TLD Universal Acceptance Initiative
Agenda

- Introduction & Background
- Scope of the Initiative
- Problems, Examples, Etc.
- Network of Interests
- High-level Roadmap
Introduction & Background
What is the Issue?

If names in a TLD aren’t useable,

The TLD isn’t useable
What are Problems?

- Name Ownership and Operation
- Web Browsing
- E-mail Delivery
- Content Search and Examination
- User Interface
- Identifier security
- E-commerce
- Social Media
- Anti-virus/Spam
- Mobile Devices
- ...dynamic set...
- ...legacy code...
Activities to Date
ICANN related efforts

• TLD Universal Acceptance
  o An effort to remove obstacles to the use of newly created TLDs

• IDN TLD Universal Acceptance
  o An effort to enable non-Latin script TLDs

• Joint IDN Group (JIG) Final Report on Universal Acceptance of IDN TLDs
  o ICANN stakeholder groups combined statement
Other Studies/Activities

• EURid’s “World Report on IDN Deployment”
• APTLD’s “Addressing the issue of Universal Acceptance of IDN TLDs”
  • Member meeting in May dedicated a day to the topic
• A topic of Domain Name Association’s Technical Committee
• Fairwinds Partners TLD Compatibility WG
Where (some) Solutions Lie

- GNU’s libidn (open source)
  - http://www.gnu.org/software/libidn/

- Microsoft’s “Handling Internationalized Domain Names”

- Twitter’s “twitter text”
  - https://dev.twitter.com/docs/tco-url-wrapper/how-twitter-wrap-urls
Scope of the Initiative
Universal Acceptance

• Combine work on
  o TLD Universal Acceptance
  o IDN TLD Universal Acceptance
  o other work such as Internationalized Email

• *If names in a TLD aren’t useable, the TLD isn’t useable*
Scope Limits

• The initiative addresses what can be considered “errors” or “false positive” rejections of names, including TLDs

• The initiative is not addressing administrative prohibitions on names, including TLDs
Problems, Examples, Etc.
Name Ownership and Operation

- Lifecycle of name ownership
  - Registration of name and contacts
  - Use of name (such as web, email)
  - Management of name (transferring registration)
Web Browsing

• Same Origin Policy
  o Determining relationships between names
• Treatment and Display of Scripts
  o Assumptions made about what user can read
  o Defense against “look alike” attacks

• Is the Public Suffix List the answer?
E-mail Delivery

• Configuration of mailbox name
  o Internationalized email (IETF’s RFC 6530)

• Spam rating and filtering
  o Rules for what is and what isn’t “real email.”
Content Search and Examination

- Language Assumptions
- Ranking of Results
- Malware Detection
User Interface

• Drop-down menus (for example)
  o Choice is limited

• Right-to-left and left-to-right scripts
  o As scripts mix, will they overwrite each other

• Text-to-URL conversion
  o Interpreting meaning of strings
Identifier security

• URL
  o Represent “things”

• Email Addresses
  o Used to identify people

• Domain Validation Certificates
  o Representing hosts
E-commerce & Social Media

- Security
  - As mentioned in earlier slides
- Access to market
  - Vendors want to reach new/bigger audiences
- Plus specific concerns
Anti-virus/Spam

- **Security**
  - Want to judge URLs, email addresses
    - A form of reputation building
  - Heavily based on heuristics
    - Which can be prone to false positives
Mobile Devices

• All the issues listed apply to traditional computers

• There’s a parallel universe, bigger and more of a driver for growth
Network of Interests
Domain Name Registration

- ICANN
- Registries
- Registrars
- DNS Hosting
Protocol and Operational Standards

- IETF/IAB
- W3C
- CA/Browser Forum
Industry Forums

• TLD Registry and Registrar Associations
  o AFTLD
  o APTLD
  o CENTR
  o LACTLD

• Other Associations
  o Domain Name Association
  o Fairwinds Partners
Software/Service Producers and Vendors

• Microsoft and Apple
  o Software developer conferences
• Google
• Mozilla

• Open source
• Web-mail, web hosting
• Social media
Written Script and Language Communities

• TF-AIDN, Task Force on Arabic Script IDNs
• Seeking other languages/scripts
High-level Roadmap
What Needs to Be Done

• Define scope - dynamic
• Identify and recruit
• Create a sense of urgency
  o As important as IPv6 and DNSSEC
• Enabling sector: Registration
• Rest of the Internet
Registration

• This may seem like “oh, we got this” but
  o Registrars aren’t always up to date on the TLDs they sell and manage
  o Sometimes registrar/hosters have only portions up and running for new TLDs
  o Even registries have to examine themselves
    ▪ Can I use an internationalized email address for billing?
    ▪ Or in a membership/community mail list?
Roadmap Story

- Global alliance/...
  - An organized critical mass to push this forward
  - Not *needing* to be a formal task force/WG/SIG
- Steering of priorities, focus, energy
  - Encourage progress but eliminate bottlenecks
- Milestones and possibly measures
  - To motivate at all turns
Universal Acceptance Initiative URLs

- Two ICANN resources
- A description of the TLD Universal Acceptance Initiative
- An ICANN community wiki
  - https://community.icann.org/display/TUA/TLD+Universal+Acceptance+Home
Social Media

https://twitter.com/ICANN

http://gplus.to/icann

https://www.facebook.com/icannorg

http://weibo.com/icannorg

http://www.linkedin.com/company/icann