Internationalized Domain Names

Fahd Batayneh

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Agenda

1. ICANN’s IDN Program
2. Universal Acceptance Initiative
3. Task Force on Arabic Script IDNs (TF-AIDN)
ICANN’s IDN Program
Internationalized Domain Names allow people around the world to access domain names in their local languages.

Top Three Countries by % of Total Global Internet Users***

<table>
<thead>
<tr>
<th>2000</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>30%</td>
</tr>
<tr>
<td>JAPAN</td>
<td>9%</td>
</tr>
<tr>
<td>GERMANY</td>
<td>6%</td>
</tr>
<tr>
<td>CHINA</td>
<td>22%</td>
</tr>
<tr>
<td>U.S.</td>
<td>10%</td>
</tr>
<tr>
<td>INDIA</td>
<td>8%</td>
</tr>
</tbody>
</table>
Internationalized Domain Names

- ASCII Domain Names consist of the English letters A-Z, numbers 0-9, and the ’-’
- An Internationalized Domain Name (IDN) uses a particular encoding and format to allow a wider range of scripts to represent domain names
- IDNs enable people around the world to use domain names in local languages and scripts
- IDNs are formed using characters from different scripts, such as Arabic, Chinese, Cyrillic or Devanagari
- ICANN has instituted the IDN Program to assist in the development and promotion of a multilingual Internet using IDNs
- The IDN Program also supports projects geared towards effective use of IDNs at the second-level of the Domain Name System, as guided by the community
Top-Level Domain Projects

• Root Zone Label Generation Rules (RZ-LGR)
  A community driven project aiming to define conservative mechanisms for introducing IDN TLDs into the Internet's Root Zone in a stable and secure manner

• LGR Tool
  An application that enables users to create, use and manage IDN tables in the formal, machine-readable format, called Label Generation Rules

• IDN ccTLD Fast Track Process
  Fast track process created by Internet community for evaluation of top-level IDN labels representing countries and territories
Second-Level Domain Projects

• IDN Implementation Guidelines
  Recommended practices developed through a community-led process to reduce user confusion and promote consistent use of IDNs for registries implementing IDNs at the second level

• Second-level LGR References
  Reference second level LGRs, reviewed by experts and community, being provided to assist registries offering IDNs during Pre-Delegation Testing and the Registry Service Evaluation Process
The Timeline of ICANN’s Progress on IDN TLDs

- **2003**: ICANN produces IDN Implementation Guidelines v.1.
- **2007**: ICANN introduces .test IDN TLDs in multiple scripts in the root zone.
- **2010**: ICANN initiates the development of Label Generation Ruleset (LGR) for the root zone. The LGR is a mechanism for creating and maintaining rules to determine valid IDN labels and their variants, if any, in different scripts.
- **2013**: 35 IDN generic Top-Level Domains created in the root zone through the New gTLD Program.
- **2014**: ICANN initiates and encourages the formation of community-based panels for different scripts for example: Arabic, Chinese and Cyrillic.
- **FUTURE**: Look for more IDN TLDs to be created in the root zone.
Get Involved!

- Email us at IDNProgram@icann.org

- Visit us at https://www.icann.org/resources/pages/idn-2012-02-25-en

We Need More Help!
Universal Acceptance Initiative
History

- In the early days of top-level domains, TLDs were either 2-characters (.tr, .qa, .uk) or 3-characters long (.com, .org, .edu)
- In 2000, the first set of New TLDs were introduced into the root. Some were longer than the traditional 2 or 3 character TLDs
- In 2010, IDNs were introduced into the Root for country codes
  - Email addresses could use non-English characters in the MAILBOX Name
- In 2013, the start of hundreds of new gTLDs started entering the Root
  - These were NEW TLDs
  - Many of them were longer than the traditional two or three characters
  - About 10% were non-English TLDs
Problem Definition

- We have TLDs that are more than 3-characters long, and others that are non-English
- Turns out that application developers have not kept their applications up-to-date to the standards and the variations in string length of the many new TLDs
- As a result, some users of these new TLDs and these new email addresses are experiencing frustration with using a website or corresponding with email

This is not JUST an IDN issue, but also spills over to New gTLDs
What is Universal Acceptance?

That ALL domain names and ALL email addresses work in ALL applications
Universal Acceptance Steering Group (UASG)

- An Internet community initiative
  - Supported by volunteers
  - ICANN provides funding and administrative support
  - Details at http://www.uasg.tech/

- Producing
  - Good technical and non-technical documentation
  - Producing Reports on the Benefits (Economic, Social, and Cultural)
  - Evaluating UA Readiness of things
  - Providing a logging and outreach facility when people encounter problems
  - Evangelizing the message to CIOs and Application Developers
  - Bringing key parties together to test inter-operability
How Can YOU Help?

• Get your own systems UA Ready
• Let others in your community know of the opportunity
Get Involved!

- Email us at info@uasg.tech
- Visit us at http://www.uasg.tech/
- Subscribe to our mailing lists at http://www.uasg.tech/subscribe/
Task Force on Arabic Script IDNs (TF-AIDN)
Introduction

• TF-AIDN is an initiative which focuses on technical issues and solutions to promote Arabic Script IDNs’ definition, secure deployment, and ease of use for the community
• Founded in October 2013
• Consists of around 40 members from 10 countries
• Expertise in more than 12 languages that use the Arabic Script (Arabic, Urdu, Farsi, Jawi, Punjabi, Pashto, Torwali, Malay, Seraiki, and some African Languages… etc.)
• Supported by ICANN logistically and financially
• Online presence at https://go.icann.org/1tiN7MM
Scope of Work

• The TF-AIDN have so far worked on the following items or are working on them:
  o Arabic Script Label Generation Ruleset (LGR) for the Root Zone
  o Paper on Arabic Script IDNs
  o Second level LGRs for the Arabic script
  o Universal acceptability of Arabic script IDNs and variants

• Some future work items include:
  o Arabic script Internationalized Registration Data Protocol and Practice
  o Technical challenges around registration of Arabic IDNs and variants
  o Operational software for Arabic script IDN registry and registrar operations
  o DNS security matters specifically related to Arabic IDNs and variants
  o Technical training material around Arabic script IDNs
Core Group of the Arabic Script Generation Panel
Get Involved!

- Email us at tf-aidn@meswg.org
- Visit us at https://go.icann.org/1tiN7MM

We Need More Help!
Engage with ICANN – Thank You and Questions

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