IANA and its meaning for TLDs

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IANA Names Liaison

ICANN

Overview

- →What is IANA
- →What IANA does
- **→IANA** and TLDs
- +Statistics
- +Future Directions
- +Summary

What is IANA?

- → Internet Assigned Numbers Authority
 - ★Established around 1972 as the place where protocol numbers were assigned
 - →Never really existed in a legal sense
 - → Funding was part of a (D)ARPA research project on high speed computing until the mid- to late-90's
- → A centralized coordination point for Internet resources
 - → Works as long as everyone agrees it works
 - Anyone/anything can be the IANA as long as you convince everyone you are the IANA
 - → IANA has a long history

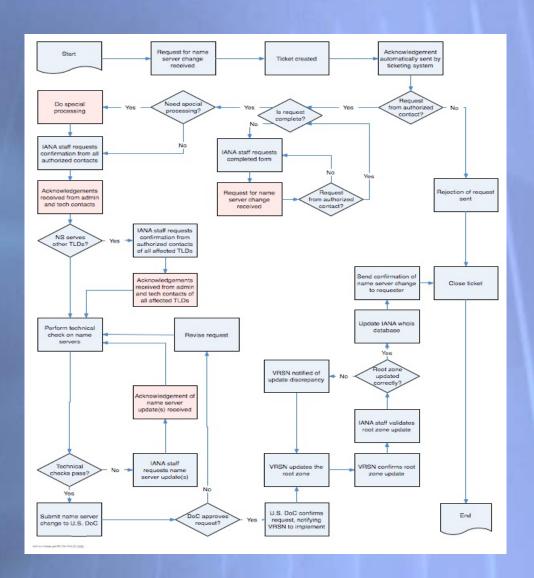
What IANA does

- → Allocates/Maintains registries for:
 - → Top level domains
 - → ccTLDs, gTLDs, sTLDs, other TLDs
 - → Coordination of root server system
 - → Some second level domains
 - → .ARPA, .INT
 - → Internet Protocol addresses
 - → IPv4 and IPv6
 - → Autonomous System Numbers
 - → IETF Protocol Parameters
 - → Ports, protocol specific registries
 - → Private Enterprise Numbers (PENs)
- → We also review Internet Drafts for IANA considerations

IANA and TLDs

- → Most visible service IANA provides relates to Top Level Domain support
 - → (Re-) Delegation of Top Level Domains
 - → Additions, changes, and deletions of name servers and "glue"
 - → Additions, modifications, and deletions of registration ("whois") data
- → Surprisingly non-trivial
 - → "The more elaborate our means of communication,
 the less we communicate." —Joseph Priestley
 - → Authorization failure, email bouncing, contacts vanishing, technical failure, unresolved dependencies, double-checking authenticity ...

TLD Name Server Update



- More than 30 steps
 - → 8 decision points
- Red boxes are where most delays occur
 - Waiting on responses from requestors
- ✦ And this doesn't include VeriSign's root zone modification process

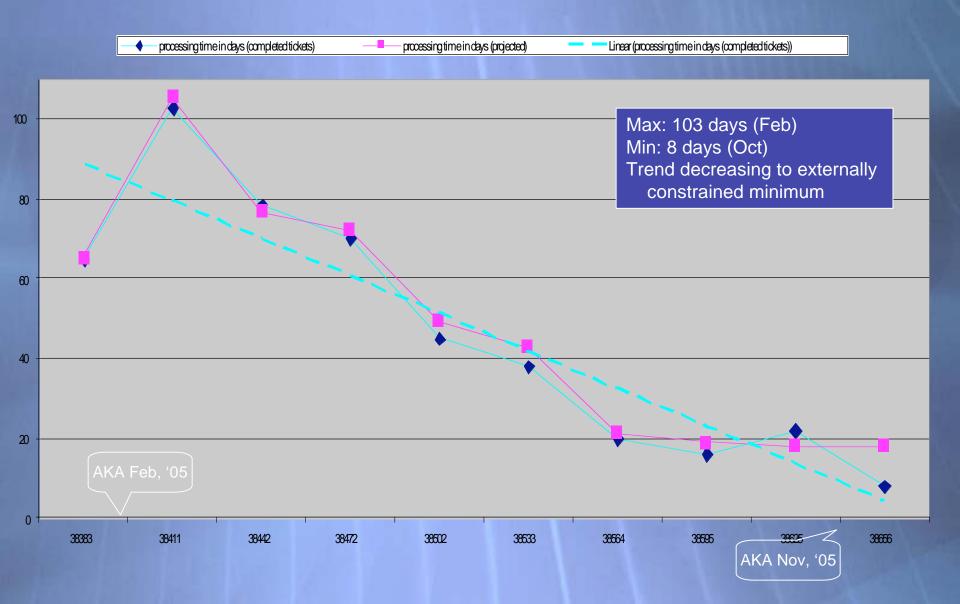
Relationships

- → IANA is an operational body
 - → IANA does not define policies, it merely implements them
 - → Policies are defined in external organizations, e.g.:
 - → "What is a top level country code domain?"
 ⇒ ISO 3166
 - → "Who should technically manage a TLD?"⇒ the TLD's administrative contact
 - → "Who should be the TLD's admin contact?"⇒ the TLD's sponsoring organization

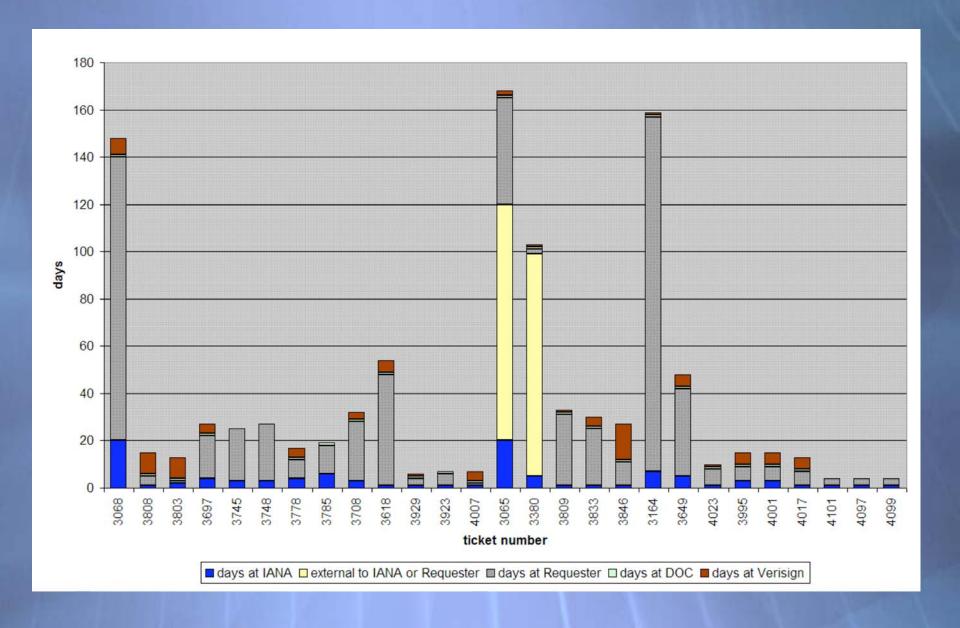
Relationships (cont'd)

- → What about top level definitions?
 - → What are the TLDs? ⇒ ?
 - → Who are the sponsoring organizations? ⇒ ?
 - → What are the external organizations? ⇒ ?
 - **→** IDNs in the root? ⇒?
- → ICANN to the rescue
 - → ICANN constituencies help define policies
 - → ICANN regional staff and community help IANA in understanding the situation "on the ground"
 - → Critical in re-delegation
- → ICANN provides a relatively neutral meeting ground in which various parties can try to come to agreement
 - → "ICANN annoys everyone equally" —Anonymous

Root Zone – processing time in days



Root Zone: where time is spent



Future Directions

- → Internal Optimizations
 - → Reviews of processes and procedures
 - → Streamlining where possible (and allowed)
 - → More automation in most processes
 - → Leveraging eIANA
 - → http://www.dns.pl/iana/
 - → Improved ticketing system
 - → Consistent interfaces across resources
 - → New staff
 - → Psst! Wanna job? Contact me!
 - → 24x7x365 IANA availability
 - → New Web Page...



IANA Home Page

Domain Names

@ http://www.iana.org/

IANA managed the DNS Root Zone (assignments of ccTLDs and gTLDs), as well as the .int registry, and the .arpa zone.

- » Root Zone Management
- » .int Registry
- » ,arpa Registry

Number Resources

IANA coordinates the global IP and AS number space, and allocates these to Regional Internet Registries.

- » IP Address Allocation
- » AS Number Allocation
- » Internet Abuse Information

IANA is the central repository for protocol assignment registries, used in many Internet protocols.

- » Browse F
- » Apply fo

→ A A C + ⊕ http://www.iana.org INTERNET ASSIGNED NUMBERS AUTHORITY 1 C W S 18 JANUARY 2000

New Web Mockups

Q- Google

[RT Login ICANN * Nominum * Tech * News * Dev * Apple * Science * Personal * Travel * Misc * Ajax * Amusement * Politics * Apple Downloads * WELCOME TO THE IANA WEB SITE, SITE DEVELOPMENT TASKS 02/06/06. WORKING ON HOME PAGE, INCORPORATING FEEDBACK, GLOBAL NAVIGATION UPDATED: OCTLD DATABASE - ADD LINKS TO WIDGET NAV RSS FEEDS: LATEST UPDATES TO THE IANA PLEASE BELECT A NAVIGATIONAL TRACK: SHAREHOLDER 1 SHAREHOLDER 2 SHAREHOLDER 3 SHAREHOLDER 4 IANA HOME PAGE DOMAIN NAME SERVICES The IANA's Role in the Internet APPLICATION FORMS IDN LANGUAGE TABLES The word "authority" in the IANA's name is perhaps a bit misleading: it means that the IANA keeps authoritative records concerning various numbers for other organizations; the choice of what goes into these records is determined by a variety of engineering and other IP ADDRESS SERVICES considerations. The IANA serves as a bookkeeper in recording the assignments that are made. In Internet terminology, the record-keeping service IANA performs is called a COMMUNITY LINKS registration service, and IANA serves as a registry. PUBLIC COMMENTS NOUSTRY NEWS In addition to IP addresses, IANA also serves as a registry for a variety of Protocol PERIODIC REPORTS LHEADLINE 1 Numbers (see </numbers.html> and several other kinds of names and identifiers. CONTACT US LHEADLINE 2 REPORTING AND STATISTICS It is important to realize that IANA is not an ISP in any way, and it does not provide any HEADLINE 3 network services to any end users or organizations. It does not control the use of any of the numbers it records, nor, in general, does it have the authority to change the values it 🖾 EMAIL PAGE 💹 PRINT PAGE Search all of the publicly available documents on this site. Search This site is mirrored at http://iana.netnod.se with the generous assistance of the Royal Institute of Technology's Network Operations Centre, and Netnod AB, operators of the D-GIX, Stockholm, Sweden. Related Web Pages: PICANN REFC Editor Tribute to Jon Postel PAGE UPDATED 12-JUL-2004 THE INTERNET ASSIGNED NUMBERING AUTHORITY DEDICATED TO PRESERVING THE CENTRAL COORDINATING FUNCTIONS OF THE GLOBAL INTERNET FOR THE PUBLIC GOOD.

IANA - Home Page

Search the site:

Enter a domain name, IP address, RFC number, or keywords to quickly find to relevant information on the IANA site.

The Internet Assigned Numbers Authority (IANA) is responsible for the global coordin Root, IP Addressing, and other Internet Protocol Resources. Learn more about what w

Contact Us

Future Directions (cont'd)

- → Root Zone Management
 - **→** DNSSEC support
 - → Improved/simplified communication among the various parties
- → Strong Authorization/Authentication
 - → Deployment of new technology and systems to address this requirement

Summary

- → The Top Level Domain community is IANA's most visible customer
 - → IANA is committed to continuing to improve our service to this community
- → As part of ICANN, IANA is able to leverage ICANN's resources and relationships.
- → IANA's service levels have improved over time
 - → Still room to improve
- ★ Lots of new developments and activities at IANA
 - → We're hiring!

Thankyou for your attention!