Regulation and Governance

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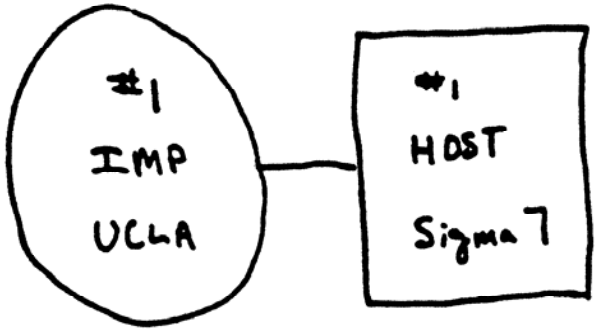
ICANN

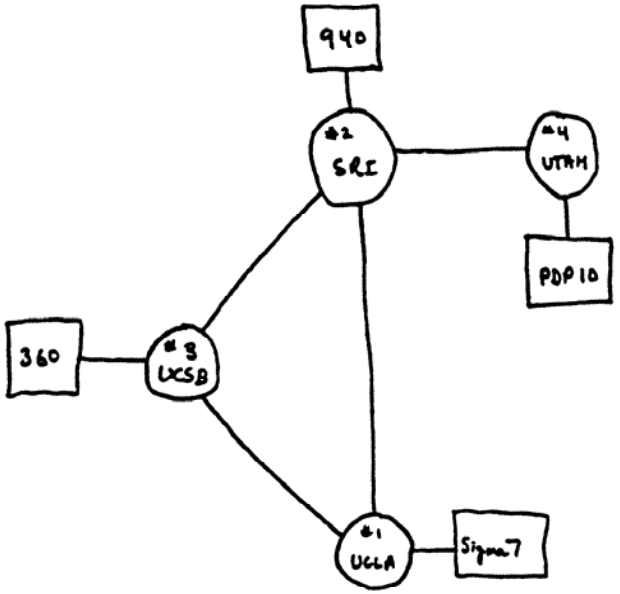
In the beginning . . .



THE ARPA NETWORK

SEPT 1969

1 NODE



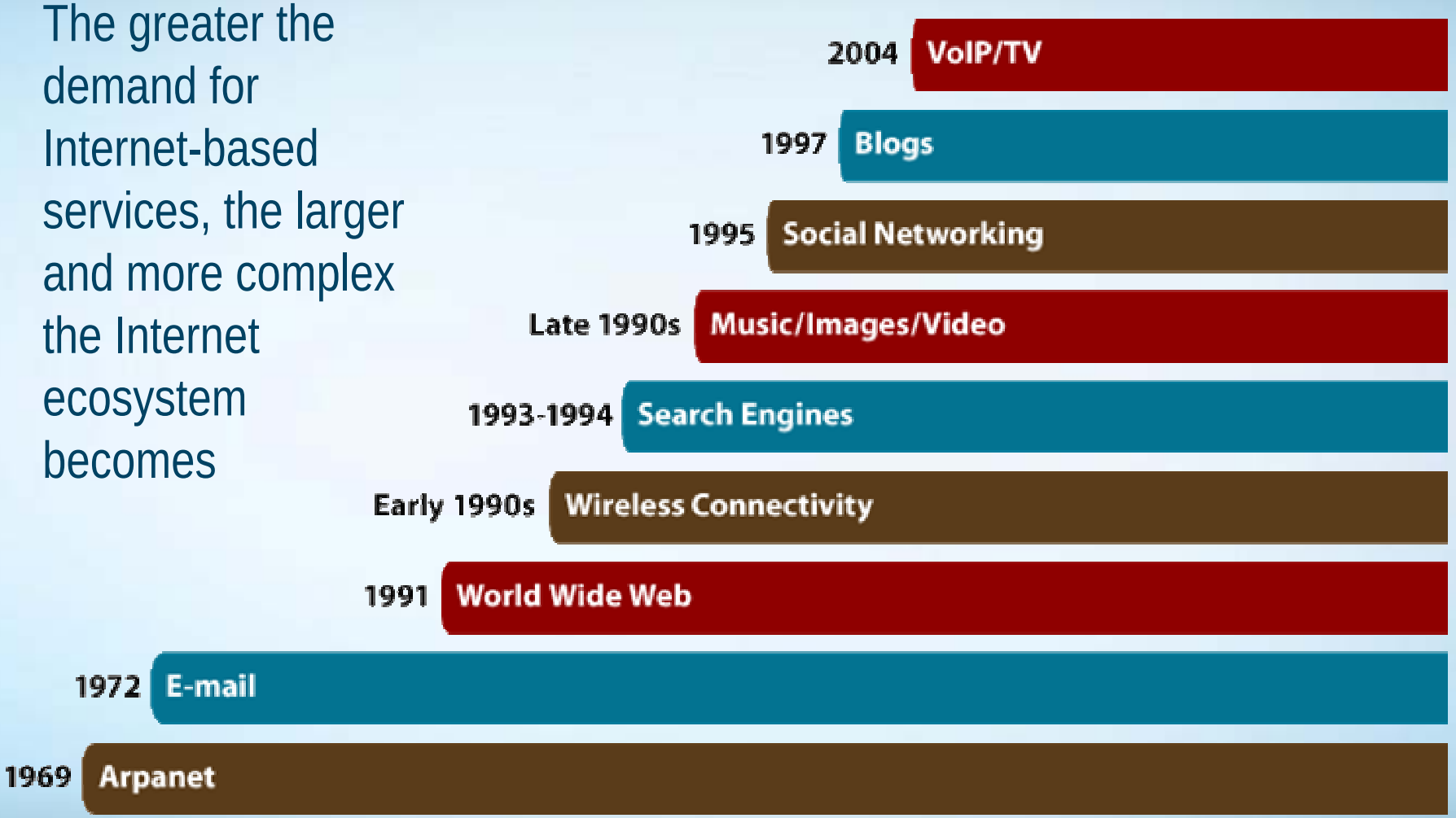
THE ARPA NETWORK

DEC 1969

4 NODES

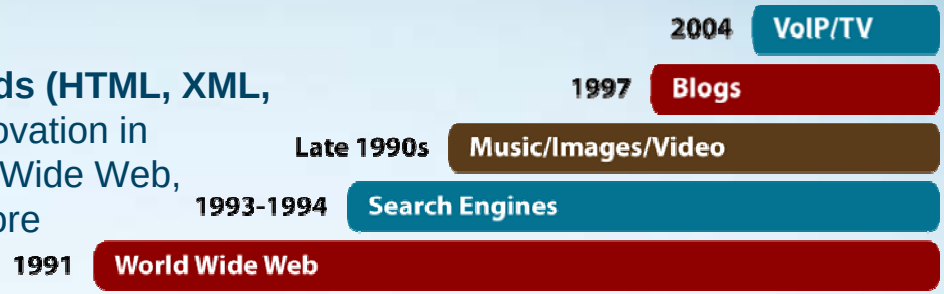
From thin pipe to fat pipe

The greater the demand for Internet-based services, the larger and more complex the Internet ecosystem becomes



The Internet's three operating layers

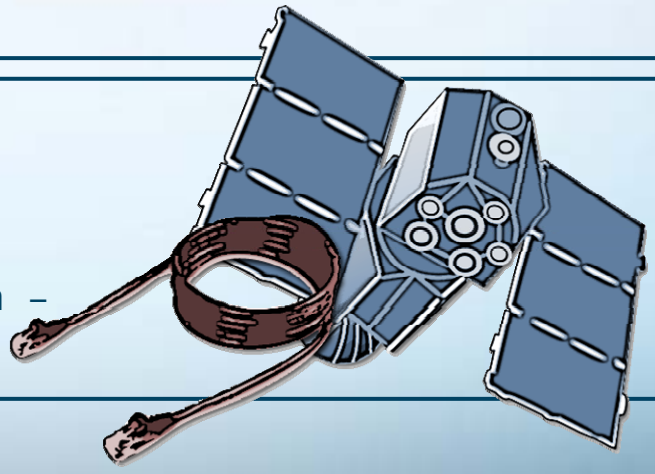
Content and applications standards (HTML, XML, Java) – Promotes creativity and innovation in applications leading to email, World Wide Web, ebanking, wiki, Skype, and much more



ICANN'S Responsibility

Internet protocols and standards (TCP/IP, DNS, SSL) – TCP/IP, controls traffic flow by dividing email and web data into packages before they are transmitted on the Internet

Telecommunications infrastructure – Physical network made up of underwater cables, telephone lines, fiber optics, satellites, microwaves, wi-fi, and so on – facilitates transfer of electronic data over the Internet



ICANN mission statement

- To coordinate, overall, the global Internet's system of unique identifiers, and to ensure stable and secure operation of the Internet's unique identifier systems. In particular, ICANN coordinates:
  1. Allocation and assignment of the three sets of unique identifiers for the Internet:
     - Domain names (forming a system called the DNS)
     - Internet protocol (IP) addresses and autonomous system (AS) numbers
     - Protocol port and parameter numbers
  2. Operation and evolution of the DNS root name server system
  3. Policy development reasonably and appropriately related to these technical functions

Multi-stakeholder participation and decision making

Advisory Committees	Supporting Organizations	At-Large Organizations
– Governmental Advisory Committee – Security and Stability Advisory Committee – Root Server Security and Stability Advisory Committee – At-Large Advisory Committee	– Address Supporting Organization – Generic Names Supporting Organization (including business, Intellectual Property, ISPs constituencies) – Country Code Names Supporting Organization	– Latin America-Caribbean – European Union – Africa – Asia/Australia/Pacific – North America

Key elements and ongoing work

- Global participation and representation
  - Fellowship program for developing countries
- Current work includes:
  - Implementation of internationalized domain names (IDNs) to facilitate improved multilingualism
  - New TLDs, and policies surrounding these to streamline approach
  - Engagement with respective entities such as RIRs, ccTLDs -- that is, the names and numbers
  - Awareness of IPv4 and IPv6
  - Partnership with organizations and outreach

Difficult to define what the Internet will look like in ten years, but…

- Usage limited by access to electricity – 3 billion
- Many, perhaps most, will access by mobile devices
- Almost no industry offline
- Significant increase in broadband access (over 100 mb/sec)
- Machine-to-machine Internet will overtake person-to-person Internet
- Billions of Internet-enabled appliances at home, work, in the car, in the pocket
- Internet used by third parties to monitor all sorts of activities and utilities – washing machines to cars to electricity meters
- Geo-location and geo-indexed systems much more common and emergency services will be more precisely dispatched

Difficult to define what the Internet will look like in ten years, but…

- Significant improvement in spoken interaction with Internet-based systems
- Wide range of delivery methods for intellectual property (movies, sound tracks, books, etc.).
- Group interaction, collaborative support tools (including distributed games) will be very common.
- Internationalized Domain Names and much more multilingual Internet content.
- So…. Challenging the single global Internet would risk the billions and billions of dollars of economic activity and millions of jobs worldwide that depend on interoperability.

Conclusions and observations

- The Internet as a powerful and pervasive technology for empowering economies and individuals.
  - It is the foundation of $2.4 trillion in e-commerce that flowed online last year.
- It's evolved due to collaboration and cooperation of an overall eco-system - technology does not recognize boundaries or politics.
- The Internet itself (in fact the entire communications system) and issues surrounding it are still evolving.
  - Such as consistency in laws for global operations or models of governance for continued convergence and innovation.
- Maintaining a single interoperable Internet is key to all of this -- ICANN and its' coordination role has some responsibilities in this regard.
- Any regulation and governance thus need to involve the stakeholders themselves, solving specific problems and building upon the already available experience.

Thank You

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