IDN Whois Issues for gTLD Registries

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Registry Whois Primer

- ICANN authorized registries are required to provide a Whois server on Port 43

- Port 43 used by registrars and other automated sources to get authoritative information regarding contact and other information for a domain

- Very different from the Whois you see on a web site

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ASCII vs. Native Representation

- Port 43 to expect ASCII only input and provide ASCII only output

- Internationalization of domains not same as internationalization of contact info

- Domain input should use Punycode

- Domain output can use Punycode
- The new Cross Registry Internet Service Protocol (CRISP) supports contact data in UTF-8 (non-ASCII)

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Whois representation on the Web

- Native form of domain should be provided using html escapes/character reference: ie. Ӓ form (perhaps as a separate field)

- Contact info can also use html escapes / character reference for outputting multilingual characters

    e.g. whois info:
    domain: xn--punycode.info
    domain (native form): Ӓऩ඀.info

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Impact on Registry Protocols

- EPP currently allows for the provisioning of "localized" contact address
- EPP allows the provisioning of two addresses: 1 in "international"=English, and 1 in "localized" form

.INFO Whois Issues

- .INFO Whois Plans are in development:
  - .INFO Port 43 Whois will show ASCII by default (per ICANN contract)
  - Evaluating display of non-ASCII text in web-based Whois
- Registrars' HTML pages – pages specify appropriate coding
  - Make sure that their HTML pages specify appropriate encoding (8859/UTF8, etc) so that they can provide correct conversion
- Registrars' plan to store non-ASCII (non-Punycode) strings in their databases
  - Ensure that this is done correctly

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Unique gTLD issues with Whois

- No longer just one language input or output
- How do you differentiate between variants and represent packages across languages
- Search of Whois records and contact information records (even from within a registry or a registrar) is now dramatically more difficult

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gTLD IDN Whois issues

- Billing and invoicing to a registrar with Whois information now has to be figured out:
  - Punycode representation ("xn—dd3234.info" is meaningless but accurate
  - IDN representation on invoices invites registrars and others in the value chain to get knowledgeable on multiple languages
  - Audit trails just got a lot harder

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