UA Tech WG Meeting Notes
25 September 2023

Attendees

Satish Babu	Harsha Wijayawardhana
Abdel Ouro	Jim DeLaHunt
Abdulnasir Roba	Krislin Goulbourne-Harry
Adebunmi Akinbo	Prof ibrhahim Tchakala
Adarsh BU	Arnt Gulbrandsen
Chilufya Mulenga	Seda Akbulut
Gordon Fiifi Donkoh	Yin May Oo

Meeting Agenda:

1. Welcome and roll call
2. *BIUWG Action Item: UASG to look into the impact of IDN Variant TLDs on UA , and brief introduction from Sarmad Hussain (deferred to the next meeting)*
3. T1 action item: identify the technology stacks for UA testing: "Javascript libraries React, Angular and Node." Identify UA testing with these stacks.
4. T5: Step by step instructions to configure CMS to make a UA compliant website (without focusing on technologies).
   1. Group the websites by functions or designs to understand the problem better.
5. AOB

Meeting Recording: Link , Password o#Hw8TK%P8

Meeting Notes

Seda started the meeting and roll call, and then discussed the technology stack for the T1 action item. The meeting will start from continuing the discussion of T1 and there would be other agenda items as well.

Satish said there are two big events coming up, the global IGF in Tokyo and ICANN78 in Hamburg. The India School of Internet Governance (inSIG) has started as well. Satish reminded WG that there could be a possibility of meeting schedules clashes and trying to resolve the conflicts.

Agenda#2 : BIUWG Action Item, Impact of IDN TLDs on UA

Satish said ICANN is working on policy for variants at the moment. Many language communities have been waiting for more than 10 years to get variances which are common in their languages, particularly Chinese, Arabic, etc. In 2012, ICANN did not support IDNs for the concept of not being ready with the variant handling, which could be a common problem with IDNs.

The Board required a policy created around the IDN variants, which has been developed by Expedited Policy Development Program (EPDP) of ICANN. The Board has asked what the impact of universal acceptance on the IDN variants would be. Many of these processes are converging on one big thing coming up, which is the next round of new gTLDs, which is predicted for the second quarter of 2026. It is expected that IDN would come up at the next round, and the IDN variants would be allowed for the first time, therefore, the Board would like to know the acceptance of the IDNs and possibilities.

Satish said Sarmad was expected to give some inputs to the WG, however, he could not join this meeting due to traveling, therefore, Sarmad would join the WG meeting and give input on this in one of the upcoming meetings. After that, WG would respond to the Board with opinions on UA and IDN variants.

Jim asked for the background of the Board request to UASG WGs. Jim appreciated Satish's explanation, and asked for written background information on this if possible. Jim said for those who are not active in the ICANN community, the context is hard to understand. The variants and its

possible issues are not clear and Jim would like someone to present this topic, as it seems very important and complicated to understand with verbal explanations.

Satish agreed with Jim, and said Satish himself is part of the EPDP and the work was started for more than 2 years, which is all about the IDN variants in the TLD. Currently, it has been working on Phase 2, which is IDNs in the SLD. The report of Phase 1 work was very long and complicated even for those in the IT industry. Satish admitted that himself did not completely understand some parts of the report. Regardless, Satish would still send the link to the report of Phase 1 work to the WG mailing list. The report has received the public comments and the stakeholders are working on the minor changes, it will be published next month, during the ICANN78. That would be the authoritative document on IDN variants.

Satish requested Seda if there would be someone who can write to the WG, in case meeting time conflicted due to upcoming events and other meetings.

Satish said in the larger picture, the new gTLD round is a complicated process, as the work done is estimated around April (Q2) of 2026. There are so many steps in between to be completed. The next big milestone would be the applicant guidebook (AGB), which would capture a lot of these issues into a single document. It would become some kind of bible for the applicants of the next round. There are different parts moving towards the AGB. That would be the authoritative document of the entirety of the new round of gTLD. This would be the big thing for ICANN for all of the business perspective, policy perspective, and technical perspective. These works are complicated by nature, and some languages have been waiting for more than ten years for this.

Satish said as the new gTLDs would come up at the next round, we would unpack some of the things piece by piece in our WG, also because there is a relevance of what WG does in connection with the next round. Satish would

like to ask Sarmad to send us some written notes on guiding the WG of what the Board wants and share his input.

Seda added that ICANN could provide a short write up about what is the Board's request, however, detailed explanations regarding the variants would be quite complex, which is why Sarmad was planning to join this meeting. Hopefully, during the next WG meeting, ICANN would be able to share it as a short presentation, and address any kind of questions regarding the IDN variants.

For ICANN78, Seda would share a list of EPDP sessions, so that the WG would be able to catch up with the most recent updates. Satish confirmed that there would be three sessions of EPDP at ICANN78, and the WG members could join the meeting online.

Just to explain IDN variants very briefly, Satish said many language communities treat multiple codepoints to be equivalent, for example, the bank HSBC has two different representations in Chinese Simplified and Chinese Traditional. Although the pictogram is different for these two scripts, they are variants of each other, and both are read as HSBC, but the unicode codepoint the characters are different. When it comes to DNS, every label of a domain name is independent, without any connection. When the website owner says they are the same, DNS has no construct to that particular requirement. We have to make a policy and make a lot of different steps and processes to delegate the new name. There is something called 'Same entity constraint', because both labels of Chinese Simplified and Chinese Traditional are equal, they cannot be given to different people, it should be owned by only one entity. Both of the variants should point to the same page.
The variant labels are defined by the language communities at the infrastructural level. When the DNS can treat them as different labels, a policy is required to glue these variants together as a single set. Arabic script also has more than one form of writing a label, there could be many more variants. There is a possibility for a combinatorial explosion, the variant numbers could

increase. All of these are part of variant related challenges. We are trying to fix this by creating a policy of handling these in the next round. Satish said Sarmad would explain better about these.

WG has no more comments on this and the next item is discussed.

Agenda#3 : T1 Action Item; Identification of Technology stacks

Seda presented the [UASG FY24 Action Plan](#), as this is continuation of the work on identifying the technology stacks on creating material for training or providing solutions. There was a discussion of prior ties with Java script libraries, three of them are Angular, React and Node. The plan was to discuss the next step after identifying these.

Satish explained T1 is an ongoing activity for multiple years, where WG tests different aspects of UA readiness and UA Gaps. The working group would create an SOW for the technical work and contract it out to the third party. Satish asked Seda if there were any more steps to do after defining the js-libraries. Seda answered that the next step would be up to the WG, and as previous works, it would be to create some code samples. Seda presented the [UASG037 document](#) as an example. The WG could decide what to ask from the vendor. Satish requested Seda to present one of the earlier SOWs as an example. Seda pointed the link to the SOW documents for the previous works, such as on code samples or checking UA compliance. Seda presented the SOW document for [Evaluation of Programming Languages - Phase 3](#) , and [Programing Languages Solutions and Bug Reports](#) , where both contain the list of platforms and frameworks for the vendor to test. Satish said WG could make the SOW by taking the previous SOW as an example. Satish asked WG's ideas and WG did not comment further.

Jim commented that WG is outsourcing to do testing on JavaScript libraries; React, Angular and Node, which are important to the JavaScript ecosystem and it seemed like a good direction to go. He asked if anyone has experienced working with JavaScript environments. Note is a programming environment

that allows writing JavaScript codes on servers. React and Angular are libraries that let you implement websites or user interfaces using JavaScript. Jim shared his observation that Node seem to be different from React and Angular, and asked if one SOW would cover both of their natures. Satish also asked the WG the same question.

Jim's sharing in chat:
About Node: https://en.wikipedia.org/wiki/Node.js
About React: https://en.wikipedia.org/wiki/React_(software)
About Angular: https://en.wikipedia.org/wiki/Angular_(web_framework)

Harsha said he did little research on JavaScript, React and the rest, but not with Node. Satish said WG would like to find out the nature of these three frameworks, and what are the specific things to ask from the vendor. WG cannot be sure what features would fulfill UA readiness, and would like to find out. There are the UA verbs; process, validate, store, retrieve, display, ect, and vendor should find out whether these libraries support all of these. If not all, the vendor would have to determine their level of UA readiness. An SOW would be prepared for the vendor.

Harsha added that there was a third party plugin for wordpress, which has UA issues, and there is a need to contact the vendor. When there are issues or deviations for UA readiness from the previous work done, is there any record or documentation to follow with the troubleshooting. Satish said not all third party plugins are open source and it would be hard to debug, and secondly, many of them are not motivated for the UA readiness, unless there is demand from the end users. Third is the version issue, while WG or the vendor is developing the solution for one version, they may have upgraded the platform to a different version. Harsha said for his team, they would go through the existing plugins and if nothing is usable, they would write a new plugin.

Gordon briefly explained in the chat:
React and Angular - Frontend

Node Js - Packages and Services

"not reviewed the entire background info yet but I may be able to help as I have some experience with software testing while I go through the background info."

Satish welcomed Gordon to add more ideas as required. Gordon said he has experience with testing software applications from the Js family. He has used the Cyprus tool, and he would be happy to help. Satish said the big picture is clear that WG would like to test these whether they are UA ready. Satish asked Arnt about the work on the Wordpress platform.

Arnt said that Wordpress has asked for more work a few weeks ago and Arnt has communicated with the Wordpress maintainers, however, they have yet to respond to his polling. Satish said Wordpress has very large numbers of plugins. Arnt explained that he contributed the solution for the main platform of Wordpress, which has some aspects which require managing, and some of the plugins need some work as well. Arnt said Wordpress itself is PHP, and it may have javascript as well. Arnt shared his observation that Wordpress has included more than 1200 JavaScript Components.

Satish asked about the three libraries of JavaScript, for both frontend and backend, and whether it should be tested by one vendor or different vendors. Arnt answered that the same vendor could test all three.

Satish also said that creating the SOW should be specific and precise. Satish said it is possible to reuse the test cases from the previous round. Jim said the obstacle is that WG does not have people who know Node or Angular or React. Jim requested Arnt to help write the SOW from a technical perspective. Arnt has experienced working with React and Angular libraries. To make an application run in a browser, such as a single-page application, React or Angular can be used. To create an environment that runs on server, and less consuming the device battery, Node is used. Almost everything is the same and there are only minor differences. There are libraries more or less popular for

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any task. There are many (6-digits) libraries, therefore, the total work needs to identify the popular libraries or frameworks to do UA relevant things. And then, identify the popular software or websites that use these libraries, such as Linkify-it, which performs linkification. It detects domain name or email address in plain text. These things should be mentioned on the list of SOW. Arnt recommended testing top 5 libraries on linkification, for sending emails via SMTP servers or services such as Sendgrid, and delivering their test results.

Satish said it is reasonably clear, and to define technical scope, and asked for other things to check for UA readiness other than the linkification. WG could create a draft SOW and asked Arnt to help define the scope. Arnt said he would like to share the pre-Alpha thoughts to the WG mailing list. (see appendix)

Seda asked that in another **SOW of T5**, there is a requirement of making step by step configuration guide of CMS to make a UA compliant website. Seda asked if the mentioned libraries (Angular, React and Node) could be used for the purpose. Satish said it would be Wordpress or Joomla for making a website. Satish said this could be focusing less on technologies. Satish assumed that if there was a need to write codes to make it UA ready, it could be with PHP, or it could also be Angular, React or Node. The underlying platform is PHP.

Satish said **T1 and T5 should be read separately** since evaluation and building a website should not overlap. Harsha said there are certain frontend frameworks like Bootstrap. All these should be checked on. When it comes to PHP, there is the Laravel framework. When the Sinhala Government is implementing public websites, to support Sinhalese and Tamil, UA support is expected to be included. Harsha said there is a need to figure it out and provide solutions to those who would like to make UA ready websites. The technology required would be Bootstrap, Angular with JavaScript, Codeigniter, and Form7 as one of the third-party plugins. Version-wise, Bootstrap and Laravel versions need to be checked, and PHP version is okay.

Satish said if we wanted to test more things, the scope would be larger. **Working on T1 and then T5 seemed correct to Satish.** Harsha offered to send some open-source solutions which were used for Sri Lanka Government websites. Satish thanked Harsha and said these could be useful.

Jim thanked WG for the discussion and clarifications to move forward. Jim suggested a useful analogy would be UA survey of Python or Java. Jim also shared the link about NPM, a package manager, which has a list of libraries of Node to install JavaScript. Going through the NPM, the environment of libraries would lead to identifying libraries which are related to UA. There would be packages for dealing with URLs or email addresses.
Jim assumed one of the SOW can say take 10 or 20 of them as part of the job is identifying and part of the job is evaluating. Angular and React sounded like a single SOW, but with a different focus. It could be able to identify which part of those libraries is related to UA and explain to which extent they work well. If they do not, the workarounds would be requested. Jim said if a website is to be created with Angular or React as a front end, how to use them to be UA compliant and what would be the workarounds. Jim believed there were similar SOWs. Satish thanked Jim and planned **to discuss NPM next time.**

Jim's message in the chat:
No, I think that the evaluation of React Angular and Node does not overlap with configuration of CMS. The former is software development. The latter is administration of existing software.
i.e. **T1 and T5 are separate tasks.**

Seda shared in the chat:
UASG033 lists top projects with libraries : *https://uasg.tech/download/uasg-033-ua-readiness-of-open-source-code-pilot-en/*
Arnt found that document UASG033 useful. Arnt said the projects need the right kind of input.

Seda closed the meeting, and the next meeting would be differently scheduled as there could be conflicts with other meetings.

Appendix:

Arnt emailed the group to share SOW pre-alpha ideas:

"As I said, well, tried to say,

1. The relevant classes of work are
   a. Accessing inbound mail on a mail server
   b. Processing email, e.g. to autorespond or to create tickets
   c. Sending email, either via SMTP or via services such as Sendgrid
   d. Linkification, ie. adding links to running text where users think a link is intended
   e. generating HTML from other languages such as Markdown.
2. For each of these, there is likely to be several node.js/… things to perform this kind of task. The next step is therefore to identify top 5-10 things for this purpose.
3. The third step in the work is to test each thing's functionality relevantly and find cases where it can do something for legacy email addresses/IDNs but not for Unicode ones.
4. The fourth step is to produce a clear and concise description of each deficiency. A simple reproducer, suitable for use in a unit test or bug report.

As Jim says, NPM is where packages live. I would not expect either React, Angular, Node or NPM itself to have UA-related issues. I've used three of the four and didn't come close to any UA issue. Admittedly I avoided raising my hand in the status meetings and tried to avoid these areas…"

Next meeting agenda is set as follows:

1. BIUWG Action Item: UASG to look into the impact of IDN Variant TLDs on UA , and brief introduction from Sarmad Hussain.
2. Draft/Review SOW for T1 item
3. Discussion on NPM
4. Developing 5-year strategic action plan

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Next Meeting: 06 November 2023, Monday 14:30 UTC

Action Items:

No	Action Item	Owner
1	Share a SOW template as per as per Arnt's email on 25 Sep (similar to former Tech WG SOW to outsource to do testing on JavaScript libraries; React, Angular and Node; e.g., Evaluation of Programming Languages - Phase 3)	Seda
2	Share the info of EPDP sessions at ICANN78 to the WG	Seda
3	A short presentation on IDN variants (in the next meeting)	Sarmad
4	Share more information on technological scope and advise on scope of the SOW for T1 item	Arnt
5	Discussion on NPM in the next meeting	WG
6	Next meeting schedule to be shared	Seda
7	Send written notes to Tech mailing list on guiding the WG of what the Board wants and share his input.	Staff