Examining
the User Experience Implications
of Active Variant TLDs Project

Study Completed in March 2013

Scope of P6 study

+ Focus on TLD label issues but consider FQDN implications
+ Take into account current variant implementations at the second level
+ Balance user expectations with consistent and secure implementations
# Existing Variant Experience at SLD level

<table>
<thead>
<tr>
<th>Status of a variant set</th>
<th>Chinese IDN ccTLDs (3)</th>
<th>Arabic IDN ccTLDs (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Treated as an atomic unit for operation &amp; Registration data</td>
<td></td>
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<table>
<thead>
<tr>
<th>Limits of active variants</th>
<th>Consistent: 3</th>
<th>Different, upper limit varies from 3-6</th>
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<table>
<thead>
<tr>
<th>Choice of active variants</th>
<th>All-simplified + all-traditional + one user-choice</th>
<th>User choice</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Members of variant set</th>
<th>Consistent across all</th>
<th>Different within and across Arabic language ccTLDs</th>
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<table>
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<tr>
<th>Registration software</th>
<th>Custom-built</th>
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<thead>
<tr>
<th>Registrant support</th>
<th>Hosting by Registrar to manage variants</th>
<th>Registry support for configuration</th>
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</table>
Principles for Active IDN Variants TLDs

+ **Minimality:** Variants must be implemented with the least changes necessary in the DNS

+ **Security:** Variants must minimize the risk introduced by IDNs

+ **Equivalency:** Variants must direct users to related content and managed by the same entity

+ **Predictability:** Variants should behave and function as users expect in their language and script environments

+ **Consistency:** Variants should behave similarly within and across TLDs and supporting technology

+ **Manageability:** Variants should be straightforward to visualize and administer with supporting technology

+ **Ease of Use:** Variants should be easy to understand and use for new and existing Internet users
User Roles

- **End Users**
  - Those who use the variants

- **Registration Users/Managers**
  - Those who manage registration of the variants
  - Registrants, Registrars and Registries

- **Technical Community**
  - Those who deal with usability, configuration and diagnostics of the variants
  - System Administrators, Network Managers, Security Managers, Application Developers
Issues Related to Active Variant TLDs

The issues grouped into the three categories

- Use of variants
- Registration management
- Configuration and diagnostics
Recommendations

Based on user experience principles and informed by current IDN variant practices. Recommendations are directed at four audiences:

- ICANN (11)
- Registries (6)
- Registrars (5)
- Technical Community (3)

The following slides highlight selected recommendations.
Implement a well-defined and conservative variant TLD allocation process:

+ Approval of variant TLD must not be automatic
+ Variant TLD application must clearly demonstrate necessity
+ TLD variant(s) must be allocated to same entity
+ All requirements for a TLD application also apply to the variant TLD application
Recommendation number 6.1.2. to ICANN

- Maintain LGR repository and make it available to users and programmatically processable
  - Root zone LGR
  - State of each variant (activated, withheld, blocked, etc.) of each allocated TLD
  - Second-level LGR submitted for each TLD
Recommendation number 6.1.3. to ICANN

+ Develop minimal, simple and consistent IDN LGR for the root zone

  + For *character repertoire*: Minimally needed by a given script community; If no consensus for a given code point, default decision leave out; code points should be added at a script level

  + For *variants*: code point variants be added based on security consideration and/or significant community need; Root LGR variants should be based on script; simpler variant rules preferred
Recommendation number 6.1.6. to ICANN

+ Recommend registries to apply relevant subset of IDN TLD LGR and state life cycle for SLD variants. Justify any deviation.

  + Second-level LGR conforms with root LGR to avoid contradiction
  + Variant state life cycle for second level in line with root zone life cycle
  + Second-level variants to same registrant
  + Registry to advise the registrants to point SLD.TLD variants to the same or similar content
Recommendation number 6.2.1. to Registries*

+ Register any second-level variant labels on approval requirements

  + Registration of variant not automatic; initiated by registrant; variants withheld by default

  + Variant registered to the same registrant

  + All requirements for label apply to variant

  + Registration of variants be connected with primary, e.g., if the latter expires, the former also expires

* Applies only to registries that offer IDNs for scripts that have variants
Recommendation number 6.3.2. to Registrars*

+ Extend linguistic and technical support of IDN variants for registrants
  + Support registrants to understand, prioritize, and select/update variants for registration
  + Support registrants to understand pricing and service level implications of variants

* Applies only to registrars that support the registration of variants
Recommendation number 6.4.1. to the Technical Community

+ Based on requirements, consider enhancing software for administration and management of variants
  + Display current status of IDN variant labels (delegated, blocked, active, etc.)
  + Display both A-labels and U-labels
  + Update pattern-matching and searching tools for identifying and managing variants
  + Make client/server software “variant aware” for enhanced monitoring and management of data traffic
Recommendation number 6.4.2. to the Technical Community

+ Software intended for Internet end users—such as web browsers, email clients, and operating systems—should support variants to the extent necessary to ensure a positive user experience

  + Search engines not treating variants equivalent
  + Variants for user IDs, email addresses, etc.
  + Keyboards not supporting variants
  + History logs not deleting variants for privacy settings
  + Auto-complete functionality not variant sensitive
  + Sessions not consistent with variants
Input and Guidance on the Recommendations

+ The ICANN Board requested interested Supporting Organizations and Advisory Committees to provide any input and guidance they may have to be factored into implementation of the Recommendations by 1 July 2013.

+ Staff requests your input on:

  + Which recommendations if any, are pre-requisites to the delegation of any IDN variant TLDs (i.e., delegation of IDN Variant TLDs should not proceed until these recommendations are implemented)

  + Which recommendations, if any, can be deferred until a later time

  + Which recommendations, if any, require additional policy work by the ICANN community and should be referred to the relevant stakeholder group for further policy work
Thank You