

IANA and its meaning for TLDs

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IANA Names Liaison

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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

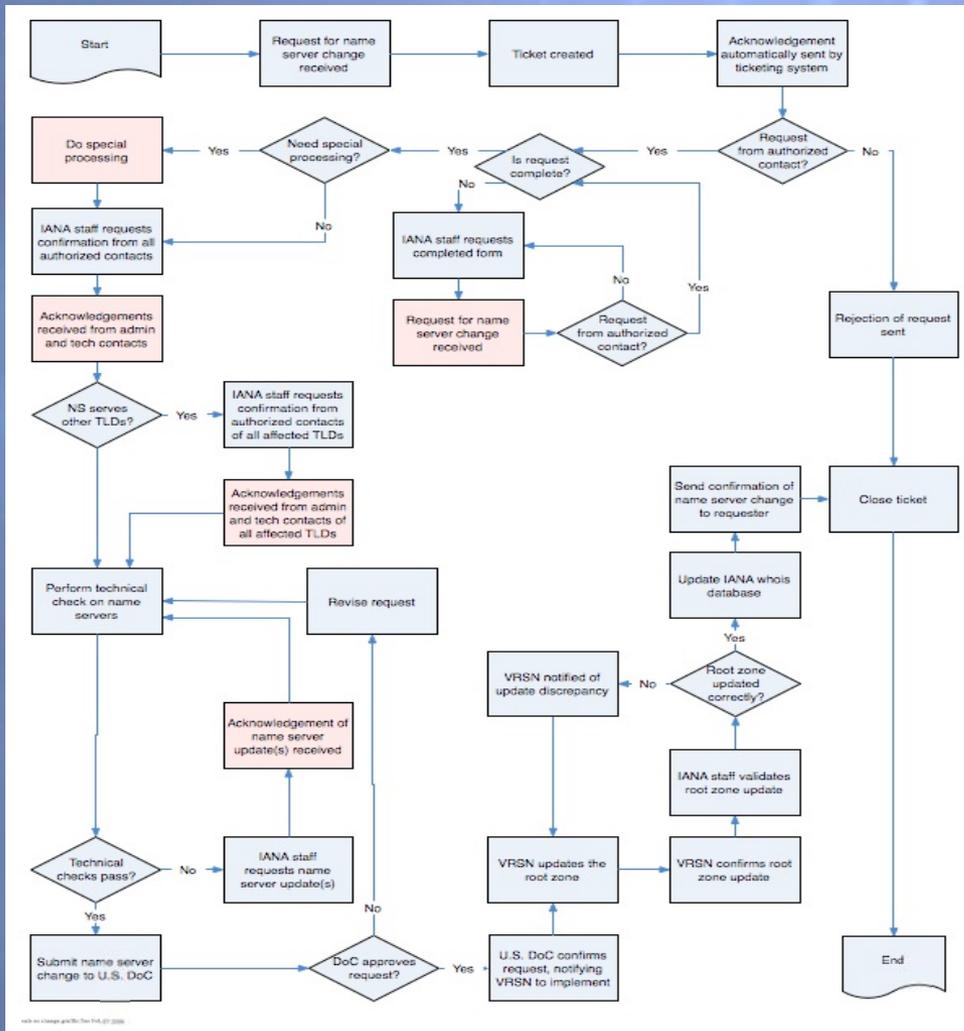
What IANA does

- ✦ 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

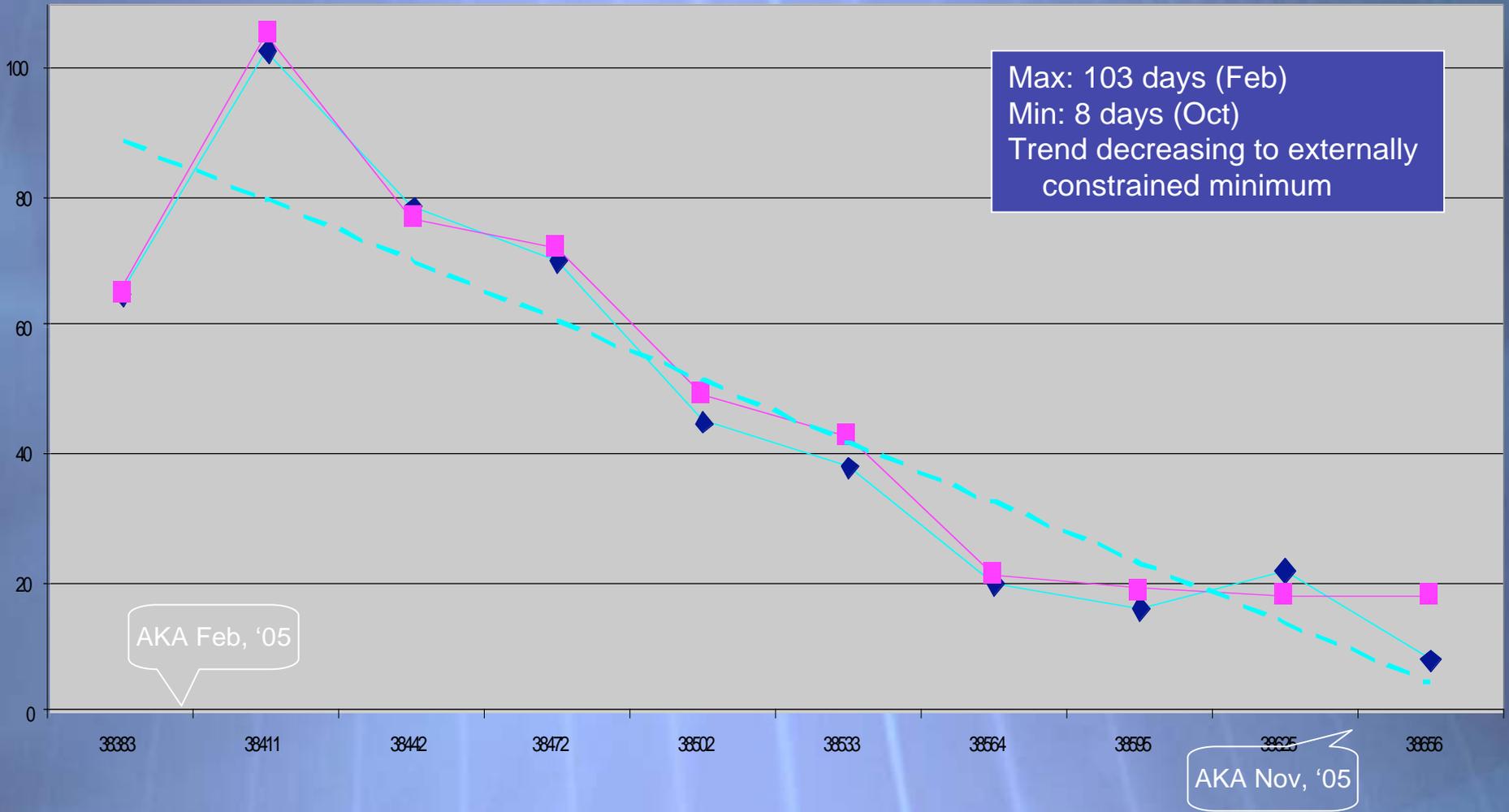
- ✦ IANA is an operational body
 - ✦ IANA does not define policies, it merely implements them
 - ✦ Policies are defined in external organizations, e.g.:
 - ✦ "What is a top level country code domain?"
⇒ ISO 3166
 - ✦ "Who should technically manage a TLD?"
⇒ the TLD's administrative contact
 - ✦ "Who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

Relationships (cont'd)

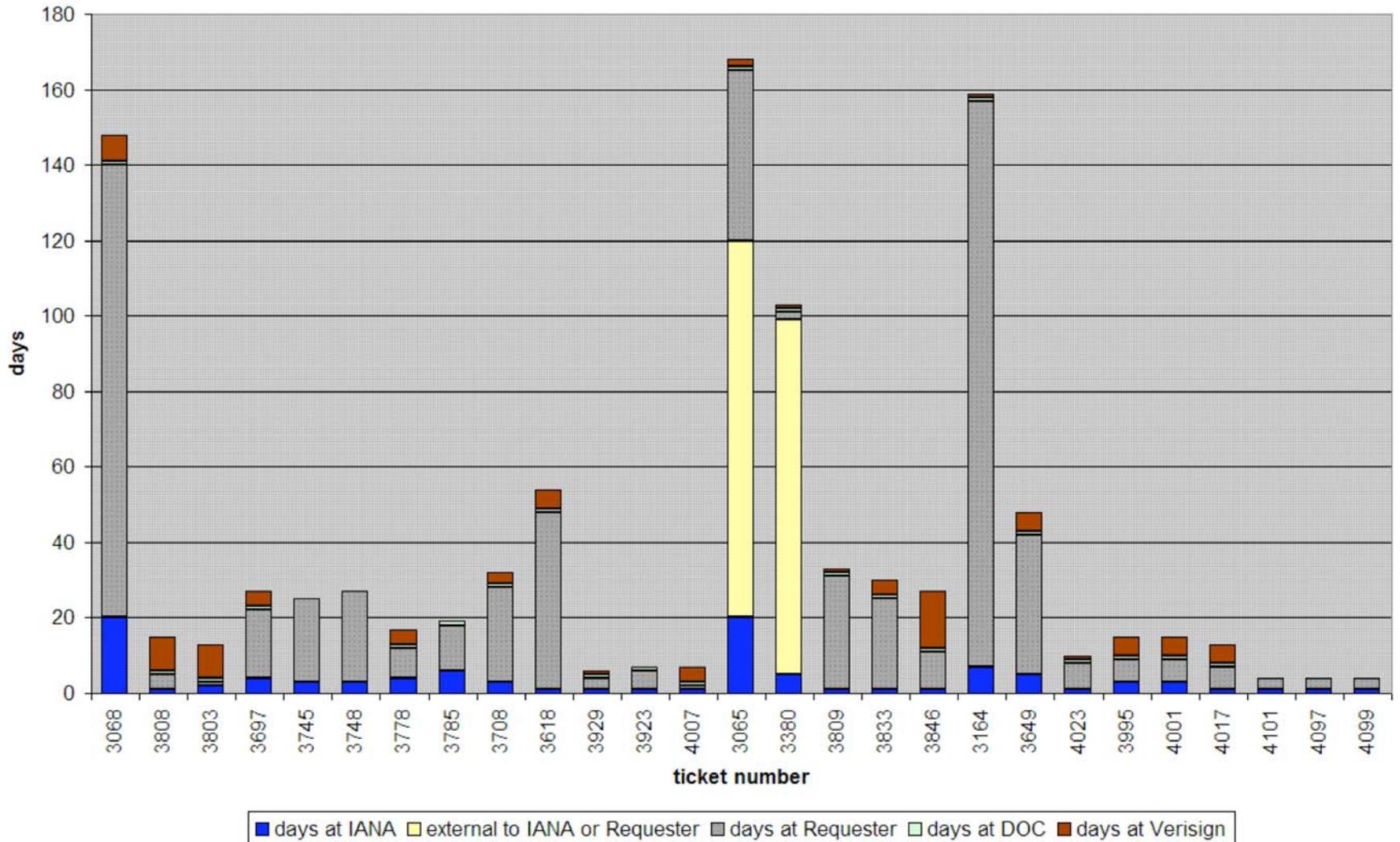
- ✦ What about top level definitions?
 - ✦ What are the TLDs? ⇨ ?
 - ✦ Who are the sponsoring organizations? ⇨ ?
 - ✦ What are the external organizations? ⇨ ?
 - ✦ IDNs in the root? ⇨ ?
- ✦ ICANN to the rescue
 - ✦ ICANN constituencies help define policies
 - ✦ ICANN regional staff and community help 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

processing time in days (completed tickets) processing time in days (projected) Linear (processing time in days (completed tickets))

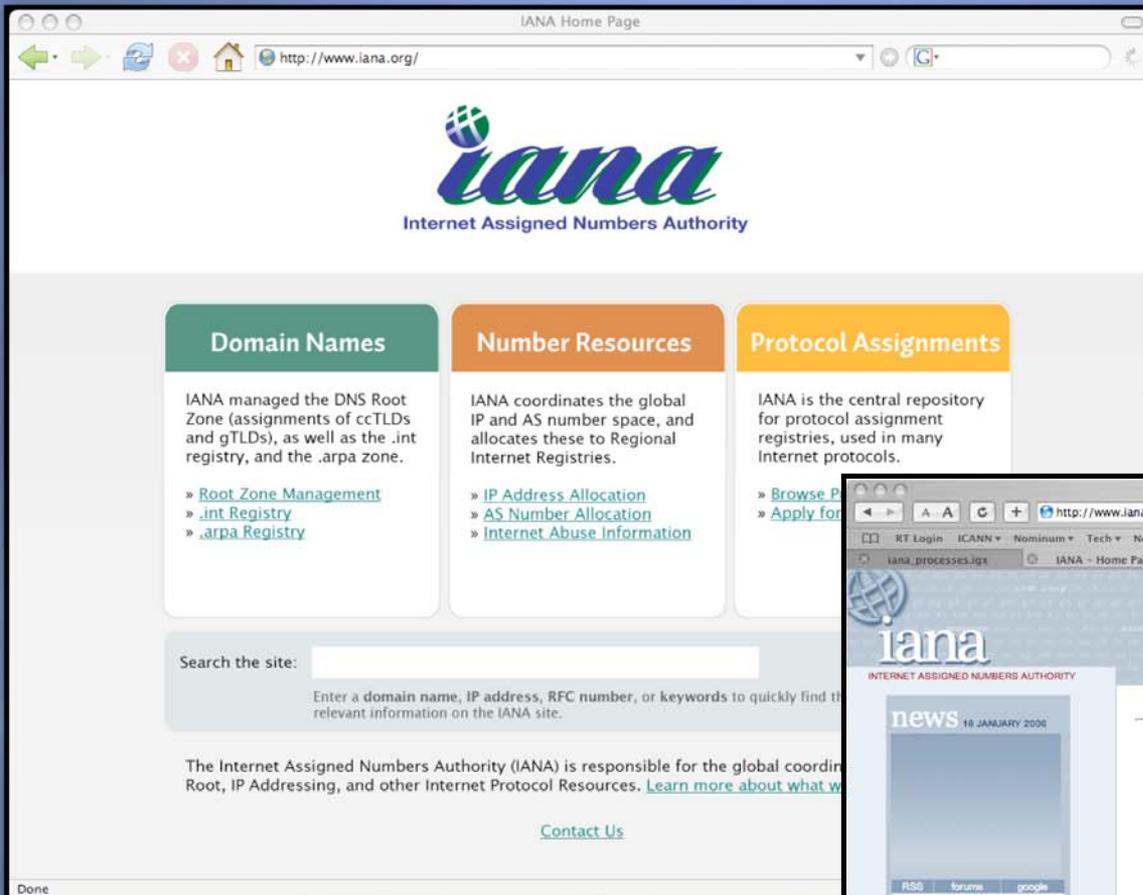


Root Zone: where time is spent

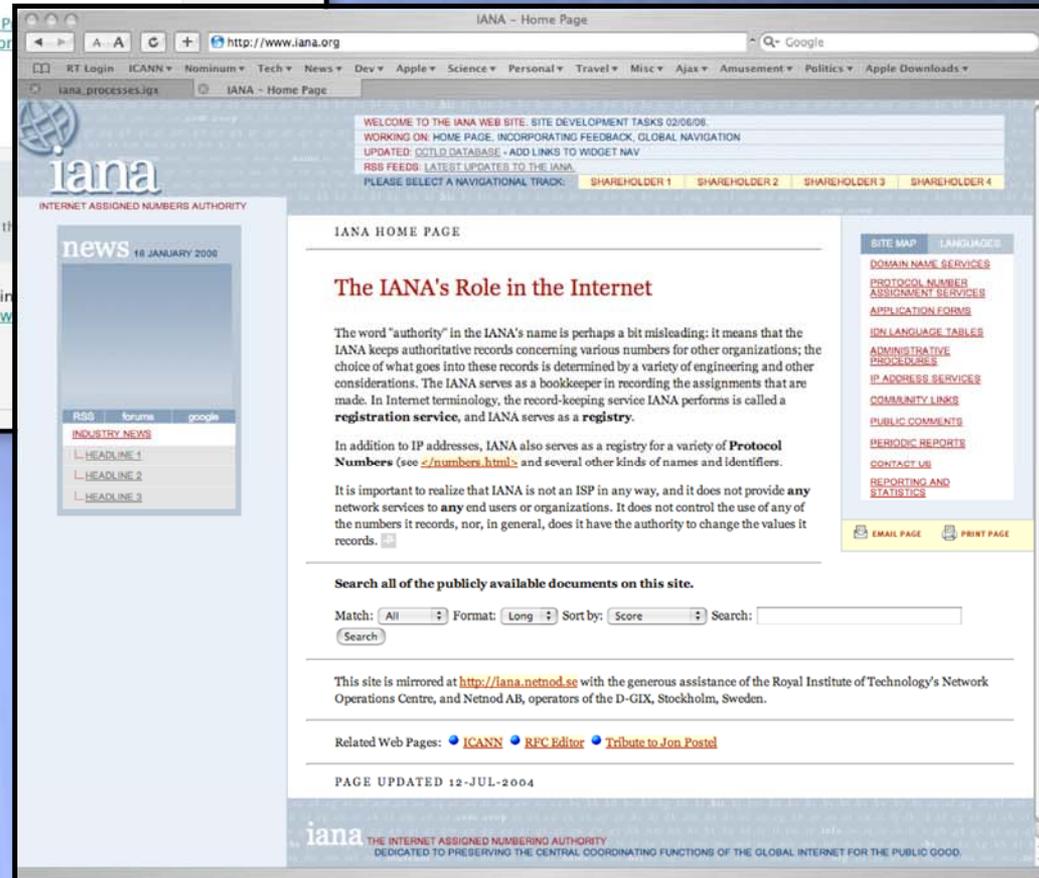


Future Directions

- ✦ 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...



New Web Mockups



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!