Naela Sarras: …Fast Track Process. Just to give you a little bit of where we're at in terms of numbers, we launched this in November of 2009; we have to this date we've received 34 unique requests from different countries and territories. These requests represent 20 countries and territories and 30 IDN ccTLD strings in the root zone.

We have six that have been approved through the Fast Track Process and are either in the IN Delegation Process or will be going into the IN Delegation Process. And so without any further delay, I'd like to take us next to some of these countries that have already had their string delegated in the root zone for a while now and for them to share some of their experiences with us. And we'll start with Mr. Jonathan Shea, CEO of HKIRC who looks after Hong Kong.

Jonathan Shea: Thank you, Naela. How can I show the PowerPoint? Okay, thank you.

Naela Sarras: With the clicker. So I'm going to be passing this around and let me get your presentation started.

Jonathan Shea: Good afternoon everyone. I'm Jonathan Shea from HKIRC, the registry for the .hk ccTLD. So just a quick introduction to our registry. We are non-profit and a member-based organization. We

are designated by the government of Hong Kong Special Administrative Region to administer the .hk.net Hong Kong and Chinese top level domains.

In addition to being the administrator of those two top level domains, we are also promoting the use of internet in Hong Kong and represent Hong Kong in international forum like ICANN and also regional forum as well.

Our mission is very simple – just to provide our registration service in an uninterrupted effective customer-centric and sustainable manner. In terms of our achievements since the year 2000, we have launched an individual category called idv.hk in 2003. We opened up the second level of the .hk in 2004 and we launched a Chinese registration under the .hk at the second level in 2007.

We make application to ICANN in November, 2009 so I think we are one of the very first applicants for this IDN ccTLD Fast Track. We recently introduced the Chinese version of the .hk to the communities to help them label their website with the native language and to promote their website easier and enable the Chinese speaking community to have access to the website and reach the website more easily.

We have decided not to charge for the .hongkong/Chinese separately because Hong Kong is a bilingual city. People speak Cantonese as well as English. And we think it is more natural for

us to bundle our .hk and .hongkong as a bundle. So they pay for one of the names and they get both.

Since we have already introduced Chinese registration at the second level in the .hk, we automatically also give them the same name at the new .hongkong Chinese suffix.

Because under .hk we already have a number of thread level categories like .com.hk for companies, .org.hk for organizations; therefore, we just offer the same categories with the Chinese .hongkong equivalents. So the existing six thread level categories under the .hk automatically map to the corresponding .hongkong Chinese category.

And as I just explained, the user pays the price of one and they get both the English and Chinese name and the name has to be renewed and transferred together. And for the existing Chinese registration and the .hk, we automatically give them the same name under the same category, under the top .hongkong Chinese suffix.

Now for these names they cannot decouple these names. These names have to be renewed and transferred and deleted together. So I will skip the details on this slide. It only says the maximum length of a .hongkong Chinese name is 15 Chinese characters. Actually we allow a mixture of Chinese characters as well as English and numerals to fit into the culture of Hong Kong.

This slide explains the handling of variants for Chinese. Basically of Chinese we have two scripts – our traditional Chinese and simplified Chinese, and we automatically give the registrant both

the full traditional form and full simplified form of the name. And the other combinations, namely those with mixed traditional and simplified Chinese characters will be reserved.

Now, how do we launch a .hongkong Chinese? Firstly we have to cater for the existing .hk registrant. Therefore, to start with, we offer what we call a pre-launch prior to registration period during which the existing.hk registrant can register their .hongkong/Chinese name.

After that we just do our general launch and that was actually on the 31st of May. I think I will try to skip the details here. Basically what we are saying here is that an existing.hk registrant can register the same category under the .hongkong/Chinese suffix.

During the pre-launch registration, all the applications are taken as a batch and for those .hongkong names which only have one applicant, we will just activate a name for them after a seven-day objection period. That's what we call the first stage results of the priority registration period. And if no one objects to those applications after the seventh day, we will activate those names which have only one applicant.

And for the applications which have more than on applicant - actually we have about 400-something names which have more than one applicant – and for those names we have a period open for them to provide additional supporting documents, substantiating their claim for the name. And we base on the information we receive, we will allocate the name to one of the

many applicants. So as you can see in this slide, we have a number of criteria in priority order.

So firstly we look at trademark. If none of the applicants have any trademark, we look at their Chinese company name, whether it is the same as the domain name they applied for. If not we look at the trade/product name; if not we look at the individual name, etc., etc.

One thing I think is worth pointing out is that we have a similarity test which is the point (e) at the bottom of the slide whereby if none of the applicants have trademark, Chinese company name, trade or product name, individual name, we will look at how similar the English name is to the applied-for Chinese name and we only look at whether they are similar or not.

So, if the English and Chinese name are similar they pass the test; otherwise they fail the test. And if that cannot distinguish who should be more eligible, then we look at the commencement date of the English domain name. The one with the earliest commencement date will be allocated the Chinese name. And if all these fail, if none of the criteria can help us to decide who is the eligible applicant, we would do a random draw.

Therefore, we allocate all the names and at the end we have to do nine random draws. So it's not a lot, so that means we can resolve most of the colliding applications. There's only nine of them which we need to do a random draw.

And same at stage one we open a seven-day objection period. We publish the result of the allocations and after the objection period those which have not been objected will be activated right away. And with the domain names which have been objected, then we have to handle the objections first.

On the Chinese fourth of March we have actually officiated at the launch of the .hongkong/Chinese top level and we have invited Mr. Dengate Thrush, the Chairman of ICANN, to attend our launch ceremony.

Okay, in terms of number, we are just surpassing the 200,000 mark in Hong Kong and as of the 15th of June, the total number of registrations is 219,000. And as you can see, a little bit more than 10% of these are the top .hongkong/Chinese domain names so it's a little more than 10% at this point in time. So that ends my presentation. Thank you. I'm not sure that you have any questions for me or we can wait for the panel discussion.

Naela Sarras: So thank you, Jonathan. I think what we'll do is have the questions at the end so we'll have the presenters and then we will have a question and answer period for everyone on all the presentations.

So for the next presentation, we have a different flavor. We have an Arabic ccTLD. We have .alsaudiah and for that we have Mr. Raed Al-Fayez from saudiNIC, so let me get that started or not.

Raed Al-Fayez: Thank you, Naela. I would like to thank ICANN for giving me this opportunity to share our experience in managing our IDN ccTLD, .alsaudiah. My agenda is short. I will give small introduction about saudiNIC and what we have exactly done regarding our Arabic ccTLD, .alsaudiah, and what is next regarding .alsaudiah and some listings there.

SaudiNIC, Saudi Network Information Center, is a non-profit organization operated by CITC. It's managed the .sa ccTLD since 1995 and it's managed the IDN ccTLD .alsaudiah DS since May last year.

SaudiNIC actually leading the local community efforts towards supporting Arabic domain names. We chair the Steering and Technical Committees and for the Arabic Domain Name Pilot Project which was a test bid for testing Arabic domain names started in 2005 and ended in 2009 when ICANN opened the Fast Track. We represent also the Arabic language in various events and working groups.

These are some of our latest achievements. We fully deployed IPv6. We have full IPv6 support in our registry since January 2010. We opened the registration for Arabic domain names and .alsaudiah and this is an example – (inaudible).alsaudiah – this is the registry domain name in Arabic – on May 2010. We opened registration for second level domain names directly under the .sa early this year in January, 2011. So we almost was very rushed

and have lots of works in that in the last year for opening two managing, two registration plans. We have four sunrise periods, two for the Arabic and two for the second level domains.

We updated our domain name Domain Name Regulations and our procedures for submitting objection, which is similar to the Domain Name Dispute Resolution in April this year.

Coming for next we have the next step is open registry-registrar and we will have DNSSEC and we will test IDN emails since they are not finalized; still struggling in the ITF to finalize them, finalize the RC.

And we have a job that we need to continuously check all applications related to IDN to make sure that the Arabic language presentation are done in a correct way and I will speak about the last point at the end.

We have around 25,000 domain names registered in our registry for both the ASCII label and the IDN label and the most portion goes to com.sa, around 65% and .alsaudiah, each one of them have 7% and the rest of the sub-level domains as you can see in the pie chart.

What we have done regarding the .alsaudiah, once ICANN opened the Fast Track, immediately we applied for it on the same day, so we applied the Fast Track on the 16th of November, 2009. ICANN approved the string on the 20th of January, 2010 and we applied for the delegation for IANA and we got the delegation… we got the approval for the delegation on 22nd of April, 2010. And on the 5th

of May, IANA added the IDN ccTLD to .alsaudiah to the root servers.

And on that day, .alsaudiah was shining on the internet and our registry label was (inaudible) along with other labels like I Love Saudiah, .saudiah and other domain names was working and operational since that day.

From regulation point of view, we have built many documents, regulations and guidelines. We have the main regulation that regulates the Arabic label, who can register a domain name under .alsaudiah, what are the requirements, what is needed, etc.

And we have also a regulation that's controlled the opening of the .alsaudiah. Actually we have done two phases and the next slide is about it and we have added .alsaudiah to the objection rule so if someone else has an Arabic domain name and someone else wanted to object about it, this is the guiding policy.

And we have created the reserve list, the Arabic domain names. The Arabic names that can be reserved; no one can register them. And we have also a guideline for that. And we build the guidelines to how to write Arabic domain names so it includes the Arabic language and some rules on how to write Arabic domain names. There are rules published on our website and we put clarification for reasonable relationship between the domain name and the registrant.

And this is needed because we provide the domain name for free and only domain names that are related to his name or his services,

nothing else. So we are trying to fight bad warehousing of someone cyber-squatting or someone wants to do domain phishing, it's not possible in our registry.

These are the two phases. Phase one was targeted for government entities and just have their official name and trademark holders and trade name holders and also they can carry only their exact name – nothing else. It started on the 31st of May the same month actually that our name was added to IANA, to the root zone file on 2010.

And the second phase was started on the 27th of September last year and is still going. It's a continuous phase actually. There is no end. It's not at a dead end, we are still accepting registration for Arabic domain names and we will continue.

From technical point of view we have rebuilt the registration system to support Arabic IDNs so we have fields that is called A-Label and U-Label. We have supported language tables so we can add language tables from the Arabic script when needed.

We have a layer we call the Language Confusability Safeguard and we call it internally Emlaa Algorithm. Actually this because the Arabic language for one character there are many shapes for the same character. As you can see different shapes of Aleph, different shapes of (inaudible), different shapes of (inaudible). So we have a layer that solves this problem within the language.

And there is another layer which is a script-wide variance. We call it internally the Master-Key Algorithm. This will allow the registering domain name for a language will block other variants

from other languages. So this is like another safeguard but it's across the script, not within the language itself.

We have put it as an Open Source solution so the link in the middle, if anyone interested in the solution it helps any registry, even gTLDs if they want to do something with Arabic script, I encourage them to visit this tool and see it and they can also download it.

We have built also our internal tools and implementation of IDNA 2003 and IDNA 2008. We have updated the Zone Builder and the WHOIS and the Light WHOIS because before the searching was done on the domain string, now we know you need to search for the key also just to make sure no one uses domain name that is variant from another domain.

We have done also infrastructure enhancement. This is the registry level, the registry level approach that we have done. The first stage is actually the language table and there is an RFC that sits for exactly what are the code points for the Arabic language and it is followed by 22 countries by the Arab League. So most of the Arab Leagues will use the same RFC.

And the second stage is the confusability safeguard. For example, we have (inaudible and inaudible), one with [hamzah] and one without [hamzah]. If someone just saw any one of them, and other variants will be blocked from registration by other users, the only one who can enable them is the initial registrant for the space string.

And the master key algorithm, if somebody just wants (inaudible), which is exactly the same shape but presentation code is different – the first one using Arabic keyboard; the second one using a Persian keyboard, Farsi keyboard. So if someone, just the other will be blocked.

What's next regarding .alsaudiah? Actually if someone sees the sign on the left of the screen which means in Arabic, (inuaidble) and English, "Visit our website Makkah.sa." And this is just a translation of it. If you see it in a newspaper or a sign on the road, actually he will use his keyboard and type the string that he has visualized.

When he types it using Arabic keyboard, he will be able to reach the website. However, if he types it using other keyboards, Farsi, Urdu, whatever keyboards that is supported by the Arabic script, he will get DNS error. So our main TLD, our ccTLD, (inaudible) can be presented in more than two shapes, even (inaudible).

So without having actually the delegation for our TLD variants, it's not possible for users to reach the domain name anyplace on the internet. We have then the solution for Makkah, the first site. We have built our solution which is the master key algorithm that will fix it. We will delegate it to the registrant, but it will not work unless we have got the delegation for the TLD itself.

The next thing is IDN support and applications. We want the IDN support to be not only in the web browser; we want it to be in all of the applications – emails, chats, search engines, etc. We want also

to be user friendly applications. We don't want the applications to display the A-Label. They should display the U-Label that the user understands.

There are also some problems in the right to left view, when the application is viewed on the right to left strings. They sometimes, you know, reverse them. The hyperlink is not working till now. Actually the whole solution needs to be transparent to the user. It will be better if the application converted spaces to dashes because end users are not familiar with dash or hyphen; they are familiar with space. In Arabic we don't use the hyphen.

But since there is a technical limitation for using spaces, we force them to use hyphen; however, the application they can play with that and to matriculate a place the space to hyphen.

Lessons learned – TLD variants is a must-have, as I told you, in order to reach the IDN domains from anyplace on the internet using any keyboard. We have a problem with the hosting companies, both locally and globally. They are not supporting new IDNs and ccTLDs.

There is issue with default zone settings, like sometimes if somebody just had Arabic domain names by default they put mail.arabicdomainname then www.arabicdomainname, and this is actually not the case. There is something needs to be changed in the application windows for the web hosting companies.

There are still issues with the IDN application. We as SaudiNIC generate a yearly report for application windows. We talk all

applications – not all applications, the well-known applications like Firefox, Chrome, Explorer, Safari, and we take some example operating systems like Windows, Linux, Open Tool and Mac OS and we display a report and we have these cases and the we give the results in a report and give it to the vendors.

Also we are attending the IDN Software Development Consortium and hopefully this will push forward to support Arabic domain names in a better way.

Marketing is a must. That's why we have decided to start registry-registrar model and one thing that we have known. There is a variant overhead on customers. They need to host the domain name and the variant. Till now we have around 300 variants enabled in our registry. And for each registrant he had to coordinate with the hosting company to host the base string and the variant strings also, and this is overhead for the customer. Hopefully there will be a solution for that, a technical solution. That's it and thank you for giving me this opportunity. I hope I have added knowledge to everyone here. Thank you.

Naela Sarras: Thank you, Raed. This was indeed very helpful. In fact, what I'm going to do – I want to change the structure a little bit. Mr. Shea and Mr. Al-Fayez gave us a lot of good information. So I was thinking maybe we could take some questions now if anyone has questions while the information is still fresh in our heads. So if

anyone has questions, I'll take a couple questions and then move on to the next presentation.

So please walk up to the mic if you do want to ask a question and I'll take Chris, followed by the gentleman behind Chris and then I will take you and then that's it. I'll close it after that.

Chris Dylan: Thank you very much. I'm Chris Dylan from the University College, London and it's a question for actually both of you, but I think Jonathan mentioned a concept of similarity between English and Chinese strings. I mean, I guess it's probably if there's a [gung] slur in the Chinese and you're looking for company in the English. But could you just explain that concept a little bit?

Jonathan Shea: Yeah, Chris, you appreciate the cheekiness of doing such tests. So in our case we try to make it as straightforward and mechanical as possible. So in our case the test is made by references to dictionaries only, to dictionaries. We have a few different dictionaries that people can refer to, but apart from dictionaries, we only look at pronunciation and maybe documents like business registration, etc., etc. where you show that you can find both the English and the Chinese name on it.

And also the tests, the result of the tests is one or zero, so it's either pass or not pass. We did not intend to say this is more similar than the other. That's not what we intended to do. That was and is our

expertise anyway. So, we tried to make that test as mechanical as possible based on dictionary checks only and it's either pass or fail.

Chris Dylan: Okay. Thank you very much. Raed, is it the same with Arabic? Do you do similar things with similarities in Arabic?

Raed Al-Fayez: Actually, we don't allow having a string mixed between Arabic and Latin, so only pure Arabic. Nothing else, so just only Arabic. So we have Arabic to Arabic. Nothing else.

Chris Dylan: Thank you.

Sivasubramanian Muthusamy: I have a question mostly to south Arabia. You said that you have certain tests which you apply to a string before it can be registered. So is that sort of grammatical in a sense that certain letters have to follow certain letters and certain letters cannot follow certain letters? Is it that type of test that you follow or is it said that it should be in this correct set?

Raed Al-Fayez: Yes, currently in our registry now accept only Arabic language characters. It supports Farsi and Urdu; we haven't enabled because we haven't got the delegation for the variants for our TLD.

However, when we get the variants we will enable them. But now we check for the language so I use (inaudible) and this is the Arabic language string I'm searching for an Arabic language.

We will search against the language table for Arabic language, so whatever characters you have given to us we will search for it in the Arabic. If they are not found in the Arabic language, we return an error. If they're found we will search for the string and we will search for the key for the string because sometimes when you want just a domain name, you search for the string, the string may represent a base domain name or a variant domain name. So that's why we convert it and when we do converting, we do…

Sivasubramanian Muthusamy: So you do some kind of normalization?

Raed Al-Fayez: Yes, some kind of normalization actually. So when we normalize the string, we call it to a Master Key and this Master Key will be searched against our data keys. If we found the record we will say the domain name already exists; if we cannot find the record, we will say the domain is eligible and you can register it.

Sivasubramanian Muthusamy: Do you check for the validity of a string? For example, would you say this string, although it's all Arabic correctors, it's not valid Arabic. I mean, it's just nonsense. So would you check for that as well?

Raed Al-Fayez: Yes. Yes. If someone added an ASCII string we will give…

Sivasubramanian Muthusamy: No, no, no. Let's say they're all Arabic characters, but if it makes sense in Arabic, in a sense it didn't follow the grammar rules.

Raed Al-Fayez: No, we don't check against the grammar rules.

Sivasubramanian Muthusamy: No, you do not.

Raed Al-Fayez: No, we do not.

Sivasubramanian Muthusamy: Okay, so it's just the characters.

Raed Al-Fayez: Yeah, if he just use any code 1 from our supported language table, we will accept it.

Sivasubramanian Muthusamy: Right, even if it doesn't make any sense.

Raed Al-Fayez: But still we have a restrictive more than registration, so it will come to a staff; he will check the domain name that you're asking for exactly to present you and we have a document that defines the criteria between the domain and the registrant. So no one can register a domain name that doesn't have any relation to it or try to set aside…

Sivasubramanian Muthusamy: So you have a second level?

Raed Al-Fayez: Yes, we have a second level.

Naela Sarras: May I ask that you please state your name when you ask a question? And, sorry, one more thing. Joseph, if you could just hold on to your question until … Thank you.

Sivasubramanian Muthusamy: I'm Sivasubramanian from ISOC INDIA CHENNAI and I also served as ALAC IDN Liaison for a very brief time. IDNs have opened up the internet for the next billions of internet users, most of whom are comfortable only in their native language. But what is being done to make the IDN the local content identifiable to the international user?

Before IDNs at least the domain names with multilingual sites were in ASCII characters. But with IDNs even the name of the website is unintelligible for the rest of the world. From your experience in IDN implementation, what would you recommend for the next phase of IDN policy development?

What would be your suggestions for communication across IDNs? How would users from different IDN communities identify the websites to users from other communities? How would content and names be served? How would the names and contents to be translated into common language? Is there a technical possibility that ICANN could work on dual stack names for the next phase of IDN policy?

Naela Sarras: So was that question for anyone specific from the gentlemen that spoke already? Mr. … okay. That's a really long question, but a really good one and I'm sure a number of people here probably on the panel want to comment on it, so what does the panel think? Does anyone want to comment on this question now or should we take this one at the end? At the end? Okay, I'm sorry. May I ask you to bring this question at the end after everyone here has presented and then I'm sure a number of people here will want to speak about that. Okay? I'm sorry. Okay.

So next we're going to have Mr. Abdulrahman Al Marzouqi, also an Arabic ccTLD .emirate. And go ahead.

Abdulrahman Al Marzouqi: Good evening everybody. My name is Abdulrahman Al Marzouqi and I work for the Telecom Regulatory Authority, the TRA, in United Arab Emirate. And the TRA is responsible for managing the .ae ccTLD as well as the IDN version, .emirate.

So hopefully this presentation will be short and informative to everyone. I'll start by giving an introduction about the TRA and .ae. The .ae is an entity within the TRA which, as I said, manages the UAE ccTLD, both .ae and its IDN version using registry/registrar model. Actually, we are one of the first ccTLD managers in the Middle East region and Arab region to run an EPP through registry/registrar model. And we actually enabled it also for the IDN version.

So .emirate is our ccTLD, a ccIDN. We were one of the first four IDNs that were approved by ICANN and it was delegated in the root on the same day the first three IDNs were introduced in May, 2010.

From our point of view there are four success pillars for any IDN. We have first policy, then the technology, the marketing and operation. So we've kind of focused on these four pillars when introducing .emirate.

From a policy point of view, we have a unified policy framework for both the ccTLD and ccIDN with some variation, obviously because of the language differences. We have Unified Dispute Resolution Policy as well based on the Unified DRP.

So in this table you can see the difference between .ae and the IDN version. The allowed characters in .ae is ASCII only, and in the IDN it's only Arabic as most of the Arab countries that applied for or they launched for their IDN such as Saudi.

Variance in .ae – we don't have any variance. With the IDN obviously there are variants but within the language. We did not enable any variance with other languages such as Persian and Urdu. With .ae there is a third level registration, a particular one such as .org or .gov, .ac, etc.

For IDN, because of the structure of the Arabic language, it doesn't make sense to abbreviate words and as such we could not introduce a third level registration and I believe this is the case also with Saudi and others.

With .ae we did not have any launch policy because it was redelegated from an incumbent operator in 2008, but with IDN we have to have some kind of launch process or launch policy. There is a registrar, because we operate on registrar/registry model, there's a registrar accreditation process for .ae, which is a typical one. With IDN it is similar to .ae; however, there are more tests to make sure that the registrars understand both the policy and it can handle the added work such as variant.

So why do we have variants? Obviously, we need variants to reduce phishing and cyber-squatting and also to enable a better accessibility for the community.

We've identified two types of variants – a cross-language variant and a variance within the language. Cross-language variants means because the Arabic script is being used by multiple languages, there are similarities between characters in certain languages such as Urdu and Persian and others with the Arabic language so that would cause confusion when, as my colleague here have mentioned that you have the same letter [yeah], for example in Arabic which looks exactly the same for the Persian and Urdu but the code points up are different.

Although we support, I mean, the variants handing mechanism is supported by the system, but we've decided not to enable it at this point of time. If it was implemented, then the system would be able to delegate them in the DNS automatically so that someone from Iran, for example, or Pakistan can type using their keyboard and still access the website.

Variants within the language – this is related to characters within the Arabic language – the similarity or confusion. So we've tried to handle them within the system so that if a registrant with just a domain name variants will get locked automatically by default and per request it can be activated, per registrant request. There's an example here.

So if you – this is in Arabic unfortunately so – if you register, for example, (inaudible), it's the Abu Dhabi Tourism Authority, there will be multiple variants, probably more than 10, and those would be reserved automatically. However, the ones that climatically make sense can be enabled, but it is based on requests from the

registrant. So here, for example, the registrant decided to enable three of them.

From a technical point of view, we have, as I mentioned before, a system which support EPP and we use the same system for the IDN version and at the moment we can… there is two possibilities to this domain name through our registrar so he can; there is some who can register using an online registration facility and that would handle registration in real time.

However, the system is there but due to the phases of launch, this is not get enabled because at the moment we have just finished the sunrise so once open registration is opened already, then real time registration will be possible.

In terms of timelines for the IDN ccTLD Fast Track, as I said, we were one of the first to apply, we started preparing for it in January, 2009 and we've submitted the request on the 16th of November, 2009 for the string. We received the approval on January, 2010, then followed by the string delegation, then the Root Zone delegation, then official launch. So we launched in May, 2010.

The launch process was a typical one except that we've given priority to the government. So phase one was dedicated for the government only to relevant names. Then phase two, which just ended this month, the sunrise period for 10 months. We start the land rush process next month. So beginning next month for about two weeks, and then the open registration.

Our launch experience – so we've developed or the aeDA developed a platform to handle the various processes so this platform gives access to the registrars to register names at various stages. It gives access to trademark verification agent to verify trademarks and aeDA administrator to approve the registrations and sort them.

I mentioned some tips for those looking for launch process. Insure the Trademark Committee is at work because and is aware of the process, otherwise you receive a poor registration or no strong registration and then you'll end up having many dispute cases later on. Involve registrars as soon as possible because they are the access to the market. Without them you'll not be able to succeed.

Find an appropriate Trademark Verification Agent who is experienced in the region or in the language. So this is a very important step, and give sufficient time for sunrise.

I think awareness is one of the important points that you have to focus on. We've seen some… or we learned from the registrations that we've seen during the government phase and sunrise phase that many people don't know what's IDN.

Most of the users – they don't know that IDN is possible so marketing and awareness is very important. They have to understand that IDN is not a complete replacement of ASCII domain name. You still need ASCII domain name to represent you globally because obviously many people don't understand your language and yet they need to access your website.

This is a case that we've seen which I was pleased with personally. Dubai.ae have just Dubai, not emirate which is Dubai.emirate. And if we directed the IDN to the Arabic interface while Dubai.ae to the English interface. So I thought that is good to share with everybody.

From a policy perspective, make it very clear. Many people don't understand that space is not allowed. So we've seen some registrations with, or applications with space in it. Obviously the system would directly reject it or notify the registrant that there's something wrong with the name. But it's more helpful to make it clear to the registrant that space is not allowed.

Also, many of them did not understand that the hyphen or dash is possible and allowed. So, while seeing that space is not allowed, they've eliminated the space which doesn't make sense in Arabic language and they combined the two words. Sometimes it's possible because the letters are not joining together, but still in most of the cases, the letters will join together and it will appear as if one word. So they have to understand that hyphen and dash should be used as a separator instead of a space.

Also some of them confuse between dot and dash or hyphen, so we've seen some applications with dots as a separator, not knowing that it's a completely different domain name. That's some of the challenges that we faced throughout this process – the registrant and user awareness.

We think that registrants still have lack of awareness regarding IDN, so we had to always try to communicate to the registrants and that takes a lot of our time rather than focusing on our core business which is a registration service.

Some browsers do not display Arabic IDNs correctly, so we've seen people complaining about, you know, their domain names not appearing on the browsers. Not all browsers, obviously, but some of them, they don't display either completely or incorrectly by having these directional issues.

We're posting companies as well. Many of them and their technical staff are not aware of IDN or how to deal with IDN. So some registrants struggle while registering their domain name but not being able to actually enable them. So we had to also communicate with the key we're posting companies within the UAE to make them understand how to deal with IDN.

We've also seen many requests on IDN emails so many registrants are saying, "What about email? How can we achieve that?" So that's the end of my presentation. I hope it's informative and thank you very much for your time.

Naela Sarras: Thank you, Abdulrahman. This was indeed very insightful. So I'm going to take one more presentation. This is going to be Mr. Han Chuan Lee from SGNIC. SGNIC looks after .sg and ASCII, but also .singapore in both Chinese and Tamil. So let me load up your presentation real quick.

Lee Han Chuan: Thank you, Naela. Good evening everybody. My name is Lee Ha Chuan or Han Chuan Lee, depends on how you look at first name and last name. In ICANN I usually call myself Han Chuan Lee, but in Singapore I call myself Lee Han Chuan. I am the Technical Manager for SGNIC, the registry for the .sg domain name.

So just to share some of the experience that we have in dealing with internationalized domain names or IDN. Just some background information: we are the national domain name registry and as of June this year we have 130,000 .sg domain names registered.

And we have seven categories of domain names, the breakdowns are there. And the most popular is still .com.sg, followed by .sg. I'm sure before you come to Singapore you have read up about what Singapore's like and how Singapore is a multiracial and multi-cultural society and expect that we have four major races here.

So the Chinese accounts for 74% of the population, followed by the Malays, the Indians, others. We include the Eurasians, so that is the ethnic composition of population sample. We have four official languages – English, Chinese, Malay and Tamil which is also the reason why the sites are ASCII domain names, we are launching IDNs in Chinese, in Tamil. Good thing for us is that Malay is actually in ASCII so we don't have to worry about Malay domain names.

In Singapore, English is our first language and that is what we learned in school. Besides English, we have another language that we have to learn and we call our mother tongue. So if you are Chinese, you learn Chinese or Mandarin as a mother tongue, Malay or Indian, you learn Tamil as a mother tongue. It is spoken but it is not so common to use in writing and in our work unless you have a Chinese girlfriend and you might want to write a letter to Chinese father that doesn't know English, use Chinese.

We're also used to typing in English, writing English that not many people are actually very proficient in how to change a keyboard to type Chinese and even in Tamil. Even for us we struggle because we have to write it in the (inaudible) and that whether you do a chi or ci or he or zen, so these are some things that even these particular aspects still struggle with entering our Chinese on a keyboard.

We have been looking at IDN for many years already and we have been very active in a lot of committee groups both in ICANN and in other regional organizations with two objectives: one is look at mutual collaborations and contributions on our experiences as harmonization of language tables to us – that's very important –in both the Chinese language as well as Tamil.

So we are active in ICANN like the ccNSO/gNSO Joint IDN Working Group. There is a Chinese Domain Name Consortium known as the CDNC. I'm sure many of you have heard about it so this consortium looks at the Chinese Domain Name of which our .hk Singapore, China, .cn, Taiwan, (inaudible) all are members of

it and have been looking at harmonizing the Chinese language table for many years.

In APTLD we have the Indic Working Group and we have Mr. (inaudible) who is very active and helping us to look into the harmonization of the Tamil groups among four countries, so Singapore, Malaysia, India, Sri Lanka and we're looking at the Tamil language table harmonization.

In 2009 we have completed the system enhancement to our registry system so on the EPP end and Web Panel end we have full support for IDNs; we're not ready to launch but we completed our system as of June 1. One of the few key features added in is the variation for Chinese domain name. So as some of you may be very familiar with Chinese there is a simplified format, there is also the traditional form, both equal so we don't want to have confusing strings or to having phishing cases so this must be treated as equivalent.

So the general point is all labels strengthened from the corrected variant table are reserved, and if restricted all will be activated, it is possible. For SG NIC we have this concept of a premium domain name so what we call premium domain names will be things like a numeral domain name, a pure numeral domain names. If you look at ASCII you look at 123.sg, it is a premium domain name; 999.sg is also a premium domain name and we charge a premium for such names. As far as single character – a.sg, b.sg, c.sg; so these are also premium domain names.

So we have to bring over the same concept from the ASCII domain names to our IDNs so in the Chinese, English, as well as the Tamil domain names, the same principle and concept applies. So e.singapore or e.sg, even a single character like y.sg, this also supports premium domain names and we have worked with our system vendor to add that special capability into our system so that we can be able to differentiate between the normal domain names as well as the premium domain names.

So in 2009 we launched IDN for .sg meaning the we still keep our ASCII TLD, so the ASCII has been kept. To the left of it is will be Chinese and we entered it for the Chinese domain name. The reason we did that is so that several businesses is looking for them to reach to the overseas market, especially in the Chinese market in a language that they're familiar with.

As it launches, we did it in four phases. Government agencies gets the highest priority, followed by trademark holders and then we open it up for everybody and we completed our general launch in 10th of June last year. So during this phase launch we made sure that 1,400 Chinese domain names.

Everybody's favorite topic - the IDN Fast Track experience. Sorry, it may not sound very good but it happens a lot throughout this, the IDN Fast Track experience. So we applied for (inaudible) and .singapore in Tamil in March last year. Three months later we got approval from ICANN for the string (inaudible) and seven months later we finally got two strings into the root in February of this year.

So what we learned from that is IANA's process and ICANN processes are actually very similar and after we did ICANN application both me and my colleague thought, "Yes! We have a holiday!" and then we came up with the same questions from IANA and there goes our holiday plans. Just kidding.

We skipped France for our vacation and besides my examinations, this is probably one of the longest questionnaires that we had to deal with so that lasted quite a while to complete and I think we have raised this at previous meetings that IANA process is a bit more transparent and I'm sure that's already underway, right? Yes, that's good.

So next month, in July 10-11, 2011 we have been looking at four IDNs meaning the entire string will be in Chinese, or the entire string in Tamil. Phase 1 – looking for existing registrants of IDN.sg, so those of the 1,400 Chinese domain names, they will get priority; followed by trade holders, government agencies and other entities. And at the end of the year we will open it up for general launch. So those are the two strings up there - in Chinese and in Tamil.

One thing that we were very lucky is that the three characters in Singapore, they do not have variants so we don't have to deal with the variants on the top level and it's a single string.

Throughout the whole IDN experience with (inaudible) now, this is some of our learnings key. ASCII in sample we do ban names that

are sensitive or offensive and in English is quite straightforward for us because that's our first language.

However, in Chinese and Tamil that was a liberal change for us, being able to filter out names that are sensitive or offensive in Chinese and in Tamil. This is one of the capabilities that actually had to build up over the years. Premium domain names in ASCII are relatively easy to handle, but premium domain names in Chinese and Tamil pose quite a lot of challenges especially for our system as they will tell you.

What we taught in ASCII is easy to do. When we moved to IDN it became very, very hard to do, but we managed to get IDN. Punicode was an area of skill that the service providers in Singapore, businesses and even hosting companies we were not very familiar with. So we had to educate the public on how to use Punicode especially to their zone files. They can't do it in the Chinese for the Unicode format; had to do it in the Punicode format so there are some things that we have to educate the service providers.

Total variants - this was also something that we really had to educate the public. We are offering Singapore the simplified Chinese format and when we explain to them that you have to take care of the traditional string as well, this is still something that they are not familiar with and something that we have to educate them to. I'll open up for questions now. So question?

Naela Sarras: We have the question from Joseph which we'll take now and we'll still defer your question until after the last two gentlemen here.

Joseph Yee: Hello, Joseph Yee from Afilias. Just a quick question to Jonathan. There's some characters that is quite creative from the Hong Kong code for and they were in the Unicode extension B, C and D. Were they supported right now in the IDN Hong Kong?

Jonathan Shea: Thank you, Joseph. Yes, we do have some specific characters which are very localized, colloquial. Only more, they are actually, some of them are created in Hong Kong and at the moment we do not support all of them. The reason being that we are still using the language table agreed at the CDNC, the Chinese Domain Name Council IDN.

And at this moment we are in discussion with the consortium because once we add those characters into our language table, then our language table will be different, you know, will be specialized to be just for .hk, and for .hongkong and Chinese. But I think it will happen because for the consortium they will need more time to consider the process of adding more characters to their table at the request of different members.

Naela Sarras: Please remember to say your name. Thank you.

Waqar Azeem: Hello. I am Waqar. I am a new ICANN fellow. I'm from Pakistan and I have a question to Mr. Abdulrahman. You said space is not allowed. Have you allowed the zero with non-joiner?

Abdulrahman Al Marzouqi: Can you repeat your question?

Waqar Azeem: You said space is not allowed in your IDN. Is zero with non-joiner is it supported by your IDN?

Abdulrahman Al Marzouqi: No, it's now allowed in the language table. Thanks.

Naela Sarras: So, yes, we'll take you as the last question and if you could wait until after the last two speakers please. Thank you.

Vladimir Shadrunov: Hello, my name is Vladimir Shadrunov. I'm the Director of Policy for Telnic, the .tel domain registry. The question is to anyone who has the answer. Do we have any factual data as to how the domain names in your IDNs and ccTLDs are actually used? So are they used in parallel with the main ccTLD or are they used for… how many used by domain as how many are parked and so on.

Male: From our experience, we've seen, because we've opened only two phases which is the government and trademark – the trademark is still not finished yet. But for the government, many of the government agencies are using it for web access or as a website, for their website. And many of them, they redirect to the Arabic language landing page.

So this is the only use that we've seen so far. We've done a small experiment by searching, for example, Google with a domain option by writing ".emirate" and we searched and we've seen that there are tens of thousands of pages indexed in Google which has .emirate domain name. So mostly it's web use at the moment.

Vladimir Shadrunov: So you're saying it's an alternative method of addressing an existing website that has a primary domain name, right?

Male: Yes.

Male: If you allow me, I can add something to that. We have lots of websites that only have IDN domain, most of them for blogs. So we have professors and doctors users. We have just their domain name in Arabic and they have their blog in Arabic, totally Arabic. There is no other language except Arabic.

Most of the well known sites like banks, governments, companies, they have registered both. They have .sa and they have .sa in Arabic. And the Arabic version leads you or directs you to the Arabic content; the ASCII directs you to the English.

There are different behaviors, so there is none one behavior, depending on each organization. We have seen that a large portion was just for trademark owners and they're just doing for securing them; they haven't enabled them yet.

There are some problems with the hosting company so if somebody just had a domain name, the hosting company doesn't exactly know how to configure it; it doesn't know how to deal with it. We have done seminars internally; we have YouTube. We used YouTube to explain how to host it, how to convert it to Unicode or A-Label and then host it.

But still the community or the hosting companies have problems – not within them. Actually they have a solution like C Panel and other tools that are… C Panel actually is ready but there are other tools that are not ready. I forgot their names actually. So also people cannot use… The only services available is web. Email is not ready; they are asking for it, the users are asking for email. We said, "Please hold on; it's coming, just give us some time."

Hopefully, email we'll finalize it within this year, but still the only thing they can use is only either just a domain name for web use or just for securing and don't use it. That's it.

Naela Sarras: Okay, thank you. So I'm going to move to the next presentation and I'll take the gentleman in the gray shirt after the one question we know we have pending and then you, okay? So next I would like to move to a slightly different experience here that we want to hear about. This will be an update from Dr. James Galvin of Afilias. This is an update on IDN email. I believe you presented on… or Afilias presented on this at the Cartegena meeting in Colombia and we asked for an update on this. So…

James Galvin: Thank you, Ms. Sarras. It is truly a pleasure to be here on this side of the world where internationalized domain names are such an important part of everyday lives. We have a solution for you.

So far we've heard multiple people talk about all the presentations have been primarily about internationalized domain names and one of the things we'd like to focus on is a particular application. It was mentioned by our friends here at saudiNIC. They obviously have done some work in that area and our Saudi Arab Emirates questioned the need for dealing with the issue of IDN email.

This is a standard look at email architectures. You've probably seen it in different versions before in the past. It's basically a look at how you can structure email message, it gets submitted to your local server, it swirls around the internet for some amount of time and finds its way to your recipient's email server and goes into file storage and they get to look at it.

The important thing to notice here is that all of the email addresses are in ASCII so the domain names are all in ASCII, as well as the left-hand side of the @ sign which is also all in ASCII. Obviously it seems pretty straightforward that the place that one wants to get to is to have your email address also allow you to use your local language.

So we've had a lot of discussion here today about internationalized domain names which would be the characters on the right-hand side… internationalized domain names on the right-hand side and what you can see here by example is we have an example of an internationalized email address where the left-hand side now includes the local language and it's not U.S. ASCII.

There's been a working group in the ITF which has created some standards for email address internationalization. What's important to note about this work is it has significant changes in all parts of the email system so also the protocol SMTP that's used for moving messages around, the IMAP protocol which is used for how you get your email message when you want to look at it and get it from your server and then, of course, the underlying servers and technologies. And we have gone and implemented all of these things and also included a management console with which to manage it.

So the main parts of this which are available today – we start with what we call our sandbox which was launched in 2008. I want to emphasize the 2008 because all of my colleagues here on the panel talked about launching their efforts in 2009, so we've been at this

at least one year longer, although it's probably fair to point out that they've been thinking about internationalized domain names a lot longer than we have.

But it's also, we support 14 languages today which happens to include all those languages represented up here on the table today, as well as many more and very pleased to be able to say that. We also have a version of our system that's available to cloud solution, so it allows for rapid setup and new usages, new clients and it comes with a mobile web client, as well as we have implemented some IDN mobile email clients.

So we have a client for the iPhone, as well as Nokia phones and the Android in addition to the web-based email client. So it has broad applicability.

One of the things that we learned in implementing this system and doing all of these standards that were created by the ITF is that if you have an email message from an IDN email system, it cannot be delivered to a legacy email system, a U.S. ASCII-based email system and that's what's represented in the second example here on this page.

What happens is you can see there that that from address in Russian from the IDNS MTP server – it simply cannot be accepted by the legacy SMTP server and that's because by definition email addresses are required to be 7-bit addresses. So what you have down here at the bottom is an example of, if I send a message from any email address and I send it to both a legacy server as well as an

IDN-based email server, the messages to the legacy server would fail, whereas the ones to the IDN email server would continue and work.

So we've essentially built with this email standard two clouds, if you will. You have the old legacy system of ASCII-based email addresses and the new system of IDN email addresses and you don't get to talk between them.

So what we have is IDN email gateway which in fact solves this problem. It's based on discussions that were developed inside the same IETF group which produced the standards for IDN-based email addresses and it's a gateway that insures that, regardless of the origin of a message, whether it's from a legacy system or from an IDN email system, for example, the one that we have as represented in the lower left-hand side of this picture, off to any IDN email based server, that it's possible to send the message and all the recipients will be able to receive it and they would all be able to reply and the message would come back to all other participants in the message.

So taking a look through very quickly what these things look like – if you look at this example, you can see that we have a from address that's Russian and a to address that is Chinese and an ASCII-based email user in the cc address. And this message can be sent; it can be received by the ASCII-based email user – this is just using Gmail as the example – and it does show you that what the gateway does to those email addresses – the Russian and the

Chinese – is it maps it and it creates a unique version of it that the gateway knows about.

And if you look at the @ sign in those two email addresses – the one in the from field and the one in the to field – you'll see that the right-hand side is a domain name that is in ASCII which is our gateway in this particular case, cause it's our IDN email gateway, and this insures that when the messages are replied to, they'll come back to the gateway and it will continue to do the right thing with the email message. It'll continue to insure that all of the recipients can receive the message and it gets passed on.

It will un-map those addresses when they go back to an IDN user. So the ASCII user sees those rather long, lengthy mapped addresses, but the IDN users will see the unmapped addresses and thus will be able to be displayed in a manner that is most useful to the users. And here we just see the ASCII user replying to the message and the to field and the cc field having the mapped addresses.

Now what we have here is a quick video – it's three minutes long – which actually shows this gateway in operation. It shows an email message being sent and received and Naela here is going to bring up that video and show it to you. It's just three minutes long.

Video Starts: *"Did you know that of the almost two billion internet users in the world, only about one-quarter are English speaking. Yet the internet was designed on an ASCII-based system that only uses*

Latin characters and numbers. For years this has prevented the growing populations of internet users in non-English speaking countries to fully utilize the web in their native languages, frustrating them with every web address or email address they try to type.

Internationalized domain names or IDNs allow non-ASCII characters to be utilized in domain names. Afilias' IDN email is based on global standards and provides the first fully compliant end to end solution to internationalized email so that web users can send and receive email in their own language.

Soon these IDNs will be brought to the right of the dot in the address bar. One of the first of these is .jo for the country of Jordan. We'll now demonstrate how Afilias' IDN email can allow a user for the first time to send and receive email completely in Arabic including their email user name, domain name and the top level domain of the address.

Using Afilias' IDN email solution, here a user can compose a message in Arabic and send it to both a fully Arabic email address and a regular ASCII one. Another Arabic user can see the email in their inbox in their native language and when they read the email you can see that the address remains in its intuitive and original language format.

In addition to IDN email standards, Afilias also supports the conversion process from an IDN system back to a regular ASCII system, a process known as downgrading. Afilias' unique and

proprietary idea and gateway technology enables this process and helps any email provider to revolutionize their platform and customize it for global users, even supporting languages that read right to left.

By the end of 2010 the mobile subscribers are expected to surpass more than five billion users, led mostly by growth in non-English speaking markets like India and China. Over half a billion people accessed the mobile internet in 2009 alone so naturally Afilias' IDN email solution can support mobile email too.

We have developed custom maps for mobile devices, allowing users to send a fully IDN email in Arabic to either an Arabic or English user by simply using their native keyboard on their phone. Other Arabic users with the app can receive the email and view it in a fully IDN environment, just like in our web application. And of course, the mobile app also supports downgrading to ASCII only environments."

"I use Chinese as my primary language to communicate with my friends and family. I believe that IDN is important because it really helps to bring people together who otherwise wouldn't be able to communicate effectively because it allows me to communicate with my friends and family in a more natural fashion."

(language)

"Afilias' IDN email solution supports many languages and is a perfect complement to your email service. The technology is

available for beta testing or for full licensing today. To learn more, visit Afilias.info/idnemail."

James Galvin: So thank you very much. If anybody would like more information, we also have a booth out here, so thank you.

Naela Sarras: Thank you, Dr. Galvin. I will move to our last presentation of today. This is going to be Mr. Jonathan Frakes on Engagement with Application Developers and Universal Acceptability of IDNs. Let me load up your presentation.

Jonathan Frakes: Thank you very much, Naela, and out of respect for people's time and so that we have some room for questions at the end, I will accelerate through this, but the slide presentation will be available online listed in the meeting. If those of you attending would like to see more of the detail, you're welcome to go through those.

My name is Jonathan Frakes. I'm here representing the Mozilla Foundation. I'm a volunteer with them. They write a popular web browser software called Firefox, but I'm going to talk to you about a couple of community projects that they use… that they do that I am helping as a lead contributor on, the first of which is the public suffix list which essentially is a list of all known public suffixes.

Essentially it descends to each level of the extensions under which one can register. What it does is it rounds out, complements and enhances the IANA list of domain names. And the reason that something like this is beneficial is that it helps to create a richer, more appropriate experience for users of browsers, anti-spam, security; it's used by some search engines and in other languages essentially so that they can be aware of what is or is not a top level domain.

It was originally designed to help browsers work, but it's ultimately come into use amongst Firefox, Google Chrome, Opera and other browser software, as well as email clients. Google's Java Libraries – there are libraries for Perl and PHP and web-based or telephony development packages such as Nokia's QT, as well as Ruby on Rails, another popular development package and JavaScript. There's other software packages operating systems and other derivative uses.

Now the significance of that is initially application developers would have a very simple process with a very static list of top level domains. If it had two characters it was a country code; it if had three characters, it was a gTLD. But over the course of time, that certainly evolved and now with the ccTLD Fast Track for IDNs, as well as the new TLD Program Approval, being able to validate what is or is not a top level domain has become a very fluid process that's going to have more and more changes.

So the specific software developers who are derivative users of this public suffix list are basically using this one central location that is

updated by the ccTLD administrators and curated by a small group of volunteers, essentially have derivative works. So as you add new top level domains and you want application developers to have access to your domains in IDN, in ASCII, in whatever means, it's good to make sure to get that top level domain or that sub-domain added into the public suffix list and I encourage registries to take that effort.

And, in fact, Jonathan, I noticed that there are some sub-domains of .hk that I would like to work with you to help get added to that so that they work correctly in the browser. I will talk with you later.

The next piece is the Mozilla IDN Whitelist. Mozilla Firefox 4.0 has been downloaded over approximately 230 million times. It's got a very large install base. It's fully localized into over 80 distinct languages and growing. There's a deep commitment from the community of volunteers to enhance localization and create a richer internationalized domain experience.

However, there is a need to make sure that that's a safe process for users. There's a very common example of what's called a homograph attack or a potential homograph exposure where the term PayPal can be composed in mixed script to present the URL as PayPal, where it might be composed of some Cyrillic characters and not actually be the classic PayPal you would seek to go to. And that would be bad user experience for someone to go there and enter in their user name and password and have a very bad financial occurrence happen from that.

So that creates a vector of opportunity for a bad actor to potentially create a problem. And the developers in the community have recognized that there's ways that this can be protected. So one of the things that happens at the Mozilla Foundation is there's a list called the IDN Whitelist that helps protect against such homographs such as the Æ character. The AE compressed could turn into an AE and other characters that composed together look visually similar to other strings.

So what the browsers have done is, and in fact I'll speak towards what Firefox does, the default behavior for Firefox is that it will show A-Labels in the location bar. Now for IDN TLDs and sub-domains, this is very important to note. It's not really a pain point because people will still be able to access the information; however, you'll probably get calls from your customers because it's not showing in Arabic or Chinese or Hebrew or Urdu or whatever language you're hoping to show. You'll see xn--something.

What the browsers, at least at Mozilla have done is you must be Whitelisted into this list and in order to get there, you have to provide information about your policies, show where you can't have that same type of duplicate domains presented and basically identify that those need to be… there's a policy as to it's not possible for two people to have separate registrations for the same visually similar string.

And so we follow the ICANN IDN Guidelines v. 2.2 which essentially says, "List the domains that you allow and all others are

disallowed. Show your character set." And then we follow the rules in Unicodes Technical Reports. You know, publically document your enforcement policy on confusable characters and if two domains are allowed to be single script or mixed script confusables.

What we essentially do is have registries submit where they have that information, their policies, their registration information and unless they do that to where we can review that and make sure that it's not possible for confusingly similar characters to be displayed or multiple registrations, we will not add that to the list.

Once we've added it to the list, the domain name will show in native form the U Label will show in the browser, but until that time it does not happen. And it essentially creates a situation to visually expose homographs so that users are less likely to be tricked or confused. That helps the community of people who are not necessarily technically sophisticated and it's an additional visual cue that helps to protect from phishing or other malevolent activity.

Basically the Whitelist can be reviewed, all the policies can be reviewed. There is a URL that I've provided on the screen and in the presentation. You can go there to review it. It's at Mozilla.org and if you are a ccTLD administrator in the Fast Track, you can add your top level domain. If you are a ccTLD administrator or a gTLD administrator who would like to also add yours and you're adding IDN support, you can add those as well.

Please see me, email me or use the tools that I've made available by link in this slide that has been provided. I thank you and I think we're ready for the questions.

Naela Sarras: Thank you. So what we'll do is we'll take the two questions we already have from the floor. I'm sorry. I didn't get your name. Can you come up and ask your question? And then the gentleman in the gray shirt and then we'll take questions from online. And I realize we're running overtime. I do appreciate everyone's time. This is exactly what we anticipated – that there will be a lot of questions that will be generated here so thank you for your questions.

Sivasubramanian Muthusamy: My name is Sivasubramanian; I am from ISOC India Chennai. IDNs have reached the internet to the next billions, but how do users communicate across IDNs and what is being done to make IDNs identifiable to speakers of other language to whom the script may not be legible? Will this be the next level of IDN policy development? Is there a possibility that ICANN could work on dual stack names for the next phase, for the future?

Naela Sarras: Go ahead, Dr. Galvin.

James Galvin: I guess I'll comment first to your question about is this the next level of policy development. I mean, I don't think it's a policy issue at this point. The question that you're asking really is a regional issue. If the name is available, people have to know it's available and then the users have to start to use it. So I think it's a market issue; not a policy issue and a regional issue; not necessarily one for ICANN. You're asking about users and the next users of that, of internationalized domain names, correct? Do I understand your question?

Sivasubramanian Muthusamy: No, not at all. So far multilingual sites had ASCII names so as a user who does not know that particular language, I could at least guess the content of that site from the ASCII name. Now even the name becomes unintelligible for me and what do I know just by looking at a Chinese website with a Chinese name? I don't even know if it's a textile web or if it's some other web. And that knowledge contained in the website is lost to me. How do I search for it? How do I identify that site as a Chinese website with a certain content? Don't you think all this should be addressed in the next level of IDN policy development?

James Galvin: No, again, if I understand your question, if I don't speak Chinese, I don't think I'm interested in Chinese websites.

Sivasubramanian Muthusamy: But I'm interested in the knowledge contained in a Chinese website, so, so long as that has remained in English, there was a free flow of knowledge and I could connect to a site across; so both the policy and the technical questions.

James Galvin: I think you're asking for translation responses and…

Naela Sarras: So we'll ask Raed to please respond to this and then if anyone wants to speak, please get up to the microphone for the sake of our remote participants. But we'll let Raed comment and then we'll take the next question.

Raed Al-Fayez: Actually if you think about it like a business card. If I give you a business card that have Chinese and Arabic, which one you can read? Okay, if I give you English and Arabic, which one? Okay, for you English, but maybe for other people there is Arabic. Same thing for Chinese people that use Chinese. I think it's based on the audience for the content provider. If someone have a content and this content totally in Chinese, I think – and he is targeting Chinese people – it will be better to put Chinese label on there, not ASCII label.

You know ASCII label, but someone else may not know ASCII label. Same thing for Arabic, exactly the same story. In order to reach or to expand internet users, as what you have said the second

billion actually, these people doesn't know ASCII, don't know English. They speak their own native languages. So in Arabic they cannot use also search engine providers because they need to type Google to come, or at least their home page, Google would come.

And this is not always the case. What will happen for email addresses? If a native Arabic user or native speaker for Arabic language want to send an email and he only know Arabic characters, he doesn't recognize the ASCII, he doesn't know a or e or g or nothing else, he needs to have his own language.

Now from policy perspective, these are two different parallel, you know, evolutions. ASCII was here from the age of internet; the IDN was only introduced in 2010, so I believe everyone for Saudi Arabia have one policy for both labels; they are exactly the same. It do the same thing exactly. If there is something needed in the Arabic script, for example, we have different language tables. This is the only difference. Other options is for the content provider.

He wants to use one domain, he can do; he wants to use two domains and double (inaudible) – it's totally his choice. And that's it. I think in policy we cannot enforce, and we haven't done that because you can't enforce people to, once you register on ASCII you should register in Arabic. I think this is not good practice from policy perspective. This is based on marketing, user needs, etc. This is my own view for this.

Naela Sarras: Thank you, Raed. Please go ahead.

Atef Loukil: Atef Loukil from .tn, Tunisia. I want to ask the gentleman from Emirate and Saudi Arabia – why do they block the variants and not just simply consider them as typo errors that could be made. For example, if you are just on Facebook.en with 00 or 10, it's just typically the same and the example in the Arabic language could be (inaudible) and Koran which basically mean the first, they are variants as you've explained, but the first one means Koran and the second one means marriage and they are really two different domain names.

Abdulrahman Al Marzouqi: From our perspective, I think it's a bit different from Saudi as well. The variant is one to one mapping for certain letters which is Aleph with a different representation of Aleph (inaudible). So these the only three letters that we've actually created variants for them and there's one to one mapping.

So for example, your example, Kiran and Koran, if somebody just said Kiran, then Koran will be automatically blocked and he will be the only one that will be eligible to enable it and the system will automatically delegate it if enabled to the same name servers, so you can't point it to different directions.

Our view is that we don't want to make things complicated. IDN itself I think is for end users and people who are not

knowledgeable in IDN, it's complicated enough for them. So from our point of view we wanted to make it simple.

The other reason why we did not distinguish or try to make distinctions between domains with variants is the possibility of having two domains name s or multiple domain names which have different meanings and we wanted to give them to different people, we thought it's minimal. It's not so much of a possibility. So I couldn't think of many, many examples of Koran and Kiran to be honest.

So we thought why complicate things and have to translate all this complication to the end user while the possibility of having such scenario is not much. So this is why we decided that, okay, let's just focus on simplicity; focus on how to market it and create awareness rather than try to solve all the problems. So we thought there's no perfect solution for everything, but we'll try to capture what we think is necessary for the users and their interests. So does this answer your question?

Raed Al-Fayez: If you'll allow me, I will add to that. I will give you another example. If I wanted to register just our official organization name which is (inaudible) - in English, Communication and Information Technology Commission. If I want to just add the domain name and secure it, so I will take all the variants I need to register 64,000 variants and this is totally a burden on the user and we cannot wish that burden to the user.

So what we have done, we set the variants for different shapes of letter Aleph – [ya, ha, and ta] will be secure. And if somebody just the Koran in our registry, if you want just Koran, we will say no. This is a different word. You cannot enable it, even if you have the base string. You cannot enable it unless you have something to prove that you have a marriage or something like that. And, by the way, Koran is on the reserve list so no one can register it at all. It depends on the policy.

To make it short, our registry, we go level below, so we only enable variants, not just shapes of Aleph, shapes and the position of the letter in the word. Is it the beginning, isolated, end, middle? So we have one depth below that so even if you're just a word you may not get all the variants. You can enable just the variants that match the initial string. So this is something…

Naela Sarras: Unfortunately I can understand why the 64,000. There are a number of us here in the room that are involved in the IDN variant project that ICANN and the community are running and we're all very thrilled by the possibilities of what we have to work on.

I'm going to take the question from online – Patrick – and then we have two more questions here in the room. And I do want to make sure we get to the Gala Night. Our gracious host has put together what I understand is a good party to look forward to so we need to make sure we get there.

Male: So, Naela, Jonathan Frakes has thankfully answered the question *via* the chat so, I can read it in for everyone, but in the interest of time, Jonathan has gone ahead and answered the person who asked the question within the chat of Adobe Connect.

Naela Sarras: So you're saying we can give them the … Is it a quick question? Does it look like it's quick?

Male: The question was, "What is preventing Firefox from currently properly displaying Unicode for IDN gTLDs and when can the community expect these to be properly displayed. Thank you."

Naela Sarras: And you're saying Jonathan wants to provide the… Go ahead.

Jonathan Frakes: Well, I already responded. It can depend upon what version of operating system and browser you're working with. The community is constantly updating which of those strings which are added to the Whitelist and they must conform to some of the specifications in Unicocde TR 36 and ETR 39 as well as the IDN Guidelines.

And it just basically boils down to can you register visually similar domains that might create a vector for phishing. Specifically, the person asking the question, [Moshi], he's referring, I think,

specifically to [Commonet], and there's a lot of work being done; but because they were early innovators, and kind of as a consequence of all the work that they did in the launching IDN second level, the standards have evolved and there are some things where the situation still exists that homographic attacks could happen and that will still need to be addressed before they get added by the community. That's what's up.

Naela Sarras: Okay, thank you.

Joe Cadey: I'll try to be real brief. Joe Cadey, STG Interactive. I just thought of a spin a bit on the answer to the questions about the ability to read ASCII and for those who would rather see ASCII characters in their URLs, perhaps the question is to maybe put it on its head is as long we have the capacity to create IDNs, do we have the right to oblige people to put ASCII URLs, in a sense, as long as we have the IDN technology.

As long as we don't use it, we are in a sense obliging people to create URLs, domain names, etc., in a language that is not their own. It's a strange spin, but in a sense it's the progress which obliges the policy to move forward in that sense. That's the way I look at it. Thank you.

Naela Sarras: Thank you.

Subramanian: My name as it happens to be, I need a little bit of background for the answer to this question – a little bit of background is probably useful. My name – I happen to share the same name as Subramanian, as the gentleman who asked the question, the earlier question about having English URLs.

Additionally my background is I've been at various points involved as a faculty member at Stanford and at the Singapore University, but my current capacity is here as the IDNS.net, the company that helped pioneer IDN. In fact, I'm the person who coined the term IDN 11 years ago here. Now, when the technology was proposed to me, I helped invent it but it was already mainly invented both email and versions of IDN today, at least in the modern version in 1997-98.

At that point in time I am fluent in two languages, actually three or four. And when it was proposed to me I came to the same conclusion initially that why bother, English domains are there. Why? Took a while for me to understand it – I'm fluent in a few languages.

But the presumption is when you say why have English, there is a presumption underlying that position. The presumption is that English is special. I mean, that has to be because you're just saying it's English so I want it there so I can look at… We can use Chinese as the medium for figuring out across languages because there's more speakers or something.

I mean, that could be the language. Chinese could be the language that could be the central language. Everybody else has different versions and use Chinese to figure out which way, just like the proposal was that you'd use English.

Now to follow up with the spin that the gentleman just brought up, that's like saying if AT&T invented the phone as we know it, the telephone as we know it in America, just because the phone, I can make the phone, everyone should speak in English on the phone because everyone learn English to use the phone. Why that language? That's the point I wanted to make regarding that.

Who chooses which is the language and the world is a rich and diverse place. Some day there may be more Mongolian speakers than English. We don't know, right? No. 2 – the second point I wanted to address and I'll close that end.

I happen to be a scientist, so I like to stick with truth as much as I can so it may seem a bit rude here but I think people like Jonathan Frakes, who was there back then and there was [Zoman] who isn't here from UAE and Jonathan Shea is there, I think Dr. [Gehan] is here. And it is true – and I bring this up only because I've already pointed it out to Ram Mohan once.

IDN email was actually first sent in 1997 and 1998, an experimental method. [Takil Nanjan] was the head of the APNIC association, yeah, I received one Korean in Tamil. After that point in time, in 2000, there was a company that was called – I just so happen to have it in my pocket – we have a million pens left over

from that company after it dissolved – and $3 million was raised primarily by me from people up in the same building here.

And IDN email was launched back then in Taiwan with Taiwan.com which was a big portal at the time. Hundreds of thousands of people used it exactly in a similar way, patching all the various things. It has happened before. It was done but it was done with race. Since then Pinnacle had moved on. It's been applied elsewhere. The same things, exact same things – patches and so on.

So it's incorrect to go ahead and say this is the first complete demonstration or we've been at this since 2008. That's just incorrect, you know, and I'm just pointing that out. That's all. No one else is saying that, you know, but that's the truth. Sorry to end on a rough note, but there is history. Thank you.

James Galvin: Thank you for all of that and I don't dispute anything that you said except that I don't believe I said we were the first IDN email solution, and I only said that we'd been working on it since 2008. So, but other than that all of your history is fine and I agree with it and I understand. Thank you.

Naela Sarras: Thank you everyone. I want to actually make one more last comment. There was a comment during your presentation about the processes and making IANA processes a little bit more clear.

And so there are experiences that we as an organization also learned through the IDN Fast Track process and I happened to be working in the IANA delegation during that time and I assure you that it is something that we also learned was our experience that the process needed more explanation and the user needed to come into the process knowing what it is that they had to provide to ICANN and IANA.

So we've tried to build in more clarification throughout the process and maybe even before you come to the process for delegation maybe explaining the requirements a little bit more. So it's something that I do want to show everyone here that we are working on providing that documentation, publishing it, it is something very much on our minds.

With that I really want to deeply thank everyone here that presented. This makes us just understand the challenges ahead of us and know that we have to work even harder in the Variant Project and every other area of IDNs where we're involved.

Thank you so much for your experiences, for your lessons that you're teaching us here and thank your gracious host for your party tonight. We're looking forward to it. Thank you everyone. Good night.

Male: Yes, the local host welcomes you to the Gala dinner. It will be held at the Suntech City. There will be ushers outside that will point you to how to walk to Suntech City. Basically there are two

ways – it's either underground or above ground. It will be a bit warm above ground, but if you would like to go out on the grounds, there are shopping areas and there's also the I-Experience Center by IDA that you can visit along the way. If you want to just look out for the ushers, they are… It's not hard to identify them, and I wish you a very enjoyable and memorable night tonight at the Gala. Thank you.

[End of Transcript]