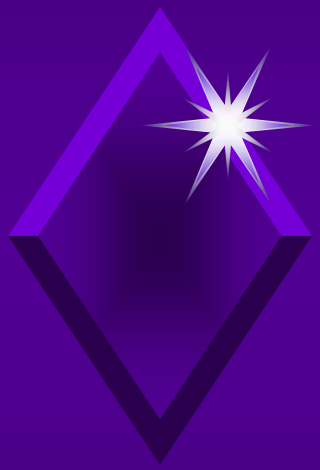


ICANN
Internet Corporation for Assigned Names and Numbers

Vinton Cerf
MCI WorldCom

April 2000

IANA and ICANN

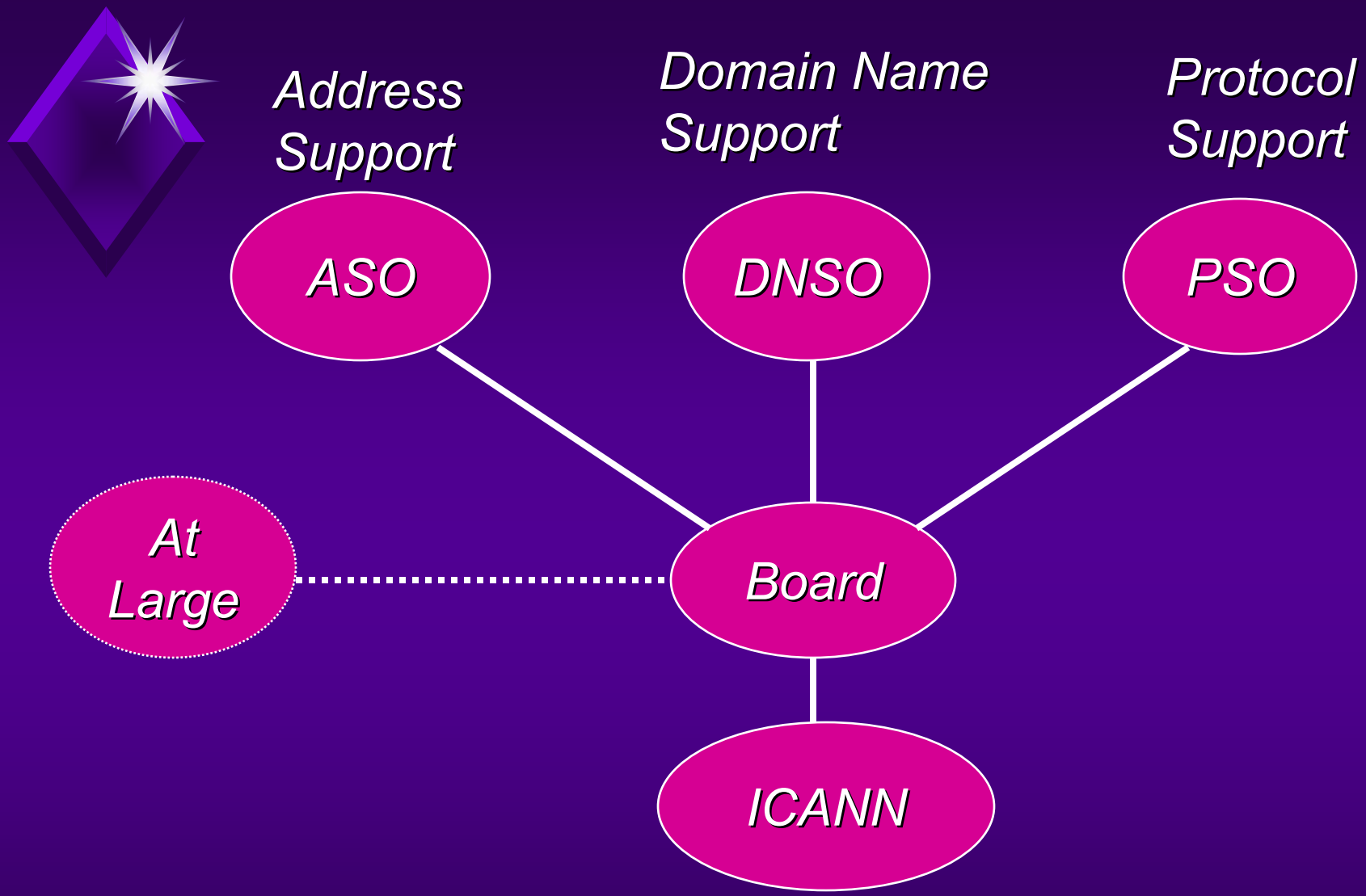
- 1996 - Postel initiates Internet Ad Hoc Committee with support from Internet Society to institutionalize the IANA functions and open top level domains to competitive registration
- This proves to be very difficult with many people with differing views and interests. The debate doesn’t come to closure…

US Government role

- 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

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 Support Organization

- 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

Domain Name Support Org.

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

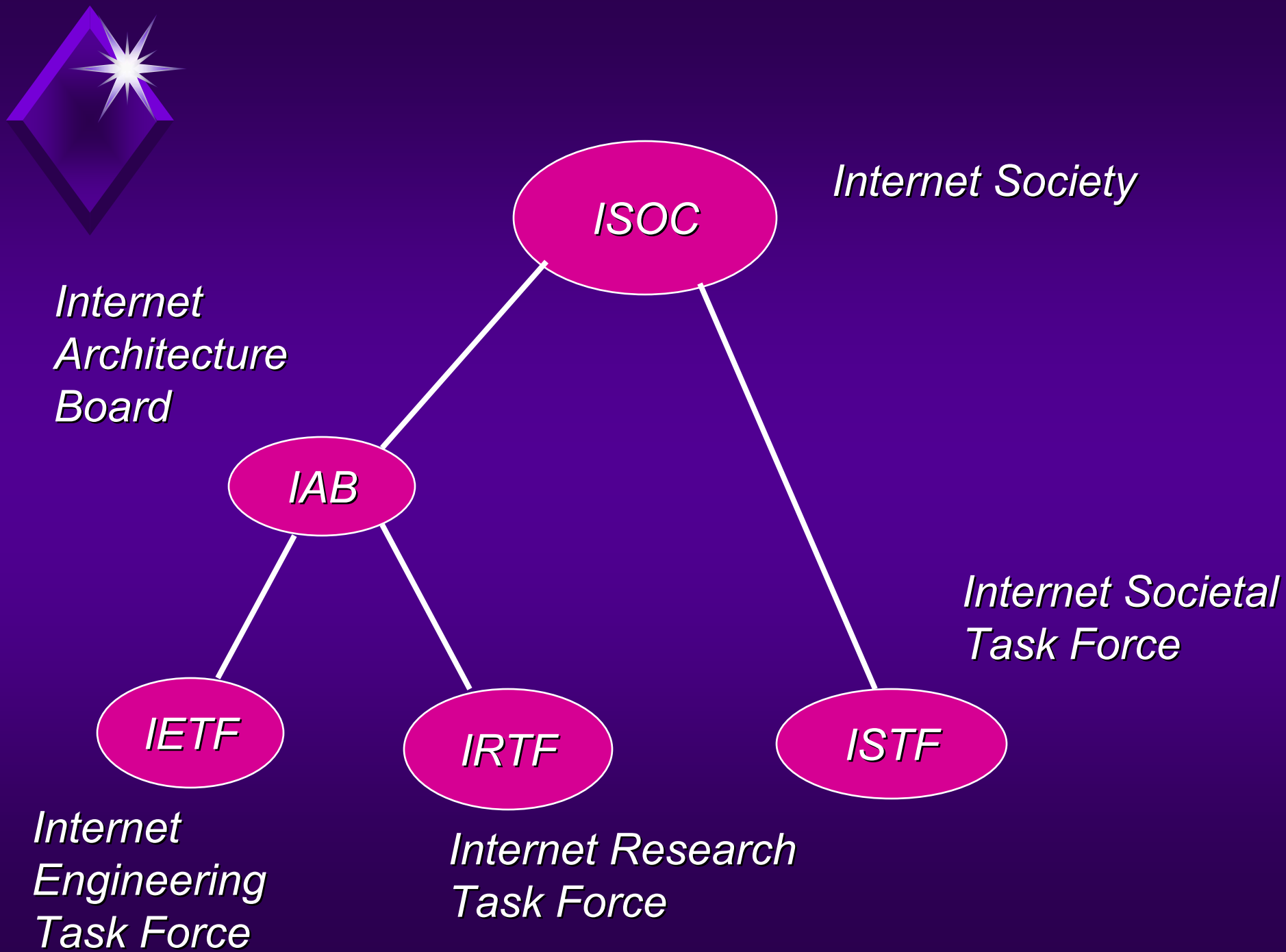
ICANN Board

- 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


ISOC
Internet Society
Internet Architecture Board
IAB
Internet Societal Task Force
IETF
IRTF
ISTF
Internet Engineering Task Force
Internet Research Task Force

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)