Taxonomy

Isolated  final  medial  initial
Character Set

• Not all PVALID characters should be allowed for TLDs
  — Combining Marks
  — Archaic Characters
  — Quranic Marks
  — Digits
  — Others (misc.)
Multi-"word" Expressions

• Cursive complex script
• No concept of abbreviation
• Space not allowed
• No capitalization
• Possibilities discussed by the case study team – not finalized
  — ZWNJ (for some other languages)
  — Hyphen (for Arabic language)
• Neither allowed for TLDs
Variants in Arabic Script

- Identical Cases
- Similar Cases
- Interchangeable Cases
- Optional Cases
Label Generation Policy

- More than a “language” “table”
- Characters + variants + additional constrains + meta information + …
- Need an automatic variant generation and verification process
- A string of 5 letters can have $4^5$ variants
- Should variant be at character or position level?
Variant label Status Management

• Multiple States
  — Allocated, Reserved, Blocked, Activated, Delegated, Fundamental

• Process and constraints for changing between states?

• Impact of TLD re-delegation

• Impact of change in label generation policy
WHOIS Lookup

\[
\begin{align*}
\{ \text{Label 3}_1 \} & \cdot \{ \text{Label 2}_1 \} & \cdot \{ \text{Label 1}_1 \} \\
\ldots & \cdot \ldots & \cdot \ldots \\
\text{Label 3}_l & \cdot \text{Label 2}_m & \cdot \text{Label 1}_n
\end{align*}
\]

• How will variant Domain Name Registration Data (DNRD) be looked up?

• Additional Services? Variant look up to point to Fundamental? Status information?
Fees

• Recommend no extra fees
  — Variants caused not due to applicants choice but through inherent ambiguity in
    • Script
    • Encoding
  — Increasing fees will discourage variants, affecting user access and perceived internet stability
End User Requirements/Issues

• Character support (OS, font, applications)
• Font style and size variation
• Keyboard variation
• Lack of management tools for U-label display
• Bi-directionality
Local Host Organization

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Thank You