ICANN FIFTY
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IDN Variant TLD Program

ALAC Update

Monday, 23 June 2014

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Internationalized Domain Names and Variants

- Internationalized Domain Names (IDNs) use character sets such as Chinese, Arabic, Cyrillic, outside US-ASCII

  - . پاکستان

- An IDN variant Top Level Domain (TLD) may look like or be considered exchangeable with another TLD by a user of the related writing system

  - U+06A9 پاکستان – ک
  - U+0643 پاكستان – ك

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IDN Variant TLD Program

- To support IDN variants in the root zone, the ICANN community, at the direction of the Board[1], undertook several projects to study and make recommendations on their viability, sustainability and delegation

- Being conducted in multiple phases, these projects form the basis of an implementation plan that will be considered by ICANN's Board of Directors

[1] https://www.icann.org/resources/board-material/resolutions-2010-09-25-en

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Phases Completed under the IDN Variant Program

PHASE 1 (2011)

Case Studies:
- Arabic
- Chinese
- Cyrillic
- Devanagari
- Greek
- Latin

PHASE 2 (2011-12)

Integrated Issues Report

PHASE 3 (2012-13)

Projects:
- P1 LGR XML Specification
- P2.1 LGR Process for the Root Zone
- P6 User Experience Study for TLD Variants

https://www.icann.org/resources/pages/reports-2013-04-03-en

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Phase 1: Script Case Studies

- Investigated issues relevant to scripts that need to be resolved to facilitate a good user experience for IDN variant TLDs

  ○ Arabic, Chinese, Cyrillic, Devanagari, Greek and Latin

  ○ 66 experts from 29 countries and territories

  ○ expertise in DNS, IDNs, linguistics, security & scalability, policy, registry/registrar operations

  ○ The reports posted in October 2011

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Phase 2: Integrated Issues Report

- The six script case studies used to create a common framework of issues with the possible inclusion of IDN variant TLDs in the DNS root zone
  - ICANN was assisted by a coordination team comprised of representatives from the case study teams
    - Provided valuable language and script support
    - Served as reviewer to the structure and content of this report
  - Developed a working definition of 'variants'
  - Clarified the issues and identified complexities
  - Recommended for additional work on the issues and identification of potential solutions
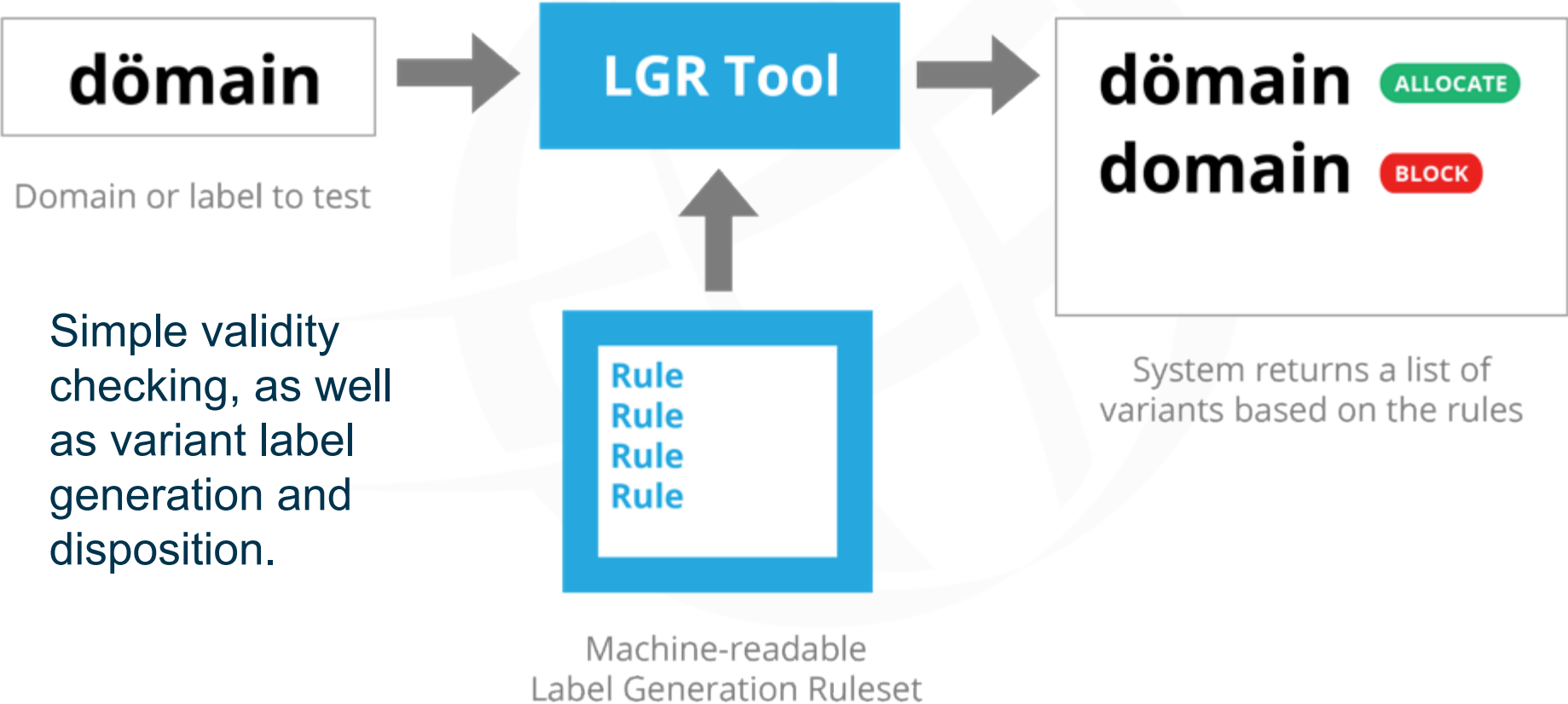 - The report posted in December 2011

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Phase 3: Label Generation Ruleset (LGR) and User Experience Implications

- Based on Phase 2, ICANN, in consultation with the community, identified and prioritized next steps as three projects

  o Label Generation Ruleset Specification and Tool – P1

  o Label Generation Ruleset (LGR) Process for the Root – P2.1

  o Examining the User Experience Implications of Active Variant TLDs – P6

  o The reports and protocol posted in March 2013

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Phase 3: Project P1 - Representing LGRs in XML

- ## What Does XML-LGR Enable?

dömain

Domain or label to test

LGR Tool

dömain ALLOCATE

domain BLOCK

System returns a list of variants based on the rules

Rule
Rule
Rule
Rule

Machine-readable Label Generation Ruleset

Simple validity checking, as well as variant label generation and disposition.

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Phase 3: Project P2.1 - LGR Procedure
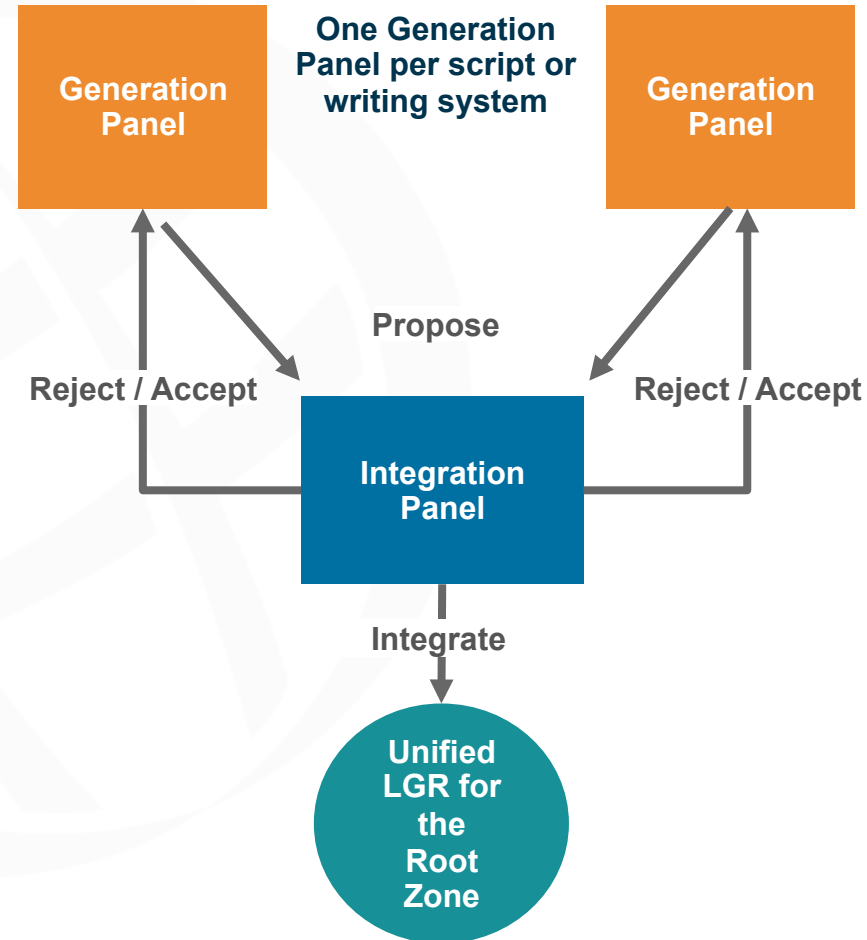
Generation Panels

- Generate proposals for script specific LGRs, based on community expertise and requirements

Integration Panel

- Integrates them into common Root Zone LGR while minimizing the risk to Root Zone as shared resource

Label Generation Rules (LGR)

- Which labels are permissible
- Which variant labels exist
- Which variant labels may be allocated

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Generation Panel   One Generation Panel per script or writing system   **Generation Panel**

Propose

Reject / Accept   Reject / Accept

Integration Panel

Integrate

Unified LGR for the Root Zone

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Phase 3: P6 – User Experience with variant TLDs

- If two or more variants are delegated, what are the user experience issues for the users:

  - End users

  - Power users (system admins, developers, etc.)

  - Registries, registrars, registrants

- Recommendations to provide an acceptable user experience

- Response elicited and received by SOs/ACs (GNSO, SSAC, ALAC) for further consideration

Current Work: P2.2 Implementation of LGR

- Implementation of the LGR Procedure initiated

  - June 2013 - Call for SMEs for Integration Panel to develop Root Zone LGR

  - July 2013 - Call for Generation Panels to propose Root Zone Label Generation Rules

  - September 2013 - Seating of the Integration Panel

  - February 2014 – Arabic Generation Panel formed

  - March 2014 - MSR-1 released for public comment

  - April 2014 – Chinese Generation Panel proposal received

  - June 2014 - MSR-1 published

  - Outreach efforts for formulation of additional script Generation Panels

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MSR-1 Content in Numbers

- 22 scripts

  - Arabic, Bengali, Cyrillic, Devanagari, Georgian, Greek, Gujarati, Gurmukhi, Han, Hangul, Hebrew, Hiragana, Kannada, Katakana, Lao, Latin, Malayalam, Oriya, Sinhala, Tamil, Telugu and Thai

- 'Common' and 'Inherited' (shared)

- 32,790 code points

  - from 97,973 PVALID/CONTEXT code points defined in Unicode 6.3

  - 11,172 Hangul syllables and 19,850 Han ideographs

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Next Steps

- Focus on P2.2
  - MSR-2 will complete the repertoire
    - adds some or all of the deferred scripts:
      - Armenian, Ethiopic, Khmer, Myanmar, Thaana, Tibetan
    - possible further extensions where warranted
      - Including existing script repertoire
    - In the meantime, MSR-1 is the basis for LGR-1
  - LGR-1 released after GP proposals are received and successfully evaluated
  - Continued outreach efforts
- Ongoing analysis for viability of implementation for P7

LGR Procedure Depends on Community Work

- Generation Panels and LGR proposals are REQUIRED for IDN variants to be considered for delegation

- Get involved:

  - Form a generation panel

  - Volunteer to join a generation panel

  - Take part in public review of the MSR, LGR proposals, integrated LGR, etc.

  - Disseminate information to interested communities or individuals

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| Arabic |
| Bengali |
| Chinese |
| Cyrillic |
| Devanagari |
| Georgian |
| Greek |
| Gujarati |
| Gurmukhi |
| Hebrew |
| Japanese |
| Korean |
| Latin |
| Sinhala |
| Tamil |
| Telugu |
| Thai |

Outreach Efforts

- Outreach efforts focused on organizing GPs
  - Tool kit
    - Outreach material for LGR
    - Simplified GP formation process
  - Video on IDN
  - Email to ICANN executive mailing list to help to reach out to their contacts to create new GPs
- Keeping community informed
  - Targeted events
    - IGF and regional IGFs
    - ICANN meetings
  - Web announcements and updates on ICANN community Wiki
  - Brochures and collateral materials

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Thank You