think that that will – we came out of the workshop on Sunday thinking that that will take some real work.

We also know that the world of technology constantly moves, and so that the tests we do this year will need to be supplemented by new tests in future years because new technologies appear. We'll need to do the same tests over and over, but we'll be needing to be brave enough to add tests to our arsenal because new technologies appear, and we need to measure the kinds of successes that we're having with new technologies.

Finally, the breadth of the task is a real challenge for this group. And so I think one of the things is what you'll see here between now and the Dublin meeting is a set of quite clear deliverables. First of all, the resources that are needed to take on these works will get well-defined. They'll get well-defined in resources that the UASG actually asks for, but not only that, a timeline for requesting those resources will get developed.

We'll also, very early on here in July, establish a first round of community-developed metrics. And those are both the hard metrics of things that I talked about, and also the softer metrics that engineers might not feel so comfortable with all the time.

We also think that we'll take a laboratory approach. We don't expect that the group that you see up here or people working with us, we don't expect to actually build a lab of our own. That would be too costly, too time-consuming, and frankly, there are other people who do a much better job of that than we would ever do.

So we plan to take advantage of the resources of laboratories that are available to test these things. And we think we'll have identified a

laboratory environment in which we can test things that we're talking about before the Dublin meeting.

We intend to participate in the Prague IETF to talk to people about these measurement tasks because folks inside the IETF are very good at measuring things like network resources, capabilities, and negotiating capabilities between endpoints. They're very familiar with the kinds of things that we're talking about here. And so that's around the corner, that's in the third week of July. We plan to participate in that and actively seek out guidance from the standards organization.

And finally, I don't think we'll have time to actually execute the first rounds of measurements before Dublin. I think that would be, although there are people who were participating remotely on the call on Sunday who definitely encouraged us to move faster. In fact, I felt like my ICANN staff colleagues who they get a microphone, they present a timeline and the first comment is, "Can you actually move that up a little bit?" I mean, that happened to David in the last one.

And believe it or not, in the workshop that we were in on Sunday, they said, "Please work on an Internet timescale, not on a slower and more consultative timescale." Something that I took very seriously, something that came out of that workshop.

Finally, let me say if that is sort of the fundamentals of roadmap, one of the things that you can expect is that in July, there will be a community conference call and also a Web meeting based around the idea of establishing those fundamental metrics – those fundamental metrics for a stab, at least, at those fundamental metrics that we're

going to be doing. And also, initial conversations about what detailed resources are going to be required.

That's going to come up in July. And my colleagues who have already talked have already talked about how important it is that you contribute to this effort. You are part of this effort. Ram said it beautifully at the beginning of our hour and a half here that this is a community-based effort.

ICANN has been incredibly supportive, and that's been great. But this is truly one of the great sort of bottom-up community-based efforts. And to make this succeed, we have to have your voice, your expertise, and your knowledge to participate. So just like my other colleagues, I hope you join in, and if you're interested in metrics and measurement, join directly with us. Thanks, Ram.

RAM MOHAN:

Mark, thank you very much. Before we go to Christian and to Rich, I wanted to pause for a moment and ask if there are questions, either here from the group, or from online, on either the internationalization area that Dennis and Dusan spoke to, or for Mark's measurement and metrics area. Any questions? Any comments from here in the room?

DON:

One of the topics that came up in the session just before our session was the work that the GDD is doing on the perception of new gTLDs, whether they're trusted or not trusted. So Mark, I think that might be an opportunity to bring some of those softer measures from people

who've already done the work so that you don't have to reinvent the wheel.

MARK MCFADDEN:

Thanks for that, Don. I learned a lot from the previous session, but the breadth of the reviews is breathtaking, I would say. And what we can learn from them on especially the softer metrics that I talked about will be especially important. And I think that this group will be carefully watching, be an observer of that activity.

RAM MOHAN:

Thank you. Edmon?

EDMON CHUNG:

I thought I would stay in the audience so that I would stand up and start the queue. Right? But I observe that there is a question online, but he is retying it in. So I'll take up the little bit of time here.

So I think, of course, the whole development is great and I think the USG and some of the things. A couple of things I wanted to highlight. In fact, I'm really excited to hear from Ashwin and the work at ICANN. And I think pretty much all the work teams, I think, could interact more with ICANN. We are part of the community, obviously, and I'm sure that ICANN would be more willing to be more transparent.

I'm sure there are going to be confidential stuff, but if there is more willingness to be more confident, more transparent, and share the

data both on the metrics side and looking at EAI, looking at IDNs, I think we can document that whole process even much better.

I mean, what you have right now, Ashwin, is very impressive. You know, how it breaks down and stuff. But as we design those metrics and measurements, as we design how we fill those gaps for IDNs or EAI, perhaps we could use ICANN, if we will, as a test case or as a case study that can eventually be documented into a case study that we can also take further.

Just kind of comment and hopefully, and I'm guessing hopefully I'm not putting you on a bad spot, but hopefully we can get the support from ICANN to do that.

RAM MOHAN:

Thanks, Edmon. Ashwin is here, but there's also other folks from ICANN. My good friend, David Conrad, is hiding all the way in the back. And David was active just recently on the mailing list, speaking a little bit about what ICANN is doing with some of the IDN TLDs. So David, perhaps you could come up and share a little bit of that, as well, with the group.

DAVID CONRAD:

Hi, I'm David Conrad, ICANN CTO. So we're working with APNIC to run a series of experiments where we have created ICANN dot, I think, 700. I don't remember offhand, new [inaudible], including IDN gTLDs. And the APNIC experiment uses Flash running in Google's ad system to invoke browsers to try to do DNS queries to these domain names. And

it's a very elaborate experiment that will probably take a couple of months to run. I forget the exact timeframes.

Several million queries will be sent across the Internet from whatever browsers happen to be able to run Flash and happen to have [inaudible] looking at YouTube or a few other large well-traveled properties. And the intent of this experiment is to get sort of a base-level understanding of how many of the new gTLDs, not IDN-specific, but new gTLDs in general are being blocked at sort of a network level.

So this won't show why they're being blocked or the mechanisms by which they're blocked. But it will show sort of a baseline measurement of sort of the ability of TLDs in general to be queried by end user systems as long as those end user systems can run Flash.

So we will be providing periodic updates to the UA-discussed mailing list. We, like I said, I believe it will take a couple of months for the experiments to run. We plan on repeating it periodically so we can see a baseline and then do time series to determine whether things are getting better or worse. One hopes they only get better but this is the Internet.

So we will keep you all informed as things move on. And one of the challenges we had was in order to get these domains, we actually had to go out and buy them. We discovered that some are significantly more expensive than others and I decided not to actually pay a very large amount for some of the more pricey new gTLDs. The implication of that is we won't have them in the baseline statistics. If they want to happen to donate some domains to this effort, ICANN.whatever would

be very nice, but it doesn't have to be that. We have gotten a few other domains.

So if that's of interest to people, they can send me an e-mail, and I can provide additional details. I just don't happen to have them offhand.

No. I'm sorry.

MARK MCFADDEN: I'm guessing that is the answer, actually.

DAVID CONRAD: Any question you ask is generally no, but.

MARK MCFADDEN: Let me try the question and you can just grunt again. The question is, does the experiment have any routing information in it so that you can tell where it's being... The answer is [inaudible] for the record.

DAVID CONRAD: Actually, it does have some routing information because the way this will work is there will be queries that will be generated, DNS queries that will be generated. And I believe it even tries to do an http connection. So you actually have source address information of some sort. It'll probably almost invariably be an [inaudible] box or a resolver. It won't actually be the end user system.

But there will be some information that will provide at least an indication of the AS number from which the Internet service provider from which the attempt was made, potentially down to an end site level that it'd be unlikely that we'd actually get the end user machine or the...

Since I think there are http connections, we might also get browser information. But the amount of information that we get is somewhat limited just because of the way the experiment is implemented.

RAM MOHAN: Thank you, David. We look forward to continued updates. And thank you for the focus in this area.

DAVID CONRAD: Yeah.

RAM MOHAN: Before we move on to the final area, Edmon had indicated there was a question online. So would you like to read it in?

UNIDENTIFIED FEMALE: Yes. So there is a question from the remote participation room. And the question is from Yuri Kargapolov. The question is, in general, now the situation around domain name [inaudible] topic means that we have to change the ASCII paradigm to a paradigm Unicode. Punycode, unfortunately, cannot help us. By means of this algorithm does not

solve problems, convert IDN address in the local part. It one problem but not end. The sole thing via alias technology is not kosher. But then the question is, are we satisfied with the current version of Unicode 8?

RAM MOHAN:

So I'm just showing the question to Dennis and Dusan. I'm assuming since this is a question in internationalization [inaudible] want to answer. There is a leading question there but there's a deeper question inside.

DUSAN STOJICEVIC:

Yes, I can take it. First of all, this is Yuri Kargapolov. So pronunciation. Let me... So the question is, are we satisfied the current version of Unicode? As my colleague, Dennis, said already, we are not here to build RFCs. We will try to find the problem. So this is one perspective. It's about Punycode versus Unicode. This thing, we will try to help to be solved. We cannot solve, like me and Dennis. We cannot decide. We can help that this thing can be solved.

RAM MOHAN:

Thank you. So we accept the limitations but we recognize more work has to be done. Thank you very much. Let's go to Rich and Christian to speak a little bit about the workshop, what happened at the workshop specifically, but outreach.

CHRISTIAN DAWSON:

Very happy to do it. Thank you very much. In order to best understand what our outreach efforts do, it's important to know why we needed to go last in the workshop. We needed to go last because we needed to be informed by the other groups about exactly what it is we are supposed to be doing, quite frankly.

So our number one job was to take thorough notes on what was happening for the rest of the day. And here's why. Because up until that point, we'd make a lot of lists. Lots and lots of lists of potential stakeholders and potential things that we can do when, I mean, it's everybody and anything.

This is a huge problem with lots of potential things that you could possibly do in order to reach people. And I kind of thought that we would step into this and say, "Okay, we'll try and do these conferences and we'll try to send out these slide decks." And what it ended up feeling like is scattershot effort that was going to get scattershot results.

So our goal was to listen to the other groups, and then narrow our focus and narrow our focus, and then narrow our focus some more, so we could figure out what we can do first to make the most maximum impact. And that was our strategy going into this working session.

We didn't have an agenda. The agenda was to listen and to figure out what happens next. The first thing that we needed to do was take that list of potential stakeholders and find out, first of all, pick a timeframe. We decided let's figure out what we can do in four months. And then find out what did the topline issues group and the internationalization

group, what do they think we needed to be focusing our attention on in the first four months?

Well we got our answers, and you got your answers when you listened up here. You heard that the topline issues group identified that they wanted to go out there and talk to large e-mail providers. That's great. Actually, and then we got even luckier because we've got Google here at the table with us, we've got Microsoft here at the table with us. So we want to talk to and people and we've got number one and number two in the world for large e-mail providers here to help us figure out what is going to influence them and what it is we need to be saying.

So we were very happy with that as our first target outreach target. Then we heard from the internationalization group, and they said, "We want to start targeting small developers." And so we started talking about how we could best reach small developers. And we realized that by reaching out to technical trade associations, we probably have the most bang for our buck in trying to make some initial effort in a small four-month period.

So we were able to identify that really, our first goals were going to be at the direction of the other groups, try to gear up two sets of deliverables. We're eventually going to need to have lots of deliverables for lots of different organizations, lots of different target outreach targets, because this problem is huge.

But in four months, let's try to gear up two projects. One to target large-scale e-mail providers and maybe some mass outreach platforms will make our list, as well, of groups that we want to reach

out to. And then some technical trade associations. Two sets of deliverables.

The next thing that we spent a lot of time on during our workshop was doing some initial brainstorming around what those outreach targets that we had identified going from potentially everybody to now two groups of people that we wanted to talk to in the first four months, what is it that they are going to be compelled by? What kind of message are we going to be able to influence them with? And again, it was very helpful to, when our target is large e-mail providers, have the largest e-mail providers there to tell us exactly what it is we should be looking for.

When it came to talking about technical trade associations, we were dealing with small-to-medium businesses, and it was great to have ICANN at the table. Because honestly, some of the challenges that are going to be faced by the types of organizations that we're going to be trying to interface with are being faced by you today. And so, again, we are very lucky in being able to be informed by our peers and figuring out what we need to package up and give back to the community within our first four months of building deliverables.

We are in the process, now, of establishing these, I would call them intended audience profiles. After we have these profiles, we're going to try to build messages, to try and influence those groups, and we'll go out there and test those messages. We'll test those messages on our colleagues at the table and other people that have shown up to see what is going to be most effective.

Only at that point does it make sense for us to start any outreach efforts. We've got lots of potential things that we can do. We've been talking about group branding and logos. We've been talking about self-certification programs and badges. We've been talking about newsletters, public communications, videos, visual outreach, identifying relevant conference opportunities, and traveling the world with a message. But until we know who we're talking to and what they need to hear, it doesn't make sense to do thing number one.

So to summarize, what we have to be able to achieve, this during our workshop, and I believe that it wasn't just the culmination of our session, but the culmination of the entire workshop, was to figure out who we're going to try and talk to first, and start to get some ideas of how we're going to talk to them, which is the ultimate goal.

At the end of the day, we get goal number one under way. We actually start to produce something within the next four months. We are going to need to rely upon metrics and measurements to figure out what our next target is. We're going to need to go back to the other groups and say, "Okay, let's iteratively approach this and let's figure out what to do next, and then next, and then next," because this is going to be an exhausting exercise that takes a long, long time.

These initial things, hopefully, they make a tremendous amount of impact. But it will ultimately be a drop in the bucket compared to what it is we ultimately need to achieve. But it's a place to start. And that's what we were looking for. We found a place to start and a

process that's going to allow us to take that to the next step and to the next step, and hopefully to a great deal of success therein.

RICH MERDINGER:

Hi. I really don't have much to add. Thank you very much for that, Christian.

The most important thing for me that I took out of this that I'm trying to help formulate and push with this is we all understand the importance of the technology and the tech debt that exists in the ecosystem today. But going around with the message of "Here, this doesn't work and we need you to fix it" is just giving more people work and it's not very motivational and we don't think it's going to get people to join our efforts.

But understanding what the value that the EAI as well as IDN and fully useful domain names can bring to all these individual constituencies, and then translating that value into them to show them what they can achieve is part of our motivational effort to try to get them behind the effort. So it's not just fix what's broken, it's achieve what you can achieve. And we're trying to mix those messages together.

ASHWIN RANGAN:

I want to piggyback on that last comment there. We think of the Internet and we say that the next 2.5 billion people are not going to be coming from where the first 2.5 billion people came in. That next 2.5 billion people in large measure are not English-speaking, and speak their language and understand their script.

And if we want to make the Internet the resource that it has proven to be, as useful to them as it has been useful to us, we have to do this. This is not a work of choice.

In addition to that, even for the established players in the software marketplaces that we're talking about, if they do this, they have the opportunity to offer what they currently do to the next 2.5 billion people. That's the business opportunity here in addition to the Internet expansion opportunity. So there's a multitude of goodnesses associated with doing this work.

So I think we ought to look at how we package this message appropriately so that we can hook the right kind of people with the right aspect of the messaging. So there is an altruistic aspect, there is a business aspect, and yes, there is a work aspect. Thank you.

RAM MOHAN:

Thank you, Ashwin. There's a comment online. Let's have that read in.

UNIDENTIFIED FEMALE:

Yes, this is a comment from Jothan Frakes. He says, "I commend everyone in your room for participating towards solutions for these complex matters. As this is not the most glamorous of the many things happening here at ICANN, the outreach, the testing, the initiatives are all helping to chip away at the challenging issues. So thank you, capital letters, on behalf of the next 2 billion Internet users."

RAM MOHAN: Thank you very much, Jothan. And, really, the thanks go to folks like you and others from the community who are engaging, participating, and helping guide where we go. One comment that came on the online chatroom, I was told, was that the very last piece on community outreach, Christian and Rich, that perhaps all of it was not heard. So did you want to take 30 seconds and just summarize what's already in a summary slide?

CHRISTIAN DAWSON: Absolutely. Is this better? Before I start, I want to make sure that this is audible. Okay. Very good. So ultimately, we went last because we spent the time looking at what the other groups were needed. Our job is to focus on being the delivery mechanism for the message that gets created by the other groups. Our goal was to pick a first deliverable, we did that. We decided that we were going to build a four-month project to attempt to reach large-scale e-mail providers and technical trade associations.

So we have two sets of deliverables that we are in the process of working on.

RAM MOHAN: Thank you very much. And that brings us to a close for this public session. Thank you very much for those of you who bravely persevered all the way to 7:30 on this opening day of the ICANN 53 session. There is a lot of work to be done. Please participate, please join the groups.

This will only happen with all of you and all of your engagement.
Thank you very much.

[END OF TRANSCRIPTION]