Changes to the Top Level Domain Landscape

A presentation to PacINET 2012

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Overview

1. TLD Namespace
2. New gTLD program update
3. Pacific outreach - discussions
4. Universal acceptance of TLDs
5. Participating in ICANN for beginners
What is the name space?

The formal structure of the DNS database is an inverted tree with the root node at the top.

- The root node is designated using a terminating “dot”.
- Each node has a label.
- Top-level node
  - 2nd-level node
    - 3rd-level node
  - 2nd-level node
    - 3rd-level node
What is a domain?

• A domain is a node in (a subtree of) the name space
  – It includes all its descendants

• Domains have names
  – A domain is named after its top-level or apex node
  – Top-level domain (TLD) names are generic or country-specific
  – TLD registries administer domains in the top-level

Names in generic Top Level Domains

Names in country-code TLDs
Who’s who in the DNS Ecosystem?

• Registries manage the TLD databases and generate TLD zone files
• Registry operations are very diverse
  • Large corporations, small non-profits, departments in universities...
Who’s who in the DNS Ecosystem?

• Generic Top Level Domain registries have contracts with ICANN
  • Must comply with ICANN policy
  • Subject to those ICANN contracts
  • http://www.icann.org/en/resources/registries/listing
    • 3 or more letter code (eg. .com, .info, .museum)
Who’s who in the DNS Ecosystem?

• Country Code Top Level Domain registres are not contracted with ICANN
  • [http://www.iana.org/domains/root/db/](http://www.iana.org/domains/root/db/)
  • 2 letter code derived from ISO-3166-2 list (eg. .fj, .tk, .tv)
  • Internationalized Domain Name (IDN) ccTLD – string of characters in local language script (eg. .भारत)

• ccTLDs are very diverse in both operations and policies
  • From Global Registration to resident only
  • Non- Profit, For Profit
  • Operated by Government or by external party
  • From single or part time FTE to large dedicated organizations
Registrars

• Business entities that process domain name registrations
  – In gTLD space all registrars must be ICANN accredited and are subject to Registrar Accreditation Agreement (RAA)
    • http://www.icann.org/en/resources/registrars/raa/ra-agreement-21may09-en.htm
    • http://www.icann.org/registrar-reports/accredited-list.html
  – ccTLDs define their own registration processes
    • Some use ICANN accreditation or similar accreditation

• Providing registration services is not an exclusive business
Outsourced Operations

• Entities listed as “Sponsoring” in the IANA database <iana.org> may provide several operational roles
  – Registrar
  – Registry
  – Authoritative name service
  – Technical “back end” operations (Databases, EPP, DNS)
  – All Operations
Domain name registration 101

• Party chooses a string it wants, e.g., “example”
• Party visits a registrar to check string availability in a TLD
• Party pays a fee to use the domain name
• Registration information:
  – “string” + TLD (managed in registry DB)
  – Contacts, DNS (managed in Whois)
  – DNS, status (managed in Whois DBs)
Registered Domain Names Growth

source: verisigninc.com
2. New gTLD program update

• Recap at last PacINET 2011:
  – covered details of new gTLD program, timeline, criteria to apply and application costs
  – updates via PICISOC mailing list and websites
Application statistics

- Total number of applications: 1930
- Applications for IDN strings: 116
- Applications for community-based strings: 84
- Applications for geographic names: 66
- Financial support applications: 3
- Withdrawals: 8
- Change requests: 57
- Objections filed: 0
- Public comments submitted: 12030
Application subsets

- **IDNs**: 103
- **Community**: 67
- **Geographic**: 49
- Overlapping numbers:
  - Community and IDNs: 6
  - Community and Geographic: 1
  - IDNs and Geographic: 6
Applications per region

- Africa: 17
- Asia Pacific: 303
- Europe: 675
- Latin America: 24
- North America: 911
What’s next for new gTLDs?

• Update from ICANN 45, Toronto meeting:
  – Use of Drawing for prioritizing New gTLD applications
    • IDNs will be given a priority. Advance release of IDNs promotes DNS diversity, makes the Internet more accessible, increases avenues of participation and serves the public interest
  – First prioritization draw on 17 Dec 2012
  – March 2013: Objection period closes
  – Expect new delegation of TLDs by June/July 2013
PROPOSED PRIORITIZATION FOR DELEGATION
(Combined batching & metering solution)

Guiding Principles:
- Enable program to move forward at a controlled pace
- Objection closed 9 months after publication date
- Release Initial Evaluations for IDNs first to underline commitment to global public interest and international outreach
- Contract signing & delegation after Beijing meeting
- Limit delegations to 1000/year to ensure smooth and stable delegation

Delegation (1000/year)
Starts Q2 2013

Prioritization Draw
Early Dec. 2012
Los Angeles
$100/app.
Applicant/Rep. Present

Objection Period Ends March 13

Initial Evaluation Released weekly (~100/week)
March – June
Released in order of
Draw Number (with priority for IDNs)

Any Objections, Contentions, or Evaluation Failures?

Resolution?

Yes
No
EXIT

Yes
No

Standard form Agreement Acceptable?

Negotiation

Pre-delegation Test (~20/week)
Weekly appointment/scheduling determined by Draw Number and applicant readiness

Pass?

No

Beijing Meeting

Weekly Contract Signing (~20/week)
Signed by Draw Number
3. Pacific outreach - discussions

• Outreach and awareness to Government ICT forums, PITA, PacNOG, PacINET, Pacific IGF, media
  – Little interest
  – Protection of ccTLDs
  – Early warning via GAC

• New opportunities for:
  – local registry, registrar market (IDNs)
  – innovative ways to use the Internet
    • Choice, product, services
    • Other new services/ startups
For Discussion

• Review local ccTLD registry best practices
  – more exposure and marketing of local TLD
  – support local/regional applicants

• Plan for 2\textsuperscript{nd} application round
  – Should there be more outreach/training?
  – Any venture capitalists to target?
  – Do we need to empower the DNS industry in the region?
  – Other issues!
4. Universal Acceptance of TLDs

• On-going effort at ICANN

• Goal: Raise awareness about diversity of the domains (gTLDs and ccTLDs, ASCII and IDN)

• Covers acceptability issues due to certain constraints as implemented in software

• *Does not cover policy aspects of what domains should be allowed or restricted*
The Problem
Activities to date

• Created discussion forum and dedicated webpage: http://www.icann.org/en/resources/tld-acceptance

• Posted TLD verification tool at: https://github.com/icann

• Consultations with ICANN stakeholders

• JIG WG initial report

• Technical recommendations

• Outreach campaign
How you can help!

• Check your software — do all your applications properly support all domains?
• Inform and educate software developers and others
• Email for more information: tld-acceptance@icann.org
5. ICANN for beginners

ONE WORLD. ONE INTERNET.

WHAT DOES ICANN DO?
ICANN is responsible for the coordination of the global Internet's systems of unique identifiers and ensures the systems' stable and secure operation. It also develops policies and standards appropriate to its mission through a community- and consensus-driven, multi-stakeholder model with a broad representation of the global Internet community.

WHICH FUNCTIONS DOES ICANN COORDINATE?
- Domain Name System (DNS)
- Internet Protocol (IP) address allocation
- Protocol parameter registry operator
- Generic Top-Level Domain name (gTLD) system management
- Country code Top-Level Domain name (ccTLD) system maintenance
- Root server operator
- Time zone database management

SECURITY & STABILITY
ICANN protects and prevents misuse of Internet unique identifiers, and ensures that the system operates as expected.

INTEROPERABILITY
ICANN ensures continued and stable domain name system interoperability with the global Internet.

WHO'S INVOLVED?
- Board of Directors
- Supporting Organizations
  - ASO
  - ccNSO
  - GNSO
- Advisory Committees
  - ALAC
  - GAC
  - RIRs
  - SSAC
- Liaison Group
  - TLG
  - IEFT

HOW DO I PARTICIPATE?
- Online forums on ICANN's website
- Supporting Organizations' and Advisory Committees' mailing lists for participants
- Public meetings throughout the year
- Public input at the Public Comment Forum

For more information or to get involved, please visit www.ICANN.org
myICANN platform
At Large

• Individual groups or a community can join as At large Structure in the Asia Pacific Regional At Large (APRALO) under the At Large Advisory Committee (ALAC)

• ALS from Pacific sub-region:
  – PICISOC
  – Cook Islands Internet Action Group
  – Internet User Society-Niue
Governmental Advisory Committee

• Key role: provide advice to ICANN on issues of public policy, and especially where there may be an interaction between ICANN's activities or policies and national laws or international agreements.

• 12 Oceania countries/territories represented in the GAC:
  – AU, CK, FM, FJ, NR, NZ, NU, PG, TO, TV, VU, WS
  – SPC and Forum Secretariat are Observers
Country Code Names Supporting Organization

• Created by ccTLD managers to be a structure in ICANN
  – A forum to discuss ccTLD issues/concerns
  – Nurture consensus, skill building for ccTLDs
  – Recommends global policies

• 15 ccNSO members from the Oceania region
  – AU, CC, CX, FJ, FM, NC, NR, NU, NZ, PF, PG, PW, SB, VU, WS
Region invited to join

• Generic Names Supporting Organizations (GNSO) with 4 Stakeholder groups
  – Commercial Stakeholder Group (CSG) for Businesses and service providers
  – Non-Commercial Stakeholder group for interested registrants or Internet user
  – Registrar Stakeholder Group
  – Registry Stakeholder Group
Travel support to ICANN meetings

• Open ICANN fellowship program

• Special allocation for ALAC, GAC, ccNSO members

• Next meeting
  – [beijing46.icann.org](http://beijing46.icann.org)
References

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