ICANN75 | Prep Week – Community Update on Universal Acceptance (UA)
Thursday, September 8, 2022 – 22:00 to 23:00 KUL

SARMAD HUSSAIN: Thank you all for joining the community update on universal acceptance. This session is going to provide an update on the work being done on universal acceptance, the Universal Acceptance Steering Group. And for that purpose, let me invite Dr. Ajay data to take us through this session. Over to you, Dr. Data. Thank you.

AJAY DATA: Thank you, Sarmad. This is a very important session from UASG perspective where the update what this group has been doing to the community and listen and hear feedback on the webpage.

This is kind of an overview where I'm going to give a little update [inaudible] and what UASG is going to do, and then we are going to have the working group chairs individually from measurement, technology, EAI, and comms, to take you through what they are doing in each working group. Next slide, please. And of course at the end, we will have our Q&A session.

So universal acceptance, for those who are new, is very simple. All domain names, and all email addresses, must work in all software applications. That's the vision of Universal Acceptance Steering Group. We wish to make an impact to the next billion people, anybody who is interested to have a new choice of domains.

Obviously when the new choice comes, there's a competition across the top-level domain names and provides more broader access by breaking the language barrier.

Universal acceptance was formed in 2015 as a community initiative and it remains a community initiative till today and which advocates and encourages relevant stakeholders to make their system UA ready. Next slide please.

This is a very simple vision if one can see, but it has very important pillars. Internet is governed with domain names, where you need a domain name to access Internet. And there are examples which are new in this era where top level domain names are not just .com, .net, .org, there could be any other domain name which can go up to 64 characters after the dot.

So there are three examples which you can see. And this third example is a unique one which is non-ASCII characters. It is an IDN domain name example where all the characters are non-English. By definition, even if there is a one character which is non-English, is also an IDN domain name.

There are now examples of EAI, e-mail address internationalization where at least one character is of non-ASCII. And another example which we take as long top-level domain names, which could be ASCII, or which could go up to 64 characters. Examples are in front of you. And you can see the first example is not having any IDN domain name but has a long top-level domain name dot Istanbul, and then all the examples.

Now, how the problems are solved. UASG has come out with five pillars strategy, accept, validate, process, store, and display. If any of the example of domain names and email addresses are accepted, validated, processed, stored and displayed well, in any of the software applications, then only the website or a software is UA ready. If not, it has a UA problem. Next slide, please.

And there's the problem which we intend to resolve the world over. How do we resolve it? Because there are many parts of universal acceptance and we work through all the working groups. So there is a technology working group, there is an EAI working group, measurement working group, communication working group, local initiative working group, and UA ambassadors.

These are all different stakeholders within UASG who do their task specific to their working group. Some of them are going to share their update with all of us today.

So this is our entire strategy of having leaders from the community to lead that initiative. Specifically for technology for example, Satish Babu is the chair, he will look after. EAI, Mark is there, he will look after. And he just focuses on EAI. So we have very focused working groups who focus on each activity related to the universal acceptance. Next slide,

UASG update, UASG has done many tasks this year. And we have released a readiness report. This report allows us to see what's happening in software, in EAI and domain names, and we tell to the community and to the word that as far as these are the softwares which are ready, which are not ready, we test them and we submit the report.

We also make our action plan every year. And this is the action plan which is submitted, which is available online. This is the plan which is made with consultation with all the working groups and volunteers we have on discuss list.

And a new thing, which is we are announcing first time to the community. And that is 16 February 2023, UASG has decided to celebrate UA day, most probably every year on 16 February. This has been done after discussion with all the stakeholders and ICANN SOs and ACs and our community to have this date finalized to celebrate UA every year.

And this UA Day, we are going to celebrate in 2023. So I would request you to block your calendar, block your dates, and be available to participate in UA Day. if you are interested to some do something on UA Day, you will be able to do so. We will talk about it in the days to come.

At ICANN 75, there are five events. And you can see five interventions on 18th through 22nd. You have the mail in front of you on your mailing list. The dates are also there. I'm not going to repeat them. But please note those dates and also find all the action on the schedule of ICANN 75. Next slide please.

So now we are going to invite working groups from here. Next slide. And we are going to have measurement working group. Nabil, please.

NABIL BENAMAR: Thank you, Ajay. Thank you, Sarmad. Thank you, everyone, for joining this session. I'd like to present our main tasks that we have done so far in the UA measurement working group.

Our group plans, oversees and directs the gap analysis of efforts of the UASG for various frameworks and technologies and reports on UA readiness progress. We have published so far UASG 32, 35 and 36 reports that you can find on the UASG website.

And we are looking forward to now to finish the work on the UA readiness of popular web hosting tools as well as readiness of identity platforms. And we have just started working on preparing the curriculum for the academia. This is something that we will present and we will discuss in detail during the ICANN 75 session. There will be a dedicated session for this. Next slide please.

So back to our ongoing task, which is studying the popular web hosting tools. The objective is to develop a test method to assess the web hosting tools which ISP offer their customers and to assess the UA readiness of three web hosting tools. Namely, cPanel, Plesk, ISPconfig which is an open source one, all popular in many regions.

So far, we have these initial results. We have seen that none of the web hosting tools—cPanel, Plesk or ISPConfig— are in compliance with the UASG's defined objectives since a number of underlying services are not ready to support native scripts, so they are not UA ready.

Plesk has the highest chance of providing a full native script experience. And, for more details, you can visit our website, UASG.tech for further detail on this. Next slide please.

Number two is to work on the popular identity platform. So, the objective is to develop as well as like the other task that we have, is to develop a test method and evaluate the OAuth standard and design structure that the identity products integrate into to assess the UA readiness of three identity platforms that use OAuth standards. By the way, OAuth is an IETF standard for all these identity platforms and different applications are used in this case. So two from commercial source, Okta and Auth0, and one from the open source which is Apache Syncope. Next slide please.

We are looking to continue working on next projects. And the scope is to collect data and identify how to address HTML5 EML field for accepting globally inclusive email addresses as identifiers. Websites using a HTML5 type default as input are not UA ready as it causes the browser not to allow Unicode characters before the @ symbol, as you can see from the UASG report, number 39.

To support email address internationalization using HTML5, programmers have to either write their own code for input email validation, or use existing IDN libraries. Engagement with WHATWG working group and W3C for supporting EAI in HTML5 to help resolve this issue, as we can see from the report UASG 40. Next slide, please.

So to the other project is to characterize how much the Android platform limits the acceptance of IDNs in web browsing, because they stay compatible with Chrome on Android, which uses an outdated IDN spec, which is the IDNA 2003. So the main task is to identify the UA related constraints on applications running on Android platform.

The okHTTP is very popular HTTP client in Java and Android environment. However, it refused to support IDNA 2008, as well as we want to identify how many Android apps projects will make a decision like okHTTP and reject UA because it conflicts with Chrome on Android. Next please.

AJAY DATA: Thank you, Nabel. Very wonderfully done. Well explained. We will invite Satish Babu. I think Satish is not there, then I would request Sarmad to please take up. Thank you.

SARMAD HUSSAIN: Thank you, Dr. Data. I will just cover the UA technology working group slides because Satish Babu is traveling and was not able to attend. The UA technology working group focuses on the remediation of existing UA gaps in different tools and technologies and standards and also focuses on developing technical trainings and technical materials for end users, relevant stakeholders to be able to address them for the tools and technologies they are developing.

More recent work for from the technology working group includes current third phase of evaluation of programming languages. We'll talk about some of these in this presentation later. Also, UA readiness of top 2000 websites globally. And then there was another report done which looked at the different standards and best practices. And finally, there is actually a report which is currently being finalized which is looking at developing UA ready code as a sample, as a minimum viable product which can be released for those who are interested in, for example,

finding out how to do programming in a particular language to make their own code UA ready. So this provides an example. And where there are libraries which are not compliant, either we try to find solutions around them as examples or otherwise, the bugs are reported to those library developers.

There are a couple of ongoing tasks in addition. There is a survey being designed to determine the big picture and challenges in adopting UA by the technical community. And also, we are looking at how do we fix some of the issues in the UA, the gaps in UA, in the 2000 websites which we have tested globally, by trying to reach out to those who develop these websites.

So going into these in a bit more detail. So as far as the work on programming languages evaluation is concerned, the working group looked—this was a third phase where specifically the working group focused on UA readiness of platforms which are based on mobile technology rather than just computers. Much of that work was done for computers. The work was completed in first two phases. So this last phase looked at iOS and Android platforms. And in addition, it also looked at PHP as that was not covered in the first two phases for computers.

The detailed report, you can read through the link provided. But as a summary, iOS demonstrates some compliance to EAI and IDNA 2008. However, none of the libraries tested for Android were UA compliant. So as you can see, there is limited support on mobile platforms. We tested all the different libraries which are related to domain name

processing as well as email processing, and more details are available in the report provided.

Remediation of websites is also one of the work which is ongoing at this time. UASG has been testing about 1000 websites over the last few years. It had initially tested globally websites used globally. But in 2020, in addition to the global websites, it's also tested 50 national or local websites across 20 countries, so another 1000 websites but with a slightly different design.

And in the more recent study, UASG is looking at all those 2000 websites [inaudible] studies, both the global and the local, to see if they are still noncompliant or not. And then if they're noncompliant, UASG is aiming or actually attempting to reach out to these website developers to see if we can share them the issue, explain them the issue and encourage them to address that.

This is a summary of the survey and as you can see, over the past few years, the needle has not really moved much. So what we do is we go to a website and look at their contact us page for example, and where normally it allows you to enter an email address, we enter a valid email address either in Arabic or in Chinese or one of these other formats.

And if you look at the top two rows here, which includes all email addresses in local scripts like Arabic or Chinese. You see that only about 11% of the websites are currently accepting these email addresses as valid, whereas the other ones are still rejecting them. And that's a gap which needs to be filled. And in this study, what we're trying to do is trying to reach out to these website developers or owners and see

whether we can engage with them to inform them of the issue and see if they can fix them.

Another project which was recently completed is developing code samples, or minimal viable products for developers. So if somebody wants to develop code in Java or JavaScript or Python which is UA compliant, sometimes when we go into a training, we encourage developers to make their websites for example, or applications, UA ready. However, there are sometimes questions on how should they do that. And what this project does is actually articulates exact code which can be used or reused by these developers. So this project has developed these code samples, they're available in the GitHub account. And anybody can actually go and access them and reuse these codes to make their applications UA ready. And so this project is now currently coming to an end, in at least its first phase where we cover these three languages, Java, JavaScript and Python.

As far as the ongoing tasks are concerned, there is actually to understand what are the challenges from a developer, development manager point of view. The technology working group is designing a survey which they intend to go and use to engage with the technology developers to understand, how many of them first of all are aware of these problems, and second, whether there are any challenges or what are what are the issues which they may face or impediments they may face to make their applications UA ready. They could be technical impediments, or they could be just business case issues. So we want to find out more about this.

Okay, so that provides a summary of some of the work which is ongoing or completed recently by the technology working group. Back to you, Dr. Data. Thank you.

AJAY DATA: Thank you, Sarmad. Very impressive and detailed work has been done. I would request my colleague, Mark, to join us here to share about the EAI.

ABDALMONEM GALILA: Dr. Ajay, could I jump in? As Mark wasn't able to attend the meeting.

AJAY DATA: That's okay, Abdalmonem. Go ahead.

ABDALMONEM GALILA: Today, I will explore the concept of email address internationalization. Actually, the email system has many components [which are also using a protocol.] So all these components and all protocols should support the concept of email address internationalization readiness.

I mean, we'll have for example SMTP that have protocols. POP3 and IMAP have for sending email and for receiving email also. All these components should comply with EAI readiness in order to be—sorry. So all these components should able to deal with each other whatever the language of the email address.

We have two parts of the email address, the domain part in the right side of email address, and the left side which is account name or mailbox name.

So for email address internationalization, we have the domain name in the right bar is already internationalized. So we're focusing now the left side of the email address, which is the host. All of these email address could be considered email address internationalization, so e-mail address internationalization doesn't take care about the language of the email address, whatever is the script it is written for the email address.

So are here trying to focus on the technology gaps and training materials that will help email software providers and the administrative technicians in order to comply with e-mail address internationalization readiness. Next slide, please.

We have two main ongoing task. The first ongoing task, EAI readiness self-certification guide. When you are trying to go to buyers of email system software, you want to see how much EAI readiness is the software.

Depending on some test cases, depending on there is a software tool to check or to compile how much EAI readiness scores for the software. Also, this self-certification guide will address all the components of the email system in details and have some criteria maybe this component is a EAI ready or not, how much [inaudible] is this software components within the email system is compliant with EAI or not.

Also, this self-certification guide will help both IT and [inaudible] manager to use [inaudible] software to select the proper software that that [inaudible].

So I will try to—[inaudible] wanted to have a system that could send and receive email, whatever the language, and in [inaudible], so I will select the highest scoring email system software to comply for that.

So also for this [inaudible] the softwares of email system and these components will help developers and technicians who develop the APIs, and this component should consider them as well. Next slide, please.

So we have different levels of EAI readiness that are there in the self-certification guide. All of them are related to two main points. The host is—

SEDA AKBULUT: Sorry to interrupt. Could you please speak a little bit slower for the interpretation? Thank you.

ABDALMONEM GALILA: Yeah. Okay. So for the self-certification guide, we'll have three levels of EAI readiness. The main difference between these three levels, we have two main difference. The first one is related to the mailbox name itself. Is this email software could host this EAI address Unicode account name, Unicode mailbox or not? The second point is that [inaudible] functions or the extra features for the software, like calendar, address book, whatever, how to schedule a meeting, is this part of schedule a

meeting inside this mail application could support this type of email addresses or not?

So we'll have three main categories. The first one, the silver one, like the legacy system. In addition to that a [inaudible] could send and receive email from EAI mailboxes, but doesn't host any EAI addresses. So the mailbox name or account name, couldn’t be in Unicode, couldn't be hosted for this category of email server.

The second level is a gold one that have all the feature in the silver one, except that you could create the email software itself could handle EAI mailboxes, but it is not enabled by default. You need to enable it.

And other sides of the function or the extra feature of the email system doesn't process email messages for like for address book, you can create and store Unicode email addresses. But there is a host itself, the mailbox name or account name couldn't be created by default as this level.

So the highest level is a platinum level. You could have host mailboxes name or account name, by default, it is already enabled, you could create, for example, my name in Arabic, my name in Hindu, whatever the language is, and also extra feature for add this book, for calendar, it is already enabled and works and all these components work in a consistent way. That is the three levels of EAI readiness.

So for these levels of readiness for email softwares, the APIs used by these softwares. How could we validate the email? The MUA, mail user agent could validate that this email address is correct. There should be some mechanism to allow the MUA to validate this EAI address is the

correct one, before going to submit this email address, this message to the SMTP server to send an email. So the second ongoing task is related to this. Could you go to the next slide?

SEDA AKBULUT: Yeah, could you please speak a little bit slower for the interpretation? Thank you.

ABDALMONEM GALILA: Okay. The second ongoing task is related to the technical engagement. We need to have APIs that support the concept of email address internationalization. This SPI submit the email message that they have EAI address to the SMTP server to start to work and to deliver the message to the end.

And other end to receive this email address, API could receive this email address and deliver it to the mailbox. All this protocol depends on APIs for all of this. So we need to go for the technician in order to tell them how to validate these EAI addresses.

We need to go for the forums that [inaudible] forum that have discussions like Stack Overflow, GitHub, and something like this in order to answer the question related to the technician's part of email address internationalization for IDNs, for universal acceptance.

Like, for example, how could I validate this email address to be a valid one? How could I check that the email address already exists? How could I check the domain part of email address is I have a valid domain name? So that is why you are talking for technical engagement.

You know that we have lack of awareness about universal acceptance from the developer perspective. We have two main issues here. The analyst, software analyst and the software developers. The software analysts who are the [inaudible] architect for any software don't have the knowledge of what is what is universal acceptance, how universal acceptance should be deployed while I am doing the proposal for the developer in order to develop the application?

And the developer himself couldn't be able to create code to validate the email address, couldn't be able to process the EAI address. So that is why our main ongoing to ask is a technical engagement, both for [inaudible] the forums to answer the questions that is related to email address internationalization and universal acceptance, and increase awareness of the technician Next slide, please.

So here, for example, we have the forums like Stack Overflow, Reddit, Serverfault which is related to this a validation of EAI addresses. How could we validate EAI addresses using some scripting language like jQuery and regex? Even the regular expression, what regular expression could be used to validate the EAI address?

Is my new gTLD causing—how could handle this EAI addresses [inaudible] in the firewall in [inaudible]? How could I handle all of this? So we need to increase awareness. We need to answer the question related to universal acceptance in order to go ahead. Next slide, please.

So, there is a survey conducted related to the email server EAI readiness. We have tested more than 35 million email server for the

scope of gTLDs. We are testing that the code able to accept sending—to accept, to receive message from EAI mailboxes for EAI server.

So, we tested that starting from the fourth quarter of 2021 and going through the next quarter until we reach the 2022 quarter two. So we have around 32% this email server didn't respond to our call to deliver email [inaudible] using EAI addresses. Other email server, around 60% starting from Q4 2021 till 2022 quarter two, didn't support international email at all.

And finally, only 7% were set up to accept e-mail address internationalization, could receive emails from EAI addresses. So we have [survey toolkit available for free] that could be used for testing such email server.

So, next slide. Yes, thank you.

AJAY DATA: Abdalmonem, great, thank you for super update about EAI. This is a very important thing. And [inaudible] email address through some [inaudible] tried and I have received five of them. I will let you know whom mail I have received here.

So now we will invite Anil Jain here who is a chair for communication working group to give that update. Thank you.

ANIL JAIN: Thank you, Ajay. Next slide please. So, we have taken the input from measurement group, from the technology group, from EAI group. And

now this group basically takes the works of all these groups to the users, to the stakeholders and explain what work UASG is doing.

So communication working group develops the communication strategy for UASG and oversee its execution. So, what we have already completed, a UA messaging in six UN languages which are available as we mentioned here.

We are also going to talk about a case study, a GitHub UA hackathon which is taken at Thailand. Recently UASG has participated in Africa IGF 22. And then finally, what UA out preach we have already achieved.

In the ongoing work we will explain about the three aspect. One is UA explainer videos, which is under preparation. Then the paid social media campaign, which we did last year and we found a lot of uptake of the social media campaign. And finally, UASG is going to participate in global IGF in Ethiopia. Next slide please.

Regarding messaging, which is available at UASG 038, we talk about the social relevancies of why a consumer choice and multilingual is there. A new TLD represents culture, brand geographies.

Four examples are given. Total population of Internet, it is expected, is around 4.5 billion active users and one more billion are expected to come online. And that 1 billion is expected to come from a non-English speaking, non-English TLD that is IDN TLD.

Looking at that, why the stakeholder should adopt UASG and everybody looks at the commercial aspect. So there was a study in 2017 where it is found that UASG or UA itself provides a business case of 9.8

billion plus dollars opportunity for all of us. And of course, career opportunities for people who are engaged in this because they get the new skill set and new category of coding also. Next slide, please.

We are talking about the hackathon, which I said it was conducted by Thai Network Information Center. And it was to promote open-source code improvements on GitHub repositories in support of IDN and new GT D gTLDs. The examples are given, as well as the Thai email. Very interesting to know that 37 developers competed in the whole hackathon and 40 popular public GitHub repositories, we are able to modify this and which are now UA ready.

It was a success, because it is able to pull the request into the GitHub origin repositories. And as far as a good practice for supporting developers in getting their UA proficiencies. The details are available at UASG.tech/casestudies. Next slide please.

In Africa IGF, just one month back, we concluded. In this, the discussion sessions were very intense. Good number of people attended this. And the key takeaway is UA require a joint efforts by all of us, so everybody is a stakeholder now. Government should incentivize the adoption of UA ready tools and systems because it helps the developers to adopt.

TLD registries, registrars, resellers and local domain name organizations should review their systems to become UA ready as per the business case available to them. And finally, the recommendation was academia should include UA in their research, study and curriculum, especially in the subject like computer science and software engineering, so that the future generation is able to adopt UA

and they should be able to provide an inclusive internet to the world. Next slide, please.

As has been explained by chair of UASG, Dr. Ajay Data, that we have a UASG ambassador program with us and we have a local initiative which is undertaken by various countries. So some activities which are conducted are explained here in this slide. In India, the workshop on EAI technical capacity building was conducted between May and July, in China, introduction of UA to Sun Yat-Sen university student with Coremail, and in Thailand, the Botnoi Chatbot Marahackathon was to develop a UA ready chatbot, which was successful.

Now let us look at the other from the LAC countries. They celebrated a domain name week virtually in April 22 with a team universal acceptance in LAC region and why it matters.

Similarly, there was a performance on Middle East on the DNS forum which was also virtual, can more universal acceptance of domain names contribute to the growth of IDN?

And then I discussed about Africa IGF in the last slide where it was said that it was meaningful access to Internet in local languages with UA.

An upcoming event is in Ethiopia, in November, that is global IGF where the theme is role of community to achieve universal acceptance. Next slide, please.

Now, this is about what we have already done. The next slide is about what is ongoing task. So one is about the statement of work for three explainer videos, which are the three subjects. One is introduction to

UA and why it is important. So it is very important that for a person who is not aware, they should get awareness.

Then second, configuring email system to support EAI. And that is what chair of the EAI has explained what are the different categories and how they are helping the developers to adopt this and how to make UA ready applications. Now this was explained previously also.

Each video will be a five minutes in length, and in English with subtitles in six UN official languages, so that everybody and we can have a reach to maximum number of people.

Objective is to develop and produce videos to explain UA issues in short, meaningful, educational and engaging way that is based on UASG training material.

So this is all from my side. Next slide, please. The message is that it is not only the UASG group who has to get, but I think each one of us is a stakeholder in UASG development, promotion, and inclusive growth of Internet world over and get 1 billion more internet users next time.

For this—next slide, please—we have a lot of material which is available for all of you. You can reach to that material. And constantly, you can reach us through Twitter, LinkedIn, and Facebook, all the hashtag and all connections which we have already shared here. So I would like to thank all of you for patient listening. Thank you very much. And over back to Dr. Ajay Data. Thank you.

AJAY DATA: Thank you. And I think now Sarmad will dive take [inaudible]. Thank you.

SARMAD HUSSAIN: Thank you, Dr. Data. So we'll open the floor for questions and Seda, please let us know if there any questions from the chat room.

SEDA AKBULUT: Thank you, Sarmad. Yes, we have now received one question in the chat. Has ICANN considered simply writing modules to implement UA? For example, give folks running an email system a way to easily implement UA rather than leaving that coding effort to providers who may not have the resources to do it in a timely manner. And this question is from Bill Jouris. Thank you Bill.

SARMAD HUSSAIN: Abdalmonem. Would you want to respond to that from an EAI perspective? And I can also put myself in the queue.

ABDALMONEM GALILA: Yes. Actually, there is a concept for software development [inaudible]. So all the email system depends on APIs, and these APIs doesn't invent it from scratch. They use other APIs that support email address internationalization or the concept of universal acceptance.

So if you're going for example, for GitHub, and have one API that support IDN and EAI and supports the concept of universal acceptance, it could be used for this email service provider. That is why you have

advices for e-mail address internationalization. We have advices for this email service provider or this technician to use the APIs that support that. This is my answer. I hope you got what you want.

SARMAD HUSSAIN: Thank you, Abdalmonem. Just to add on that. So, as Abdalmonem explained, there's already tools, libraries which are available, which can actually be used to process domain names, internationalized domain names, as well as email addresses. There are two kinds of these APIs or application programmers interfaces.

Basically, one focuses on allowing validation and processing of domain names and email addresses. And then there is always the separate sets of tools which allow sending email and receiving email, which are part of the mail server setups.

So as far as what UASG working group has been doing, as was shared as well, that they've actually looked at all the email tools and published which email tools support internationalized email addresses, for example, and which don't. So people who are interested in deploying this, they can use those studies to see which tools to use to set up their mail servers. Many of them are open-source tools. And then set up their mail servers accordingly. Some tools may need some adjustment. And some of these reports also point out to this.

In addition to that, there is more work on how to set up mailboxes. And there's actually been a set of guidelines which have been posted by the EAI working group on how to set up internationalized mailboxes for

internationalized email addresses. These are guidelines for the labels before the @ sign in an email address.

In addition to the mail tools for the programming, just general programming language applications, we shared during the technology working group slides that the technology working group has already developed these minimal viable products which are actually code examples in Java, JavaScript and Python at this time, which are now available at the GitHub repository. So the aim is exactly what the question is asking for, that we provide a reusable code which people can integrate, developers can integrate into their own applications. And they don't need to figure out how to do UA readiness testing or UA readiness support, but they can just reuse the code based on the libraries they're using. So what we're doing is we are developing it not just for one library in Java, but all the relevant libraries in Java and JavaScript and Python. So those code samples with explanations are available as well.

So UASG is developing guidance, actual code bases, as well. And in one of the items for FY 23 action plans, UASG is also planning to develop actually a complete, for example, server setup for internationalized email addresses which people can reuse, exactly the kind of question which you were raising. So once that work is completed, that would also be available to the community. Thank you.

SEDA AKBULUT: Thank you, Abdalmonem. Thank you, Sarmad. So we have another question from Achille. Does UA introduce some security challenges on

Internet communication? If yes, what are countermeasures UASG is taking so far?

SARMAD HUSSAIN: Would anybody on the panel like to take this?

ABDALMONEM GALILA: Yeah. Could I respond from the perspective of email address internationalization?

SARMAD HUSSAIN: Please go ahead, Abdalmonem.

ABDALMONEM GALILA: Actually, what I said during my slide is that we are caring about the left side from the left to right contacts, email address. For example, the mailbox name or EAI mailbox. We have already published that document that relates to selecting the proper mailboxes. [And it's secure to constrain.]

And as you may be talking about, for example, homograph attacks for such [inaudible] that use the full domain name or as well as use for the mailbox name. All of this, I think, for domain names or for the tickets in Unicode, it was already kind of handled in LGR, Sarmad, or correct me if I'm wrong. So we're trying to be away from such attacks for such security constraint through this document [inaudible] document. So I will send you the link inside the chat box. So you could follow or could have a look [inaudible]. Thank you.

SARMAD HUSSAIN: Thank you, Abdalmonem. If there's no one else who'd like to add anything, back to you, Seda.

SEDA AKBULUT: Thank you, Abdalmonem and Sarmad. Yes. There's one more comment in the chat from Giannina. “This is fascinating work for a digitally inclusive Internet. Thank you for presenting.”

And we have another question. Is this UASG session at the IGF open? Can we attend remotely? I actually responded this one in the chat. But for everyone, and for the record, yes, this is an open session and it will be a hybrid format. So you can attend remotely as well, after registering from the link in the chat.

And we have another question from Hafiz Farooq. “UA team, thanks for excellent set of presentations. And the question is many security tools, firewalls, antivirus, HIPS EDR, use NLP-based algorithms to sometime block IDN. Is UA working with security vendors also?” Thank you for the question. Is there anyone who would like to respond to this question?

SARMAD HUSSAIN: We do not have a tech working group chair here. So what we will do is we will take this comment, question to the tech working group. And this is good input. The measurement and tech working groups are working with many different tools and technologies. But we obviously still haven't covered everything. Nabil, would you also want to add anything in addition to us taking this back to tech working group?

NABIL BENAMAR: Yeah, I'd like to thank Farooq for this excellent question. He is mentioning here the security tools that are used nowadays and the advanced ones that are based on NLP to block the IDN.

For the moment, we are not tackling the security tools from the measurement working group side, but this is something that we need to look into, because this is very interesting. Since NLP is used here to block any IDN context and [message] and URL and email. This is really interesting. It shows that there are still a lot of things to tackle for the next item on our agenda. Thank you very much for raising this point.

SEDA AKBULUT: Thank you, Nabil. And before we close, there's one more question from Nicolas Fiumarelli. “Is ICANN willing to submit a contribution to the global digital compact in regards to the UA issues based on the conclusions from the UASG, or is there an idea to form a working line on this? I think a lot of [inaudible] in a working line on this [inaudible]

SARMAD HUSSAIN: So we're running out of time. Maybe request you to—this requires a bit of a discussion. So if you can send it to info@uasg.tech, please send an email so that we have your contact and we can follow up with you if that is okay. We also had a quick hand up. Jim, you want to make a quick comment before we close?

JIM DELAHUNT: I wanted to make a quick answer about security software and firewalls. Two things, two ways we are in fact testing them. One, in the context of email tools, there is end to end testing of email delivery, and that includes getting through spam firewalls. So we do include it in that way. And secondly, a lot of our tests are end to end, can you use email addresses or domain names in various software? And that will also include going through end to end including through their security systems. So we cover it in that way as well. Security layers are definitely a part of the overall universal acceptance challenge.

SARMAD HUSSAIN: Thank you, Jim. And we'll continue these discussions at ICANN 75. Please bring your interest, your questions to the sessions on UA during ICANN 75. We hope to see at least some of you face to face and many of you virtually as well. With that, thank you all for your interest and for staying a bit longer. And we'll close the session.

AJAY DATA: Thank you, everyone, for joining. Thank you very much. Bye.

[END OF TRANSCRIPTION]