

UA Tech WG Meeting Notes

20 November 2023

Attendees

Satish Babu

Dr Matogoro (TZ)

Carson Day

Harsha Wijayawardhana

Hervé Hounzandji

Jim DeLaHunt

Letsatsi Lekhooa

Matthew Newton

Samwel Kariuki

Arnt Gulbrandsen

Ece Cetin

Seda Akbulut

Yin May Oo

Meeting Agenda:

1. Welcome and roll call
 2. Tech WG Action Item from UASG's meeting with ICANN BIUWG (Board IDN UA WG) and ICANN org based on the [background information](#) and ([SubPro Doc page 114-Topic 25](#)).
- + Discuss how the variant domain names effect the 5 verbs of UA.

Action Item1	WG Progress
<p><i>UASG to look into the impact of IDN Variant TLDs on UA.</i></p> <p><i>(assigned to UA-Tech WG)</i></p>	<p>Approved IDN ccTLDs in 2010 and IDN gTLDs in 2012. Language community wanted the variant TLDs for a name in both Traditional Chinese and Simplified Chinese (For HSBC), however, it was not approved. All the variants should be treated as equal, one set domain not to create complexity. When transferring the label, the whole set has to move from one registrar to another.</p> <p>EPDP is currently working on creating a policy on how to bring IDN variants into rootzone.</p> <p>The concern is whether IDN variants will create new UA gaps. To answer this, we need to make a study, and discuss if any technical help is required to measure the impact of IDN Variant TLDs on UA.</p>

	Please refer to a study on variant TLDs 5 years back on the UX report: https://www.icann.org/en/system/files/files/active-ux-21mar13-en.pdf
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3. Reviewing the [SOW](#) for T1 action item: identify the technology stacks for UA testing: “Javascript libraries React, Angular and Node.” Identify UA testing with these stacks.
4. Quick update: Interim survey results (31 responses; deadline extended to 1st week of December)

Meeting Recording: [Link](#) , Password A1Y=T2!b=8

Meeting Notes

Seda presented the meeting agenda and shared about the [recent post](#) on handling the variant TLDs in the mailing list.

Satish greeted the WG and excused to leave early because of jetlag. After Satish would leave, Seda and Arnt would continue the meeting. Satish would like to bring up item#2 first. Arnt would explain about the SOW part after Satish.

Background information about IDN Variants on both top-level and second level considerations:

- Based on the IDN-related Outputs under Topic 25 in the [GNSO New gTLD Subsequent Procedures \(SubPro\) PDP Final Report](#), following recommendations are related to variant domain names.
 - **Variant TLDs are allowed for the same-entity.**
 - Recommendation 25.5 “IDN gTLDs identified as variant TLDs of already existing or applied for gTLDs will be allowed only if labels are allocated to the same entity and, when delegated, only if they have the same back-end registry service provider. This policy must be captured in relevant Registry Agreements.”

- **Variant domain names needs to be assigned to the same registrant.**
 - Recommendation 25.6 “A given second-level label under any allocated variant TLD must only be allocated to the same entity/registrar, or else withheld for possible allocation only to that entity (e.g., s1 under {t1, t1v1, ...}, e.g., s1.t1 and s1.t1v1).”
 - Recommendation 25.7 “For second-level variant labels that arise from a registration based on a second-level IDN table, all allocatable variant labels in the set must only be allocated to the same entity or withheld for possible allocation only to that entity (e.g., all allocatable second-level labels {s1, s1v1, ...} under all allocated variant TLD labels {t1, t1v1,...}).”
- **It is not required that each variant domain name behave the same.**
 - Recommendation 25.8 “Second-level labels derived from Recommendation 25.6 or Recommendation 25.7 are not required to act, behave, or be perceived as identical.”
 - For example, s1.t1 can point to a Traditional Chinese content website, while s1v1.t1 can point to a Simplified Chinese content website. As long as these two domain names are with the same registrants it is ok.

Points for UASG Tech WG Discussion:

1. Are there any points in the DNS ecosystem that need variant domain names to be ‘merged’?
 - a. If a registrant has both s1.t1 and s1v1.t1, is there any needs to merge two email addresses e.g. info@s1.t1, and info@s1v1.t1 and point the incoming message to the same inbox? If so, what happens when reply?
 - b. If a registrant also apply the ‘variant’ concept at the mailbox part e.g. info1@s1.t1 and info1v1@s1.t1 is there any need to merge the two mail boxes/mail accounts?
 - c. Others?
2. Are there any other considerations needed, based on the SubPro Recommendations?

Agenda#2: Impact of IDN Variant TLDs on UA

Satish talked about the raised questions from the board which is on the new IDN gTLDs, whether they would be affected by UA works. Many IDN variants are new, and the board's concern becomes a task of the UA-Tech WG. We need to understand the variants and its potential impact on the new gTLDs. Satish talked about the HSBC bank example of using Traditional Chinese label vs Simplified Chinese label. Seda shared the [SubPro document](#) and the link to the explanation email of the [variants matter](#).

Satish shared the variant handling issue to the WG, and also talked about the communities who would like to register IDN TLDs. Satish explained about Expedited Policy Development Process (EPDP). The Domain Name System (DNS) has no mechanism on this currently, thus, we need to keep some glue to keep the variant labels together. Satish said the overall concern is for IDN variants and these potential threats to DNS. EPDP phase1 was only the top level, and now, phase 2 is looking into the second level.

The definition of variants is defined by the language communities on visual or semantic similarity of the codepoints or codepoint sequences. The policy being implemented right now is to glue those which are variants to be the same owner so the users will not go to the wrong address. Satish briefly talked about the variant handling methods, [whether a variant could be allocatable to the same entity or blocked by the primary label owner](#). Satish also talked about the LGR Tool which is for checking the variants of a label, and produces the output of how many variants, whether they are allocatable or such. If those variants were to become email hosts, would their emails be handled differently.

Satish opened the floor for questions after explaining about the Board's question and the potential variant issues with IDN. Some level of depth is required in implementing the variants policy.

Jim appreciated the brief capsule information he heard from Satish and asked what kind of implications could be there. Jim also [suggested that the UASG.tech website should have a page about IDN and variants with layman](#)

[explanations](#). questioned whether the software treats differently to the variant set. Jim said the software that looks up the IP address of retrieval should know this information as well. It would go wrong if the browser just accepts the unicode string and looks up for the IP address without knowing the existence of variants.

Satish said the [questions of variant handling are not yet answered clearing for lower levels](#). We can only predict by assuming what if these variants were domain names owned by the same person or different people at the same time. It would require some backend changes in the browser as well. The remaining parts of the policy will be finalized soon. EPDP phase 2 is in discussion on this concern. Currently, registries manage the second level. There would be an upcoming meeting to make decisions on this matter.

Seda shared that the IDN EPDP Phase 1 report focuses only on TLDs. SubPro document covers both top-level and second level consideration.

Arnt said the [DNS has two phases, at one, for the domains that register \(for example through EPP\) have variants. On the other hand, the day to day using websites have no variant handlings](#), and the browser just looks up the string and matching IP address. There is no way for a mail server to detect if a domain has some connection to a variant. It would be very difficult to have restrictions on the labels with variants, and also difficult to push through the communities that use non-ASCII. For example, when the community wanted both ASCII and non-ASCII labels of Québec city (.quebec and.québec), it would make best sense for the registrar to choose what they actually want.

Satish said the [main purpose of the policy work is to avoid user confusion and potentials of phishing type DNS abuses. That is why if variants are required, we need the same entity principle](#). In the case of .quebec, it was the language community's decision [not to make e and é variants](#), and that was the reason the labels were not mapped to the same address. Harsha also added that the consonant conjunct form and independent forms are there in Sinhala language. They were not defined as variants. Satish said the second level

management is decided by registries, and they are required to follow the ICANN recommendation.

Harsha also asked about having variants and breaking DNS. Satish shared that the principle of conservatism exists; there would be a need for user requirements. SSAC asked the reasonable number of variants. The LGR can estimate but we cannot know. Having a large number of different names and mapping to the same IP address have been done, and they are scalable, but it was not recommended. Satish talked about the tool to be used as the measuring mechanism of variants.

Satish said there are multiple issues that came up with this, and he requested WG to think about this based on the question and possibilities.

Due to the interest of time, Satish suggested moving on with the next agenda. Dr Matogoro as vice chair of WG led the meeting.

Agenda#3: The SOW for Javascript Libraries

Arnt explained about the [SOW](#) contents. It is doable for the vendors as one work. The tests are to be done on fairly large and important libraries in JavaScript. The SOW is written for the vendors to understand and they know what to do and how to do. The blue color text under 'Description of Work' is added for this purpose.

["Description of Work"](#)

[Software that uses React, Angular and Node.js often performs functions such as receiving email from a human \(perhaps a customer\), storing information in a ticket \(e.g. "customer x sent message y to customer service at time z"\), composing replies \(e.g. "we are sorry that we failed to reply within four hours"\), generating web pages \(e.g. showing customer service employees today's incoming mail\) and similar tasks.](#)

[The NPM package library contains packages to help writing almost anything under the sun, including all of the example tasks mentioned in the previous paragraph.](#)

This work item tests whether it's possible, simple, to write such services that handle IDNs (e.g.) and EAI addresses (e.g.) in the same way as legacy addresses (<https://icann.org> and uaprogram@icann.org). The code may run in the frontend (using React or Angular), in the backend (node.js) or a mixture.

Only packages from NPM are in scope, and only code in javascript.”

Arnt said Java is a backend part, however, the work to test Java is not the same as JavaScript, thus, the SOW is written to do tests in JavaScript.

The work plan would be reviewed by Tech WG members before the vendor starts the testing. We will give 2 weeks of time to WG to review. The edits on SOW were done by Seda and Arnt. Arnt had sent a list of tasks about 5 weeks ago. The steps under the description of work are based on that email, and he made it maximally understandable and unambiguous for vendors.

Jim suggested changing the name of the SOW to better reflect the ‘Description of Work’. The tests are more focused on email and linkification. So, the title could be “[email and linkification handling using Javascript libraries: React Angular, Node.](#)”

Arnt thanked Jim for the excellent comment, and typed a title in the chat: “[Email processing and HTML generation](#)”.

Arnt pointed out that in the list, the points from 1.a to 1.f [needs re-ordering because some need to be done before email-related points](#). 1.d and 1.e should be before or after four email related points. Dr Matogoro said [the email-related projects would be after 1.d](#). Jim also suggested that part of their work would be also contributing to the EAI Self-certification guide.

Jim’s Comment in the chat:

A benefit of focusing on email addresses is that it exercises domain name handling as a side effect.

Arnt said these listed tasks on SOW are not standalone components, these are to be worked with other components. The designed tests in SOW and the tests in the Self-certification guide have very small overlap.

Jim's Comment in the chat:

“Vendors need someone to pay their hours if they are to do good work.”

The ‘Deliverables’ are in line with the ‘Description of Work’. The vendors were suggested not to report bugs because Arnt was not happy with the way vendors file the bugs previously. Bug reporting requires more time and by the time the maintainers respond to the vendor, the contract duration would be over. Therefore the bugs will be listed by the vendor, and Arnt will report them.

Seda suggested WG going through this document. Dr Matogoro asked for a deadline, and Seda suggested finalizing by the next meeting. Arnt would be joining the upcoming UA-Tech WG meetings. Dr Matogoro said this could be circulated in email; we could do that too.

Agenda#4 : Interim Survey Results

Seda shared that the survey results are good, and also the Getfeedback survey tool would expire soon and urged to finish this early. Since this is an interim round, then we can actually implement another round with different sets of questions.

The high-level survey purpose was to understand the strategic situation and shared understanding of UA. So far, more than 31 responses were received out of 69 surveys. The survey time will be closed.

Jim shared that he has the impression that the survey has probably gotten most of the value, and we should call an end to it and write up the results we have. We're at the stage where waiting will get us a small number of extra responses, and those extra responses will not much change the value of the

overall results. If not today, we should close the survey sometime soon. He added that we should just declare that we're done with this round, and start analyzing the results, and making a report, and then think about what we do next. The high-level purpose for the survey is to help us come to a shared understanding of the strategic situation that universal acceptance is in, and what obstacles we face. Jim said that he doesn't see that UASG has a statement of the strategic situation and a shared understanding of that. And the purpose of the survey originally was to collect ideas about the strategic situation and start working on expressing that consensus. So probably the results of the survey is a start on expressing that consensus.

Next Meeting: 11 December 2023, Monday 15:00 UTC

Action Items:

No	Action Item	Owner
1	Review the SOW and add comments before the next WG meeting.	Tech WG members
2	Share responses or milestones of Interim Survey Results	Seda
3	Communicate with team for the next meeting date and time	Seda
4	Communicate with surveyees for more responses and then close it by the next meeting.	Seda
5	Re-order description of work steps 1d, 1e, and finalize the SOW title.	Arnt