ICANN: Update and Issues

PSO GA

Sophia Antipolis,
July, 2001

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and
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ICANN Directors

ICANN: The Basic Bargain

ICANN =

Internationalization
of Policy Functions for DNS and
IP Addressing systems

+

Private Sector
(non-governmental) Management

What does ICANN do?

Coordinates policies relating to the unique assignment of:

- Internet Domain Names
- Numerical IP Addresses
- Protocol Port and Parameter Numbers

Coordinates the DNS Root Server System

- through Root Server System Advisory Committee

What are the IANA functions?

- Protocol parameter assignments
  - Under March 1, 2000 IETF/IAB/ICANN MOU
  - Documented through IETF's RFC series
  - Types of numbers range from unique port assignments to the registration of character sets.
  - List of IANA Protocol Numbers and Assignment services: <http://www.iana.org/numbers.html>
- IP Address Allocations
- DNS root zone file management
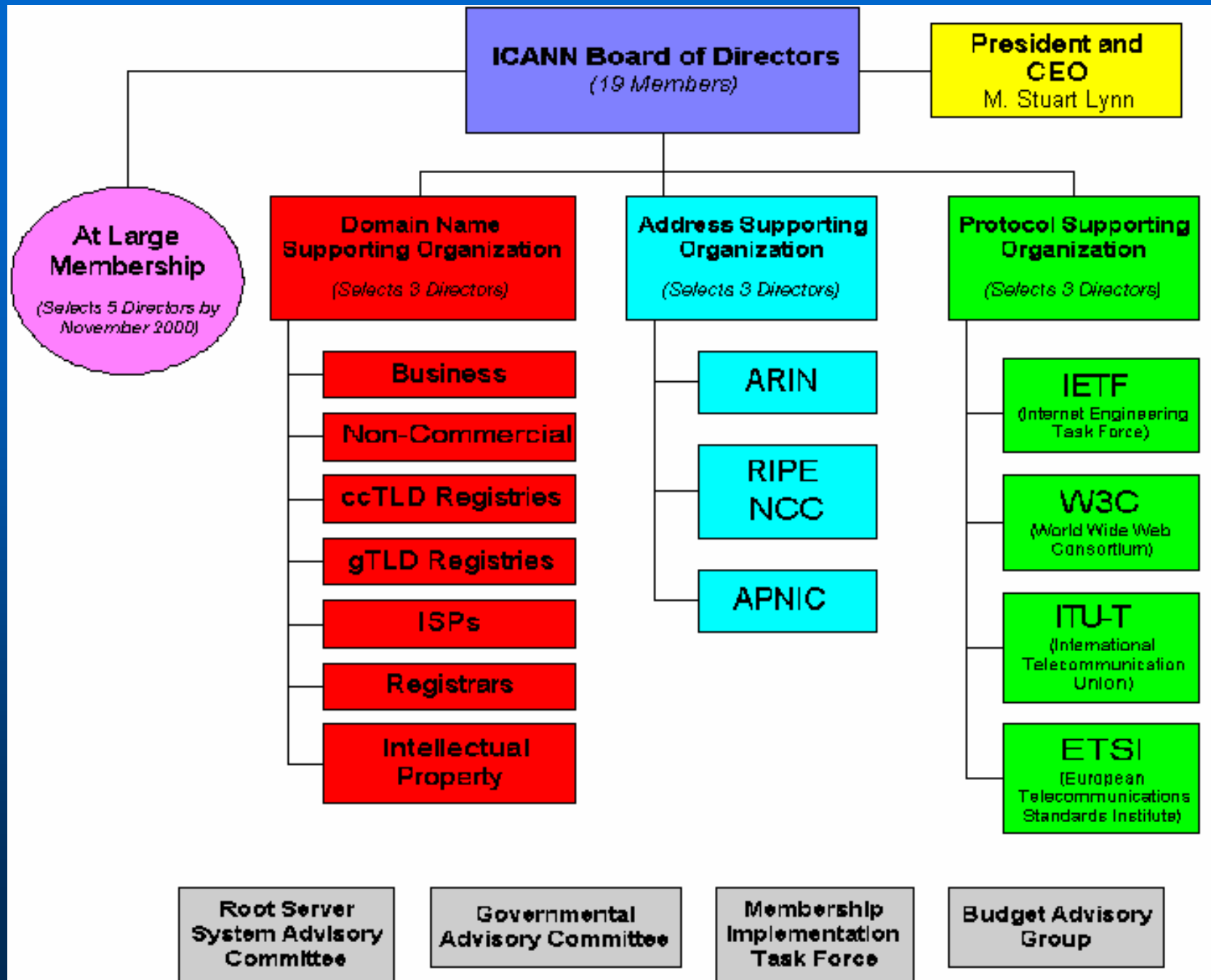
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Domain names & IP addresses

- **Domain names** are the familiar, easy-to-remember names for computers on the Internet
  - e.g., amazon.com, icann.org, nic.or.kr

- Domain names correlate to **Internet Protocol numbers** (IP numbers) (e.g. 192.168.5.130) that serve as routing addresses on the Internet

- The **domain name system** (DNS) translates domain names into IP numbers needed for routing packets of information over the Internet
  www.icann.org = 192.168.5.130

Types of Internet Domains

- **Generic Top Level Domains (gTLDs)**

  - <.com>, <.net>, <.org> open to all persons and entities on a global basis

  - <.int> for international treaty organizations
  - <.arpa> for Internet Infrastructure purposes

  - <.gov>, <.mil> for U.S. government, military
  - <.edu> for US universities

More Types of Internet Domains

- **Country Code Top Level Domains (ccTLDs)**
  - <.cn>, <.hk>,<.jp>, <.uk>, <.ca>, <.br>, <.de>, <.pl>, <.cc> . . .
  - Imprecise name: ccTLD includes *countries* and *geographically distinct territories*
  - Derived from ISO 3166-1 list
  - Registration requirements vary by domain
    - Residency requirement
    - Price (or no charge)
    - Ability to transfer
    - Dispute resolution policy
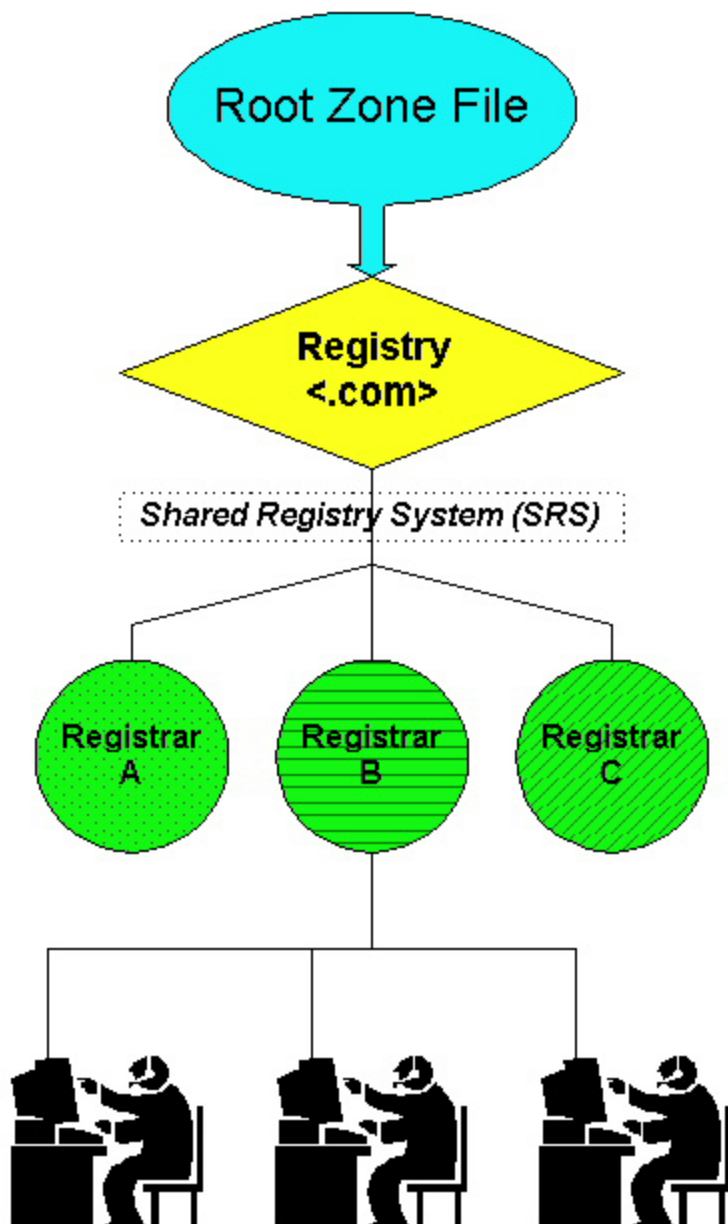
Basic DNS Registry Structure
Example: <.com>

ICANN
(= overalll coordinator)

Registry
(= authoritative database of domain names and corresponding IP addresses)

Registrars
(= interact with customers/registrants; handle billing; place data in registry database; provide WHOIS service)

Registrants
(= domain name holders)

Root Zone File

Registry <.com>

Shared Registry System (SRS)

Registrar A

Registrar B

Registrar C

Map of the Root Servers

Root nameservers
- Status check map -

Regional Internet Registries (RIR)

ARIN
- North America
- Latin America
- Caribbean Islands
- Sub-Saharan Africa

RIPE NCC
- Europe
- Middle East
- North Africa
- Parts of Asia

APNIC
- Most of Asia
- Australia/New Zealand
- Pacific Islands

New Top-Level Domains

- First group chosen in November 2000
  - Global Open: <.info>, <.biz>
  - Individuals: <.name>, <.pro>
  - Specialized: <.museum>, <.aero>, <.coop>
- Proof of Concept - Launch with caution, observe carefully, learn from experience
- If successful, there will be future rounds
- Biggest challenge: Launch phase
  - *Intellectual Property & Cybersquatting fears*
  - *Opening day rush & Fairness to everyone*
- Danger: Sleazy pre-registration offers (*see* FTC Warning)

Top Policy Objectives for Year 2001

- Successful introduction of New Top-Level Domains
- Completion of agreements with ccTLD registries, IP Address registries, root server operators
- At Large Study
- Restructuring of Domain Name Supporting Organization (DNSO)
- Review of Uniform Dispute Resolution Policy (UDRP), Whois database policy
- Support emerging Regional Internet Regristries: LACNIC and AfriNIC

At Large Elections 2000

- Free and open to anyone with a verifiable email address and physical address
- Over 158,000 registered to vote; over 70,000 activated memberships; over 34,000 voted
- 5 Directors elected from 5 different regions
  - North America, Latin America, Europe, Africa, and Asia/Australia/Pacific
- Problems: Imbalance in distribution of members & votes; nationalist patterns in voting; capture by small groups; outreach; full participation by non-English speakers

At Large Study

- Next steps: Study the process, draw lessons, redesign for the future
  - Chair of study committee: Hon. Carl Bildt (Sweden)
  - Vice-chairs: Pindar Wong (Hong Kong S.A.R., China) and Charles Costello (USA, Carter Center)
- <http://www.atlargestudy.org>

Main results of June meeting

http://www.icann.org/minutes/prelim-report-04jun01.htm

- Budget approved
  - http://www.icann.org/financials/proposed-budget-14may01.htm
- Revision of Registrar Application and Accreditation Fees
- Emerging Regional Internet Registries
- Referral of .org Issues to DNSO
- Process for Monitoring and Evaluation of New TLD Program initiated

Further hot topics

- Alternative routes
- Verisign deal (maintain .com in total, give .net and .org away in next years)
- Separate SO for ccTLDs
- Legal and political actions from various sources (e.g. .kids, .xxx)
- Policy on internationalised domain names
- Phasing-in of new TLDs
- Overseas office

Poss. PSO Issues in ICANN

- **Basis principle:**
  - stabilize ICANN
  - avoid alternative routes
- **Protocols / Standards:**
  - support of enum (numbering mapping of E.164 to DNS), avoid conflicts by ambigous names, if required enhance the UDRP
  - discuss amongst PSO members to develop
    - open Registrar / Registry Protocol
    - performance standards for all DNS elements
    - PICS for new applicants
    - interoperability tests between registrars and registries

Poss. PSO Issues in ICANN

- IP addresses: until now no action, but possibly:
    - introduction of IPv6: develop migration mechanisms and/or overall architecture
    - use of IANA for protocol numbering
- Domain names
    - internationalized domian names: standards are on the way in the IETF, do the other PSO members see a role?
- Independant Review Panel and New TLD monitoring and Evaluation
    - PSO members required
- PSO director to be appointed

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http://www.icann.org