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APrIGF 2017

"ENSURING AN INCLUSIVE AND SUSTAINABLE DEVELOPMENT IN ASIA
PACIFIC: A REGIONAL AGENDA FOR INTERNET GOVERNANCE"

BANGKOK, THAILAND

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WS. 1

UNIVERSAL ACCEPTANCE: AN ELIXIR TO INCLUSIVE AND MULTILINGUAL
INTERNET

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>> AMRITA CHOUDHURY: Good morning, everyone. I think we are
going to start our workshop.

(Lost English translation.)

>> AMRITA CHOUDHURY: I was actually ... (lost audio) to Bangkok
and with me in the panel today, we have several people who have
been working for long, Edmon Chung from the DotAsia Registry.
Most of you know Edmon Chung but I will introduce him briefly.
He's an expert in the IT development and he has been involved in
this domain. He has also been involved in the technical
standards and policies related to IDNs, an inventor having many
patents in various technologies and email addresses on the
Internet.

We have Thaniya Wongsuanoom -- I'm sorry if I made some mistake
in pronunciation. He's from the Thai Network Information Centre
which manages the Thai IDNs and the --

(Audio distorted.)

>> AMRITA CHOUDHURY: Policy development and security awareness.

We have Jian Kang Yao who is the Senior Engineer from the China Internet Network Information Center, also one of the recovery key shareholders, having the responsibility of keeping the key. One of the seven which can reboot the Internet. He's an important person.

And we have Ashish from India, he's country head for offices of Xgen Plus, India, between governments and various other countries. Xgen has their own email system, email service system in local languages, both in Indian and others, I believe. Harish will be joining remotely. He is from the National Internet Exchange of India and has been involved in many of these issues.

The reason we are here, all are aware that the Internet is the greatest leveler. It has the potential to give the benefits to the haves and have-nots equally. Unfortunately, most of the Internet we use today is English. And more than half of the world whom we need to connect today are not English speaking. That actually gave rise to the need to have local language domain names, email services and that led to the growth of IDNs and ccTLDs and gTLDs and localized language. While there has been certain amount of headway which has taken place but the road is bumpy and there is more to be done. Perhaps the panel today could speak more on the opportunities, the challenges which they foresee and learn from the best practices from each other.

Without much ado I would start the presentation which Harish had to give. And he will chip in whenever he wants to.

So the agenda primarily of this presentation is an introduction. What is universal acceptance? He would want to give you a highlight of the linguistic diversity in India. What is IDNs? The challenges. And what has been done so far?

ICANN has given a definition for the universal acceptance and they have a steering group which basically says that all the domain names or all the country code TLDs or emails should be available, should be acceptable, should be validated, should be able to process and display in the similar manner. It is there in the website, but I'm trying to summarize it so that we can stay on time.

There is a lot of linguistic diversity in India. We have 22 official languages. We have more languages. We also have newspapers in 35 languages. And though we have an English speaking population, more than 70 percent of the population do not speak English. Internet penetration today is 17 percent, not 2 percent which is written in the slide.

And we have most of the Internet users in the country are predominantly mobile Internet users.

Internationalized Domain Names enable people across the world to communicate or write in their own local languages. It could be in different languages such as Arabic, Chinese, Cyrillic or Devanagari. It is coded by the unicode standards and used as allowed by IDN protocols which have been set by IETF. Typically IDNs are stored in the system as ascii strings using unicode. I am not a technical person. I look at it from the policy perspective. Excuse me if I go wrong on the technical -- (Audio distorted.)

>> AMRITA CHOUDHURY: Ensure that you reach the local, the people who speak local languages and to have a multilingual Internet ecosystem.

And this basic graph gives you some amount of information on the importance of having localized languages or the importance of IDNs because most of the people do not speak English. For a user, it would mean the benefits of IDNs include that they do not need to use a U.S. ascii. User has a choice. It allows them to use domain names in the local scripts. ccTLDs and gTLDs are summarised with the IDNs Internationalized Domain Names is what the community needs. It gives choice to people, it creates competition in the market. There are new ways in which the user, it allows localisation and also branding for companies. So the I in the Internationalized Domain Names means that the Internet is equally accessible in all languages. And it is all about localized solutions. There have been challenges in the implementation of IDNs. That is why we are here to discuss it. There is a lack of awareness. There is a lack of trust. The email support is not available and very limited to local languages. There are security issues. There are challenges in using the search engine optimization elements. There is an issue in interoperability and in terms of searching through the search engines.

So IDNs without email address, internationalisation or EAI are a challenge. It would not allow people to use it in the way they would want it to be used. There is a Working Group at IETF which is working on the email address, EAI issue. They have created a structure and framework for Internationalized Domain Names and defined a particular extension to enable the use which is of UTF8 in the envelope address in local part. Optionally in the headers. Unfortunately there are challenges in deployment. So there is a need which has been felt for multistakeholders to work together, not will only the IDN groups but the regional groups as well as the information security groups, organisations such as ICANN, Internet Society, IETF, IAB, IGF, W3C. So the issues, challenges can be taken care of. Internet architecture board has a project which is called the I18N. And Harish, for whom I am presenting, is one of the members in the

coordinating the project. Internet Society also has a project called deploy 360. Which is providing real world deployment information for key Internet technologies. And the aim, they aim to bridge the gap between the IETF standards. ICANN also has a UASG Working Group which is working on this issue. The primary objective is to help software developer and owners understand how to keep pace with an evolving domain name system. I think we have Harish on the remote. He is not there? Okay, okay.

So we will try to -- I wanted Harish to actually speak more on what is happening in India and what he and his team is doing. In case we can connect with him, we will have the updates from him. Or else I would take it up at the end, if that's okay with everyone.

Is he there?

>> (Speaker away from microphone.)

>> AMRITA CHOUDHURY: Do we wait and have the other speakers speaking and we come back to him? Would that be okay? All right. If we can connect Harish later I would like him to present on the other part. We would like to go to the next speaker who is Ashish. He will be speaking on the initiatives taken by his organisation in providing emails in localized languages.

Can we have his presentation? Ashish?

>> ASHISH MODI: Thank you, Amrita. Meanwhile the presentation gets loaded, first of all I would like to thank the organiser for inviting here for presenting this important topic of universal acceptance. Before starting I would like to ask everyone present here, how many of you are aware that domains are available in your local language, other than English? Show of hands.

Say ten?

So we can see exactly here that why the session is here today. And why it is so important. People present here are not aware that domains are available in their local languages. So my presentation will focus on Email Address Internationalisation and IDNs. I hope at the end of it you will be interested to have your own email IDs in your own local language.

>> HARISH CHOUDHARY: Hello.

>> AMRITA CHOUDHURY: Harish, would you like to speak about the India initiatives?

>> HARISH CHOWDHARY: Okay. Good morning, everybody. I'm Harish Choudhary and thank you for giving such a beautiful introduction, Amrita. Am I audible to everybody?

>> ASHISH MODI: Yes, you are.

>> HARISH CHOWDHARY: Okay, thanks. So in India there are recent developments regarding the IDNs and basically in India we

have 22 official languages. And now in 2014 we launched 15 languages covering seven scripts. And they were covering so many languages like Hindi, (listing different languages.) And for remaining eight languages, they are Delegated as IDN ccTLD, the Internationalized Domain Name, country code top level domain, other languages in the month of June. Now India has 16 ccTLDs with 15 IDN ccTLDs.

So that means we have 15 ccTLDs in local languages covering 22 languages. So that Indian population in the light of digital India can connect to the digital world through the Indian local languages.

And NIXI provided more than one ccTLD to be distributed free with .IDN domain. If you have .IDN domain, you have a ccTLD for India in different languages for free. Now there are over 27,000 domains present in India in IDN ccTLD. The numbers are low but keep ongoing. Apart from that we have developed in the keyboard for the smartphone so people can type in their, so that they can use domain names in their own languages. They can provide input in their own languages. We have in India there is a brand called Micro-max which launched mobile phones which supports Indian languages. There are also smartphones in India which runs on INDUS OS and they support so many languages. In the same way there is also mobile phones like index which are supporting 21 Indian languages including (listing languages.) There is only known EAI service provider is Xgen Plus and I think Mr. Ashish will give more light on it. And email is also in the process of developing EAI services.

So why I am describing this? Because this issue is very important for connecting next billion population to the Internet. And out of 500 million out of 1 billion are from India and Asia-Pacific Region. More than 500 million are from Asia-Pacific Region, and it is very important for our region to provide the solution and it is very useful, which is universal - the concept of universal acceptance is useful for keeping all the domain names equally in the digital world.

That is what is not happening right now. We have to look into this issue very seriously because this is again a form of digital divide in the future. So our government of India is the idea of universal acceptance. Yes, they are aware of the issue and we have done so many roundtable consultations and we have invited Microsoft, Yahoo, Google, and everybody to understand what is the issue and then what are the main outcomes. She say publishers need to be made aware of the unicode. And what is the lack of trust for IDNs and then we have been meeting in July and at the time of the meeting most of the common browsers were displaying IDN in Hindi without effort or changing anything on the system, but now with the recent development of HTML5.2

specifications there could be issue that the local part would not be displayed in the unicode format. So this could be again the issue and I believe that our community should engage with W3C on this issue. We have to provide the inputs. I think Edmon, Mr. Edmon Chung will describe more on it. And we all are discussing this issue in the UASG Working Group.

We have done one meeting in August with the email service providers and industry positively responded, Xgen Plus responded. Some views how to promote contents on the websites in unicode and how to prevent the emails IDs from phishing and spoofing. That is a big issue. There are so many, you know, reports on phishing and spoofing through the IDN domains.

So the ...

(Lost audio.)

>> HARISH CHOWDHARY: Next steps? I believe we should have an emailing list and we have to, APrIGF as well and we have to discuss this issue, how to deploy it and how to provide the security. If there are some standard needs to be changed at IETF level, the task force has to create a Working Group there and we have to work upon it and we have to coordinate with all the stakeholders, all the I star organisation because this issue is very big. And I think as per my research last year, one of the organisations like ICANN, IETF cannot solve it alone. We have to solve it together. By making all systems interoperable, we will reach the next one billion users through an increasing number of new domains including knowledge and based knowledge, including domain names and local parts. That is very important for us and I hope we may, you know, solve this issue together. Thanks. This is all from my side today.

>> AMRITA CHOUDHURY: Thank you, Harish. One question in case you drop out. You mention that you have been in various, various users have been given Internationalized Domain Names. Have you done any kind of survey to see how many have used it or what are the issues they faced?

(Loud static.)

>> HARISH CHOWDHARY: Hello?

>> AMRITA CHOUDHURY: Did you hear my question or should I repeat it?

(There is no response.)

>> AMRITA CHOUDHURY: Okay. I think we will go on to Ashish. Harish is kind of not there.

>> HARISH CHOWDHARY: Hello?

>> AMRITA CHOUDHURY: Yeah, Harish, we can hear you. If you can respond? That will be great. In case you're having difficulties.

>> HARISH CHOWDHARY: Yes, yes, I can respond.

(Loud buzzing noise.)

>> HARISH CHOWDHARY: There is some time lag but I can still hear you.

>> AMRITA CHOUDHURY: So my question was that you have provided IDNs to various NIXI users. I wanted to know if they used it and what is the kind of feedbacks you have got?

>> HARISH CHOWDHARY: As per the current statistics there are 27,000 IDN domains. And half of them are reserve domains and half of them people are like using. But the issue is the displays, you know, in the browser and the email address internationalisation that means they can not use right now emails in local languages.

So that is the issue and we are trying to solve it.

>> AMRITA CHOUDHURY: Thank you so much. If you can be online, that's great. We will have Ashish speaking now. At the end there might be some questions for you.

>> HARISH CHOWDHARY: Sure.

>> ASHISH MODI: Thank you, Harish.

So I start with my presentation. So in the slide you can see, I just explain briefly about domains. So you can see at the end top level domain, followed by the second level and the next level. What is a domain? Simple language. It is used to find people on the Internet. You can say Internet addresses. Every computer Internet has a unique number like a postal address, we called it IP address, Internet protocol. It is difficult to remember. Instead of numbers, DNS uses letters, hyphens, numbers to make it more easier to remember.

Domains like country code, top level domains, ccTLDs, and top level TLDs. Basically result for a country, .BR for Brazil, and more than two character level like .org.

Since 2006 the domain systems has expanded not fueling choice and innovation but truly enabling a multilingual Internet.

There are now more than 1500 top level domains, many of which are longer than the traditional two entry connectors. For example, .com, .net, .org and others, or scripts such as Urdu, Tamil and more.

Harish's presentation has already spoken about it, but briefly talking about IDN industry, since the last 17 years, first IDN was made available in 2010, and India started in 2014.

So now the slide shows you domain and IDNs. You can see until late 2009 top level domains were restricted to the letters A to Z, without signals. After 2009 IDN TLDs were introduced in scripts that you can see there. .org, which I gave earlier, but now we have options in Arabic, China and others.

This is a huge opportunity. As Harish spoke there are in India, only you can see only 30 percent speaks English. If I talk about globally, 40 percent of the world population has an Internet connection today. 1995 it was less than 1 percent.

The number of Internet users has increased ten fold from 1999 to 2013. And the first billion was reached in 2005, second billion in 2010 and the third billion in 2014.

So you can see how much the opportunity lies here. 2020, you know, it is expected more than 5 billion.

As Harish told, Xgen is working in India on email IDs and regional languages. Examples, we have 22 official languages. What you are seeing here is the email ID which we are offering in local languages or regional languages in India. Some examples, (listing languages.) We have .paret, which is provided free of cost to everyone. This is what we are promoting in India and expanding it. So people can have, those who do not understand English they can have email IDs in these languages whatever they are comfortable in India.

If you talk about internationalization, we are there in Chinese, Arabic and others also. We are working with Russia with this dot ... we have launched some back in Russia on this project. Four characters, there are 56 characters but under UTF8 there is no limitation of characters.

What an email should have, all the major components are available with our services. Web mail, iMap, POP. SMTP, anti-spam, search, storage, everything comes under it.

There are a lot of global challenges. As Harish talked about, there are challenges faced in India and outside India also.

How it works, ISO mail clients do not support EAI configuration.

Major email services are not ready. Social media is not supporting it. Your Gmail you need it to log into Facebook.

There is no regional email IDs which you can log into. So we have to, we are still facing these challenges and work on all this. Then only we can go ahead with this project.

Unicode was again mentioned already, but I will again (audio distorted.)

>> ASHISH MODI: We are using Internet host names, using the unicode characters transcoded to consist of letters, and hyphens. You can see this is a way to represent international IDNs. An example, in IDN you right, in Punnycode it will look like this. So there are hyphens, symbols mentioned in it. So now you can have email IDs with symbols also. You can see. You can have heart symbol for one girlfriend. If there are two, you can have two hearts.

(Laughter.)

>> ASHISH MODI: You have a lot of options available now in this email system.

For contacts, many people have mentioned handwriting. You can have email ID with these symbols.

We are talking about universal acceptance. So I will take a little time about this. What is it? A concept that all domain

names should be treated equally in simple language. How does it feel if the world can navigate entirely in local languages? Is it possible? But only with the support from everyone. Internet applications and systems must read all TLDs in a consistent manner, including new gTLDs and internationalized TLDs. As told specifically, they must accept, validate, store, process and display all domain names. Many organisations and businesses have not uploaded their system to accommodate the new domains. In other words, become universal acceptance ready.

Internet connected devices and systems are not able to accept, validate, store, process display all domain names. This causes a headache for users. If the application does not recognize or appropriately recognize this, it will result in the loss of a customer and poor user experience. That is why we are pushing it that people should have more and more their system universal ready.

What are the resources available to assist you? I am quoting from ICANN. To address this issue and provide support to stakeholders in leaders such as Microsoft, Apple, next general plus which they have said, apart from universal acceptance in growth, the UASG exists to help organisations and show their systems are able to accept all domain names and email addresses in local valid script.

So these are the companies supporting, Gmail, Yandex, Postfix, Hotmail, et cetera. If I send it in Hindi to Gmail, it will display. So they are supporting it.

There are now emojis also available. More email addresses. In the last 17 years in this email solution experiences, we have more than -- Harish was talking about 20 mail. With Datamail, we have 12 million email accounts. There are no source components, 100 percent control over the solution customized and it is India's largest email service provider. You can download our app and have your free mail ID, from Datamail. Thank you. That's it.

>> AMRITA CHOUDHURY: Thank you for keeping time. We will have the questions and answers after all the presenters present. Next we have Thaniya who will be presenting his .TH experience. Thank you.

>> THANIYA WONGSUANOOM: Thank you. Okay. Good morning, everyone. My name is Thaniya Wongsuanoom from I come here to talk about Thai EIA and give an update. This is some statistics that are about Thailand Internet penetration, names and EAI accounts.

We have about 39 percent penetration with 43 million Thailand Internet users. In 2017, we have about 66,000 .TH domain and 18,000 of .Thai domain. Our IDN.

We already launched our EAI service in June 2016. We have many accounts including four types of EAI accounts that come from free services that we provide for our customers who have .TH and .Thai name for their account. Second is comes from commercial service that our customer can be stand by an additional account. This comes from .TH, sorry, from TH mail migration to EAI service and four come from con.Thai.

Okay. This is the Thai EIA. In 2004 we launched IDN.TH. So we also developed services until 2011 we launched IDN.Thai. That is our Thai IDN for the first time.

This year we launched EAI service for the system in enterprise version. We launched contribution.Thai. You can use EAI in Thai domain at con.Thai. We provide TH mail migration to EAI service to our customers who want to migrate their own email system. That is not supported by EAI service. This year Thai NIC did a good thing for pushing this forward to our IDN service. We connect ...

(Audio distorted.)

>> THANIYA WONGSUANOOM: So what is the language limitations? Why do we need an EAI IDN? This is a problem that we show you. This is a high problem.

Okay. You will see ...

(Audio distorted.)

By Kai. We can pronounce in all the most, the most way as Kai but in Thai we call high, high, Kai. These are most common problems for Thai people to, who want to communicate with foreign people.

This is a communication problem. From the picture you will see the misspelling problem between two persons who want to communicate by the phone. They have more similar pronounced some English characters like key or T. It is hard to listening what you want to talk to.

So these are our activities about IDN and EAI. We published .Thai journal for statistics, the subdistrict administrative organisations and the Thailand tourism offices. The content is about IDN and. We want to educate our people. This is hard to understand because we are trying to make them easily. You can use it to let them send you a product and make value.

We have Thai EAI test from 2014 until now with through Wave, Coremail, Afilias, Google, Microsoft Thailand Outlook, Yahoo, Hotmail.

There is a workshop, we organised the first EAI deployment workshop in -- EAI deployment workshop. They need some guidelines. So now we build the EAI basic deployment for people who want to set up EAI in Wikipedia. In recent Thai version. So Thai is our client on the platform. You will see my mailbox. This is my EAI at email .Thai.

So you can use and access your mailbox by using both the unicode or traditional email so that you can send your email in English or Thai at any time. Mail will be sent to the same box. It is easy to tell the Thai people with Thai email and other people with English email.

This is, when I send email with my EAI, the mail app or Google mail, they can recognize my EAI, something like this. You will see the EAI account, or my (Thai word) email in the local language.

Now, email in Mac OSX I tested on my laptop. It allows the user to add EAI account to the email and in the email app.

Because in the past, the mail app doesn't detect the EAI and in the correct format email.

We launched (Thai word) EAI service for people who want to use EAI without .TH or Thai domain.

About the (Thai word) that is a big concern. Our company supports the EAI to register our website or service platform. You see these are our domain management system that we support Thai people who have EAI to register the account. This means .TH domain contact supports EAI. You can see EAI in who is in .TH.

That is my slides. Thank you.

>> AMRITA CHOUDHURY: Thank you, Thaniya. The next speaker is Jian Kang Yao and he will be speaking from the CNNIC perspective. The presentations will all be online if you want it. They will be at the APrIGF website.

>> JIAN KANG YAO: Good morning. My name is Jian Kang Yao. I would like to share our efforts on EAI deployment from China. In 2012 we have the first global Chinese email address. This also broadcasts this very good news. So in 2014 we hosted APAC meeting in Beijing. This was funded by APAC funding. From Google and others and many friends from all over the world joined this activity to promote EAI all over the world. So we see it also provided a free account, testing with Coremail. We also was testing with Microsoft. So especially our Professor Qian, our Internet father of China. So he was a gift from Professor Qian to the Internet father. And the former ICANN COO, Robert Kahn. And we also, our Congress also promoted our EAI in China. So call for users using Chinese email address. We like to do education in China. For example, I do some presentations in Peking University and other universities to teach university students to know what is EAI, what is IDN. But many young students don't know what is IDN or EAI. We should do some education work.

So last December we also have an IGF workshop, enabling every user with a unique Internet culture ID. We have Microsoft, UASG and ETDA, we had present for this meeting.

With Microsoft, they co-chaired these sessions. So a lot of IETF and other persons joined this session.

So we also have a Suzhou EAI meeting with people from France, Thailand. We worked together to discuss how to promote EAI in China and all over the world.

So this is the First Lady is from our information organisation who manages China Internet industry. So promote how to, she also helps to promote EAI and IDN in China.

So we also encouraged open source, open source software to support EAI. So for Exim Internet supports email. We also send a mail to support EAI. So the patch is ready, but officially it is not up and pronounced.

We also are funding Postfix to support EAI Postfix. We also support EAI so you can download Postfix from their website. Qmail is also very popular. You can download to upgrade your email service.

So finally we have also email. So it is such as Xgen Plus from India, already support EAI.

So Yandex from Russia. So we, from China. Also very interesting news is one small enterprise, local service provider also upgraded their service to support EAI.

So CNNIC also upgraded their service to support EAI.

About email clients. Microsoft Outlook in 2018 supported EAI. In China, Coremail supported client, so some open source client. These are some open source client.

So we were appreciating Google Gmail's support. Gmail is the first big email service provider to support EAI. I think it is the CTO said after supporting EAI she said if the EAI deployment and EAI technology is a mountain, we need Google and Gmail would like to be the first one who climbs this high mountains.

So this is high technology company. I appreciate their efforts. Thank you.

So exchange, Microsoft. So Microsoft, so some products already support EAI. At the end of the year they already, most sources will be upgraded to support EAI. So they are currently testing with different parts of the world to make every languages available to users.

So iCloud from Apple. In the future Yahoo mail will also support EAI. Now, what is the problem? For example, in China, we only one big email providers, Coremail. But bigger email providers such as QQ.com, they do not support EAI. We like to urge them to upgrade their service. So for example, we have Chinese email address since to QQ.com. They will reject my email address. So we should have QQ.com upgrade their service.

So here I would like to suggest three phases to support EAI. According to UASG we have five steps. First, accept. So you should know it is the EAI address. Also validate. Okay, this

is an email with no problem. Also you can store this email address in your local file. Also we can process EAI. Also you can display it to the users. So first step is you can deal with your message. So first one Gmail already is in phase two. Phase two, can register EAI, but currently they are ready to register EAI accounts, but many email service providers still don't support EAI accounts.

So phase three, we should have EAI accounts as Internet ID. For example, in China the bigger, Internet pay system, in the future they would also like to upgrade their service as ID. For example, Chinese email address as a pay ID. In the future Facebook account will also be able to support EAI. LinkedIn system already supports EAI address as Internet ID.

So suggestions. Push major email service providers to support EAI at least so they can receive and send email address to. Now they refuse to send or receive the EAI addresses. So we should do, should push every local region because every region has a different email service providers. So global email service providers will support EAI soon. But the local will be slowly. We should do some efforts to push them.

So we also would like to provide demo efforts for setting up open source email systems. Maybe this will, so from efforts from UASG, AP TLD, ICANN, we should do something to help them. Maybe APRIGF will support us some open source.

So thank you for your kind attention. That's all.

>> AMRITA CHOUDHURY: Thank you, Jian Kang Yao. Edmon, the show stopper now.

>> EDMON CHUNG: I hope I don't stop the show. Good morning, Edmon Chung here.

It is very good always to talk about IDN. Those who know me know that I have been talking about it for years. It is very interesting. Earlier on Harish was asking the audience how many had herald of IDNs. And quite a number of you did put up your hand. I was thinking through my head whether that's a good thing or a bad thing. What we have in the room obviously are a lot of old friends. We have those who still believe in IDNs. We have those who have tried and given up. We have those who are very frustrated. And it is like, I don't know how to deal with this anymore. Let's not waste our time.

But I think this is, I personally obviously sitting here and also don't forget the next session I will be sitting right here again talking about exactly -- not exactly the same thing, but the same topic.

One of the things, putting it in perspective, is that the DNS was actually invented or put in place in 1983. That is 34 years ago. IDNs were introduced, or at least the concept was introduced in 1999. If you take 2000, let's say, as the date,

that is 17 years. We are halfway, we are actually, the existence of the DNS did DNS and existence of IDNs, that is 50 percent of the existence of the DNS itself. What is the problem, why are we still talking about this? Well, not all is lost. And depending on how you see it, maybe it is 50 percent of the Internet. We have Google, we have Apple, we have Microsoft, all the big three supporting IDNs at this point and EAI. Are we 50 percent of the Internet yet? Probably not. I could guess most people would argue not yet. But that brings me to one of the things that Jian Kang mentioned, the mountain. That's an interesting Chinese parable is about a foolish old man trying to move the mountain. So this foolish old man is, you know, taking us up a spade and going to the mountain and digging and digging. People ask him, why are you digging the mountain? He said oh, I'm trying to move the whole mountain because this is blocking my way to the market. It was like you are never going to be able to move a mountain by yourself. The foolish old man said I have my kids and my kids' kids and my kids' kids' kids. Eventually the mountain will be moved.

Well, obviously I hope that my kids will have IDNs by their time. But the point about the parable, a lot of people forget, even Chinese community forgets is that the parable ends with not the old man's kids' kids' kids' kids moving the mountain. In fact, the old man actually moved the gods. The gods came in, two giants moved the mountain in the old man's life.

So we are waiting for those giants. In the world of Internet, I think that is the crowd. The problem, the biggest problem right now is the end users do not know that there's this Option. The end users are not demanding this service. The average end user doesn't even know that they can use their own language and their domain names. So I'm still hopeful once we hit the critical mass, that's going to make a difference. So, ladies and gentlemen, I hope you --

(Audio distorted.)

>> EDMON CHUNG: Two reasons, I think this will work eventually. I think languages are here to stay. We are not going to wipe out the world's languages. We can't make everyone speak English. Some people might want to do that. That is not going to be the case.

I think users care about expressing their identity in their own native language. This is another thing. I think another important thing is that I think domain names are here to stay for quite some sometime. There have been talks about alternative identifiers, domain names are no longer useful. I don't think so because the same thing is going to happen. If

you create a new identifier, the acceptance of the new identifier needs to take a very long time yet again.

So why not work with what we have right now? And finally, a very important aspect is just a matter of world view. Do you believe in a culturally diverse world? Or do you believe that everybody should learn to use the ascii keyboard and just type in ascii domain names for the rest of their lives and for the rest of their kids' lives?

There are people who believe that uniformity or using one standard is, one language is a good thing. I believe otherwise. And I think there are people, enough people who believe that. And that brings me to another important aspect. Yes, we need market forces as well. And seeing Ashish and his folks and other people putting this into the marketplace is very important. There are a number of things that will make a difference for people to actually use internationalized domain names. Search engine, thinking back, people thought search engines were going to kill domain names. A good 20 to 30 percent still directly access websites, directly access services with typing in domain names. That is a fact. And that is not going away. It dropped obviously from maybe 80 percent down to 15 to 20 percent. But that is staying here. Think about the websites that you know most. And when you look at a poster and you are trying to go there, those are domain names that you navigate directly.

I also think that mobile, again mobile seems to be yet another domain killer. People using apps. They don't use domain names anymore.

But I think another technology, the voice input, audio input is going to change yet again. And I think that is going to make IDNs much more important. Think about it. When you type, okay, fine, you may be used to typing English characters and it's easy to do that.

When you are talking to your phone obviously you are going to use your own language. It would be strange to see the Chinese person talking to their phone in English. That's a will be strange. Trying to send an email to your father and talking to your phone in English. That would be very strange. I think that is going to change and make it possible.

But there are other interesting areas. The market, I'm excited to see folks from India, folks from Thailand, and continuing force from China. But yet again, there are people who come and go. There are companies that tried very hard and then, you know, didn't see ...

(Lost audio.)

>> EDMON CHUNG: There were companies that came and went, actually. When I started at bimanual, one of the interesting

things, I started a company in 1999. I went into business. There was competition bringing out IDNs. That competition went away a couple years later in 20-something. Then my investors were saying oh, that is great. We are a monopoly now. I told them that's not great. Competition is important. You know, in this marketplace we need more companies bringing their action to the market. Why isn't there?

Well, when I talked to folks especially in the U.S., they are very strong believers of free market. Of course, free markets is great. But right here what we see is I think a market failure. What does a market failure mean? That's that the end demand is not seen and the suppliers trying to bring it to market don't see the economic benefits of it. Therefore, they stop providing that service.

One of the interesting things about economic theory, when there is a market failure? What should happen? When there is a market failure that's when the government should come in. That's when policy can make a difference. That's when the government should take a leap and when policy should take a lead. Ie. see he people forming a line and that's a good thing. I'll wrap up. The main message is yes, web at it a long time. I think not all is lost. We are gaining momentum, but we need the crowd behind us. We've got to get out there and have to be able to touch the end customer for this to eventually work. So I think I'll end with this. All of those who have been with me on this 17 years, I hope we are not all old fools and don't give up on this. One day I think our kids or our kids' kids, hopefully it's earlier, won't even remember this fight. And that's when we know we have succeeded.

They won't even remember there was a time in the history of the Internet that you can't use your own name as email address, or can't use your own native language in domain names. That is when this cause will be fully realised. I think, again back to don't give up! Thank you.

>> AMRITA CHOUDHURY: Yes, we are now open for questions. Please, tell your name and if you have suggestions, questions, queries, whatever.

>> AUDIENCE: Hello. I am from the ICANN board are, Working Group, and IETF leadership. So --

>> AMRITA CHOUDHURY: The mic is not on or the volume is low.

>> AUDIENCE: Yes. So thank you for the presentations. And one thing I wanted to point out, because in the spirit of IGF we should look into the policy mostly. I want to point out yes, what we saw is like sunny scenarios in most cases. Our technology is basically there.

The EAI is there. You have like, if anyone wants to start reading up on it, RFC, 5321 and 5326, look them up as a good starting point.

The technology is there but what we are missing here and continuing to Edmon's market theory, it is, the problem is not the technology is lack of policies and the product is not yet ready. When you don't have a ready product you need market adoption. Without a proper product you can't have market adoption.

IDNs have many fundamental issues and none of them was mentioned. First of all I would separate IDNs from EAI and male address. They are very different in many cases. IDNs and technologies, unicode.

(Audio distorted.)

>> AUDIENCE: That's one. For example, the main cause, because I see a lot of students and young people here. Than the main reason is unicode was designed for print. I think it is good to mention, unicode was not created to have a name space. It has similar characters, visually sometimes completely similar. You don't have a unique name space. It can have simple characters for a simple name. I would like to make the discussion. For example, I have one good idea why the product is not ready and I will focus on email because of these presentations. What do you do with ... if Gmail now has EAI, support a Gmail.com can be at least visually, citing from my memory, 16 different ways all looking exactly the same. What if the S in German which is very similar to the S in other Latin characters. They do, they start sending emails to people asking for pass are words or things like that. There are policy issues.

(Audio distorted.)

>> AUDIENCE: Or China, what if someone has an Arabic name and they want to ...

(Lost audio.)

>> AUDIENCE: Until we ... we do not want to do that before then. Thank you.

>> AMRITA CHOUDHURY: Valid point. Anyone wants to speak on it?

>> EDMON CHUNG: Thank you. I think that's true. I mean, the policies for IDNs and EAIs need to be there. EAI and, sorry, we are completely losing the audience because this is email internationalisation. Your email in your own native language. The IDNs is the domain names in your own language. They are separate but somewhat, there is a big overlap in that. So one of the things that we need to remember, first of all, yes, we admit that there are policies that need to be done, but don't forget the same issue is existent for ascii or English email address as well.

Creates the same problem that IDN does. It doesn't change the issue. The issue has been there. In fact for email, capital letter A and small letter A is actually different. By protocol, if your name is spelled with different capital letters, it has a different email address.

And providers over the years have policies that normalize that. And there is a general expectation today of some form of uniformity and some form of usage. So yes, there are policies to be created.

(Lost audio.)

>> EDMON CHUNG: So different from ascii. Ascii has a similar set of characters. We are dealing with the largest ... (audio cutting in and out) still needs to be there. My point is that if we create an environment, the reason -- I agree very much with that, that the products are not ready at this point. Not all the products are ready yet. But there are products there already. The problem there is not enough developers are actually actively working on it or putting it in the roadmap. This is too small an issue for most of the companies. This is not going to bring in extra reference for them. So it is a very low priority that needs to be put in the roadmap.

In order for them to put in the roadmap, that's where policy is ... Put out tenders, add it in their tender documents that says tell us what your Mohammed is. Even if they don't require it out of the box. What is your universal acceptance?

>> AMRITA CHOUDHURY: Thank you. Simultaneously I would add respective governments, there has to be an environment for encouraging the innovators, the business to also innovate and work together. At times the market forces will only work when the environment is also created.

That I think is also an issue. You might have something, it might have been given to people, but is it actually working? It is not the numbers which matters. It is the use which matters than.

>> JIAN KANG YAO: I want a quick comment. I agree. The problem is, you say policy is important. Most important, everyone's effort. I like, at the ICANN board, I would like to ask one question to the ICANN board. ICANN's website supports IDN? IDN? ICANN's email address, systems supported EAI? Thank you.

>> AUDIENCE: To my knowledge, most parts doesn't. The profiles, ICANN profiles, I can try that, but this is for the ICANN organisation but not the board. General answer, I would say no.

>> JIAN KANG YAO: Yeah. If it was there already, the ICANN board, I propose for them to do so. Thank you so much.

>> AMRITA CHOUDHURY: Next question, please.

(Applause.)

>> AMRITA CHOUDHURY: Is the mic coming to you?

>> AUDIENCE: Thank you very much. I am currently working with the information programme of the Prime Minister as a consultant. In February we have launched our .Bangladesh domain, but the problem is, I think the .Bangla domain even though in our own language, people are not really just using the domain much because we found getting Bangla, either in India or Bangladesh, our language is very complicated. When it has come to, when you are talking about the typing of the text. We saw still we have no standard keyboard which is easy or accessible for all. That is a big challenge for promoting .bangla and also another big reason people are not very interested, that is the colonial form of unicode is not ...

(Lost audio.)

>> AUDIENCE: This is a big challenge for promoting .Bangla. Thank you.

>> AUDIENCE: Okay, is it my turn? I am retired from the ICANN board.

You know, actually it cannot be done by ICANN alone. Of course, ICANN is one of the institutions that has to push that. And you know that. ICANN can do a lot in the past many years. But I think the real problem of IDN and EAI, for example, some of you sitting here, you are the ccTLD operator. I think you have a more information than we do. How many of IDN query to your IDNs? Compared with the regular ascii? I think if you look at the data, it can be shown to the public to let us know if this is going or not. So we know how much we can put the effort in there. And we know we are doing effectively and efficient enough to make this happen.

So I would really strongly suggest for all of you at ccTLD or gTLD, DNS operators, can you show us those indices so there is one of the things that we can make things really clear?

I think this is the first question.

(Lost audio.)

>> AUDIENCE: We have to be aware, of course, I really appreciate your patience to do this with a long history. I participated in the conference since the year 2000. Of course, I am not participating full-time, but you do, you know. I think right now really you are the challenge. You might be know that many countries or many so-called Internet users coming to the Internet right now, many of them they don't use email anymore. They just are living in a world like on Facebook or what's app. A lot of people just use WeChat and nothing else, don't even carry email. So I do recognize what is market driven, is all market development in the future. So what is the best way to make IDN really effective and also universal acceptance? It is the only thing we need to do.

(Lost audio.)

>> AUDIENCE: What can we do about it? Let's just take one simple example. You might know that this, in this country or in Myanmar, they don't know how to use the Internet. How can we do it? This is a challenge. IDN or EAI is not ...

(Lost audio.)

>> AUDIENCE: The problem is not only the policy. The problem is in the market, how the market will really help us and how we can get into the market to make it happen. So remember when we are talking about universal acceptance, it is not only technology, not only talking about policy. How can we get into the market? And market is not decided by policy. It is not decided by technology. We see a lot of wonderful technology fail in the market. We see a lot of the policies. It doesn't work.

So I will strongly suggest that you move into the market to understand how we can make the market really happen instead of just sticking it into a very few areas and maybe this area is no more important. Thank you.

>> EDMON CHUNG: Edmon here again. I have a quick response. I guess first to your query, yes, in terms of the email, the usage for it as a common communication service in general, focusing on IDNs, the domain names and identifiers in native language, that is something we need to think through. We have a unique identifier, regardless of whether it's an email address or not, we have policies to reduce confusion as we talked about. (Audio distorted.)

-- just like in the days of AOL. Those of you who still remember America Online there used to be keywords, right? That was the walled garden. Do we believe in a walled garden world? Who knows, maybe in the future the walled garden will be broken apart and we can see better uses again. Finally, one important point. I do agree very much that the market force is important, but I also truly believe after a few, good few years that we have a market failure here. And if people understand market failure, when there's market failure there is a set of policies that can help it.

And I don't think the cultural diversity should go away. This is one of those things that require market forces beyond the market to help it get started. That I think is an important point.

>> AUDIENCE: I make very short to your answer. I fully agree that walled garden is no good. And actually, there is more important and more critical issue in this age. Because the walled garden continues to grow. Actually, the Internet is really in trouble.

>> AMRITA CHOUDHURY: It is nice to see a young face in the crowd to share his views. Yes.

>> AUDIENCE: This is a comment from the remote speakers. Harish, he wanted to comment about Google doesn't provide to read your email in the local languages. The question is to Jian. And another question from remote participant. Universal

...

(Distorted noise.)

>> AMRITA CHOUDHURY: Harish, can you hear?

>> HARISH CHOWDHARY: Yes, I can hear you, yes. Could you please repeat because some audio was broken.

There is some -- could you please repeat the question?

(Pause.)

Sorry, not able to hear. Audio and video --

>> AMRITA CHOUDHURY: Google doesn't enable you to read ID in the local languages. You want to respond to that?

(Audio distorted.)

>> HARISH CHOWDHARY: I am not able to hear the question.

>> AMRITA CHOUDHURY: Okay. We will come to you. In case anybody has a query. Yes?

>> HARISH CHOWDHARY: Hello?

>> AMRITA CHOUDHURY: Come to the line if you would, please. You will be the second one out.

>> HARISH CHOWDHARY: Hello.

>> AMRITA CHOUDHURY: Harish, we have two more queries and we will come to you.

>> AUDIENCE: Issues that we face, also the policy required, the biggest market is on, because of EAI it is not only used for email. It is used as the identifier, especially in the digital certificates. The subject of names and most of the government offices do not have English name to spell. No control. The department names, either they have the directories works around that and it is totally a mess there. We tried to use the EAI in other aspects.

The problem is February 21 of this year, WTO reached the first multilateral trade agreement demonstrating the most important aspect of that is you need digital design documents of the government. There are hundreds of documents that need to be signed and exchanged all over the world by 22nd of February next year. You can search around all the movements.

A lot of people have high hopes, but now the real use of EAI will exist through the document authentication, digital certificate. It has become a policy issue. How the government should plan for these, especially the government like in Thailand that we don't have. Either we have to revise the whole government directory to include intricacies, the names of the people and what is shocking you, it is a corporate name.

We have eight Microsoft companies in Thailand which have different Thai names. Because of translation and transliteration in language it creates problems. The registrar does not concern on the English names for the corporate. All these aspects, we used to have high ownerships of EAI coming in and saying this will reflect a legally binding aspect of the registrar. At a certain point in time the government has to make a decision whether we need to carry on like a password, have a dual language approach and how we work with IETF on several ICs, that how these should be revised. I do hope that even though I have been working in the integration panel, it is still a lot of dark. The government needs to participate because with the Committees, with the IETF, we are getting lost. Even though it is our own problem and we need a lot of advice. I hope that UASG, if you could come up with that advice, what should be done to achieve that, that would be a lot of help for further government for the government to come up with the appropriate public policy standpoint.

>> AMRITA CHOUDHURY: We have just five minutes to wind up. Could we have the question? Yes, ladies first. Let me give the permission.

>> (Speaker away from microphone.)

>> AUDIENCE: Hi. Thank you for the informative and all the information. I'm Haley and I really, I think the discussions really, it's very controversial because this is linked to you really believe in free market and do you really believe in cultural diversity? This is interesting but I want to know for me, personal opinion, like this is really like forced by the market or is it the policy like touching into it? Why people would believe, there is only Facebook on the Internet. Is it like a monopoly of the market? Is this part of the private company? This leads to people's thinking. Also I think like the whole domain name system somehow, if you don't have the local language, it will kill the more companies or kill and also hinder more people in utilising like the Internet. And also, yeah, from your perspective, like in terms of pushing the market in terms of pushing the policy setting, what should we or your company do in, like in enhancing more awareness? Because in your market we don't know there is a product there. It is just like when PNG or other companies have new products, if the people don't know the product, like we will not ask for it. It's like more on which side.

So I think like the policy and also the private company should have pushed it instead of asking, always asking we, like the end users, to create the demand ourselves because we don't know what we can, what we have. So thanks.

>> AMRITA CHOUDHURY: Do you want to take it? Yes?

>> JIAN KANG YAO: Thank you for your very, very good comment. So what you need to do, check your email providers and ask them: Can I register my own language email address? So if they support it, you can complain so they will upgrade their service to support IDN EAI. That can help us. Thank you.

>> AMRITA CHOUDHURY: I would like to add out here, the young folks in the audience, do you want to use the apps or the are you using currently, are you satisfied with Facebook or WeChat? That is the most critical question. We don't know whether they want to use something unless they have an alternative or a choice. It is very important. Are you satisfied by the kind of services you are using? I would like to ask the young ones. Show of hands?

Anyone else? Do you look, do you think you need the services in your own languages in email or app? Are you satisfied with this? Or your friends, that's the most critical question. Mic, please. Yes.

>> AUDIENCE: Yes, technically as a young person, for example, I am a native, basically my main language is Hindi, but my writing of Hindi is poor. So to improve, I try to use it on the Internet via transliteration, et cetera. But personally for me, it is in a way, like Mr. Chung said, it is also about cultural promoting native language.

This is a quick question. Do you internationalise IDNs, pose any unique issues? I think it was mentioned. So just to get your perspective and also you said that for searches from speech to text, I think it will be, there might be a large benefit to persons with disabilities. Just my comment, yeah.

>> AMRITA CHOUDHURY: We want to add, but we need to wrap up. But if you want to respond?

>> EDMON CHUNG: I'll add and also wrap up on my side and others can add. So in response specifically, I think the, what you said and we mentioned, and also the gentleman here mentioned that there are a number of issues that are kind of peripheral. We are all looking for help. Web accessibility, you know, for those with disabilities. There is the PKI, those issues. There's even IPv6. All of these issues unfortunately are very low in priority for most of the companies because they don't make an additional dollar.

What I personally think, and especially in the last year or so I have been trying to gather more people, is that we need to band together. If we put Webex's ability, put those digital certificates, put all of this and we view it not as a market thing, but hey, you are not trying to put out a new feature to the marketplace, but you are behind. You have a bug in your system. You are not upgrading your system. Corporations if you don't accept ie., that's a bug in your system. If you don't

have PKI or web accessibility for the visually impaired, you have a bug in your system.

That is a different thing. And if we group all of this together, then it creates more of a reason for companies to, their CEOs or CIOs to pay attention and say okay, let's put this in our roadmap. That might be one of the things that we can ban all these other people who are trying to push the different initiatives together.

>> AMRITA CHOUDHURY: There is a remote participation question: Why ICANN is not pushing UA on a landscape while it is doing everything to promote generational panel to create new IDNs? Anyone from ICANN wants to quickly respond to that?

>> AUDIENCE: I'm not from ICANN, I'm from the ICANN board. It is very distinct difference. First of all, I quickly checked because ICANN profile is disabled. ICANN board, Gmail, they support internationalized names. I have to check if it really works, but we support it.

This is out of the scope of ICANN, the email addresses. If it's IDNs, if the question about IDNs, I would have answered differently. The email addresses are different. Before I leave the mic I want to make a very selfish comment. I like the discussions here. So if possible for the next session, I don't know who is moderating that. I know you will sit here again. I would like to have more time for this interaction. I'm learning a lot from that. I really like to hear other people in the room. The presentations are very good but I would prefer shorter ones.

>> AMRITA CHOUDHURY: You want to respond to it?

>> JIAN KANKA YAO: Okay, I'm not against that. I'm not against the IDN or EAI. In my previous talk I said how we can really make that happen in the effective way because you keep pushing that, you never have communication with the end user, what they want. Maybe they want something is very different to the use of you sitting there. There's a difference. So I think we have to have more communication with the audience. Thank you.

>> JAI-RONG LOW: I'm Jai-Rong Low, manager for the Asia-Pacific ICANN office. The question is why is ICANN pushing for the label generation panels for IDNs and not doing more to promote IDNs per se and also the address issue of universal acceptance. Now, in the discussion there was already mentioned that this problem is bigger than ICANN. And that's also the issue of what role does ICANN play in this whole thing. Now it becomes very clear that ICANN's role in this case is not about creating a market for things. It is enabling the infrastructure for the internationalized domain names. So where we are right now is that on the one hand, the technology is there for IDNs. On the other hand, the various languages and scripts, what can be a top

level domain? What letter can be a top level domain is not even fixed yet. That is going to be the next session.

I'm leaving it there as a cliffhanger. Stay for the next session to find out more about what is required of that kind of work. That's why we are still in the process of doing it right now.

>> AMRITA CHOUDHURY: Thank you so much. We will have to wrap up now. We over-shot our time. Thank you, everyone.

(Applause.)

(The session concluded at 10:35 a.m. local time.)

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