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ABU DHABI – ICANN GDD: IDN Program Update  
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SARMAD HUSSAIN:

...the overview of the set of presentations we have. Initially, we have a quick update on the activities we have been undertaking through the IDN Program and an update by the Integration Panel. Following that, we have updates from the work which has been going on in the community.

As we have some limited seats here up front, what we'll do is request the first three presenters to be up here first. Then we'll switch to the next three presenters afterwards. May I request Marc and Mats to please join me up here?

Let's get started. Let me start with a quick update on the activities which have been undergoing with the IDN Program. Many of you may all know we work mostly at enabling IDNs for the top level, but we also have a couple of projects which also look at the second level. We will be going through some of these in more detail.

Also, we regularly reach out to the community to update on what we do and also get them involved in the work we are undertaking. So we will also just summarize some of the activities we've been undertaking since the last few months.

One of the main projects we undertake is what is called the IDN TLD Program. What it is aiming to do is define some rules on what is a valid

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TLD and what are some of the variant labels for that particular TLD if it's an IDN. We call that Root Zone Label Generation Rules, and the motivation for Root Zone Label Generation Rules comes from IDNA2008 itself which expects registries at all levels, including the top level, to reduce opportunities for confusion by restricting characters or using variant techniques. So obviously, the root zone LGR work is the basis for this mechanism for the root zone itself.

Root zone LGR aims to achieve at least three objectives. It aims to support the different scripts which are used by communities globally for the root zone. It also aims to do this in a secure and stable way. In addition to determining secure and stable valid labels, it also aims to define what are the variants of variant labels for those IDN TLDs.

The process to do this was determined by the community to develop the root zone LGR. The mechanism which was finalized was that each script community will organize itself in what we call Generation Panels. Each script community will develop the rules for their own script because they are the experts for that script and advise ICANN on those rules. We will then integrate those rules into a singular root zone LGR using expertise of an Integration Panel to ensure that all the details which have been specified by the LGR procedure are adhered to in the process.

There are many script communities which are now active. As you can see, eight different communities have already finalized their work, which include Arabic, Armenian, Cyrillic, Ethiopic, Georgian, Khmer, Lao, and Thai. There are many other communities which are almost

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finalizing work, which include for example Chinese, Japanese, and Korean. Then there are many other communities which are well underway for their process, for example the Greek, the Latin, and the Neo-Brahmi community.

But then there are also some communities which have not organized themselves yet to start this work, but we are now working with these communities to see if they can also get the panels together. We have now the Sinhala panel which is almost formed, and we're also working with some of the other script communities to enable their panels.

As far as the root zone work is concerned, the initial version of root zone was released in March 2016. Following additional we received, which the first version included only Arabic, we released a second version of the root zone LGR in August 2017. That has now integrated six of these scripts, which include Arabic, Ethiopic, Georgian, Khmer, Lao, and Thai.

Armenian script which is a seventh one was not integrated because it has some cross-script variants with the Latin, Greek, and Cyrillic scripts. So we are waiting for those script panels to finalize their work to integrate Armenian along with those scripts as well.

The eighth one, Cyrillic, currently the proposal has been released for public comment and we actually invite you to review that proposal and send us feedback on it. Once the public comment period closes, we will basically take that into the integration step.

In addition to developing the LGR, obviously we are also developing tools which use the LGR or allow the use of LGR. This tool is following the guidelines in RFC 7940, so it processes LGRs in that particular format. It has multiple functions. It allows you to create LGRs in the RFC format. It also allows to view the LGR initially only in the XML format, but very soon we will also have the HTML view for the LGRs as well. So just by clicking a button, you will get a human-readable form off that XML. The XML is sometimes very hard to actually go through, so it will give you both HTML and XML views online.

In addition, once you have an XML developed for an LGR or [load an] LGR, you can use the tool to validate labels using that LGR to test. That actually can be done one label at a time, or you could actually upload a whole file of labels to see. If you are doing some testing for the LGR, you can actually load a whole file of labels to see which are valid and which are not.

And then there are multiple functions to manage LGRs to compare different LGRs to see if there are any changes or they are the same or not.

So there are many functions which are available in this tool. All of those functions are illustrated in the User Guide which is published on the IDN website at [icann.org](http://icann.org). Please go and see the website. The tool does require a login which is available in the User Guide as well. So login information for that tool is available in the User Guide. The tool is also available open source, so you could actually download the tool and deploy it on your own end as well.

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So how is LGR actually going to be used eventually? LGR actually defines a process to determine labels and their variants, and that's a prerequisite to implementing variants. There are slightly different uses for those existing IDN TLDs versus the applied-for TLDs.

For existing TLDs, they will go through the LGR using the tool, and the tool and the LGR together will produce all the variant labels for the existing TLDs. It will also tag them as allocatable or blocked based on the LGR definition for that particular script.

Similarly, if you use it for a new TLD one is applying for, you could input that particular label as well and it will tell you whether it is valid or not. If it is valid, then it will also give you the allocatable and blocked variants of that particular label.

That's the intended use of the root zone LGR, however it will actually only come into play once the procedures for the IDN gTLDs and IDN ccTLDs have been upgraded to include root zone LGR into them.

We are also conducting or running the IDN ccTLD fast track process through the IDN Program. this is the updated information. We now have 58 IDN ccTLDs which have been successfully evaluated, which represent 40 countries and territories. The latest addition in this list is Mauritania which was very recently announced. Of these 58, 56 IDN ccTLDs have already been delegated. They represent 38 countries and territories and are representing 33 different languages in 19 different scripts.

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The IDN ccTLD fast track process undergoes a review every year. The last review actually started in January 2015, however there were some concerns raised by the community on second similarity review process. Because of that, it has actually gone through a process where the Board actually asked ccNSO to review that part of the IDN ccTLD fast track process. That review is now completed. There was a joint ccNSO/SSAC response which was submitted back to the Board shortly before ICANN 60, and that is now in consideration with the Board. [Once] the Board gives further direction that particular which started in January 2015 will close and we will move forward with the updated process.

I'm not going to talk about IDN implementation guidelines because we actually have a short presentation there in the session today separately. So I'll skip directly to reference second level IDN tables. This is one of the projects which we are undertaking for second level. In this particular project, we are basically publishing second level IDN tables as references to be used by the community.

The community can reuse these IDN tables if they're supporting those particular languages or scripts, however it's not required to follow these exactly. So it's a reference, and a particular TLD may actually make changes to these tables and update them to suit their own requirements. However, they provide a good starting point for that purpose.

We also regularly reach out to the community to update them on the work which has been going on by the IDN Program. We actually have

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some dedicated pages at [icann.org](http://icann.org), and you can get to them by just going to [icann.org/idn](http://icann.org/idn). We also give regular updates to the community at the ICANN meetings and to SOs and ACs upon their request. Then we also have been outreaching to the community directly across different countries and different events. For example, we presented the IDN Program at the APTLD meeting in Georgia recently and so on.

We also maintain an active set of wiki pages for the different community working groups we are managing. We also maintain some e-mail lists in case you are interested in getting information online from us for the IDN Program. One of the main lists is [vip@icann.org](mailto:vip@icann.org), and you can go and sign up for it. Again, if you need more information, you can visit our web pages or you can write an e-mail directly to us at [IDNProgram@icann.org](mailto:IDNProgram@icann.org).

That concludes my presentation. I will hand it to Marc Blanchet who is going to give an update of the work which has been undertaken by the Integration Panel recently.

MARC BLANCHET:

Good morning. My name is Marc Blanchet. I'm a member of the Integration Panel. We are five of us: Asmus Freytag, Wil Tan, Nicholas Ostler, and Michel Suignard who is with me, and myself.

The scope of our Integration Panel is to review proposals presented by Generation Panels and, if accepted, to integrate them into a consistent set of label generation rules for the root zone. Our decisions

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have to be unanimous. So the playing field of reviewing the proposals and integrating them, that's our main purpose.

It is what we've been doing since two ICANN's ago. We reviewed one Generation Panel proposal of the Latin one and reviewed many draft LGRs. This process enables continuous improvements of the LGRs as we go through with the Generation Panels. It provides a better output at the end since all the issues are handled before the public comment. So Ethiopic, Thai, Japanese, Greek, Korean, Cyrillic, Devanagari, and others actually because it's going not every day but every week also.

We also are monitoring the need of the new MSR if needed. Currently, no real plan. There were some discussions for two possible additions of [inaudible] characters, but we haven't received yet the formal request. So we'll see.

I guess our main work outcome for this period of time was the release of LGR-2, the second version of the LGR. It in fact was really the first time we actually integrated multiple scripts because the first one was a single script, Arabic. Now we add more scripts integrated. The scripts are, obviously, listed there and have been said before: Arabic from the LGR-1, Ethiopic, Georgian, Khmer, Lao, and Thai. As described before, we postponed Armenian waiting for the other related scripts to arrive in their final form.

It has been an iterative process, meaning that we create internally an integrated LGR and then verify and continue improvement of it. So it was not a single thing out. Between the Integration Panel, there are multiple implementations of software, completely independent



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implementations, to read and verify the combined LGR. Therefore, that enables us a much higher confidence of the actual files or LGRs as the output.

We went on public comments on June 6. There was good support received from the community. We really would like to thank the Generation Panel members who verified at least their own script file to make sure that we haven't screwed up something. I would encourage when we will be releasing the next version of the LGR, make sure that the Generation Panel members do a review of at least their own script to make sure that we haven't done any issue.

Thankfully, no issues were found during the public comments. Hopefully, we will never receive any issue, but a perfect world doesn't exist. We posted the final version on August 17, so this becomes the official LGR-2, integrated LGR.

That LGR is split into multiple files, one what we call "element LGR" per script, which is essentially what we receive from the GP apart a little tweak on the references and things like that but no change in the real normative content, and a single merged LGR which is actually mechanically generated from all the element LGRs. For those interested in the reason for this and for all the actual use, we'll talk about it this afternoon during the workshop.

What is important to understand is we're producing and providing to the community the XML and the HTML file, but the HTML file is not normative. The real normative versions are the XML. We provide

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documentation files, such as overview and code tables. So the truth is in the XML file, not the HTML file.

You could use the LGR to verify a label, for example, a new application as Sarmad showed for validating a label, generating allocatable variants, and check for collisions. Again, more details this afternoon on the various files.

During the process, specifically because we learn more and also because we add more scripts and because of the integration of LGR-s, we updated our documents that are no the wiki for the various topics related to either the integration or for the LGR for scripts. I would really encourage the Generation Panel or anyone interested in the topic to actually read the documents. They are pretty extensive and comprehensive, which means more time to read them, but they're actually very good in us understanding all the issues and how to do things.

One of the documents that was created during that process some time ago became an RFC in the sense that the content was used as the base for an RFC and was adopted by the IETF as a RFC 8228. While it was an independent effort, it's really related to what we've been doing.

That's it for me. Thank you very much.

SARMAD HUSSAIN:

Thank you, Marc. Now one of the projects we do at second level is develop IDN Implementation Guidelines. We actually have a working group currently which is reviewing and updating these guidelines. Let

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me hand it over to Mats Dufberg, who is one of the co-chairs, to give an update on the work.

MATS DUFBERG:

Thank you very much. The agenda for my part is the purpose and status, the working group, the scope and topics, and the next steps of our work.

The background to the guidelines is that there is a wish to minimize consumer problems and cybersquatting by the use of IDN on the second level and also to have good policies and practices for the creation of second level IDN tables.

The guidelines are mostly relevant for the gTLD registries offering IDN because they are required by most registry agreements to follow these guidelines. But the guidelines are also relevant for any TLD offering IDN, and it could be relevant for a third level domain if they wish to. But we are talking about TLD. That's the level. The IDN ccTLDs are a naturally relevant audience because they are expected to have IDN tables too and follow the guidelines.

This is the status. There was a call in July 2015, and the group has been working now since two years almost. We had a draft for public comment in March 2017. We have been working after that, and a second draft is presented at this ICANN meeting. So the final work should be out soon.

This is the working group. I'm one of the two co-chairs, and there's a number of people on the group.

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The scope of the recommendations in the guidelines is limited to the registered name. We are not concerning with other DNS records in the zone. Whatever you use as the name of a nameserver is not part of the scope.

There are actually 19 guidelines that are divided into a number of subcategories:

Transition, that is transition from IDNA2003 into IDNA2008.

Format of IDN tables, which format to use.

The consistency of IDN tables. You might have several IDN tables under the same TLD.

IDN variants.

Similarity and confusability of labels and the problems around that.

Requirements of publishing policy and rules.

All this we went through in great details in a session Sunday. If anyone who couldn't attend that meeting is interested in discussing something, we are here at the ICANN meeting. I am here, so you can come forward and discuss that.

And, of course, the material is available. The final work will be available soon, and that will be sent to ICANN Board for consideration. The ICANN Board will be the final instance to take or refuse these guidelines or send them back to us for revision, of course.

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Here are links for the material. So as I said, if you want to discuss anything in the material, you can talk to me or anyone else in the group during this ICANN meeting or reach out via e-mail to the [IDNGWG] working group at [idngwg@icann.org](mailto:idngwg@icann.org).

Thank you very much.

SARMAD HUSSAIN:

Thank you, Mats. As I said, due to limited seats up here, we'll have to switch our presenters. So this is a good time to do that as we move to community updates on generation panels. Let me invite the presenters for this next part of the session. For Cyrillic, we have Dusan and Mirjana for Latin and Dr. Ajay Data for Neo-Brahmi. May I request you to please come up here.

We'll start with the Cyrillic Generation Panel, so over to you, Dusan.

DUSAN STOJICEVIC:

Thank you, Sarmad. Good morning. I'm Dusan Stojicevic. I'm chairing Cyrillic Generation Panel. Let me start with what we are doing here and what is the scope of work. We were doing things around Cyrillic in Maximal Starting Repertoire (MSR-2).

Cyrillic script is based on Early Cyrillic from first Bulgarian empire. I will not go exactly into details about history, but let's say that this script is from 9<sup>th</sup> century and it is used by more than 250 million people. About half are coming from Russia. Cyrillic script is also the third official script of the European Union when Bulgaria entered this.

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How it looks like on the map, Cyrillic script is spread in southeastern part of Europe, eastern Europe, central Asia. Might say north Asia, but it's Russia. You can see here that red is Kazakhstan. We have in our region a lot of changes in states. There is switching of official usage of scripts, so Kazakhstan was recently changing from Cyrillic to Latin. Of course, Kazakhstan still uses Cyrillic. We have a lot of other changes in this region, but the most recent was Kazakhstan.

What we did in Cyrillic Generation Panel, we had a very good and very productive meeting in Istanbul. The rest of the work we were doing over the mailing list. Of course, for some questions and open issues that we had during our work, we were consulting the Integration Panel.

What we have found and what is our final result, we had a lot of inclusion and exclusion principles, but we were trying to keep as much as we can code points into the code point repertoire. You can see on the left, we have found 86 code points recommended for inclusion and only 7 code points recommended for exclusion and they are shown in the table.

When we are speaking about variants, we didn't find any variants in Cyrillic script, but we found some code points are visually confusable. So we decided to provide a table of confusable code points and anybody can use it.

When we are talking about cross-script variants, we have decided to limit these to homoglyphs. We were trying to find variants in Armenia, Greek, Latin, and Georgian script. Only in Georgian we didn't find

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anything, but in the rest of the three we found some cross-script variants. I'll go shortly.

Those are the variants that we have found in Armenian script, then in Greek script. Those are cross-script variants. Naturally, the list is big and for what I saw yesterday, it can be just bigger not less than this. So those are the variants with Latin scripts.

Timeline, well, we were working for three years. Now what is the main message from this slide is that the public comment period is open, so I'm inviting everybody to look at the result and to give us their comments on our work.

This is what we were planning to do, like next steps. Yes, we finished our job, but we still as I said for some countries they're turning back or going away from Cyrillic so we need to follow that. So those are the steps. I'm happy to tell you that the first step is already done.

Those are the members of the Cyrillic Generation Panel. You can see some of them are in bold font. Those members were active and contributing mostly to the work of our panel.

Thank you.

SARMAD HUSSAIN:

Thank you, Dusan. Let's move on to the next presentation by Marjana on the progress by the Latin Generation Panel.

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MIRJANA TASIC:

Good morning. My name is Mirjana Tasic. I'm chairing the Latin panel for the last year and a half. I will try in the next few minutes to present the work of the Latin Generation Panel done up to date.

There will be a few slides here. I will give a short history, the definition of the scope of our work. I will present shortly the membership of the Latin Generation Panel, how we organized our work, what part of the work has accomplished, and a project timeline.

We started the panel in Summer 2016 with a call for new volunteers. After accepting the members for the Latin Generation Panel, we started our work somehow before one year. In the next, let's say, six months or something like this, we finalized our GP proposal and the Generation Panel was seated somehow in the middle of May this year.

How much Latin script is used, it is used almost everywhere except this gray area where the Cyrillic script of predominant. The dark areas on this map are showing the part of the world where the Latin script is the only official script. The light green areas cover the parts of the world where the Latin script is existing with some other script.

The scope of our work because Latin script I can't remember how long it was developing, there is a lot of parts of Latin script I mean in Unicode, but the scope of our work is based first on Maximal Starting Repertoire MSR tool. We know that only lowercase letters should be accepted. The ranges of Unicode are specified there, you can see.

When we were thinking how to start our work, we decided to go through the languages, look at all alphabets used in languages using



Latin script, trying to find code points other than ASCII code points and try to find if they are included in MSR-2. We have started with a list of 455 languages. The table was derived from Omniglot site where you can find the list of the languages using specific scripts.

After that, after some discussions, we decided not to process all 455 languages but to use EGIDS code to select the languages which shall be processed in the first round. So we decided to use EGIDS 1-4 languages. This table contains 180 languages. On the other hand, MSR-2 has 279 Latin script code points, so you see there maybe Chinese is more complicated as I don't know Chinese, but we have a lot of information to cope with.

Now let's look at our members. We have 14 members in the group and 3 observers. We had representatives from all parts of the world except South America. Also, diversity of representatives is somehow fulfilled. So it seemed that we are ready to start our work when we had panel [inaudible] seated.

What were challenges and solutions? How we coped with all this amount of work? Challenges: many languages, many code points, a small number of members to cover the workload. So we have to cut something. We decided to process 1-4 EGIDS languages. We should consider in the future should we process some of the EGIDS 5 languages. We have defined a simple procedure, easy to follow, how the code languages should be processed. We divided workload in two groups: repertoire working group which is processing languages,

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looking at the code points and finding what is missing and where, and variant group which is looking at variants in script and cross-script.

Repertoire working group has 10 members. The same group developed principles for inclusion of code points in Latin script for root zone LGR. The same group is processing languages and building repertoire.

On the other hand, the variant working group has four members. They also developed principles for analysis of variants in the Latin script for the root zone, and they are identifying variants.

I'm very pleased to announce that we've finished most of the processing of languages: 180 languages have been processed. We have tested during this processing 114 MSR-2 code points, and we found some code points or code point sequences that are not included in MSR-2. We didn't discuss it. We didn't process it. Those are very rough numbers because we just finished processing of those a few days before ICANN 60.

On the other hand, developing variants group is working on variants with Cyrillic script. It is the most challenging part of the work of the variant group. All the other variants should be done in the future, variants with Greek, with any other script that follows. Also, in-script variants should be done.

Our timeline was like this. We are planning to submit our LGR tool in July 2018. Up to now, we are on time, let's say like this. Our plan is that our work should last 14 months.

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That's all for me.

SARMAD HUSSAIN: Thank you, Mirjana, for the update on Latin Generation Panel. Let me hand it to Dr. Ajay Data for an update on the Neo-Brahmi Generation Panel.

AJAY DATA: Thank you, Sarmad. Thank you to the co-panelists. On behalf of [inaudible] along with the co-chairs who work with us Mahesh Kulkarni and Udaya Narayana Singh, I am presenting on behalf of NBGP. Here is the small agenda where I'm going to look at scope, scripts, languages, and the geographical coverage. Then Akshara system and its impact, the members and their expertise, efforts and progress so far, and the future plan of action.

Let me share with you the scope, scripts, and coverage. Here I introduce that NBGP is basically covering the Brahmi script panel where we are having Devanagari, Gujarati, Bengali, Gurmukhi also known as Punjabi, Odia/Oriya, Tamil, Kannada, Telugu, and Malayalam, totaling nine scripts under the panel which is, in fact, approximately 20% population of the world. So it is a very large task this panel.

We have a geographical coverage of India, Sri Lanka, Nepal, and Bangladesh. We have family used by 11 out of 22 official languages in India. Devanagari covers [out of them], which is Bodo, Dogri, Hindi, Kashmiri, Konkani, Maithili, Marathi, Nepali, Sanskrit, Santhali, and

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Sindhi. This is what Devanagari is. [inaudible] Devanagari is because Devanagari is also used by 45 other languages in India and is being adopted by new literary tribal languages of Arunachal, Pradesh, Bihar, and Andaman and Nicobar Islands. It is also popularly used in Fiji, Mauritius, Malaysia, England, Canada, South Africa, and Indonesia.

Also, one more fact I would like to share which is related to Devanagari, that is it has 47 characters which has 14 vowels and 33 consonants. The ancient Devanagari script for Sanskrit also has two additional consonantal [vectors]. It has no distinct difference between, like we have in English, small and capital, so there is no distinction in this script. This script is being used, as I have already told, by many people.

I am not getting into more on technical. As Sarmad pointed, [inaudible] less time in the [beginning] itself. May I skip this Akshara System? What we are doing to achieve and maybe it's a point to share with everyone is we are having fortnightly calls to have a review of the script. We are having a large panel which is of 46 members as of now in the panel. We are likely to increase this panel further because of nine scripts on the radar. We could only submit one till now, which is Devanagari.

I am happy to share yesterday we got IP [Integration Panel] feedback which is very good and [very happy] feedback from IP and not many [suggestions] from their side. Some feedback we have received to change in our IP proposal. That has been modified after the ICANN 60

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gets completed, and we will submit our final draft of Devanagari LGR to IP.

We have also taken up [a parallel platform] to work together as a team and [inaudible] eight scripts together, which is a lot of work, and divide the work which [you have just understood that work on], divide the LGR work also in pieces and work parallelly. This is what we intend to do and cover these scripts in the next six months. So we are taking a very ambitious platform and ambitious task, and we intend to complete them by March.

The members and co-chairs are: I am Ajay Data; Mahesh Kulkarni is part of C-DAC, which is actually an organization that works on languages and languages technologies in India which is part of the government; and Professor Udaya Narayana Singh who is also a linguistic expert.

Our key members: Akshat Joshi is sitting here who has worked and coordinated Devanagari, Jay Paudyal is sitting in front, and Harish who is not here.

Other key members are Raiomond Doctor and Bal Krishna from Nepal and Gurpreet Lehal who is working in Gurmukhi from Punjab.

We have other members. We have Chitrita Chatterjee. I think she was here and who represents industry, who helps us to bring in the industry experts of languages; Pavanaja for Kannada; and Hempal and Ganesh Murmu for many scripts actually everybody is working on.

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We have some more [members] from Shubham Sharan, Rajiv, Abhiji, and Anupam.

And, of course, we have our friend Sarmad who is from ICANN; and Samiran who is probably sitting at the back, I saw him, who is also here; Pitinan sitting here. I never knew and I just want to expose Pitinan's expertise on LGRs. She has [inaudible] entire LGR and [submitted] successfully. She is a great resource I came to know during ICANN, and I wish to use this expertise much more in the future.

As I shared, we started in May 2015, and we could complete only one in October 2017. So it's almost two and a half years. Now we intend to complete the next eight in the next six months because of the learning we have got. The templates are ready. The team is in place. The linguistic experts are in place. The people who understand the Akshara System, the MSR is to be followed, the way LGR [template] has to be followed, now that the basic group understands everything, I think we are hopeful. We had yesterday a call in the morning for the community to get aligned and can we complete this task, and I am happy to share that we have taken this as a challenge. If not 100%, we will try to [inaudible] 90% of the work by March.

I think that's it. Thank you.

SARMAD HUSSAIN:

Great. Thank you, Dr. Data, for the update on the Neo-Brahmi Generation Panel.

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We can now open the floor for any questions you may have for the panelists or from the speakers who were here before. Any questions?

EDMON CHUNG:

Just to get hopefully more questions started, on the Latin Generation Panel, it's interesting you started with the Cyrillic. I'm just curious why. And then you're going to start work on Greek. Why Cyrillic first?

The reason why I ask is traditionally working with thinking about this issue for many years, Greek has a particular problematic situation with the N and the P. I forgot exactly which one. That seems to be something that's very interesting. So I just wondering where you are with Cyrillic and why Cyrillic first and what do you see in terms of the challenges for Greek?

MIRJANA TASIC:

I'm not the right person to answer this question. I'll try, but Bill is there. He will help me. He is a member of our panel.

BILL JOURIS:

The reason that we started with Cyrillic was simply that the Cyrillic panel was already in progress and, to the best of our knowledge, the Greek and Armenia panels were not. It turns out that Armenian is actually done, and that's why we didn't see them. But that was why we started with Cyrillic was that we had some hope of a defined repertoire before we got finished.

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MIRJANA TASIC: We are somehow asked to start first with Cyrillic, that Cyrillic LGR should be included in the next version of LGR if we finish our variants first. Thank you. Sorry, I forgot.

UNIDENTIFIED MALE: A question for Dusan from me. You mentioned many countries as part of your panel. I'm just curious to know do they have already IDNs in these countries, TLDs registered, or some of them are behind?

DUSAN STOJICEVIC: Mostly, they have IDNs. In all eastern Europe, there was problems with getting IDN TLD. The problem was in my neighborhood, Bulgaria, but almost all.

UNIDENTIFIED MALE: What about IDN ccTLDs?

DUSAN STOJICEVIC: Yeah.

UNIDENTIFIED MALE: There are [all of them]?

DUSAN STOJICEVIC: All of them are IDN ccTLDs. There are no new gTLDs I think, based on my knowledge. Yes, there is some in Russia. Russia is the biggest



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country in our region, and they have .moscow and [inaudible] and [inaudible]. But everything else is just ccTLDs.

UNIDENTIFIED MALE: Thank you.

SARMAD HUSSAIN: Any more questions from the floor?

UNIDENTIFIED MALE: Hello. My name is [inaudible]. I'm a professor of Japanese and linguistics in [inaudible] University in Tokyo. I have two questions, one for the presentation for the Integration Panel and the other question for Neo-Brahmi script.

The first question is, as I understand it correctly, Mats mentioned that implementation guidelines may be relevant to the third level domain. I don't really understand what that means, so could you clarify on that?

The second question is for the Neo-Brahmi script. You started with Devanagari. Did you start with Devanagari just because you have resources, both human and time, or do you see that would be sufficient to cover the languages and scripts in the area?

Those are my questions.

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AJAY DATA: I came late as a co-chair in that panel but, Akshat, do you want to reply exactly?

AKSHAT S. JOSHI: Yeah. Hi, this is Akshat from the Neo-Brahmi Generation Panel. There are many reasons why we at least during the generation panel phase we started working on Devanagari. The first one goes back right to the beginning of the IDN Variant TLDs Program where we had done extensive work on Devanagari issues identification. So the initial panel that was formed for issues identification was of Devanagari. When we formed the panel, if you look at the amount of population that uses various of this script, Devanagari happens to be mostly used in many of the regions. In the basic panel that we had formed, we had much Devanagari expertise already available.

It is not always the assumption that Devanagari will be sufficient for all others. There are definitely [inaudible] in other specific scripts which need to be catered to separately. However, the basic philosophy of all the scripts that we have [inaudible] in Neo-Brahmi happens to be the same. So roughly the Devanagari template can be used by others, but they definitely need to improve upon some aspects which the specific script demands which is other than Devanagari.

SARMAD HUSSAIN: Edmon or Mats, would you want to respond to the question on why IDN guidelines may be used or how they may be used for subsequent levels?

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[MATS DUFBERG]: The target for the guidelines is for the TLD creating second level domains, but if you have a second level domain with a lot of third level domains, it might be useful to look at the guidelines. If you have IDN, there may be multiple scripts under that. So it's just that it could be useful for that. And nothing enforced.

SARMAD HUSSAIN: Right. So these could be taken as a best common practice or to manage confusability issues at other levels as well.

Any more questions? Okay, then thank you very much. We'll close the session. Thank you for your participation. I'd also like to thank all the panelists for their presentations. Thank you very much.

**[END OF TRANSCRIPTION]**