Agenda

- Introduction
- IDNs for end users
- IDN tests and protocol revision
- ICANN policy process for IDN TLDs
- IDN ccTLD Fast Track
- Where we are today
- Next steps
Introduction to IDNs

- IDN stands for Internationalized Domain Name
- Domain labels that contain characters other than Letters ‘a’ to ‘z’, Digits ‘0’ to’9’, and the Hyphen ‘-’
- IDNA protocol developed by IETF in 2002-2003
  - RFCs 3454, 3490, 3491, 3492
- IDNs have existed at second level since 2003
  
  com.عربية
- Work is underway for introducing IDNs at the top level
  
  - العربية.عربية
IDNs at the top level

• ccTLDs
  - Implementing IDN ccTLDs would normally take 3-7 years
  - Fast track: a quick feasible method for introducing IDN ccTLDs

• gTLDs
  - IDNs are part of the new gTLDs process
Why IDNs?

• Demand by growing number of users who prefer to access the Internet in their native languages

<table>
<thead>
<tr>
<th>Top Ten Languages Used in the Web</th>
<th>(Number of Internet Users by Language)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOP TEN LANGUAGES IN THE INTERNET</strong></td>
<td><strong>Internet Users by Language</strong></td>
</tr>
<tr>
<td>English</td>
<td>463,790,410</td>
</tr>
<tr>
<td>Chinese</td>
<td>321,361,613</td>
</tr>
<tr>
<td>Spanish</td>
<td>130,775,144</td>
</tr>
<tr>
<td>Japanese</td>
<td>94,000,000</td>
</tr>
<tr>
<td>French</td>
<td>73,609,362</td>
</tr>
<tr>
<td>Portuguese</td>
<td>72,555,800</td>
</tr>
<tr>
<td>German</td>
<td>65,243,673</td>
</tr>
<tr>
<td>Arabic</td>
<td>41,396,600</td>
</tr>
<tr>
<td>Russian</td>
<td>38,000,000</td>
</tr>
<tr>
<td>Korean</td>
<td>36,794,800</td>
</tr>
<tr>
<td><strong>TOP 10 LANGUAGES</strong></td>
<td><strong>1,337,527,402</strong></td>
</tr>
<tr>
<td>Rest of the Languages</td>
<td><strong>258,742,706</strong></td>
</tr>
<tr>
<td><strong>WORLD TOTAL</strong></td>
<td><strong>1,596,270,108</strong></td>
</tr>
</tbody>
</table>

IDNs from user’s perspective

- Registrants can register names in their native languages
  - مثال.اختبار
- Registries handle all encoding required
  - مثال.اختبار
    xn--mgbh0fb.xn--kgbechtv
- IDN emails are still under development at the IETF
  - المستخدم@مثال.اختبار
- What you write is not always what you see!
Here is what you see
User confusion

- Problem exists in ASCII strings
  - Lower-case "l" and upper-case "I"
  - Digit “0” and upper case “O”
- IDNs increase the number of characters used hence increase the possibility of user’s confusion
  - “paypal and “paypal”
  - “py” and “py”
  - “كتاب” و “كتاب”
Preventing confusability

• IDN tables and variants
  - Developed by registry operators to inform registrants of characters available for use, and to eliminate confusability by listing variant characters
  - Used both at second and top level domain names
  - Collaboration across language communities in recommended
    • Arabic Script IDN Working Group (ASIWG) is one example
  - Variant TLDs could be problematic
    • For example Pakistan with Persian KAF (U+06A9) vs. Pakistan with Arabic KAF (U+0643)
IDN protocol revision

- IDNA provides the technical requirements for IDN strings:
  - The label must be valid internationalized domain name, as specified in technical standards: [http://www.icann.org/en/topics/idn/rfcs.htm](http://www.icann.org/en/topics/idn/rfcs.htm)
  - Protocol revision is ongoing in the IETF
  - Key developments include:
    - Unicode version independent
    - Fixing problems with right-to-left script strings
## IDN policy process

### County Code Top Level Domains

#### Fast Track
- Introduce limited number of non-contentious IDN ccTLDs within short timeframe
- Non-Latin scripts only
- Match ISO 3166 list
- Match country/territory names

#### Long Term
- Full policy that caters for all
- Follows the full ccNSO Policy Development Process
- Launched in April 2009, working groups appointed, and timeline approved

### Generic Top Level Domains

#### New gTLDs
- Includes IDN TLDs
- Same IDN technical requirements as in Fast Track
- Focus on non-ASCII squatting & confusingly similarity issues
IDN ccTLD Fast Track Process

• Lunched by creating the IDNC working group in November 2007
• IDNC WG’s main task was to develop and report on feasible methods for introducing a limited number of non-contentious IDN ccTLDs within a short timeframe
• IDNC WG was guided by:
  - The overarching requirement to preserve the security and stability of the DNS
  - Compliance with the IDNA protocols
  - Input and advice from the technical community in respect to the implementation of IDNs
  - Current practices for the delegation of ccTLDs
• IDNC WG’s final report was approved by the ICANN Board in June 2008
• ICANN staff have been working on the implementation plan of the Fast Track
Fast Track: draft implementation plan

- First version of the draft implementation plan posted in October 2008
- An updated version posted in November 2008 - contained clarifying information about IDN tables
- Public comments till 7 January:
  - Relationship between the prospective IDN ccTLD managers and ICANN
  - Financial consideration including application fees and annual registry fees
  - Contention between IDN ccTLD strings and existing / new gTLD strings
  - Role of IDN tables

**M1:** General Introduction and background Information

**M2:** Fast Track Eligibility Requirements

**M3:** TLD String Criteria and Requirements

**M4:** Technical Committee Considerations

**M5:** Request and Evaluation Process

**M6:** TLD Delegation Process

**M7:** Discussion of Additional Topics
Fast Track: interest of governments and ccTLD managers

- ICANN sent letters to 252 governments and ccTLD managers
- 74 responses received
- 31 responses (excluding confidential ones) showed interest
  - Represent 15 different languages
- Details posted at:
Fast Track: revised implementation plan

- 2\textsuperscript{nd} revision of the draft implementation plan together with explanatory documents posted on 18 Feb and public comments received until 6 April

- Explanatory papers cover:
  - Documentation of responsibility between ICANN and prospective IDN ccTLD managers
  - Development and use of IDN tables and character variants for second and top level strings
Fast Track: where are we today?

- 3rd revision of the draft implementation plan together with consultation papers posted on 31 May and public comments received until 15 July
- Implementation plan updates:
  - Detailed evaluation process
  - Draft application online form
  - Clarified eligibility requirements
- Consultation papers cover:
  - Documentation of responsibility
  - Fee and cost considerations
  - IDN tables and variants
Documentation of Responsibility (DoR)

- Commitment to adhere to technical standards and IDN Guidelines is essential and generally accepted
- Need to define and describe roles and responsibilities of ICANN and IDN ccTLD managers is broadly accepted
- Different views on how such agreement could be enforced
- Different views on the form of the agreement
  - Signed DoR or exchange of letters (EoL) at the time of approval of delegation
  - Express acceptance of specific terms and conditions when signing a TLD request
IDN costs and cost recovery

- Three draft papers:
  - ICANN expenditure analysis by stakeholder interest area: Expense Area Group (EAG)
    - Associate ICANN costs with its stakeholders
    - ccTLD and ccNSO support costs ~$9m (~17% of ICANN costs)
  - Cost analysis of IDN ccTLDs detailing
    - Program development costs: $3m (recovered over time)
    - Processing costs: $26.7k per request
  - Financial contribution paper
    - Pre-arranged and recommended contributions for IDN ccTLDs to cover the costs of processing string requests, and an annual contribution to cover program development costs
Pre-arranged and recommended contributions

- Processing string requests ($26.7k per request)
  - Based on direct processing costs
  - No development cost recovery
  - No fee for IANA services

- Annual contribution
  - To recover the program development costs
  - Calculated based on contribution across all ccTLDs
    - NOT IDN ccTLDs only
  - 1-3% of revenue based on registry volume
IDN tables and variant TLDs

- IDN tables are developed by registries to:
  - Inform users what characters are available
  - Eliminate confusability by listing variant characters

- Variant TLDs
  - Variant characters occur where a single character has two or more representations, which may or may not be visually similar
  - Variant TLDs are those which contain variant characters
  - So far, there is no technical solution to alias TLDs
  - Allowing variant TLDs may result in user confusion, while excluding them may impact communities that use characters in the excluded TLD strings
Addressing the issue of variant TLDs

- Staff to form a working team with appropriate linguistic expertise and technical support to engage with relevant language communities to:
  - Develop recommendations to address the management of variant TLDs
  - Report back with recommendations to the ICANN Board and community in time for the Seoul meeting

- The same working team will be looking at the 3-character requirement for IDN gTLDs
Working team charter: handling IDN TLD variants

- Develop definitions of variants as used in IDNs - what does “variant” mean as used in IDN tables for ccTLDs and gTLDs
- Determine whether blocking or reservation of variant TLDs is necessary to prevent user confusion
- Determine under what circumstances TLD variants might be delegated
- Determine responsibilities of TLD operator to whom TLD and variants might be delegated
Next steps

• Finalize the implementation plan by the ICANN Seoul meeting (Oct-09) including:
  - Documentation of responsibility
  - Financial contributions
  - IDN tables and variant TLDs

• Informal pre-evaluation process to test portions of the implementation process
  - i.e. application, linguistic documentation, technical string criteria, etc.
For more information

- Tina Dam, Director of IDN Programme: tina.dam@icann.org
- IDN programme: http://www.icann.org/en/topics/idn/
- IDN ccTLD Fast Track process: http://www.icann.org/en/topics/idn/fast-track/
Thank You

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