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SINGAPORE – IDN Variant TLDs Program
Wednesday, March 26th 2014 – 08:30 to 10:00
ICANN – Singapore, Singapore

SPEAKER:	It is Wednesday, March 26th 2014. This is the IDN Variant TLD Program Update. We are located in Canning Room. The Local Time is 08:29.
NAELA SARRAS:	Good morning. I think we're going to go ahead and get started. Hopefully we'll have a few more people trickle in, but let's go ahead and get started, a few minutes after 08.30. Good morning. My name is Naela Sarras. I work on the IDN Variant TLD Program and IDNs in general. Today we want to give a bit of an update. This has been a traditional thing we do at ICANN meeting; give an update on the Variant TLD Program.
	So we'll do the update, which will include several presentations also from different pieces of the program that are going on right now, including work by the Integration Panel. Let me tell you who we have this morning, and then we'll go into the Program. We have, I think… I'll explain who they are and later in the process what they're working on. We have the Integration Panel here with us in Singapore. Nicholas Ostler, starting from the left, Asmus Freytag, Michel Suignard, Wil Tan and I believe Marc Blanchet is here.
	Then there's the staff that you're very familiar with. We'll do the update. We'll talk about the starting repertoire. We'll give a little bit of detail on the label generation rule specification that we're

developing. Then we want to do one community update today about what the Arabic community is doing, and there will be much more on all of these topics later today. So let me just…

I think everyone here is well familiar with what we've been doing since 2011 with what we're calling the Variant TLD Program. In 2011 ICANN formed a project to look at issues with what was at the time, and still is, called Variant TLDs, to try and arrive at a common definition of what we're talking about when we say "Variant TLDs" and then to look at what issues come with them, and try to develop some mechanisms for handling those issues.

As a matter of fact, I was thinking last night it was right here in Singapore in 2011 where we lodged the first phase, with six community Working Groups that met here, to start looking at their scripts. That's what we're calling phase one. Phase two was to take all the work from these six groups, synthesize is, integrate it, look at the common issues, look at what are unique issues to each script. This phase also identified further areas of work that still need to be explored, looked at, etcetera.

This led to phase three, and some of the areas of work that were identified were, well, we needed a mechanism… If we were going to cause a variant label, we needed a mechanism for a procedure to develop those rules. How are we going to go about actually developing the rules for what are our variant labels. One of the additional areas of work that was suggested was how would the user experience be impacted under active variant TLDs, if indeed they are implemented?

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Then there was more work identified on creating a specification for representing the label generation rules in XML format. So that work was all started. The middle one, user experience, has been wrapped up and completed. The first and third items are current work, and in fact that's what we're mainly going to discuss in this presentation – the implementing of the procedure that was developed in phase three; what we're calling the Label Generation Rules Procedure.

Very quick overview of what this procedure is, and the Integration Panel Members will talk more about this this morning and this afternoon. Essentially, this was a community effort. There was a community Working Group that worked together on what this procedure would look like. What the idea is is that you have the script community groups get together. They work on LGRs for their respective script community.

When they're done with their work they submit it to what's called an Integration Panel – the people I introduced a little bit ago. They do an analysis review of that work, and then when both parties agree that this is a stable enough set of rules then they admit it into what's called the LGRs for their root zone and do the integration work. The outcome of that, why we need LGRs, is they allow us to know what is a permissible label to go into a root zone, what are the corresponding variants of any, and which of those labels can be allocated.

We'll talk again a lot more on this later. In terms of the staff's work to implement this procedure, as I said, there's community work, there's ICANN work, and then there's the Integration Panel work. Where we are today is… The second half of 2013 and up to now has been laying

down the foundation to enable the implementation of the LGRs procedure. Let's start with the ICANN work – what's labeled in the green box as the ICANN work.

The first thing we had to do was put an Integration Panel together, because the procedure calls for a certain amount of work that needs to be done, by the Integration Panel first. It's the starting point for the generation panels. The Panel was constituted September of last year, and they've been doing their work. In fact, they've delivered the first set of tasks that they have, which is the maximal starting repertoire.

It's currently in public comment, and I wanted to take this opportunity – because it's the only place where we talk about the public comment for this morning – it's in public comment, and the date I have up on the slide closing 21st of May represents an extension. So this morning I'm announcing that we're essentially extending the closing date for public comments, mainly because it's a major piece of work that deserves a lot of review from the community, and we want to make sure that we're providing ample time to do that.

So we'll be changing that and corresponding the public comment forum after this meeting. The IP Members will talk more about what's in the maximal start-up repertoire. Also what we've done a lot of in the second half of last year is not as much visible work, but a lot of preparations for generation panels to constitute. We put together a project website, we created a document repository of some documents that might be helpful, we put together a document that talks a little bit about how to go about forming a community generation panel.

That's all on the project website. On the top part of the chart, the community work, we've made some great progress. We expect, as I said, community generation panels exist for each script. It's not a small task. We have one panel that's currently up and running, doing work. The Arabic Script Generation Panel met here in Singapore three days before we all met to do the rest of the week.

So they've had their first face-to-face meeting already. What's labeled as "not started" is a bit of a mischaracterization. We know there's a lot of community work that's going on to form additional generation panels. I have a slide next to talk about which ones are in the process of being formed. But essentially what this is trying to depict is this process is dependent on both sections to actually complete, or to actually see to fruition, in order to enter the phase on the right, which is the finalizing LGRs.

On the section on the right, for the procedure, once a generation panel completes their work, submits it to the integration panel, it goes into public comment right away, so the Committee sees what the community is proposing. Once that's completed the IP does their integration work, and that also goes into public comment. Eventually you get to what's a proposed first release of the LGRs. I say "first release" because if you look at the procedure it calls for iterative releases.

So we do understand that the LGRs are going to be a product that keeps getting bigger, depending on how soon the community generation panels are coming through. We know that we have several communities that are in the process of forming panels. The Arabic

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community, which we'll hear from later in the presentation, is seated and doing work on the LGRs. We have Chinese, Japanese, Korean, and New Brahmi Panels in different stages of being formed. Lots of work going on in those communities on pulling resources together for panels.

I should mention that there will also be more on this this afternoon about what it really takes to put together a generation panel. Who are the people that are asking to volunteer their time and effort to come and do this work, and what type of resources are coming from the ICANN side to help support the work, etcetera. Then we have two panels that we are calling in the "expression of interest" state. The procedure that we set up, we put a call for participation out, and then we provided an email address for people to respond and say, "Yes, I'm interested in working on X Panel."

So we're received several interests for those two panel – the Cyrillic and Latin – and we're currently working with these individuals, as well as other people in the community, to try and create a little bit more additional people that may be interested in forming that panel. The interest we have now are fairly small in terms of numbers. In summary here, what we're trying to do with the last few slides is to say that the LGR procedure that we have is a community-based procedure. It needs both pieces of work that I've shown on the previous chart to come together.

So there's ICANN work and community work, and in order for this to happen both have to come through for the LGRs to materialize. Again, we're interested in comprehensive complete work, and that's what

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we're going to be striving for. So what are we doing as staff? What are we doing on our side to help promote participation and do a little bit more outreach? We're basically going to… You're probably going to see us reach out to certain individuals a lot more and ask for participation.

But we also need to be careful that this is a community effort, and the community needs to decide what works best for them. That's in terms of involvement. We're calling on the community to, "Please come and help with this effort." There's also a major amount of work that's out now for public review, which is the maximal starting repertoire. IP Members will talk more about this, but essentially this is really important right now that communities have time to go in and look at this.

This represents the starting point for generation panels. What's been included or excluded in the MSR impacts them. So even though panels are constituted yet, we're calling that please, try to dedicate some time to reviewing the MSR. Please call on your colleagues, your friends and contacts to help participate in this work. What the staff side have been tasked with is to also provide support in the background. Many of you that have been involved in previous stages of the work, specifically the script panels, you saw that the staff took on more of a coordination role.

That's what we're targeting in this one as well. For the panels that exist or are in the process of being formed, there's one staff that's mainly dedicated to that panel. It helps us, as staff, to be coordinated in what we're saying to the panels, and it helps them have a point of

contact when they're trying to ask questions and get details on how we can support them. So we propose to have at least one person dedicated to the panel to help it form and see it through its work.

We'll continue to maintain the project website. We hope to make it a good resource for panels to come to, and a good repository for data on what's going on with the implementation process. As per the procedure, it calls for providing advisors to help panels with their work. So the procedure provides for a lot of collaboration to of course happen between the generation panels and the integration panel whilst they're doing their work. But the integration panel is the body that has to assess the work at the end.

Therefore there may be a need for more of an advisory role, and the procedure provides for that. We do have three advisors currently assigned to the program, and they can be provided to the generation panels. The procedure also provides that if the advisors we currently have on hand don't have the expertize required by the generation panel, depending on the request, we can also hire additional advisory expertize. So what we're trying to say here is that we get as much resources available as we can to help facilitate that work.

I'm not going to take up time on these two slides. They're basically resource slides that summarize some of the infrastructure that I talked about earlier – the project website, document repository, etcetera. I'd encourage you to look at this information when possible and if needed. With that I'm going to close the topic of what's going on with the Variant Program. I do see that we already have people queuing up. We were planning to have questions and answers at the end.

AUDIENCE MEMBER: Just a small question from your slide. In your slide you're talking about the Korean and Japanese panels that have been formed. Can you clarify? As I know, it's not yet.

NAELA SARRAS: Being formed, in this case… There is a fairly wide spectrum of stages of being formed. The work is a little bit further along than expressions of interest. In the case of Korea – and I don't want to speak for the Korean Generation Panel – there will be presentations this afternoon. Specifically, Dr. Lee is going to talk about the Korean. They've identified a group of people to work on the Korean Panel, and I understand they're looking at putting together their proposal.

So they're a little bit more advanced than that. I think the Japanese… Again, I don't want to speak for the group. I think we should wait for… I believe we might hear from them this afternoon during the community update part.

AUDIENCE MEMBER: Quick question, same slide. Are we talking about script or language?

NAELA SARRAS: Script.

AUDIENCE MEMBER: So why is it script on the left hand side and language on the right hand side?

NAELA SARRAS: Tell me which slide you're talking about?

AUDIENCE MEMBER: There's no such thing as a Chinese script. There's only Han script.

NAELA SARRAS: I take that, and you're absolutely right. This has been happening since the beginning of the program, where we had the Chinese Script Panel to study the issues with Chinese script, and we've continued with that terminology. You're absolutely right. We need to fix that.

AUDIENCE MEMBER: The terminology is very important, because it defines how the variants can be generated. If you're doing Chinese script then you can have Japanese [inaudible 00:23:56]. But if you have Han script, then there's not going to be a Chinese Generation Panel and a separate Japanese Generation Panel. They should be one panel.

SPEAKER: This is an issue of label. It's maybe unfortunate that this is written down this way, but that reflects… The column on the right was meant to be a cursory overview of the status, and the entry Chinese, Japanese and Korean represented the three generation panels that would be formed, and the identification of the script for which these generation panels will do their work is going to be perfectly accurate by the

common designation of script, because it's going to use an ISA code for that. But we're not going to present ISA codes here.

AUDIENCE MEMBER: I do not know about Korean, but I do know that the Chinese is forming a generation panel, and I know that Japanese is forming a generation panel, and they're not the same panel.

SPEAKER: That's entirely correct.

AUDIENCE MEMBER: Then that's a problem, because then you're talking about language, not script.

SPEAKER: I think now is not the time to go into that level of detail, but what Naela is trying to communicate is that there are three panels being formed; one in China, one in Japan, and one in Korea, and they're going to each create an LGR with a different mixture of the use of actual scripts. So we all know that the Japanese and Chinese are using Han script. The Chinese are not using Hiragana and Katakana, and there is not going to be, for instance, an LGR for Katakana only, even though it's technically a script. Break down by script works really well according to one scheme, everywhere in the world.

In Asia there's an issue of overlap and we're working on figuring out a way how to create sensible LGRs that work in that. This is not new

news. This entire issue has already been known at the time this procedure that governs this work has been written, and is reflected in the discussion and that document.

NAELA SARRAS: Please come to this afternoon's session from 13:00 to 15:00. At least two of the three are expected to speak on this. There will be a lot more this afternoon. In the interest of time I'm going to move to the next topic, which is the maximal starting repertoire. Onto you, Michel.

MICHEL SUIGNARD: Good morning. I'll put the context for the MSR first in the environment of the LGRs. The MSR on the [world? 00:27:28] label evaluation rules, [inaudible 00:27:30] whole process, the key components of the root zone LGR, that's how you have to see this repertoire being used. It's going to basically be helping the LGRs be created. Again, to summarize what was said before, the LGR will basically allow the set of permissible labels for the root. That's the key mission; to allow root's label to be created within the framework.

Also a key aspect was to make this totally automated. So far a lot of TLDs have created their labels in partially automated, but not fully automated. So a key consideration was to make this process totally automated. Again, we covered a set of scripts. We have an amount of scripts to be covered. But each script, when you validate them, they're treated separately. We have LGRs for each script and each generation panel will create those rules to be integrated in the whole LGR. That's

where the repertoire is important, to determine how we start, is a starting point.

So the MSR was the one initial task; the one we for sure spent most of our time in the past month to create. The [outer? 00:29:03] limit of good points and [inaudible] envelope for all characters that can be added on the root. We did use a subset of [IDNA? 00:29:10] valid characters. That's clear – what is allowed by the [IDNA] 2008 RFC. [inaudible 00:29:20] basically the [delimination?] for those allowed characters. We extended it to Unicode 6.3, because [IDNA] 2008 was originally created, I think, in Unicode 5.2.

But those allow for extension as new Unicode version that's created, which is a key benefit, by the way, of [IDNA] 2008, compared to the previous versions. So we did use a facility offered by [IDNA] 2008 to do that. There are further restrictions that are not in fact from the IP but are created from outside consideration; like no digits, because you can't have digits in the root labels. That's been the case also for ASCII TLDs. No punctuation. That's for the confusability issue.

Context dependent – those are basically the zero width invisible context characters, which again have issues on security because they're invisible. Although they're useful for some writing systems, they would be a major issue on the root. Then we had further elements that we had [inaudible 00:30:31] ourselves to quality. Those are not black and white. We had this issue, but not including historic, obsolete or limited use, because obviously the root is a shared resource, and as much we should be able to create a common ground that everyone can use.

Although we define a fairly large [inaudible 00:30:54] it doesn't mean everything will be included on the LGRs. LGRs were created by the different generation panels. They'll make their own choice. They will determine which characters will be acceptable. Some maybe will be excluded, or at least will be restrained by contextual rules – some characters only allowed in some content. Those should be defined explicitly by the generation panels.

So the status. We created the first version since March 3rd. It's currently under public comment. As you heard, the public comment period was extended to May. We focus on scripts, for which we had IDN TLDs that had been applied for. That's an easy way to see interest – if people are asking for IDN TLDs that's a good sign that there's a demand for it.

We also added related scripts, because especially for variants it's important that we put together scripts that have a connection – at least from even the [GO? 00:32:08] political concern, that scripts should be addressed together [inaudible] good example, for example, if you have Thai IDN TLDs, you'll probably want to consider Lao at the same time, because those scripts are so related, stuff like that.

You'll be interested that what is MSR one today is not the final word. That's why we have a public comment period. You'll be [interested? 00:32:35] based on public comments. So it's very important for communities that have content expressed in MSL-1 to express their opinion now, in these forthcoming weeks. This is not the last version. There will be MSL-2 or further versions when more scripts are added. The key word here is "more scripts".

We don't expect existing scripts that [inaudible 00:33:05] MSL-1 to be significantly updated in further versions. There may be minor adjustments, but for the sake of stability it's very important that once a script is added to MSL it does not change significantly, because there's really some serious stability issue, especially if you try to remove something that was added in a previous version. That would be very deadly for the stability.

[IDing? 00:33:33] would maybe be considered, but even that… Because it's a variant situation, we have to be really careful on keeping a repertoire for given script on related scripts to be stable as much as possible. What will happen when MSL-1 is finalized? That should happen in late spring, early summer, if it were understood. The generation panels will select good points from the MSR, key points from the MSR – not from [IDNA] 2008. They have to go from what is in MSR. They cannot go outside of that set.

They can include characters from that collection in their own LGR repertoire. It doesn't mean they include all of them. They have to justify the inclusion of every character inside their own LGR. It's important that an IP will look for having justification for every good point added on a given LRG proposal. Each LGR is likely to have more elements. Some simple case may not need much more than just repertoire, but some scripts will need to have quite a few more rules, especially concerning variants.

Variants will need to be covered by many of those scripts. Some may have contextual rules. For example, if you have a character that [inaudible 00:35:13] at the end of the string, you have to express that

in your LGR, through the mechanism allowed by the LGR syntax. We expect, given the nature of the IP feedback mechanism, which we [cry? 00:35:31] anonymity, it's very important that we have ongoing dialogue between the LGRs and the integration panel so we avoid surprises.

We need to appreciate to have connection on dialogue. We already saw that this week between us on forming the generation panels, and we do appreciate those communications. The IP will obviously review, accept or reject script LGR [pages? 00:36:05] for integration, based on those criteria. Based on the procedures, the guidelines, that we ourselves are bound to, we will basically take the decision based on the guidelines that are provided to us.

So this is a picture of the process, where you see the yellow text that shows what the initial tasks are for the IP. Then you see on the lower right the tasks that generation panels will create, basically creating a repertoire, mapping some disposition for [vine mapping? 00:37:00]. Then when they're doing they'll have public comment and they will try to integrate in the LGR, and then there will be an IP decision to either accept or reject the proposal.

If they're rejected, they go back to the generation panel to create a new version. If they accept it for integration, we'll do the actual work of integrating the LGR into the root over the whole LGR system. Some numbers. We have 22 scripts. We're talking scripts, not languages, just to be clear. As you see, [inaudible 00:37:51] Western Europe, Cyrillic, Georgian, Greek and Latin. We see [inaudible] as well in Africa. You have Arabic and Hebrew.

Then the [inaudible 00:38:02]. We don't call them Chinese, we're just very clear that this is [inaudible] use among at least China and Japan, an possibly Korea – that's their decision. [inaudible 00:38:16] syllables, on Hiragana, Katakana, which we [cram? 00:38:16], which is one of the cases where Japan will [cram?] multiple scripts for their languages. That could also be the case, by the way, for Korea, if they choose to have both Hangul and Hanja.

Then you have a set of scripts that are used mostly in India, plus Sinhala for Sri Lanka. Then Thai and Lao. Those are the sets we have today. Again, you saw before this is based purely on the fact that IDN TLDs have been applied for. It doesn't determine a choice from us beyond these IDN TLD applications. There are two additional scripts for the gory details that come [un-narrated? 00:39:09], not really related to languages, they're just shared among scripts, but they're [inaudible 00:39:14] for a lot of cases.

We have a lot of those, some of those, included on MSL as well. It's a total of over 32,000 characters. Interestingly enough, there's about 11,000 Hangul syllables, and a bit less than 20,000 Han [itograph? 00:39:35]. You can do that math. It's a fairly large selection with Asia on this set. The [world? 00:39:47] label evaluation rules is something that we see, as an integration panel, we don't do much. We have a very simple set. I can give an example of what you would have to do in the generation panels.

There's only one we have today, which is applied to all scripts, and it's one that [inaudible 00:40:07] marks. A combining mark is a character that has to be a [inaudible 00:40:13] base character, so you expect the

base character to precede that combining mark. So having a combining mark starting a label would be a bad idea. That's a very simple rule that we do apply to every label being submitted to the LGR. That just gives a very simple example, that is basic enough that [inaudible 00:40:35] for every script in usage.

But we expect many more rules to be created on this system of [world? 00:40:44] label evaluation, that will be applied to values proposed and made by the GPs depending on their own script. Some may have simple ones and some may in fact have none. We expect some of the GPs not to have any additional [inaudible 00:41:01] rules. We expect some of them to in fact have fairly complicated rules. But they would be evaluated when we see them, obviously.

Variants, we see that the key aspect of some of those scripts should [inaudible 00:41:19] traditional versus simplified version of the [inaudible] it's a snake-like fish in Chinese, I think. On the left, the other traditional radical variant of it, in the right, you have the simplified. Even simplified looks complicated to me, but this is a bit simpler than the other one. Then, I don't know if you have [inaudible 00:41:52], which can be written two ways; double "s" or with the sharp "s". Both are allowed in the [IDNA], since [IDNA] 2008, by the way. The sharp "s" was not part of the 2003 [inaudible 00:42:10]. Long story.

Anyway, so anyway, those are the variants. If somebody allowed one side, [strasser? 00:42:15] with a double "s" they'd need some definition of a variant for it, on what to do with it. Those would be covered, by the way, in much more detail in other presentations. I'm

not going to go into too many details on this important point – all of those mechanisms are not part of the MSR. MSR does nothing about it.

It's really the work of the generation panels to come up with defining the variants and working on the disposition of those variants to determine what to do. We do have some advice for the generation panels, that the use of [inaudible 00:42:58] variants should be minimized as much as possible. There is some issue with allocating variants which go beyond this integration panel. It's [inaudible 00:43:09] DNS concern. So [broad?] variants are never an issue. It's a perfectly fine system that doesn't create any issue beyond limiting access to some names.

But [broke/broad? 00:43:23] variants should be a really common mechanism in a lot of scripts that have [inaudible 00:43:28] confusable characters. This is just an example on the MSR-1 deliverables. We did provide multiple files. Some of them are, I would say, of a formal definition. An example, for example, we have an XML file that describes an MSL-1 content in terms of the XML. It can be totally automated, extracted, data-mined.

You have a lot of tools that can look for information into it. It's very easy to see content. On the same thought, we thought it would be useful to have a bit more of a human-readable version of it, so we've created a set of PDF files that do contain, in a [shelf-life? 00;44:14] format, that's also used by the way to create the Unicode standard on the [ISO? 00:44:21] equivalent. We use the same format. It makes it a bit easier to locate your characters on…

We have a notation on this one that shows, for the [inaudible 00:44:31] [IDNA] 2008 [inaudible], so it's basically outside of the Sandbox even for us. You can see "370" on the Greek, there's an [inaudible 00:44:44] that's outside of the [IDNA] 2008. The next character, 371, is a [p-valid? 00:44:49] character, but we did exclude it because it was obsolete. That's only shown in pink. On the other hand, you can see with these other characters [small alpha? 00:45:00], which is [3.b.1?], which is obviously completely allowed in Greek.

So the document contains page after page of those characters. We also did that for the CJK section, although we used a different convention. On those we didn't want to show, because by definition, every Han [itograph? 00:45:27], unified [itograph?] are [p-valid?], all of them. That would present… I don't know. At the time of 6.3 that's probably over 60,000 or 70,000 characters, so we didn't want to have pink everywhere, especially for the extension A, B, and C.

So we showed these in the extension. For the [inaudible 00:45:49] we show all yellow; basically the characters where we don't have a pink concept in the CJK, because we don't really need it. It's a simpler… By definition, everything that's not yellow would be pink, if you want, so we kept them white. That concludes the presentation on MSL-1. There will be more details provided on MSL-1 this afternoon for people interested. Obviously we can answer questions about the MSR later this morning, or again this afternoon.

AUDIENCE MEMBER:	Quick question: in the generation of MSR, which is fine, the exclusions are based on the principle that you described, and has nothing to do with visually confusable [corrector? 00:46:43], right?
SPEAKER:	If I may answer that, no, the exclusions are based on the principles that we are going to… I'm going to present a longer presentation in the afternoon where we go into all details about the types of inclusions and what we're doing, and they have nothing to do with visual confusability.
AUDIENCE MEMBER:	Thank you very much. I jut want to make it clear that we're not dealing with visually confusable correctors in the variant generation?
SPEAKER:	The MSR work is concerned with providing an initial outer limit for the LGR. There is no confusability work involved in it. I don't know where you're coming with that question.
KIM DAVIES:	Sorry. The next topic on our agenda is filling you in on what we call the LGR and XML. Early on in this project we recognized that there wasn't a standard that we could rely upon for expressing label generation rule sets. Historically, we've had IDN tables of various different formats, that were relatively primitive in terms of how they were formulated. Each one was formulated to the specific requirements of the generator of the particular IDN table.

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If we're to have a project that's going to integrate the output from a variety of different disparate generation panels, we need something that can essentially represent a universal file format that can be used for all those representations. In essence, what the LGR format is about is having the ability to express IDN registration policies in the context of [co-point? 00:48:45] eligibility, and as well various different rules that might be associated with that.

For example, defining what the variants are of specific code-points, defining whole label variants, definition contextual rules – for example certain variants would only apply if certain characters appeared in a certain sequence. The idea is, as I mentioned, this is a universal format. We're talking today about the root LGR, but definitely it's a design consideration here, that we want a format that's universally applicable. IDN tables today are typically used at the second level; within registration policies, within both gTLDs and ccTLDs.

The goal here is to have a format that could be equally applicable at those levels. So I foresee a future where the IDN tables that exist today can be all represented in this LGR format, all be represented in a consistent, machine-readable way, and that allows us to do many things. Firstly there's clarity in terms of what the rules are. There should be no room for ambiguity if you follow the specification, and secondly it enables re-usability.

If you wish to use an existing LGR, either as a policy or as a basis for a policy, it's available, there'll be tools to support it, it should be relatively easy to do that. So what does it enable? Well, fundamentally this is the concept. You have two pieces to the LGR

puzzle, which are represented in blue. Firstly you have the file format that has a list of rules in it, and secondly you have a tool. The tool is an engine that understands LGRs, and is able to process the XML file and apply it against the label.

So if you have those two pieces; an LGR tool and the LGR file, you can insert a domain name. The LGR tool will check the domain name against the rule set and then it will provide you with some kind of output. For example, in the context of normal registry operations, that could be generating a set of one or more domains that result from that rule set. For example, what we see on the screen is essentially inserting that label into the LGR tool results in two labels that should be allocated and a third label that should be blocked from registration.

The great thing about having a consistent, machine-readable format is that we can do a lot of new things that we can't practically do today. For example, this is particularly important in the context of the root LGR, you'll be able to use such a format to take multiple different tables, different rule sets, and perform operations such as merge them. You could take Chinese, Arabic, and so on, and merge them together in a single rule set.

You can also compare them. We know today from experience that there's a lot of IDN tables out there. One of the questions I often get is, "What's the difference between some of these tables?" and there's no easy way right now to have two tables and know, "Are these identical? Are they similar?" If you have a consistent file format and you have tools like these, you can do what we would technically call a DIF and just see what the differences are between the two LGRs.

So what is an LGR comprised of? We took the basis of IDN tables as they exist today. For the most part, most IDN tables that exist today are a simple list of code points. They say, "These are the characters that are needed for this particular script or language, and anything that's not on this list is not allowed." There are also some IDN tables that have a notion of variants, so that if you have a label with this particular code point, you should also either allocate or block this alternate code point in the same position.

We've built upon this. We still have those concepts, and they're available in the LGR specification. But we also have several other pieces to the LGR. Firstly we have character classes. This means that you can define groupings of code points and treat them in certain ways. One I think particularly beneficial thing we have here is you can rely on Unicode properties to help define code point sets.

Often in generating an IDN table the author of that particular rule set is really consulting with the Unicode standard, reviewing a set of code points, checking their properties, and that's guiding their decisions about which code points to include and which code points not to include. Imagine that instead of literally enumerating every code point you find that meets your criteria, that you can use a simple set of rules to match against the Unicode database based on certain properties.

So for example if you have a certain rule because a code point is of a certain Arabic joining type, rather than enumerating all those code points with that joining type, you can simply match against that rule in the Unicode database. It makes for much more concise and short

tables. Another piece is the whole label evaluation rules. Here we're talking about contextual rules. We're talking about anything that is beyond merely checking the status of a particular code point. If you have rules that say certain characters are only permitted after or before other characters, that could be represented.

Certain characters can only be at the start of a label, at the end of a label, and so on. This is all possible. Finally we have a section called actions. One thing about the existing corpus of IDN tables is that the actions as a result are often not defined, they're just assumed. We know that there are multiple consequences of generating a variant. You could delegate it, you can allocate it, you might block it from registration.

There are several different verbs that can be used for as a result of your variant generation. Using the LGR format you can actually intelligently describe what the action is as a consequence of a particular generated variant. The result of all this is essentially you put in a label, you apply the LGR, you get a set of labels and you get a set of dispositions for those labels. What should you do with those labels?

The next steps. We've been working on this specification now for probably two years, but there's a recognition that we didn't want to finalize it until there was some usage of it. A lot of the design assumptions in the specification were really based around what we though people needed. Really, we're exercising the specification now as we get into the generation and integration panels' work.

In fact, a lot of the recent development of the specification has derived from the integration panel, and their input has been very useful in

bringing the standard to a higher level. That being said, the more of you the better. I would encourage those that use IDN tables, that wouldn't want to be involved in this LGR process, or otherwise have an interest in this, to review the specification. Just to reiterate, this isn't just about the root LGR.

This provides the potential that as a TLD registry, rather than having codified rules inside your registry that are perhaps hard-coded or very specific to your language, you can instead implement a general LGR handler and then you can plug and play LGRs to implement registry rules. It will make adding new tables much simpler in the future. One thing we expect to do beyond using this format for the root LGR is, IANA maintains an IDN practices repository.

燔Once this format is sufficiently mature, I'd hope that we can migrate those existing implementers of IDNs to using that format, and we'd update the IANA repository to use that format as well. I won't go into too much detail here. We're giving a very in-depth tutorial on the LGR format this afternoon. In essence, the key takeaway from this slide is that you should be able to convert any of the existing IDN tables – that we're aware of at least – that are out there right now, into this new format.

The MSR is an example of using the LGR format. The ultimate integrated LGR will be another. You can use available tools to check validity. This is a benefit of us using XML as a basis. So there's a schemer. You can check for errors in your table using existing tools. So a lot of the benefits of using XML we can apply indirectly to the table. So that's the quick summary.

NAELA SARRAS: Okay. So what we had planned next is a presentation from the Arabic community. But I believe the presenters are not here yet, so why don't we take any questions that you might have on either the MSR that Michel presented, or the XML specification that Kim talked about? Then we'll go to the Arabic presentation. Do we have anything online? Any questions here in the room?

NICOLE: Nicole [inaudible? 00:59:42] for people attending in the Adobe room. A question for Kim Davies from James Mitchel: "Does ICANN provide a reference implementation for the LGR tool?"

KIM DAVIES: We don't yet, but we intend to. Furthermore, we've been encouraging other parties in the community to develop their own implementations as well. We're aware of at least one other committed party in the community that will be implementing the LGR tool. As the specification evolves, internally we have two different implementations at varying levels of maturity, but as we get closer to finalizing the specification we hope to make them complete reference implementations.

EDMON CHUNG: One quick question for Kim, and then I have a more general question. I don't know whether it's the right time to bring it up, but… Just a clarification – I see that you reference RFC 3743 here. I understand

that the IP, or this particular phase of the project, does not really look at certain kinds of dispositions that were used in previous IDN variant tables, specifically for Chinese, they preferred variant concept.

I just want to make sure that this particular XML format is not… Sorry, I haven't read the draft, but I want to make sure that it covers some of the dispositions that may not be part of… At least the IP part of the project from my understanding.

KIM DAVIES: The answer is it should, and definitely RFC 3743 was a specific consideration. We believe we've captured all the nuance in that specification in this new specification. It should be a complete super-set of what's required. That being said, please do review it, and if you have any concerns that it doesn't capture something that's required, that's the kind of feedback we're looking for.

EDMON CHUNG: Thank you. One of the things… I think as we moved along, I was listening earlier on in the presentation you gave Naela. This work is built on the studies, and then the integrated report. I've forgotten the actual names, but it's built on a number of documents from before. One of the things I think maybe the Integration Panel perhaps could take a little bit of time to do, is to look back at that and identify if going forward, whether there might be any inconsistencies or conflicts between some of the things that were said, from the base documents, to what we might be seeing from the outputs of this exercise.

Again, I'll be very direct in saying that one of the concerns from the Chinese community is how preferred variants are eventually dealt with. I understand this is the IP level, and in this particular phase we might not be specifically looking at the delegation part of things, however, what I want to make sure is that that particular concept will not, at a later stage, be no longer eligible.

That whole concept means from the case study report and into the integrated report, and all the documents from before. So that's a suggestion and a question – whether the IP will look at it, have looked at it, whether there were any inconsistencies that could potentially come out, and whether that would be summarized perhaps for the community.

NAELA SARRAS: Thanks. I'm going to turn this over to the IP to describe their method of work leading up to now. I do want to note that… You probably noticed that at least Nicholas Ostler has been with the work since the beginning, so there's definitely continuity here. Why don't we hear from the IP? Thanks.

NICHOLAS OSTLER: In general, the IP has been catching a very wide net of making sure that the background information is accessed and reviewed. In fact we've looked back at the various parts of the integrated issues report for useful information, and constructed the MSR. Remember, at this point the only thing we have done is construct the MSR. In terms of what the Mandate is of the IP, that is given specifically by the procedure

document, and everything in it. The IP fully intends to make its part of the process comply with the framework that's set out in there.

KIM DAVIES: Could I add, as someone who has actually been with the Variants Program pretty much from the beginning, the IP is setting out a framework here, into which the LGR, the Language Panels, can submit. A lot of the issues that were being considered with the integrated report, and in the previous Working Group Reports, are about the allocation of variants, and the kind of clashes which can arise. The various groups should be aware of those when they have those reports at their disposal.

Then they can decide in their own domains which choices they want to make. Then they'll propose them and hopefully we'll dispose of them effectively and exactly. So I think all those issues can be met. It only requires alertness on the part of the different script panels to make sure they're brought in. The framework is open for that.

EDMON CHUNG: Thank you for that. From what I hear it seems like… It feels like the answer is yes. It is what has been done, has been reviewed, and so far it is consistent and it will not… At least not looking to be conflicting. But I guess this is my suggestion perhaps, for the Variant Project Team, that probably around the time where that… If we can integrate that into some sort of statement, or within some sort of report, to make sure that that is still the case, that will be very useful for the community.

I think some of the questions James and [Colway? 01:07:45] asked are premised on just making sure that some of the things are not moving away from what we had hoped or envisioned through the project. So I don't know… I wanted to ask more questions but I'll…

NAELA SARRAS: Noted, your suggestion, Edmon. Let me just see where the Arabic presenters are at, because I'd like to take that and… Okay. [Colway? 01:08:23], can I take your question afterwards please? Is that okay?

[COLWAY]: Yes. Very shortly I'd just like to ask one question regarding once the Label Generation Panel is set up and eventually comes out with some final result from particularly the community, do we still have a time to open comment from different perspectives – for example from the end user, registrant? Because I find that some of the Label Generation Panels, actually the panelists are only the registry guys, the registry persons. It's not really the community. Do we still have a time for open commenting like that, or not?

NAELA SARRAS: Asmus and Nicholas, did you take note of that question? I was preparing on this side. I'm sorry [Colway]. Asmus, did you take note of the question?

ASMUS FREYTAG: I did not understand the question.

NAELA SARRAS: Okay. Let's do it at a later… Okay. So with us, I'm going to let the group… Okay, so we have Tarik only? Okay. Tarik, please go ahead.

TARIK MERGHANI: Okay, thank you. Please excuse us, that [our representative? 01:09:53] is not here, so I'll do it instead of him. I apologize for that. I will talk about out GP on the Arabic Script IDN. What we've done in the last few months and the last few days here in Singapore… The history of our community [inaudible 01:10:26] in IDN. You know that it was started in 2003, the Arabic Domain Name Task Force, and the [Persian? 01:10:39] Arabic [also domain name ? 01:10:40].

Until 2013 now we have the Task Force for the Arabic Script IDN. It [inaudible 01:10:53] from the Middle East Working Group. You can see that IDN TLDs are signed for delegation for many countries, which are speaking Arabic and other languages using Arabic script, like [inaudible 01:11:15], like Saudi, like Pakistan, all use Arabic script, not just Arabic language. Also, here we have examples of variants, which we [can say? 0:11:35] they are the same, or we can say identical in the context of an organization.

As an example, [inaudible 01:11:40] [Arabic] 0643 and a little [inaudible] also. 06 [a line?] the same thing appears in-between when it's in the middle of a word. Also, there's a similar one, which is not identical, but it's similar in the shape of this type of variant we have. We have difference in shape, but when [in prognosis? 01:12:17] it's the same, like in [hah?] or a different shape. Here also are variant

examples. For identicals you can see that the letter "K" or "0643" is just identical with each other, but it's from a different code point.

Here is a timeline for your information. It started in August 2013. There was a call for membership for the Task Force or the IDN, by the MESWG, the Working Group for the Middle East. You can see the formation of the Task Force has been done in October 2013, and the consultation final draft proposal with ICANN IP was in December 2013. In January there was a mission of proposal to ICANN for formation of Arabic Script GP. Our Membership Team now is about 29 currently, from 11 countries.

They're all speaking languages using Arabic script; for example they're from Egypt, Germany – Germany is just that there's someone there who has a PHD and more knowledgeable about African language, so he was very useful. It was very much like, "Why do you have somebody from Germany in your GP?" – Iran, Jordan, Lebanon, Mauritania, Morocco, Pakistan, Palestine, Saudi Arabia, Sudan. Those are the countries represented in our GP.

The [inaudible 01:14:34] are speaking more than nine languages. We hope we can get more people who speak more languages, and to have more communication with the community to get more information about those even small languages spoken by [hundreds of thousands? 01:14:54] in our region. I [inaudible 01:14:58] use of Arabic scripts from East Asia, South Asia, Middle East, North Africa, Africa. North Africa most are Arabic. Africa, there are other languages in Africa.

[inaudible 01:15:11] academia, and even from technical sides. This is information about the Arabic [GP?], you can find it on the website.

This is our method of work. An open call for each work [inaudible 01:15:34] and there were volunteers developing the work of the team. [inaudible 01:15:37] presented to the Task Force for discussions, then [the item was 01:15:42] finalized with consensus. The discussion with the Task Force. Every step you can find on the website: community.icann.org/display/MES/Task+Force+on+Arabic+Script+IDNs You can just check it there.

Also there is our development of the GP, and our general information position work plans. You can just go through it. One of the important things we've done, and we took a lot of time on in the past three days, was the general principle for code points. In fact, we go through it code point by code point. Before going through it, we have to make it a principle to exclude or include, or even [divert? 01:16:40] which criteria we'll use.

So we took our time here. Just as an example, we found documentation that's guaranteed, and it's currently in use. [These characters? 01:16:50] be included. If we found the document, but we can't prove that it's currently in use, it's [inaudible 01:17:00], we make three categories, and if we can prove that it's not currently in use, or it's just historical, or sometimes it will be excluded, this is the principle we use. Here, in Singapore, we have our first face-to-face meeting of ten persons who are supported by ICANN to come here, from 20th-22nd of March.

As you can see here, it's divided by days – one and a half days for [inaudible 01:17:49] and a quarter of a day for general principles. We already discussed it before and did it, and here we'll just finalize the

work of our principles and review the MSR. Then after that we have ICANN Meeting Programs from 23rd to the 26th, which is going on now. [They'll be trained? 01:18:14] also for IDN [inaudible] today, I hope.

These are our next steps for our GP. I think that that's all I can say here. Shukran, thank you to you all. [applause]

NAELA SARRAS: Thank you Tarik. For the record, is it Tarik Merghani?

TARIK MERGHANI: Yes.

NAELA SARRAS: From Sudan?

TARIK MERGHANI: From Sudan.

NAELA SARRAS: Thank you Tarik. Okay, James, I have three questions online for us that I'm going to prioritize, so let's do those, they should be quick. Then we'll go to you.

NICOLE: Nicole [inaudible 01:19:13] for participants in the chat room. Three questions from [Raf? 01:19:16]: "What is ICANN doing to ensure community feedback actually occurs in the New Brahmi script case the

community is either unaware or uninterested. Expecting community members to track ICANN at its meeting is not unrealistic. ICANN needs to be in those communities. What is your plan for outreach? The second question – what actions have ICANN taken from the feedback received from the IDN workshop in Argentina?

"I remember reading lots of comments but it's not clear they're acted upon. The third question and comment – is there a mechanism for the learnings from one generation panel to be shared to others? For example, it would be interesting to see what the Arabic Script Group has done, since it impacts some languages used in India, like Kashmiri, etcetera. Thank you."

NAELA SARRAS: Thank you Nicole. Starting with the first question, this is essentially the outreach question. I can't emphasize enough how much we've talked about this in the last few months in the office. We do realize this is a part of the procedure that puts a lot of responsibility to do a lot more outreach than just relying on the ICANN meetings, for example. I can assure you that within the last two months we've been working with our Communications Team to actually do a targeted outreach program.

We're in the process of identifying some events, and in the process of identifying more relevant events for us to go to and speak about this, and encourage participation. We were using Executives on the ICANN Management Team community members, and appealing to them to essentially use their contact book to reach out to additional people. We're also looking at professional organizations to go into, where this work might be of interest to them, basically to get these organizations

to support their people to come to this type of work. So it's beyond volunteers and their own time doing this work.

So I assure you that we're doing a lot in that area, and if you have ideas for us – events, people – please by all means send them to us. I'm going to put up an email address that we need to advertise a little bit more at the end here, that people can reach us at. For question number two, you're right – we received a lot of really good input in Buenos Aires, and what we started doing, starting with the Buenos Aires event itself, is we're taking all the questions, and we actually publish what we're doing about the comments and questions we receive.

So if you go back to the Buenos Aires presentation there will be a link that says "feedback on what we're doing with these comments and questions". We plan to continue that every time we do one of these events. The last thing, the mechanism for learnings – this is inter-panel learnings, and it's something that's very much being discussed right now, how panels can learn from each other. It's called for in the procedure, and we've already set up one email address called LGR@icann.org.

That will essentially be communications and dialogue between panels, and then between the generation panels and the integration panel. It has an open archive. You can go back and review any of the discussions that are happening between panels. I'll go to you, James, please?

JAMES: First, I'd like to congratulate you on the excellent work that's been done, and I don't speak Arabic and I don't write Arabic, obviously, and there are a dozen experts out there that have looked at this in great detail, but the fascinating thing about IDNs is that if there's a script that's more complicated than CJK it's probably Arabic. If you can get that work done, well, I think between Arabic and CJK we solve 80% of the IDN problems that are faced by ICANN today.

So I have a keen interested and I've been keeping track of the Arabic progress from the very beginning, on the VIP language groups, and their work. I have a couple of comments and some of the learning experience we have from doing CJK that perhaps you can bring back to your group. Number one, Arabic in that way that's been encoded in Unicode is much a writing system, that represents how it's printed.

Therefore you have many ways that represent the same word, but because of the printing system you either [inaudible 01:24:28] or you have different literatures that [inaudible] for printing purposes. Because of how Unicode is designed for printing Arabic, but when it comes to doing identifiers then you have a problem, because then for the same word you generate multiple forms that may look slightly different.

It is very complicated for you. One way is to go back to look at the root and not worry about, once again, the visually confusable problem. Leave the visually confusable problem to ICANN. ICANN has an existing process in place to deal with visually confusable. The moment that your panel has to deal with visually confusable your problem is almost unsolvable. That's one.

The second things is to understand Arabic has specific rules on how you combine your characters in certain ways. Some ways are legal, some ways are not. I don't know the solution to that. I've seen some of your work in the RFC. Some of these rules [mean feedback? 01:25:40] to the MSR group. The way that CJK deal with it is that we actually ignore the illegal, because we assume that nobody's going to register an illegal combination, rather than create rules that forbid them. That's just for you consideration.

NAELA SARRAS: Thank you James for the kind words. James, I just want to say that there will be… I don't know if Tarik or anybody wants to comment on that, but I want to say that there will be more on the work of the Arabic Panel this afternoon. So please join us there as well. Any more questions from inside the room?

TARIK MERGHANI: I have a question. I don't know if I can say it from here or if I have to go back there? [laughs] In fact, I have two questions. The first question is about the MSR. You said that for those who start now, or they already have their scripts in MSR, they were not allowed or not recommended to make a change for an MSR-2. I don't know if that will give limited time for those who started earlier. I think for those who have not started, will they have enough time to review and everything? It may not be fair. That's my first question.

My second question is about mixing. I just want to check – before two days ago we had a meeting and we talked about [inaudible 01:27:49],

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and they are not accepted of course, but we talk about [bigit 2? 01:27:56] especially, in [inaudible] language or something like that. They use it for [inaudible], something like that. I've heard that if it's allowed, to use the [bigit? 01:28:07] in the root zone we don't have language there, so any script, any other language can use this [bigit? 01:28:16].

My question is, is it allowed, to have a mixing between the script in the TLD and the root zone – maybe? – between Chinese script and Arabic script? Will something like that be allowed? From what I understand from talking about [bigit 2 01:28:45].

SPEAKER: [01:28:50] I'll try to answer that. The root is a shared resource. It doesn't mean you can make scripts on the label. There's a restriction on doing that, except for some communities like Japan, which [inaudible 01:29:02] with the [ICANN?] characters. In most of the cases you don't mix scripts within the root, it's just that the root itself is a shared resource that does include multiple scripts. We do apply the root for the scripts independently of each other.

Just because it's a shared resource it still doesn't mean we're mixing scripts in the root for root labels. The second thing I was going to react a bit to, on the feedback on the MSR-1, is we're basically following the rules that ICANN gave us… Or we did the work in the time we were supposed to do the work, and now it's to some degree to the community to react to the work that we did and provide feedback in due time.

I would say in the Arabic case, I've been doing the work reasonably early, so that they're getting the resources to provide the feedback in due time. We're still working on getting feedback, and we'll address it, we'll answer it. It's not a done deal. The other part about modifications on MSR-1 is it's more a concern of it being stable. You want some stability so it's not a moving target, otherwise it will be very difficult for LGR to work on its own repertoire, if the base repertoire keeps changing. So there's a need to be stable.

Like I said, we're not saying that it will never change, but it's reasonably easy to add a few things. Removing things would be impossible, because then you have to look at everything that was delegated, make sure you're not creating an issue for delegated labels, to make sure that your new set doesn't prevent existing delegated labels to basically be valid. So there's much more work once you've started to delegate root level TLDs, to say, "Gee, we made a mistake, we should remove that character. We can't do that anymore."

So there's a need to be stable, and we need to make progress here. There's some concern about some communities that haven't provided feedback yet. We're not getting much feedback from some. That, to some degree, would be a shared answer of what to do with that. [I'm not the one? 01:31:26] members of the Integration Panel to make that decision. We have to decide what is MSR-1.

Sometimes we've been floating the idea to remove some script, for which we're not getting feedback, because it may be dangerous to have MSR-1 containing content that did not get any feedback. We don't like that situation too much. That's the decision that still to be

taken at this point. We have MSR out. People are encouraged to provide feedback on it, and we'll listen to every feedback comment we get.

There are a lot of different processes, and I'm sure ICANN staff can go into more detail on how that will be done. But at this point, MSR-1 is not done yet. We still propose it out and we still have a few months before we finalize the first version. After that it'll be version two, so it's not the end of everything.

NAELA SARRAS: Okay. We're almost at the end time, but I'll take your question and then I'll check and see what we have online. Go ahead. If it's a short question or comment we'll take it.

AUDIENCE MEMBER: Yes, a very short question. I just want to know why the Japanese, Chinese and Korean languages, and the Hindi languages have been left behind in making initial work on the script? Because I know all these languages are highly resourceful languages linguistically. I just want to know the reasons why they've been left behind to do the initial work.

NAELA SARRAS: Are you asking why other panels are not as developed in terms of being constituted right now and doing their work?

AUDIENCE MEMBER: Yes.

NAELA SARRAS: Again, this is a feature of the procedure. It's community based. We have to work at the speed that the community works. These panels are not left behind. They're in various stages of formation. Between now and the next meeting in London, hopefully you will see a few more come online and start their work. But from the preparation side we're certainly in place and ready to support those teams, but we need them to also be ready on their end as well.

EDMON CHUNG: You probably can't answer this question right away, but I think this is very important. Part of the Variant Program – and in project numbers seven and eight – I'm somewhat eager to see that come out, and at least some sort of draft. The reason why is because they represent the actual delegation allocation of IDN Variant TLDs, and that may or may not require policy adjustments or some additional policy work, depending on what exactly is brought up and proposed.

Both from the gNSO and from the ccNSO side are waiting eagerly I think to see that come out. As this work progresses we still have that piece of work that potentially… In fact, both of the SOs will need to go back and take a look at whether additional policies may or may not… So that process may take longer, and I think a lot of people – especially new gTLDs, IDN TLDs, and also IDN ccTLDs that have variant considerations, are hoping that process could proceed.

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NAELA SARRAS: Thanks Edmon. Noted. I do want to assure you that we understand. We're putting the bulk of our energies right now to implement the procedure and have an LGR materialize, but that's not to take away from the fact that we have been doing some work and basically identifying a lot of questions. You're right. There are some questions that we need to have answered for ourselves in order to be able to think about what the processes would look like.

So we expect, in the next few months, that we would have these questions more documented, and to come to the community and ask for help and how to answer these questions. So we're certainly not trying to make any decisions, but I'll be completely honest with you. The bulk of our work… In fact, what we've been directed to do is to focus 80% of our time on this, specifically so we don't have this, "Some communities are getting left behind," "Some communities aren't ready." We really need everyone to rally behind the LGR procedure first to make it materialize.

We're not ignoring the other parts naively. Perhaps we think that by the time we're ready with an LGR we should be ready with the other processes, but you're absolutely right. It's something that we are aware of, and you should see us talk more about it in the future.

EDMON CHUNG: Basically, as much as you have thrown it out so the community can take a look at it, I guess we've been asking for nine months, or close to a year, since the project has progressed to this particular phase, any type of thoughts or draft would really help in that regard. Thank you.

NAELA SARRAS: Thank you. Okay, so we are a little over our time. I am going to go ahead – unless I have any other quick comments or question – and close this session. I thank everyone for being here. I know we started really early, so thank you so much for your time. Thanks to the Integration Panel. We hope to see all of you this afternoon when elaborate a little bit more on what communities are doing, and the Integration Panels as well. Thank you very much. [Applause]

[END OF TRANSCRIPTION]