ICANN
Internet Corporation for Assigned Names and Numbers

Vinton Cerf
MCI WorldCom
April 2000
1996 - Postel initiates Internet Ad Hoc Committee with support from Internet Society to institutionalize the IANA functions and open top level domains to competitive registration.

This proves to be very difficult with many people with differing views and interests. The debate doesn’t come to closure...
1998 - Ira Magaziner, at the request of President Clinton, initiates an effort to facilitate formation of an international, neutral, industry-sponsored oversight organization to continue the IANA functions performed in the past under US Government contract in a global, consensus building setting.

Green and White Papers developed
Creation of ICANN

- Nov 1998 - the USG recognizes the Internet Corporation for Assigned Names and Numbers (ICANN)
- 1999 - ICANN organizes the many components specified in the White Paper (Board, Supporting Organizations, Membership, Advisory committees...)
Internet Corporation for Assigned Names and Numbers

ICANN

DNSO

ASO

PSO

Domain Name Support

Protocol Support

Address Support

Board

At Large
Address Support Organization

- Elects 3 members of ICANN Board
- ARIN - American Registry for Internet Numbers
- APNIC - Asia Pacific Network Information Centre
- RIPE NCC - Reseau IP Europeens Network Control Centre
- [AFRINIC - May 7, 2000, Capetown]
Protocol Council elects 3 ICANN Board members; PC members drawn from:
- Internet Engineering Task Force (IETF)
- ITU-T
- ETSI
- ISO
- other Industry technical forums

Criterion: Internet technical background
Names Council elects 3 ICANN Board Members
Constituencies: Internet Service Providers, Intellectual Property interests, Business users, Non-Commercial users...
ICANN Board

- Mike Roberts/US
- Geraldine Capdeboscq/FR
- George Conrades /US
- Greg Crew/AU
- Frank Fitzsimmons /US
- Hans Kraaijenbrink/NL
- Jun Murai/JP
- Linda S. Wilson/US
- Eugenio Triana /ES
- Jean-Francois Abramatic /FR
- Alejandro Pisanty/MX,
- Jonathan Cohen/US
- Amadeu Abril i Abril/ES
- Rob Blokzijl/NL
- Pindar Wong/HK
- Ken Fockler/CA
- Vint Cerf/US
- Philip Davidson/UK
- Esther Dyson/US

+5 at-large to be elected
Other Notable Organizations

- ICCB - Internet Configuration Control Board (1979-1983)
- IAB - Internet Activities Board (1983-1992); now Internet Architecture Board
- IETF - Internet Engineering Task Force
- IRTF - Internet Research Task Force
- ISOC - Internet Society
- ISTF - Internet Societal Task Force
Internet Society

Internet Architecture Board

IAB

Internet Engineering Task Force

IETF

Internet Research Task Force

IRTF

Internet Societal Task Force

ISTF
Additional Organizations

- SRI International - Network Information Center (NIC)
- Network Solutions, Inc. - successor to SRI Int’l for .mil,.com, .net, .org management
- GIP - Global Internet Project
- EFF - Electronic Frontier Foundation
- EPIC - Electronic Privacy Information Center
What are the remaining Challenges?

- Making ICANN Work
  - funding
  - mechanisms for global consensus building
- Managing the transition from monopoly to competition
- Resolving the Trademark/Domain Name conflict
- Transition from IPv4 to IPv6
Trademark and Domain Name Conflict

- Trademarks are NOT unique (MCI is trademarked by MCI WorldCom but also by a bus manufacturing company)
- Domain Names MUST BE UNIQUE in order for the Internet to work just like 800 numbers
ICANN’s IP Addressing Role

♦ ICANN oversees Regional Internet Registries (RIRs) for allocation and assignment of IP addresses
♦ ICANN released guidance for IPv6 and allocated the first blocks in July 1999
Internet Addressing

- IPv4 - 32 bits
- Initially, 256 networks … then mix of:
  - Class A (128 with 16 M hosts)
  - Class B (16,384 with 65K hosts)
  - Class C (2M with 256 hosts)
- Now, Classless Inter-domain addresses
  - Up to 4 Billion hosts, hundreds of thousands of networks
Next Generation Internet

- IPv6 - 128 bits of addressing
- Theoretically $10^{38}$ hosts
- Significant transition effort needed (sort of like changing engines on aircraft while in flight)
- IANA officially announced allocations (July 14, 1999)