



VeriSign's com/net IDN Experience

VeriSign Naming and Directory Services

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Matt Larson

Standards Implementation

Standards published in March, 2003

Standards deployed into OT&E on 27 August, 2003

Registrar Migration window began on 13 December, 2003

- + Registry converted all registrations to punycode on 13 December
- + Registrars permitted to send punycode or RACE encoding during migration window
- + Fewer than 500 invalid registrations were deleted
 - Full stops (U+3002)
 - Leading or trailing dashes
 - Bi-directional rules
- + Began publishing punycode into com and net zones on same date

Closed Migration window for registrars on 24 April, 2004

- + All registrar registration requests required to meet standards and guidelines

Removed RACE resolution capabilities in i-Nav™ resolution plug-in on 2 July, 2004



Guidelines Implementation

Strict Compliance with IDN standard RFCs

Allowable characters in an IDN should be “inclusion-based”

- + Applied to languages that have identified and appropriate tables

Support language specific rules and tags

- + All new registrations must have a language tag
 - Valid language tags are a subset of ISO 639-2
 - List pared for Registrar UI consideration
 - Chinese, Japanese, Korean, Polish, Greek, Russian and other Cyrillic based languages currently have tables
 - Chinese deploys the CDNC variant table as well as an inclusion table
 - A Chinese base registration that commingles Traditional and Simplified variants will not generate registration variants
 - Greek and Russian tables prohibit the inclusion of Latin characters
 - German and Scandinavian language tables to be deployed with next drop of core software (estimated 1Q05)



Guidelines Implementation

Support the development of language specific registration policies

- + Working with regional authorities to deploy appropriate tables

Limit domain label to characters associated with one language/sets of languages

- + VeriSign only limits based upon language tables
- + Script make-up in com/net registrations
 - 69% com/net IDNs are single language/script registrations
 - 31% combine a single non-Latin script/language and Latin
 - Only 69 registrations combine multiple non-Latin scripts

Provide informational resources in languages supported

- + VeriSign uses a language service to support registrars in their native language as needed.



Com/Net Standards Migration

Over Ninety Registrars had IDNs under management

- + Five registrars chose to no longer participate in IDN program
 - VeriSign successfully transferred 54% of those domains to other registrars through the Temporary IDN Transfer Policy
- + Many European registrars began registering IDNs once standards deployed

No major technical conversion issues

- + Many registrars used the VeriSign IDN SDK
 - Provided direct access to VNDS engineering resources
- + Exercises provided to registrars for self-assessment
- + Active registrars have continued to register at consistent rates

Remaining Registrar Issues

- + Some resellers have yet to convert their own data
- + Not all name server records have been updated
 - Removal of RACE from i-Nav plug-in has expedited updates



Client enablement is final key to adoption

Applications that have adopted IDN

- + Browsers
 - Netscape, Mozilla, Opera, Safari, Camino, Epiphany, Firefox and others
- + E-Mail
 - FoxMail
- + FTP Clients
- + Full list can be found at <http://www.verisign.com/nds/naming/idn>

Still represents less than 2% of the desktops

IDN SDKs and Language support

- + GNU libidn, JPNIC, VeriSign
- + Group for Business Intelligence IDN Libraries
- + IBM ICU



IDN Software Developer Consortium (SDC)

Participants

- + Application Developers, Registries and Registrars

Key Issues

- + Significant demand for IDNs in Asia and Europe
- + Clear business direction of application providers
- + Remaining standards issues

Current goals

- + Encourage Internet users to adopt applications that are IDNA enabled
- + Focus consumer demand for applications that are not IDNA
- + Recruit membership to the IDN SDC
 - Provide technical and business forum for sharing knowledge
 - Assist in creation of business strategies

Meeting in San Diego on 31 July

- + Interested parties are encouraged to participate
- + For more information, contact Pat Kane at pkane@verisign.com

