

Examining the User Experience Implications of Active Variant TLDs

IDN Variant TLD Program



Study Objectives

- Recommend rules or guidelines a TLD with variants should operate under to provide an acceptable user experience
- Create a useful reference for educating application developers and others affected by these changes

One World
One Internet

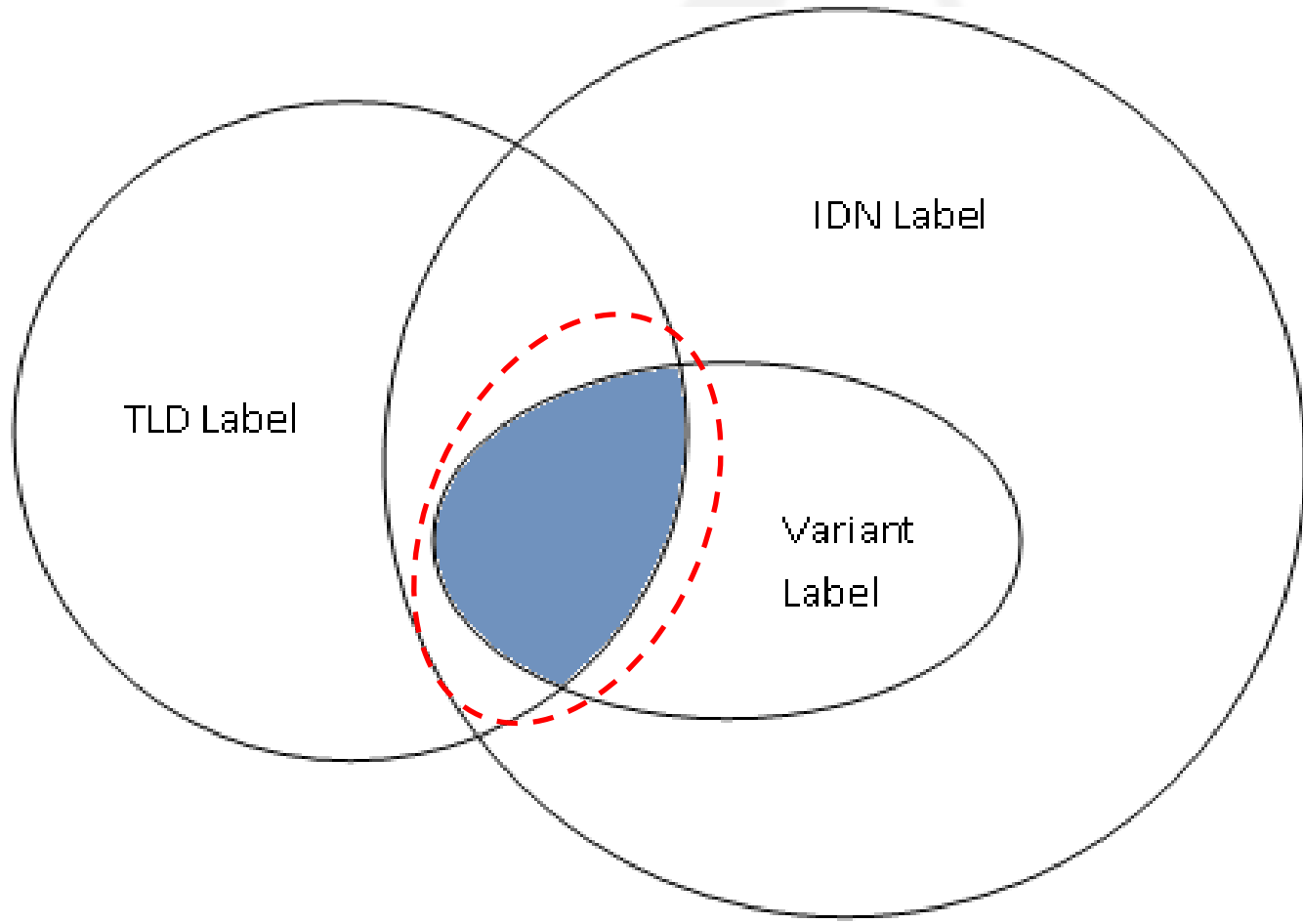


Study Plan

- Interim Report (target: Oct 2012)
 - studies existing deployment experience
 - proposes a set of guiding principles
 - identifies impacts / challenges for active variant TLDs
- Final Report (target: Feb 2013)
 - focuses on recommendations
- Public feedback on both reports



Scope of Work



Existing Variant Experience at SLD level

	Chinese IDN ccTLDs (3)	Arabic IDN ccTLDs (4)
Status of a variant set	Treated as a <i>atomic</i> unit for operation & Registration data	
Limits of active variants	Consistent across all: 3	Different across registries, upper limit varies from 3-6
Choice of active variants	All-simplified + all-traditional + one user-choice	User choice
Members of variant set	Consistent across all	Different within Arabic language ccTLDs, different for other language ccTLDs
Registration software	Custom-built	Custom-built
Registrant support	DNS hosting by Registrar to manage variants properly	Registry support for configuration of variant issues



Statistics for Simplified and Traditional Chinese IDN ccTLDs

	.中国 / 中國	. 台湾 / 台灣
Number of Registrations	320,000	43,000
% of Domains with variant forms	77%	93%
% of DNS queries to each TLD (measured by ICANN on L-root servers from 2012-07-19 to 2012-09-21)	87.8% / 12.2%	18.4% / 81.6%



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



Impacts of Active Variant TLDs

- The challenges also grouped into the three categories
 - *Use of variants (13)*
 - *Registration management (8)*
 - *Configuration and diagnostics (9)*



Next Steps

- The interim report will be released for public comment after Toronto meeting
- Invite comments on:
 - existing practices for variants beyond Chinese and Arabic script registries
 - Principles for active variants
 - The list of impacts / challenges for active variants
- Comments can be sent to idnp6@icann.org



Appendix



Challenges with Use of Variants

- User cannot find the complete set of variants for a primary label
- Variants not intuitive
- Variants defined inconsistently
- Variants displayed inconsistently
- Variants cannot be input by the user
- Unable to distinguish specific variants
- Identifier not bound to all variants
- Accessibility and privacy impacted
- Variants not searchable
- Search rankings unpredictable
- Search optimization affected by variants
- Variants not part of URL/URI/IRI
- Variants cause session re-establishment



Challenges in Registration Management

- Management across IDN TLDs inconsistent
- Registration for SLDs across TLDs inconsistent
- Inconsistent association of ASCII and IDN TLDs
- Technological support inadequate
- Registration system not straightforward to localize
- Registration information inconsistent
- Trademark protection tracking complex
- Trademark protection dispute process complex



Challenges in Configuration and Diagnostics

- Software configuration not supported
- Cannot associate variants for configuration
- Compounded certificate management
- DNSSEC validation inconsistent
- Log and history searching does not match
- Network traffic statistics incomplete
- Caching infrastructure inefficient
- Diagnostic and troubleshooting tools incompatible
- Forensics significantly more complicated

