Internationalised Data Registration Webinar
TRANSCRIPTION
Wednesday 16 September 2009 15:00 UTC

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http://audio.icann.org/gnso/gnso-sac-ird-20090916.mp3
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http://gnso.icann.org/calendar/index.html#sep

Please also find the link to the presentation:
http://www.icann.org/presentations/ssac-intl-reg-data-webinar-16sep09-en.pdf

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Coordinator: This conference is now being recorded. If you have any objections you may disconnect at this time.

Julie Hedlund: Hello. This is Julie Hedlund from ICANN, I'm sorry; I just realized that I was on mute. I apologize for that. And thank you very much Glen for your assistance.

Welcome to everyone. Thank you so much for joining this webinar on display and usage of internationalized registration data. I just have a few notes that I would like to make before we begin the call and before I turn the call over to our presenter from ICANN, Dave Piscitello.

First of all, please may I ask you to place your phones on mute? And that is to ensure that we background noise during the call. You may press star 6 on your phone to go on to mute. Also I would like to let you know that we will not

be doing a roll call of attendees on this call, however your names are all being collected and will be included for transcription purposes.

Also, please note that for logistics what we would like to do to conduct this call, is to have Dave (unintelligible) rotation, and then if I'm asked all of you to hold your questions until he's completed the presentation. And then please if you have a question, we ask you kindly to state your name when you are asking your question.

And if there are many people who would like to ask a question at once we may start a queue of names. That will make it simpler to ensure that everybody has a chance to ask a question. Are there any questions before I introduce Dave? Thank you very much. Dave, if you are ready we would be happy to begin the presentation.

Dave Piscitello: Well, thank you very much. It's sort of very indicative of how important and how far reaching this subject matter is that we have participants from China and Malaysia and Sri Lanka, Cypress and Iowa. So what I'd like to do is just quickly give you an overview of what we're going to cover today and then go directly into the presentation.

The presentation is on the display and usage of internationalized registration data. And what we are particularly curious to study is how the use of characters from local scripts will affect Internet user experiences with respect to not only internationalize...

Man: Yes.

Dave Piscitello: ...but the display and usage of registration data. We're particularly concerned about what users may access registration data using either command line tools for who is accessing Port 43 or similar applications, or using Web applications. Some of the things that we are concerned about are, you know,

these issues that are related to supporting these characters. But registrars, registries and other parties may encounter.

When we finish discussing sort of the problem and issue space one of the things that I'd like to share with you is some of the work that some SSAC members and ICANN staff have done in terms of understanding how to (unintelligible) collect and display registration data using local scripts today.

And then we'd like to take a look at some standards that might be applicable for - you know, for moving forward in terms of being able to support local languages and scripts in both WHOIS and future iterations of the WHOIS like service.

So let's begin. For everyone to benefit, the reference document can be found at the URL currently displayed on Slide 2. Go back and it is titled Display and Usage of Internationalized Registration Data. I hope it's relatively easy to access and relatively easy to read.

And I'm happy to share my email address with you if you are interested in having a private conversation or asking follow on questions. I or some other members of SSAC or staff will be happy to continue to talk to with you about this.

I like to do presentations in sort of a flow of describing the problem space, studying the anticipated or unanticipated consequences of the problems, and then looking at or considering some of the possible solutions.

So let's begin with the problem space. And the problem space is actually simply stated. Today Internet applications accommodate a very, very broad audience, and that audience is accustom to using characters and local languages and scripts in many of the applications they use today.

Most of us have encountered a script and a language that we are not familiar with, if we have done any meaningful browsing or searching on the Internet today. We're accustom to, you know, and increasingly using translations of many of the documents that we (unintelligible). Especially at ICANN we're very interested in having such translations because we have such a broad global audience.

WHOIS is yet another Internet application. So it logically follows that WHOIS has to accommodate that global audience and in order to do so ought to be able to deliver information and accept submissions of information using local characters - or characters from local scripts.

It's very, very important to understand at the outset that this is not limited to internationalized domain names. And in fact the issues that we're discussing actually existed before we began studying IDN and will - you know, and actually are relevant to a much broader space than merely IDN.

The IDN standards and guidelines to find how domain names are composed and displayed, but the WHOIS applications and Web developers can only apply these for submission and display of domain names. So the Unicode labels or U labels and the ASCII labels or the labels that are represented in the letter (digit) hyphen subset of ASCII that are typically typed with an (x scan hyphen hyphen) and then some gibberish that most people can't read -- are specifically translations and representations that relate only to the domain name.

If you go and you look at the IDN standards, and you also look at standards for WHOIS, you'll find that there are no specific standards or guidelines that define how domain registration data are composed and displayed. By domain registration data, you know, I and SSAC mean information such as the sponsoring registrar contact information and DNS configuration data.

I'm going to pause here for a moment because it seems that a great many people don't have sound, don't have audio. I see one, two, three - I see at least five.

Julie Hedlund: Dave I think that's - this is Julie. I think that it may be that they have not dialed into the teleconference...
I'm not sure how we can get the detail teleconference information to them...

Dave Piscitello: Type it in the chat.

Julie Hedlund: …in the chat because there would be different dial in numbers for all.

Dave Piscitello: Oh dear.

Julie Hedlund: Glen, do you have any suggestions?

Glen DeSaintgery:.Could they send an email to glen@icann.org and I'll send them the dial in details and tell me where they're from.

Julie Hedlund: Thank you very much. Let me send that note to the chat room on Adobe Connect. Thanks. Sorry Dave.

Dave Piscitello: That's okay.

Julie Hedlund: In the mean time Dave, did you want to continue and I'll try to do that contemporaneously?

Dave Piscitello: I guess, in the interest of - you know, of attending to the larger portion of the audience, you know we have 44 people and I - and hopefully, you know, the other handful can catch up. If not, as I said, I'm happy to just, you know, speak with people individually offline and discuss the subject.

So, let's continue onto Slide 5. In some respects, when I call this a problem space, that might be a misnomer because in fact, the - there is an evolution in the Internet and almost everything that we do breaks ground on a - you know, on merely a daily basis. The Internet is and will continue to be a disruptive technology for - you know, for many, many years.

And it is now that we can start to think about a global Internet where ASCII is not the, you know, dominant character set. And English is not the, you know, sole language that people will use everywhere in the Web. And we have to acknowledge that. And we have to acknowledge that that - that need to satisfy other, you know, other cultures and other languages is very, very important for the continued growth and success of the Internet.

So just as the internationalized domain name problem is - you know, is many years old and still being addressed, internationalized registration data is not new and - you know, and will have to be addressed. Unfortunately, it's not going to be addressed in what technology people call a flag day, where on, you know, October 12, 2012, everyone will be able to use every language and script from every - you know - or characters from every script, but it will be a gradual one. And during the interim, the user experience with WHOIS will vary. Just as it varies with other Internet applications.

Why are we going forward instead of back?

Someone is competing with me for the presentation here.

Julie Hedlund: That's very odd Dave. I haven't been touching it, I promise you. This is Julie.

Dave Piscitello: Yes.

Julie Hedlund: It seems to be going now.

Dave Piscitello: Okay. Let's see if we're caught up. I feel like my session's being hijacked. Okay, someone actually has control of the presentation at the moment and is scrolling through. And I don't have control of the presentation so I'm not certain how we got in this state but...

Julie Hedlund: Yes Dave, this is Julie. I'm very confused as well because only you and I have - are supposed to have control of the presentation. So - and all others are simply participants so I'm not sure I understand how someone could be moving this. For anyone who happens to be on the phone, if you are trying to move the arrows left or right on the presentation (can you refuse) to do that?

Dave Piscitello: Well it's run away at the moment so...

Julie Hedlund: Very strange.

Dave Piscitello: Okay, we're at the questions.

Julie Hedlund: Can you see if you can send it back Dave?

Dave Piscitello: I'm attempting to do that now.

Julie Hedlund: Okay, thank you.

Dave Piscitello: Doesn't seem to be responding to any clicks that I have.

Julie Hedlund: Let me try it and see if I can do it. It's not responding to me either. Okay and I'm the host so that's very odd. Dave what I could suggest is I can as the host stop sharing and then re-share.

Dave Piscitello: Okay, why don't you do that.

Julie Hedlund: Let me try that on everybody and...

Dave Piscitello: ...do that and we'll see if that'll get us where we want to be.

Julie Hedlund: ...difficulties.

                   Okay, this is Julie. It should be coming up shortly. And I - I'm really very sorry
                   for this everyone. I cannot explain why it would have done this. And at any
                   rate, let's hope we can get back into this pretty quickly. Okay, can everybody
                   - Dave can you see it on the screen? If you can see it I think everybody will
                   be able to.

Dave Piscitello: It's still loading.

Julie Hedlund: Okay. It's a little faster obviously for my computer.

Dave Piscitello: Okay, I think we...

Julie Hedlund: Now see if you can manipulate it.

Dave Piscitello: All right, I am on Slide 2 at this point.

Julie Hedlund: Yes.

Dave Piscitello: Now 3.

Julie Hedlund: It seems to be moving normally.

Dave Piscitello: It looks like we have regained control of the ship. So, okay we're proceeding
                   from Slide 6. Pardon the technology problem.

Dave Piscitello: One of the things that you will encounter when you are looking at Web pages
                   today is that the WHOIS treatment of IDN labels, for example, will vary and

the user experience will vary depending on the Web - you know, the Web portal that the user, you know, makes use of, the version of the browser, the WHOIS provider, whether it's a registrar, a registry or a third-party who provides WHOIS.

And Internet users might be able to submit the ASCII labels or the Unicode labels to query WHOIS over Port 43 using a command line programs or a Windows or, you know, or other WHOIS client application. They might be able to use either A labels or U labels to - as a input to a Web form, where you can query WHOIS and domain name registration.

And the WHOIS operators might display the domain names in A label in - or in characters from local scripts used by the registrar. In addition to that, other forms or other information that's displayed on Web or returned using Port 43 application maybe not only returning A labels or U labels, but maybe returning non-ASCII characters.

Generally the recognizable display of registration data will also be application dependent. If you are using a Windows 95 version of a WHOIS command line client, it's very possible that that, you know, command line is , you know, incapable of and Windows 95 is incapable of displaying characters from, you know, the full set of languages and scripts that are currently supported in a more recent version of Windows.

And it's also possible that various installations of operating systems will not actually install all languages and scripts. So, well you know, what you actually see, you know, has a lot to do with what - you know, what is provided by the service provider WHOIS and what is also present and resident in the machine that you are actually attempting to do WHOIS from.

It's very important to understand that registrars and thirty (sic) party WHOIS providers may choose encodings that best represent the language and the

scripts of the domain registration data, and that best represents the language and scripts of the parties that are using that data.

Obviously if I am operating a browser for people in France and my registry expects that the predominant number of people that use the registration service speak French, it may be that they will choose to have a French page as what - and perhaps an English page as well. They may accept, you know, characters, you know, from an extended ASCII character set that supports accents and other characters that are present in - you know, in the French language.

Similarly for people who use languages that employ, you know, Chinese, Korean, Russian or other characters that cannot be represented in a simple ASCII 7 character set, but need a fuller Unicode or ISO standard character set.

On Slide 8, I'm demonstrating to you a sample Port 43 output from, you know, JPRS, from the .jp registry. And as you can see, one of the things I can do with the .jprs is I can signal a, you know, through my WHOIS with a command (unintelligible) (minus h) that I want to be able to query the WHOISJPRS.jp using Japanese characters for the second level label. If you notice that the domain information returned actually returns some information in Japanese and some information in English.

I can also submit to JPRS, and their WHOIS service, the A label representation of the IDN. And get the same information in both Japanese characters and English characters.

If I go to .ru, and look at the WHOIS that's operated by (nick.ru), I can actually enter a domain in the U label representation or the A level representation and it will indicate that it - that label is available at the second level.

So clearly IDN (unintelligible) levels are, you know, are not the gating factors for people actually seeking to, and wanting to use, and submit characters in - using characters from local language in the script.

Moreover, it would be nice to have a compliment where if I - you know, if I were comfortable using Cyrillic, and I wanted to go to (nick.ru) and see an entirely Cyrillic represented page and submit information -- Cyrillic represented information -- it may be entirely appropriate for the - you know, their RU registry to support such a portal.

When SSAC studied this subject, we wanted to try to understand, and we wanted to try to pose questions for the community that would frame the set of issues in various vertical sectors, so to speak. The first is user experience issues. And one of the first questions that we asked was what features Internet users would find most beneficial in any application that finds registered domain names to registration data.

This is going to be particularly important, not only in the context of representing data, registration data, to people in a local language, or in characters from a local language and script, but also being able to allow that information to be somewhat, can I say portable, where someone who does not - is not familiar with that local language to be able to derive some value out of registration data. And so we have to accommodate multiple needs in - you know, in the WHOIS service in order to provide, you know, the richness or the benefits that WHOIS can - you know, can offer to a fairly diverse community.

So, one question that we're going to ask the communities to study, and I'll talk about, you know, the - what we will do subsequent to this presentation and at the end of the presentation is, are there some general principles that registry operators and registrars could adopt to minimize a battle effect...

Man: Thank you.

Dave Piscitello: ...data query services and to ensure some uniformity of information display.

Now it's very important that we have - we acknowledge not only that people will, you know, eyeball or look at and type registration information. But that there is a significant amount of investment and need for automation. Computer programs that will rely on, you know, on the ability to examine information that's returned by WHOIS providers and be able to formulate and act upon the data that it - the applications received.

And so if those applications today rely entirely on the - or assume entirely that every WHOIS response is going to be in ASCII 7, and that the responses are essentially "English," then we have to think about the impact of assuming some other baseline or some other constant in the representation of registration data.

A second set of questions that we have to consider are the questions surrounding data reliability, accuracy and some operational issues. And as I pointed out, you know, some applications that automate DNS and automate WHOIS queries, may be affected if we start to rely entirely on a different presumption than we have had, you know, to this point. And the presumption being that data returned by WHOIS applications are always U.S. ASCII 7.

And we need to understand what parties are going to be affected when registration data would return some or all non-U.S. ASCII characters in its output. So it - for example, you know, law enforcement, brand protection, people who perform analysis of and track down malicious actors, all use WHOIS extensively, in addition to other monitoring activities.

And when we don't want to put them in a situation where we - you know, we require that they have to run around looking for whatever it was that the local language used when somebody submitted the WHOIS in order to be able to actually resolve an issue. That just introduces yet another efficiency into an

already very, very inefficient and very slow process. Certainly a process that is slower than the desired response time.

One question that compliments these two questions and that we will attempt to ask the community as we continue to study this issue is, "Do we have any experience?" Can we actually know, today, and understand and anticipate today whether the use of non-ASCII characters has had a - an adverse or a positive effect on, you know, on domain registration data accuracy programs.

Certainly using non-ASCII characters today could cause - you know, cause someone who is frustrated to submit a WHOIS accuracy complaint to ICANN saying, "This is the - you know, this is not in U.S. ASCII, I can't read it, I can't use it, therefore I don't know whether it's false or incomplete."

The third set of issues or questions to consider are related to standardization and to security. And, you know, one of the things that SSAC was considering when it started to think about this broader space of expanding beyond simply relying on U.S. ASCII 7 for registration data is; "What information, and in what language in the scripts, should be permitted when collecting and displaying registration data for a set of domain names?"

"Is there a richer set of information that we might want to begin to collect? Do we want to collect, not only one language, but both the local language submitted as well as a baseline language as an example?"

We also want to understand whether sufficient submission display practices exist for applications that bind registration - or registered domain names to information about registration data. And lastly, we would like to the communities to consider whether the maintenance and display of certain registration data be required in U.S. ASCII to ensure a common denominator for core information display.

So as an example, if we decided as the - as a community that we weren't going to impose any standards at all, however what we would impose is that the sponsoring registrar information would be in U.S. ASCII 7 so that at least everyone would be able to look at the string that was the sponsoring registrar, go to the ICANN Web site, find the sponsoring registrar contact information and then go and query the sponsoring registrar directly through some abuse point of contact.

That is one way that we might actually consider moving forward. It might not necessarily be perceived as the optimum one, but it's certainly one that would be on the table.

In SSAC 37, and again, I would encourage you to read that because there are more examples and there are - there is a great deal of background information and - you know, and perspective that, you know, can't be represented in a very brief presentation. SSAC asked the board to test all the service organizations and affected advisory committees to form a working group to study both the feasibility and suitability of introducing display and usage specifications that deal with internationalized registration data.

We strongly recommended and encourage representation from ccTLD operators for several reasons; Number One, this is, you know, an issue that clearly, you know, has already impacted them and we can probably, you know, in the ICANN community learn from the existing experiences that ccTLD operators have had; and the Second is that this issue, you know, clearly affects a great many of those, you know, of those operators in, you know, in a very, very intimate way.

Within the context of the feasibility study, you know, SSAC and staff were - have been thinking about the feasibility of having applications of query registration data incorporate some sort of standard functionality.

By standard functionality we think for example that we would - you know, it might be possible for the community to agree to require applications to bind registered domains to registration data in the following ways; All applications would accept both A label and U label domain names as input and they would return A label and U label domains as output; perhaps there would be a value to having all such applications store contact information in some, you know, some standard data schema represented using XML; It may be, you know, important or it may be worth considering retaining Unicode in coding of local characters stored in contact information. And the list goes on.

You know, there are some very, very useful data queries that can be performed, called record and key type data queries, and perhaps accepting those in Unicode would be valuable. Returning responses in Unicode would be valuable. Returning responses including a character word variant bundle within each registration data query would be valuable. So these are just examples of the kinds of things that are on the table and SSAC would encourage the community to consider during and following the formation of the working group.

So that set of slides pretty much summarizes the SSAC 37 content and recommendations. And the remainder of the presentation is more or less trying to provide, you know, those of you who have participated today with a sense of what staff and SSAC members are preparing for the ICANN Seoul meeting and how we hope the community will be able to move forward on the boards recommendation to form a multi-SOAC working group and study this matter more carefully.

Over the past month or so, several staff and SSAC members have been studying currency ccTLD WHOIS submission and display practices. With the help of some of the members of the policy department I've contacted close to 20 ccTLDs and asked, you know, about their practices today. And I'll summarize them, you know, shortly.

The other task that staff has been looking at -- largely anecdotally because this is a community effort and we don't want to coop the process but we want to be able to be informed if we're asked -- is that we're looking at other conventions and standards for internationalizing contact information in particularly the Universal Postal Union Standards.

And, you know, in acknowledgement and recognition of other SSAC work in the area of recommending a successor environment to WHOIS that would accommodate or embrace a broader more general Internet directory service, we have been looking at a richer data scheme for domain registration records.

In parallel to that activity which is, sort of largely techie work, there's been, you know, a significant amount of policy work because there's a lot of - you know, a lot of effort that's required to put in place a working group charter and implementation plan. And that charter and plan are prepared and ready for publication.

The next portion of the presentation focuses on whether the maintenance and display of certain registration data be required in U.S. ASCII to ensure a common denominator for core information display. This is one of the SSAC questions.

What we have done thus far, among staff and - you know, and SSAC members, is solicited current practices from, you know, 16 or so ccTLDs. I actually have a few more that have trickled in. And certainly if any of you are ccTLD operators on the call, and you want to answer the - these four questions, I'd find that anecdotal response very valuable. I'm reporting in the aggregate, I'm not disclosing any individual operator's practices. But the aggregate is actually very useful.

And the four questions are; Does your registry allow users to register domain names using characters from local scripts; Does your registry collect and

store registration data in U.S. ASCII 7 in addition to the characters from the local script; Can users of the Web interface choose to display language -- in other words, is there a page where you can either pull down, you know, a local line with your English, or are there separate pages for local language or English, or is there a flag you can use in WHOIS, similar to the .jp WHOIS service where they say, "WHOIS(mysh) and that means return both English and Japanese characters; and If so what languages do you support -- and obviously those two questions relate to both Web interfaces and WHOIS Port 43.

So the responses that we received thus far; 10 of 16 ccTLD registries allow users to register domain names using characters from local scripts; ten of the ccTLD support English, or U.S. ASCII 7 -- in fact the responses either said English or U.S. ASCII 7 -- and the local language script including Arabic, Chinese, German, Japanese, Lithuanian, Portuguese, Spanish, Sweden - or Swedish.

So you can see that there's a fairly broad set of character sets that are involved in even the 16 ccTLDs that we solicited and received responses from. All ccTLDs that we received responses from support WHOIS Port 43. And in many of the - many of those WHOIS client - or I'm sorry, in many of the Port 43 services that are supported, there are character set dependencies that will effect whether the WHOIS client allows a submission and appropriately displays the information that is returned over Port 43.

So, in some cases, the ccTLD operator has indicated that in order for you to see - or receive the local script and have it displayed in the fashion that you might recognize, your client must be able to support UTF-8 or UTF-16 or ISO 8859. For those of you who are not familiar with what happens if you don't support those things, you typically see this little open square - or - that is a standard U.S. ASCII representation for a non-printable character.

The second question that staff and SSAC members are studying is, "Are there any general principles that we might actually find in the field today, in practice today, that we could adopt to minimize the babble effect, you know, at this point?" And how - you know, begin thinking about a standard or baseline, you know, display and usage...

Dave Piscitello: ...for WHOIS.

So one of the areas that we look at, in terms of looking at other convention and standards is the Universal Postal Union standard formatting for international addresses. And these are addresses that are used to send mail from, you know, from one country to another. And in particular from - you know, from and between countries where the countries may not necessarily share a common language or script.

So the standards are -- you know, summarized in two, you know, two sentences as opposed to ten pages -- "The addressees address shall be written legibly in Roman letters and Arabic numerals. And then if other letters and figures are used in the country of destination -- meaning if there is a - you know, are characters from local languages and scripts in our nomenclature -- then it shall be recommended that the address also be given in these letters and numerals."

So the standard here is you must use - in terms of what we would apply to a WHOIS environment is, "You must use and store U.S. ASCII 7, but you are also able to, or may optionally or choose to, support a local script."

So to see how that actually works in practice in mail, on Slide 22, you see an excerpt from the UPU standard. And the standard is actually available at the hyperlink at the bottom of this page. We have, you know, on the left in Roman - you know, Roman letters and Arabic numerals, a Mr. Omar Hussein, Post Office Box 111, Dubai, United Arab Emeritus.

And the same - on the same envelope, you would optionally and ideally put the Arabic translation so that, you know, someone who is processing this electronic mail in the United Arab Emeritus and who is not familiar with - you know, with English and doesn't recognize, you know, Roman - you know, Roman letters and, you know, well he obviously recognizes Arabic numerals, could process the mail.

So the summary in - you know, under the In Conclusion, is I think a very, very interesting recommendation that we might want to consider in the working group that we'll begin in Seoul.

Another element in this study is, you know, that the SSAC has been keen to - you know, to have put on the table for quite some time is, "What information and in what language of the script should be permitted when collecting and displaying registration data for a set of domain names?"

This is sort of a sub-set of a more general program that SSAC has been thinking about for some time, that has to do with migrating away from the current WHOIS protocol and services based on a very, very limited and constrained protocol to do something that would be based on perhaps a much richer set of protocols and services defined by the IETF in the form of the IRIS, CRISP and dereg standards.

There are three referenced documents that I've enumerated here that all encourage ICANN to consider a successor to WHOIS. And one of the main motivations of doing this is to prove - improve the availability and the accuracy of domain registration data.

But there are also a very, very large number of additional services that could be offered in the forms of, you know, authentication, auditing, access controls that would be available for the community to use when policy - you know, when the policy development process determined that those tools would be

appropriate and that, you know, that requirements would be, you know, would pass a consensus process.

So, when we began studying this, one of the things that we realized was that before, sort of, beginning to remunerate requirements for this, you know, successor to WHOIS, it might be very useful to take stock of the kind of data we need to collect, you know, and store in terms of registration data. So that we actually will have the data available to support any additional or future services that the policy and development process concludes are necessary and required.

That concludes the presentation. Thank you all very much for your patience in some of the technical difficulties. I'm very happy to stay on the line and answer questions for as long as any of you are interested. I know it's very late for some of you and I truly appreciate that you thought well enough of this presentation to stay up late and participate.

Julie Hedlund: This is Julie Hedlund. Please, if you have a question, just a reminder to state your name. If we have many, many people who have questions, which is wonderful, we'll be happy to start a queue and I can put your names in a queue and we can make sure we address all your questions. Thank you.

Please, does anyone have a question? Please go ahead and state your name and ask your question. Please remember when asking a question to take your phone off mute so that we can hear you.

Dave Piscitello: I actually would like to ask of any of the people in the room, in the Adobe Connect room, so to speak, have contact in ccTLDs or know of current practices regarding WHOIS display and usage conventions, if you would contact me by email, or you could call me on the phone, that's fine. My contact information's on the ICANN Web site and we can share it after the meeting. I'd love to hear from you, I'd love to get any additional feedback so

that we can, you know, we can go into the Seoul meeting with as much information as we can glean from ccTLD operators and (unintelligible).

Julie Hedlund: Are there any questions from the audience? If there are no questions then we can conclude this meeting. But I will ask one more time, please any questions before we conclude the presentation?

I am not hearing any questions. And so I would like to thank you very much Dave, for your excellent presentation. And also, extend my apologies to everyone for the technical difficulties. I hope that you have all found this to be a useful presentation and please do take up Dave on his offer to contact him and - oh I see that - Tim Ruiz, do you have a question?

Tim, I saw that you raised your hand. I'm not hearing the question.

Glen DeSaintgery:.He is on mute Julie.

Julie Hedlund: Okay. I see that Tim is asking where the presentation will be available.

Tim Ruiz: I'm sorry, yes.

Julie Hedlund: Oh thank you very much Tim. Yes, Dave I assume we will be posting this?

Dave Piscitello: Yes, we're going to post it on SSAC Web page and with any luck, since it's already converted to PDF for the Adobe conference, we will be able to - you know, to provide the hyperlink within 24 hours. Certainly if you want it faster than that, you're welcome to send me email and I will be happy to send you a copy.

Julie Hedlund: Thank you very much Dave.

Dave Piscitello: Thank you.

Julie Hedlund: Are there other questions?

                   If there are no more questions then, thank you all very, very much for joining us. I hope that you found this to be useful. As Dave mentioned we'll be posting the presentation and also, you know, you may contact him separately with questions or information as well. Thank you very much and I believe that the call is concluded.

Man: Thank you.

Dave Piscitello: Thank you all again. Bye-bye now.

Woman: Bye.

Woman: Thanks.

Coordinator: Thank you for participating in today's conference call, you may now disconnect. Thank you.

                              END