Report on Universal Acceptance Workshop

Held Sunday, 18 October 2015
Dublin, Ireland

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The objective of the UA Workshop was to allow participants to work collaboratively to identify the situation and develop solutions that can be completed by the end of the financial year.

A summary of the action items is at the end of the report.

Why?

One of the question during the meeting was how to answer the question of "Why UA is important".

- Leverage the Global Connectivity and the Sustainable Development Goals to empower a multi-lingual Internet. Make sure new IT initiatives towards these goals have UA built in, not bolted on.[1]
- Very much like Y2K, but without the time pressure.
- Much of the next Billion will NOT be Latin readers.

UA with ICANN IT

(https://meetings.icann.org/en/dublin54/schedule/sun-uasg/presentation-uasg-18oct15-en)

We heard an update from ICANN CIO Ashwin Ragan on the progress ICANN IT has made since his last report at ICANN53.

- As reported in Argentina, just getting a list of all the applications was effortful.
- The number of applications under management by ICANN IT has fluctuated as their pursuit of an inventory progressed. There were a couple of side benefits from the exercise:
  - A small number of applications that are no longer used were identified and could be archived.
  - Copies of all contracts with third party service or software providers have been obtained.
  - Documentation for their Disaster Recovery Plan has been improved.
  - The inventory is proving useful for other projects – including a security review of all applications.
- Applications were divided into those where ICANN could make changes and those where it couldn't.

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[1] The SDGs https://sustainabledevelopment.un.org/?menu=1300
ISOC Paper: http://www.internetsociety.org/doc/internet-opportunity-sustainable-development

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- Applications also separated where user provides input and, separately, where there's no user input but there are processes applied to domain names.   Two different test suites are being developed for each situation.
- Review of applications has started and, surprisingly, a small number have had no references to a domain name, e-mail address or URL at all.
- Work has started on some applications that ICANN has source code.
- ICANN IT would like to have a clear definition of UA Ready that they can use.
- The project is still expected to take at least eighteen months to address the applications where ICANN has control.
- ICANN IT has started engaging with their third party suppliers.   Some have not been aware of the issue. Some have no current plans to address the issue.
- An interesting discussion was how to deal with internal search functions when data may be stored in Unicode and/or Punycode. *Searches should be done using Unicode.*

Around the World with UA

During this community discussion we heard of regional activities around the world.
- Thailand
    - In Thailand, a workshop was initiated by THNIC in May 2015.   Invited participants included Government, ISPs, Open Source Education and Development Association, Thai E-Commerce Association, Thai Webmaster Association and Thai Web Hosting Service Providers Club. International speakers were also invited.
    - THNIC has installed an instance of have installed Coremail's system for testing together with the EAI compliant mail platform from Throughwave Co., Ltd., Thailand, named CrossFlow.
    - The Government has interest in the topic and are supportive of THNIC's activities – but not to the extent of implementing mandates.
    - THNIC continues to work with the software community to encourage activities.[2]
    - A second workshop, originally planned for late 2015, will happen next year.
- New Zealand
    - In New Zealand, some informal engagement with CIOs (including the office of the Government CIO), Systems Architects, and industry bodies[3] have started.

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[2] Additional information received since the workshop: We are integrating the CrossFlow to the THNIC's registration system and the registration for Thai EAI should be opened next month.

THNIC is also working on Postfix configuration so that the system can receive and reply to the EAI so that web hosting or email service providers can use. The URL is http://interlab.ait.ac.th/eai-wiki/index.php. The next phase will include how to allow a non-Ascii in the local part so that the providers can offer Thai EAI accounts to users.

The registration system is under change process to support Thai EAI and Thai IDN. Will have the first test between registry and registrar within this year and hope that we can finish the process by the first quarter of next year.

[3] IT organisations in New Zealand

InternetNZ https://internetnz.nz	Government CIO https://www.ict.govt.nz	IITP (Institute of IT Professionals) http://iitp.nz	TUANZ (Telecommunications Users Association of New Zealand) tuanz.org.nz

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- New Zealand has three official languages, including Māori, which includes macrons.
- Informal testing shows that none of the most popular websites allow the use of IDN domain names in their registration systems.
- A study conducted by the Māori Internet Society found that acceptance at Government departments and Universities was very limited.
- Discussion with IT staff and others showed an interest in the subject, but very much wanted some authoritative documentation that defined the objective and provided guidance on how to pursue UA Readiness.

- Latin America
  - In Latin America there is surprisingly little interest in the topic.
    - While Spanish and Portuguese and other Latin languages do have non-ASCII characters, there is very little particular interest in using them in the Internet.
    - New gTLD adoption is also very low – with most people choosing the local ccTLD or a .com name.
    - It's expected that once there's some documentation, particularly if it's available in local languages, the community initiatives will be able to proceed. Even then, it will take some time as there is no driving demand at the moment.

- India
  - Digital India includes a task to allow e-mail in any local language. The programme managers are having a difficult time finding e-mail applications that support e-mail end-to-end. While transport seems possible, getting a full solution is challenging.

- Cyrillic Europe
  - EuRid and UNESCO producing annual reports on IDN progress – or not.
  - Serbia, Ukraine & Russia working on Cyrillic IDN deployment.
  - Most of the ccTLDs are supporting IDNs at the 2nd level already.
  - Currently focusing on marketing focus.
  - Waiting for the bigger players to come up with EAI solutions.
  - Still issues with the display of IDNs within browsers.

- Arabic Script Community
  - Issues of usability – particularly with Right-to-Left and Bi-Directional issues, keyboard standards (Urdu standard keyboards, for example, do not include a '.' Or a '@' (including soft keyboards))
  - Arabic Script Community are identifying issues.

- Latin America
  - Not seen as a big issue in Latin America – little call for IDNs and very few gTLDs.

ICANN icann.org	NZ Open Source Society nzoss.org.nz	Chamber of Commerce	Govis http://govis.org.nz
NZ Domain Name Commission dnc.net.nz	NZRS nzrs.net.nz	Local Government New Zealand http://www.lgnz.co.nz	Chamber of Commerce
TCF	ISPANZ	Very visible IT companies: TradeMe, Xero	NZ Software Association
NZ Tech	NZICA (Chartered Accountants) http://www.nzica.com	Maori Internet Society	

- o Raise awareness with ISPs so that they can understand a complaint.
- o Important issue is getting the message out.
- **ACTION: Create Community Outreach Model**
  - o **Tony, Pensri, Don – First draft by the end of November.**

Sustainable Development Goals

The recently released Sustainable Development Goals (SDGs) which have superseded the Millennial Development Goals, have a strong focus on using ICT as a catalyst for prosperity.

For this to work in developing communities, the ICTs need to be available in their native languages, which brings UA to point.

The SDGs provide a link to local governments who have incentives and commitments to use ICT locally to help achieve the SDGs. Thus, governments can be used as an outreach channel into software businesses, locally and globally, as the SDGs are pursued. And this leads to leveraging the ICANN, ISOC and Open Source developer communities that are dispersed, ICT literate communities.

Documentation

- Need to create some FAQs and need input from the community on what questions need to be answered. *An example was how to deal with search within an application. Search on the Unicode? What if the domain name's stored as Punycode? Where's the conversion done.*
- CIO Guidebooks & other technical documentation
  - o What are the criteria for UA Readiness
  - o User scenarios – Right & Wrong
  - o Developer's concerns
  - o IT Concerns
  - o Identifying issues (such as policies on registering homographic synonyms, identification of component parts in Bi-directional text strings, normalisation, how an IDN is dealt with within an e-mail system – in its Punycode or Unicode form, and more) and develop some **Good Practice Guides**.
- RFCs
  - o There was discussion of producing an informational RFC, but this was rejected as RFCs are not really about user interfaces and developers of user interfaces don't generally look at RFCs.
  - o A forum such as StackExchange or GitHub is considered useful. **Need someone to drive StackExchange & GitHub.**
- Influencer documentation:
  - o Aimed at businesses, governments, 'do the right thing', not geared toward technical audience
  - o We have a short e-mail outreach statement for webmasters.
  - o Industry case studies should be developed
  - o Leverage EuRid/UNESCO report case studies.

- o Should be evidence based
- o Create Talking Points Document w/data
- General Social Media campaign for the software community
  - o #getreadyua decided as Twitter handle
- Need to work to grow the size of the UASG itself
- **Actions:**
  - o **Break existing document into multiple documents as relevant.**
    - ▪ **Mark & Brent, January 14, 2016**
    - ▪ **Engage Contractor**
  - o **Need to find a forum for CIOs.**
  - o **Create Talking Points memo & Identify data that we have and that we would like to have**
    - ▪ **Christian, Emily, Yuri – January 14, 2106**
    - ▪

Collaboration

Other organisations that can be involved include:

- American Bankers Association – www.aba.com - online training facility
- Internet Infrastructure Coalition (i2 Coalition has a best practice working group)
- IETF – focuses on the protocols and not the user interface. (IAB has a Internationalisation programme, but not enough people with the requisite skills and knowledge – so they are looking for volunteers!)
  - o Approaches should generally be for people's own advantage, not for the Good of the community. Focus on personal interest.
  - o Suzanne Wolfe may also be interested in the topic since she leads the Names and Identifiers work.
  - o IETF Hackathon's could provide a source of workers.
- ECO –
  - o Association of the Internet Industry, in operation for more than 20 years and with 100+ members from 60+ countries.
  - o Outreach to companies not accepting new gTLDs for registrations. Has Google Docs spreadsheet.
  - o Certified Senders Alliance meetings coming up. Lars will raise UA awareness there and investigate what, if any, EAI developments are underway.
- The DNA –
  - o Thinks that Universal Awareness is as big a deal, but that is more a focus for The DNA than the UASG. How do we coordinate so that the UASG message to the technical community in a region is then followed by The DNA Universal Awareness campaign into the same region.
  - o Has a technical working group looking at code samples for UA
  - o **Action: Working group on how the UASG & The DNA can collaborate.**
    - ▪ **Christian, Rich, Mark, Don, Gwen**
- M3AAWG
  - o Concern is that the proliferation of new TLDs does not generate major vectors for abuse.

- o UASG keen to work with M3AAWG and other anti-abuse groups to make sure that filtering service don't include complete TLDs but are more granular in their approaches.
- o M3AAWG members include all the major e-mail providers, so M3AAWG provides access to these parties.
- o **Action: Christian to further investigate membership options for M3AAWG, but also look at leveraging the memberships of UASG participants – e.g. Google, GoDaddy, Microsoft, etc. with note that UASG is an unincorporated society.**
- Others
  - o ISOC
    - Approach Dan York to get some ideas of outreach from their experiences with IPv6 and DNSSEC
    - **Action: Don to contact Kathy Brown**.
  - o W3C

Outreach

- There needs to be a collaboration forum on-line to help answer questions.
- Partner with ISOC Chapters. See if there's interest.
- Partner with the GSMA.
- Work with Script Communities
- Work with ISPs and ISP Associations to raise awareness
- Associating UA with local language content development may be a way of getting resources within some communities.
- Need to have programming libraries identified and updated. (Perhaps a Hackathon in cooperation with mobile carriers/GSMA?)

EAI

- The UASG is focusing on EAI – Email Address Internationalisation – because e-mail is an important foundation of the Internet. It is also vital that Email works if we want corporate IT departments to implement UA modifications. Getting Email to work will also help advance UA readiness in a host of other, downstream applications. It will also create market demand pull as more than a billion people now have usable tools.
- An Internationalised email address is where either the local part or the domain name are in non-ASCII characters.
- Microsoft
  - o EAI compliant Microsoft Outlook was released mid-September.
  - o EAI compliant Office 365 to be release "soon". This is an on-line service but is based on Microsoft Exchange.
- Google is working to make their own platform EAI ready.
- There are a number of other players who are active, including Yahoo, Apple, Coremail (China), Crossflow (Thailand), Openfind(? – Taiwan), Horde (US).
- Brent London gave a demonstration of EAI working, and not working
  - o Sometimes the domain name was displayed in Punycode instead of Unicode.
  - o When an EAI address is sent to a non-compliant recipient, the message is rejected.

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- There are some issues that need to be address by implementers and there are no good precedence.
  - Normalisation of the local part of an e-mail address. Without a shared approach toward normalisation, interoperability may not work for IDN email addresses.
  - How to deal with bi-directional email addresses – how to identify the local part and the domain name.
  - Security – Not sorting out these (and other) problems consistently could result in a security problem (where names are spoofed) or a non-delivery problem.
- How to deal with IDN's in local part – Punycode conversion doesn't work and isn't supposed to work.
- Use alias when engaging with non-compliant partner systems?
- Raise awareness of the EAI Mailing List.

Registries and Registrars

- We want to build a template for use by Registries and Registrars to use to get their own systems UA ready. This will include all the areas that Registries and Registrars need to address to be UA Ready.
- Initial focus will be on customer facing systems, but will also apply to internal systems and third party software and service providers.
- Create inventory of systems
- What elements need to be addressed?
- What rules are relevant? RFCs? ICANN Contract requirements?
- Registry/Registrar specifics – RDAP? WhoIS?
- **Action: By January 2016 have a preliminary draft guideline for the industry to be UA Ready. Followed by one month of public comment, then publish just after ICANN55.**
- **Action: Get characteristics of participants**
- Recommendation for Registries & Registrars (including ICANN as a Registry)
  - Create UA Ready section on their websites for wholesale customers to show definitions, activities and progress.
  - Begin technical assessments of internal systems
  - Get UA mitigation work on 2016 budget and work plans.

Linkification

The concept of how to programmers determine whether a string refers to a website or email address or a typographical error. With a large number of new TLDs available, including IDNs, left-to-right scripts and strings with both right-to-left and left-to-right (bi-directional, or Bi-Di) the rules of the past need to be reconsidered.

Of note:
- The traditional http:// or "www" are disappearing from both convention but also from the domain structure.
- There are some characters in some scripts that are being mapped to other characters in other scripts – the open dot in CJK (Chinese, Japanese, Korean) is being mapped to the traditional closed dot "." in Linkification decisions.

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- Applications are inconsistent with their decisions on whether to create a link.
- This may be an issue for the linguistic community as much as it is for the developer community.
- The decisions made need to be context based.
- Test data will be useful and can be used by multiple communities – linguistic, programming.
- Linkification should not require access to the Internet – thus don't require a lookup.
- ISPs could also interfere based on the policies.

The goal of this work stream to to create a Best Practice Guide for application developers – a Style Guide – but not for people's behaviour.

Action: Define the scope of Linkification, Dennis & Mark & Andrew

Tidbits
- The ICANN meeting registration system allows IDN email addresses! (though it doesn't / can't send confirmation e-mails)
- How to progress IDNs to the latest version of Unicode – and keep it up-to-date.
- The UASG has started a knowledge base of contact points for major browsers.
- The management of the Mozilla Public Suffix List may be relevant to UA.

Action Items

	What	Who	When	Comments
1	EAI: Recommend local part transformation	Brent	January 14, 2016	
2	CIO Guide/System Architect Guide	Brent, Mark, Don	January 14, 2016	Includes identification of additional drafting resources to be contracted in. Also breaking existing Introduction to Universal Acceptance into small, more targeted chapters.
3	Identify and create forum for different stakeholders: Programmers, CIOs	Christian, Rich	January, 14, 2016	Create space within existing communities such as GitHub or StackOverflow. Need to identify resources to monitor space to answer questions. Finding a space where CIO's go may be more challenging. If necessary, the UASG may need to create such a space

4	Develop a model for local outreach	Don, Tony, Pensri, Edmon	November 30	Develop a first draft of a local community engagement model
5	Talking Points Memo	Christian, Emily, Yuri	January 14, 2016	Produce a data based set of talking points and, along the way, identify what data is available and what data which is not available would be useful.
6	Partner Engagement			Reach out to a variety of potential collaboration partners, including: • The DNA (Christian, Gwen, Mark, Don, Rich, Adrian) • M3AAWG (Christian, Brent) – including possible membership model or leveraging existing common relationships • ISOC (Don) – Include learning from ISOC's IPv6 and DNSSEC advocacy efforts.
7	Create method for sharing details of when we've reached out to website owners (and others) who have not been UA Ready and the results, if any.	Elaine, Lars, Mark, George	January 14, 2016	This could include the establishment of a database or shared Google Docs
8	EAI Report	Brent, Edmon	January 14, 2016	Report on the status of EAI developments and deployments within the very large email software and service providers
9	UA Ready guidebook for Registries and Registrars	Dennis, Rich	January 14, 2016	First draft available by January 14, 2016 followed by a public comment period, with an expected publication after ICANN55. Include generic scorecard of UA Readiness Achievement (ICANN, Rich, Dennis)
10	Define Linkification scope and prepare initial good practice guide	Dennis, Mark, Andrew	January 14, 2016	

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