

UA Measurement Working Group Meeting

10 July 2019

Attendees:

1. Abdelmonem Galila
2. Chokri Ben Romdhane
3. Dennis Tan Tanaka
4. Jabhera Matogoro
5. Mark Datysgeld
6. Marc Blanchet
7. Mauricia Abdol
8. Michael Casadevall
9. Roberto Gaetano
10. Taiwo Peter Akinremi
11. Sarmad Hussain

Meeting Agenda

1. Roll call (2 min)
2. Re-cap of Measurements WG purpose and objective for this year (5 min)
3. Develop outline for Annual Report of Universal Acceptance Readiness (40 min)
4. AOB – Work on Dashboard for UA Metrics by Mark D.

Meeting Notes

As the meeting included newcomers, the meeting started with an overview of the purpose of the working group (WG). The members were informed that this working group will be measuring the advancement of universal acceptance adoption worldwide, referred to as UA-Readiness. The WG will be releasing an annual report which will include such measures, for example, UA-readiness for websites, browsers, email clients and servers, programming languages, etc. The measurements WG will work with other UA WGs to report these results to continue to raise awareness of UA-Readiness.

It was raised that to measure the UA-Readiness we would need to look at the five verbs of UA: accept, validate, store, process and display domain names and email addresses. The specific action in the context of various applications needs to be defined under these verbs and may differ across applications.

Some of the work has already started. For example, an analysis of the top 1000 websites based on Alexa ranking has been done and will be published for review of the UASG members soon. Programming languages were also studied (posted at <https://uasg.tech/software/>). Studies are also underway to see how to test for EAI in email clients and servers (following UASG012, UASG012A) and also region-specific top-fifty website evaluation.

On a query on the EAI study, the WG was informed that the current study is prototypical in nature, focused on estimating the procedure and effort, and not yet focused on evaluating the specific tools. This WG in conjunction with EAI WG would need to develop a list of tools to commission the follow up work to undertake the comprehensive UA-readiness evaluation for EAI tools.

On the inquiry on what is being tested on programming languages, it was shared that it was based on the set of test cases in UASG018 (and there is a detailed [document](#) on the work). The test case results are available at <https://uasg.tech/software/>. This includes testing IDNA2008 libraries, etc. It also contains limited testing for emails.

It was also raised that for EAI should be tested for the different phases; Phase 1 is send and receive internationalized email addresses, Phase 2 is provisioning or creating internationalized email addresses. Phase 3 is being referred to as being able to sign in email clients using internationalized email address. The EAI study being done is not using this terminology, which is high level, but is looking at all the different components involved.

It was noted that during the top-100 website evaluation study it was discovered that many developers are copying code for validation from Stack Overflow platform. So the question is how to engage with such community (also including GitHub). One mechanism is to share the correct solutions at these platforms. When people implement IDNs, they tend to use standard libraries: java.lang.idn, so does Python. However, they mostly implement support for IDNA2003 and not IDNA2008. Proprietary libraries have licensing challenges. This overlaps the technology WG work. The Measurement WG will need to collaborate with tech WG to allow to undertake this work. The work at <https://uasg.tech/software/> provides the assessment of what is being implemented on different platforms and suggest what should be used. The aim of the work was to assess IDNA2008 and EAI support of these libraries. It was suggested that a paper should be put together on how to monitor Github and such platforms.

It was noted that in applications, whenever an IDN is used, specialized code needs to be written to handle it. This is a non-trivial overhead, because core libraries are not supporting it. It is even more complex for EAI. This needs to be focused to solve; it should be possible to do it automatically.

The group discussed how to organize the work which need to do. It should start with setting a baseline for the various aspects of UA-Readiness. And then repeat the testing at a pre-determined frequency. As the WG, we need to document what needs to be tested and how frequently. It was raised that the test cases should be reviewed to ensure all the scripts are covered. Such an exercise should also see to what level of details an issue should be measured and what should be in scope from a UA-readiness perspective (because, for example, some issues may pertain to localization support). If this is documented as different research papers this work can get fragmented, and therefore a common framework needs to be developed.

How do we document the high-level broad picture? For example, can we collectively develop a grip, with rows indicating the testing which needs to be done, e.g. browsers, software libraries, websites, EAI software, etc. and the columns represent the verbs for UA-Readiness. Such a grid can be populated and then decided what should be in scope. Looking at the scope, it was also noted we also need to look at social media applications, CMS applications, registries and registrar systems. An initial grid should be set up to start the discussion.

Are there any other platforms? SMS verification proved to be a relevant issue, so we need to think about it. UASG's FY20 Action Plan lists Email, Content Management Systems, Programming Languages and Frameworks, Common operating system utilities, Certificates and Ecommerce Platforms. The following were presented as examples of OS utilities: curl, wget, nslookup, dig, telnet, ssh, host, hostname, scp, lxc , jail. However, it was noted that command line tools are for

system administrators and developers, so may not be our first priority, though others thought it was still important to consider. The WG should start with list all the options and then prioritize and shortlist based on our budget. The WG should also develop criteria for prioritizing.

The group discussed and concluded to keep meeting fortnightly online.

Action Items

No.	Action Item	Owner
1	Circulate a brief paper on how to interact with Github and other such platform	Marc Blanchet
2	Develop an initial high-level grid to capture the measurement space for UA-Readiness for further discussion	Dennis Tan Tanaka and Sarmad Hussain