



**ICANN**

# **Internationella domäner**

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# ICANN's IDN Program Plan

- A new program within ICANN
  - IDN Program recently established within ICANN to achieve the possibility to insert internationalized top level labels in the root zone.
- IDN dedicated staff
  - Director of IDN Program
  - Existing Technical, Policy, IANA Staff
  - New positions of CTO, Writer, Project Coordinator
- Goals with program
  - Enable domain names based on local scripts
  - Global interoperability
  - Secure and Stable Internet



# Internationalization Overview

Domain Names Based on  
ASCII / LDH Rule



Internationalized 2<sup>nd</sup> level  
Internationalized top level



ASCII based browser/email  
clients/...



Web access in local  
languages + IDN emails

Content have been available  
in many languages for  
some time



Expected to continue to  
expand

example.test → 실례.test and 실례.테스트

(example.test → xn--9n2bp8q.test and xn--9n2bp8q.xn--9t4b11yi5a)

Aim: An internationalized Internet



# IDN Program Plan

- The IDN Program Plan encompasses all the actions and deliverables necessary to eventually deploy IDNs.
- The Program Plan is comprised of several Projects that may be planned and managed somewhat independently.
- Projects includes the following 4 objectives:
  - Security and stability of the DNS
  - Solving user confusion and spoofing issues
  - Revision of technical protocol
  - Reaching agreement on policy issues



# Objective 1: DNS Security and Stability

- ICANN Core Values include:
  - Preserving and enhancing the operational stability, reliability, security, and global interoperability of the Internet.
- Operational Performance Targets
  - Year 1: “...introduce experimentally IDNs in TLDs”
  - Years 2 & 3: “deploy IDNs in the top-level...”
- Strategic Plan 2007-10
  - <http://www.icann.org/announcements/strategic-plan-22jun06.htm>
- Operational Plan 2006-07
  - <http://www.icann.org/announcements/operating-plan-22jun06.htm>



# Project: Laboratory and Root Server Testing

- Goal: *To demonstrate that the insertion of IDN strings into the root has no appreciable negative impact on existing resolutions*
  - it is difficult to prove a negative
  - we can take steps that allow us to say:  
"we are reasonably certain there are no issues"
- Reaching the goal requires a combination of activities:





# Project: Laboratory and Root Server Testing

- Proposed test plan includes interrelated milestones where some run in parallel:
  - NS records based on Punycode
    - Perform test in laboratory setting
      - input from DNS technical and operational experts to define issues
    - Perform operational process test
      - to verify functionality of necessary internal processes
    - DNS Root Name Server test
      - aimed towards applications
- Most Recent News:
  - Autonomica agreement with ICANN to manage IDN laboratory test
    - Highly DNS experienced staff
    - Test design will be made publicly available for replication opportunities
    - Test results expected in December 2006



## Objective 2: Solving User Confusion

- Example: paypal.com
  - Second character is U+0430, Cyrillic small a
  - Looks like Roman/ASCII “a”
  - Is now prevented by IDN Guidelines “one label, one script” rule
- Very strong reactions from
  - Community and press
  - Browser vendors
- Users will be protected
  - If effective protection mechanisms cannot be devised, there will effectively be no IDNs
  - ICANN, IETF, and Applications developer communities need to work together for a satisfactory solution
  - Registry action to protect against separate registrations of look-alikes will be particularly critical





# Project: Revision of IDN Guidelines

- IDN TLD Working Group
  - ccNSO and gTLD Constituency membership
  - Monthly meetings through to Morocco
  - Created version 2.0, 2.1, and pending further revisions
  - Provide regular updates to the Presidents IDN Advisory Committee
- Version 1.0
  - Commitment by .cn, .jp, .tw, .info, and .org
  - Further authorized and implemented by .info, .museum, .biz, .org, .name, .com and .net
- Version 2.0
  - Opened for script based implementation in addition to language based
  - No mixing of scripts within labels
- Version 2.1
  - Included the provision in relation to the “UseSTD3ASCIIRules” flag
- Future Version:
  - Focus on IDN TLD principles &
  - BCP practices to avoid further confusion between TLD implementations



## Objective 3: IDNA Protocol Review

- IDNA protocol is based on Unicode 3.2
- Revision needed for Unicode 5.0
  - Includes additional blocks of characters
  - Attempt for easier forward revision process
  - Includes technical review of protocol functionality
- Managed through the IAB/IETF
- Part of ICANN's Operational Plan 2006-07
- Basic Framework published September 2006 in RFC4690:
  - Language specific character issues (same script, different language)
  - Multiple usage of scripts for one language
  - Bi-directional cases
  - Confusable character issues (side-of-the-bus)
- ICANN issues in RFC4690 includes:
  - Dispute management
  - Whois management
  - Registry policies
  - Internationalized top level



## Objective 4: IDN Policy Development

- Policy development is run by GNSO, ccNSO, GAC
- Multiple meetings during and in-between ICANN meetings
- Latest face-to-face GNSO meeting in Amsterdam:
  - IDN policy issues combined with introduction of new gTLDs
  - IDN issues report and ToR are available online for comments
  - Proposes joint task force between GNSO, ccNSO, GAC to prioritize issues and propose structure for further work
- Introduction of new gTLDs are focused on:
  - Whether to introduce new gTLDs
  - Allocation methods
  - Selection criteria
  - Contractual Conditions



## Examples of IDN Working Groups

- ICANN President's Advisory Committee for IDNs
  - Formed on 23 November 2005
  - Initially tasked with IDN TLD Technical Challenges
- IDN TLD Registries
  - ccNSO and gTLD reps focused on IDN Guidelines
- IETF and IAB
- Browser Community
- GNSO, ccNSO, GAC, ALAC
- Regional Model Initiatives
- Many more....



# IDN Outreach and Community Focus

- Middle East meetings, October 2006:
  - IDN Program plan
  - Arabic script vs. language issues
- Regional gTLD registrar meeting
  - Shanghai, 19-20 October 2006
- Internetdagarna
  - Stockholm 24-26 October 2006
- Internet Governance Forum, IDN workshop
  - Athens 31 October 2006
- APTLD meeting with IDN focus
  - 14 November 2006
- ccTLD meeting for Middle East
  - Dubai 20 November 2006
- Sao Paulo ICANN Meeting, 3 IDN workshops
  - 2-8 December 2006
- Online Calendar coming soon.....



## Range of Other Relevant IDN Topics:

- Impact of potential protocol changes on registries, registrars and registrants
- IANA repository for IDN tables
- Language-script Specific Issues
- Dispute issues and rules
- Statistics and market adoption on # of registrations at second level
- Much more....

<http://www.icann.org/topics/idn/>





# Thank you

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