GNSO IDN Working Group

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ICANN Status Briefing

Tina Dam
IDN Program Director
ICANN
Email: tina.dam@icann.org

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IDN Program Plan: Towards Introduction of Internationalized TLDs

- The Program Plan is comprised of several Projects that may be planned and managed separately but have independencies.

- Projects focuses on following objectives:
  – Security and Stability of the DNS
  – Review and update of technical protocols (IDNA)
  – Promoting consumer choice and avoiding user confusion
  – Developing consensus policy to guide implementation
  – Increasing Outreach and communication plans
- Many projects – the following is a status report of
  – IDN Technical testing
  – IDNA Protocol revision

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IDN Technical Tests

IDN Laboratory Testing Goals

- Demonstrate that the insertion of IDN strings into the root has no appreciable negative impact on existing resolutions

- Obtain agreement of US DoC that internationalized top level labels can be inserted (potentially initially for test purposes) live in the DNS

- Reach consensus opinion with RSSAC and the root-ops that internationalized top level labels can be inserted (potentially initially for test purposes) in the DNS

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IDN Laboratory Testing: Project Milestones

- July 2006:
  - Meeting with IDN-PAC and root-server operators during Marrakesh and Montreal meetings
  - Plan NS and DNAME testing as two parallel running tracks
- September 2006:
  - ICANN retained Autonomica to perform laboratory test
    - Highly DNS experienced staff
    - Test plans will be made publicly available for replication opportunities
- October 2006
  - IDN-PAC agrees on method to select the strings for the laboratory test
  - Set of strings are provided Autonomica and initial testing are commenced
    - Preliminary tests already performed and while successful, demonstrated that some applications have not implemented IDNA in accordance with the existing protocol standard
- December 2006
  - More test details expected to be provided

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IDN Laboratory Testing Details

- Autonomica will develop and ICANN will publish the test procedure
  - plan detail will be sufficient so that others may replicate the test
  - ICANN will publish the results received of any other test performed in accordance with the publish test plan

- The laboratory test plans includes the following:
  - insertion of NS records into a copy of the root zone
  - tests performed in closed laboratory environment with a series of systems implemented to replicate as closely as possible the server software of the various root servers. This includes:
    - versions of BIND server software, and
    - use of the most popular DNS resolver software packages

- No further end-user or application testing is included as the laboratory environment is closed and not accessible from outside

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Development of Laboratory test strings

- Test strings was delivered by ICANN as coordinated through the IDN-PAC

- Normal Unicode-Punycode conversion
  - flod18häst → .xn--flod18hst-12a
- Performance with a 63-character long TLD string
  - .hippo18potamushippo18potamushippo18potamushippo18po

- Right to left, embedded characters with opposing directional properties

- Left to right script with sophisticated shaping properties

- Non-alphabetic script

Application Software Testing

- A positive result from the laboratory tests will allow move to a "Live" IDN TLD test

- These additional tests are intended to ensure that application software will work with internationalized domain names
  - Introduce <.test> in various scripts to ensure participant understanding that this is for testing only
  - Test scripts are intended to be determined after consultation with Internet community
  - Plans will be main topic for IDN-PAC meeting in Sao Paulo
  - Plans will need further discussion with technical community

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IDNA Protocol Revision

Proposed Revisions to IDNA Protocol

- Revising the IDNA protocol will build an "inclusion" based model for determining what scripts may be used for IDNs and potentially increase the number of scripts available for IDN deployment.

- The revision will base the protocol on Unicode 5.0 (containing 64 scripts), the existing protocol is based on Unicode 3.2 (containing 45 scripts).

- The revision to the protocol will:
  - Potentially increase available blocks of characters
  - Include revision process to include additional scripts in the future
  - include technical review of protocol functionality

- The revision effort is being managed through the IAB/IETF

- The Basic Framework was published Sept-06
  - RFC4690

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Revisions suggestions of IDNA Protocol

- Three internet-drafts were published providing suggestions for solutions to the issues raised in RFC4690:

- An overview with proposed issues and changes for IDNA
  - http://www.ietf.org/internet-drafts/draft-klensin-idnabis-issues-00.txt

- A suggestion for solving an IDNA problem in right-to-left scripts by revising the stringprep profile
  - http://www.ietf.org/internet-drafts/draft-alvestrand-idna-bidi-00.txt

- An overview of suggested inclusion based IDNA Unicode Codepoints based on Unicode 5.0
  - http://www.ietf.org/internet-drafts/draft-faltstrom-idnabis-tables-00.txt

- A status report will be provided in the IDN workshop
  - Wednesday, 6 December 2006, 17.30-19.30

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Sao Paulo Activities

- Sunday: IDN Tutorial
  - Basic IDN information, definitions, functionality, etc…

- Wednesday: IDN workshop
  - Status reports on IDN projects
  - IDN Presidents Committe on IDN on panel
  - Open Q/A

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