

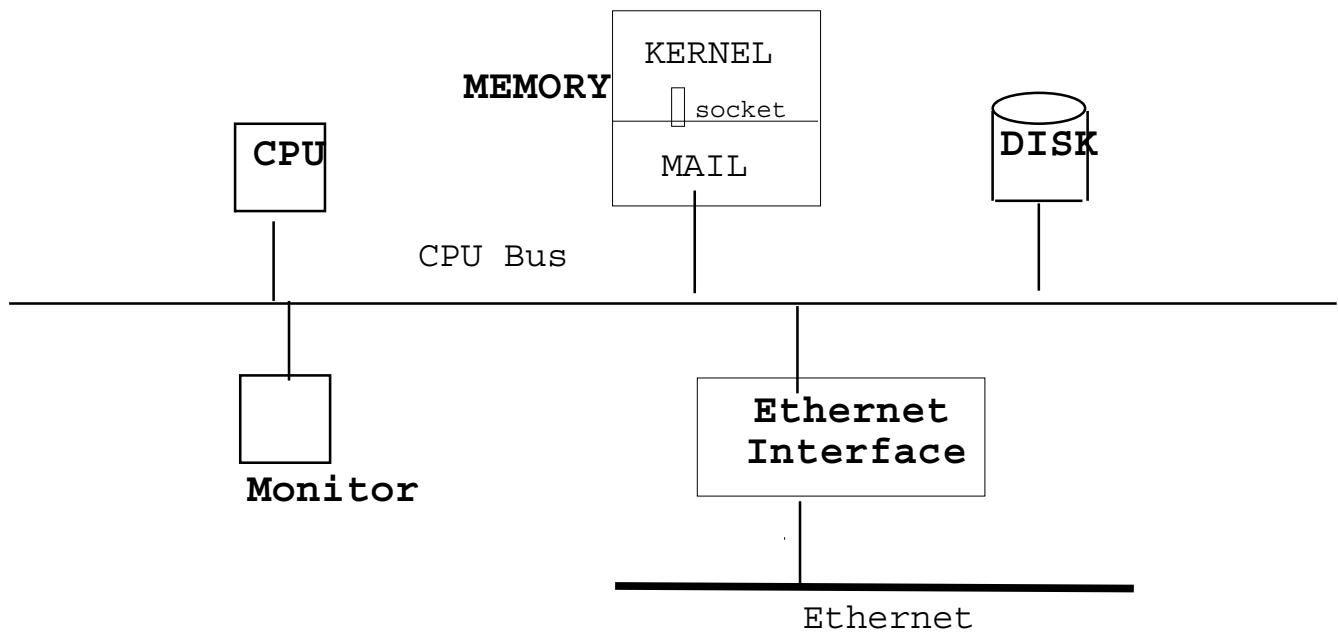
Networking Introduction Continued

George Varghese

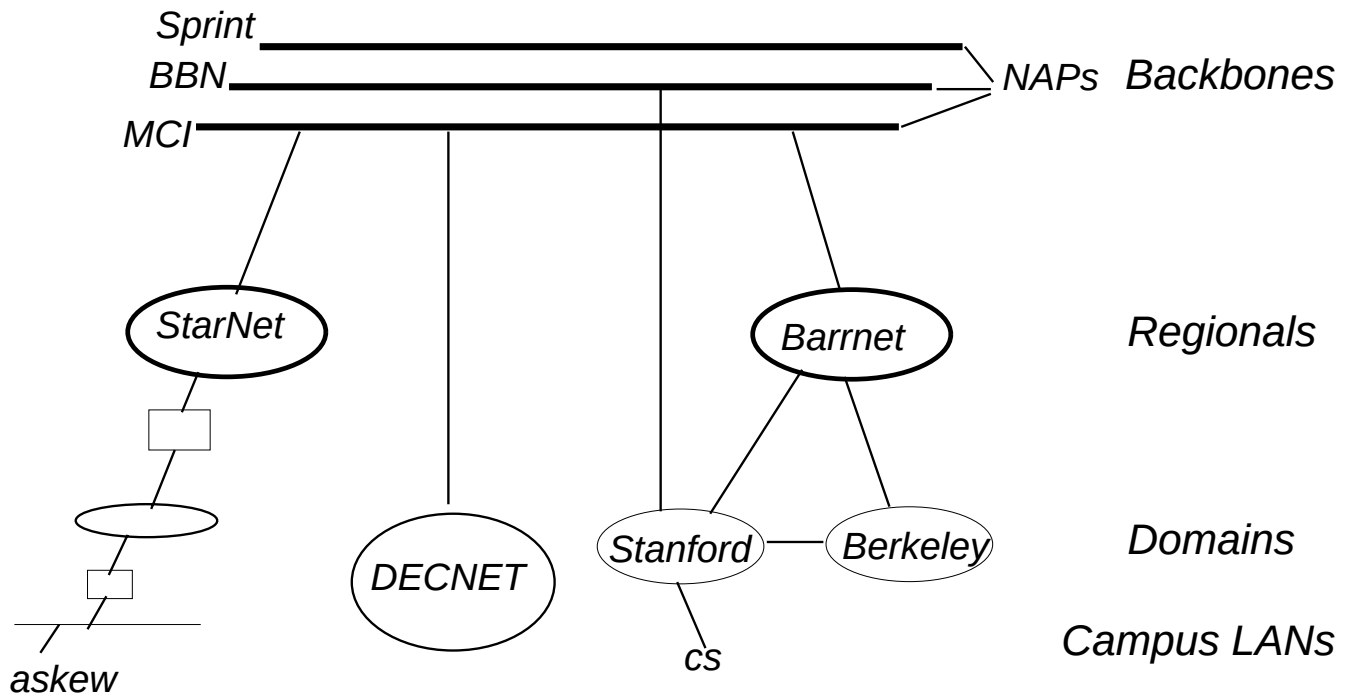
April 3, 2001

PCs/Workstations and Networking

WOKSTATION ASKEW

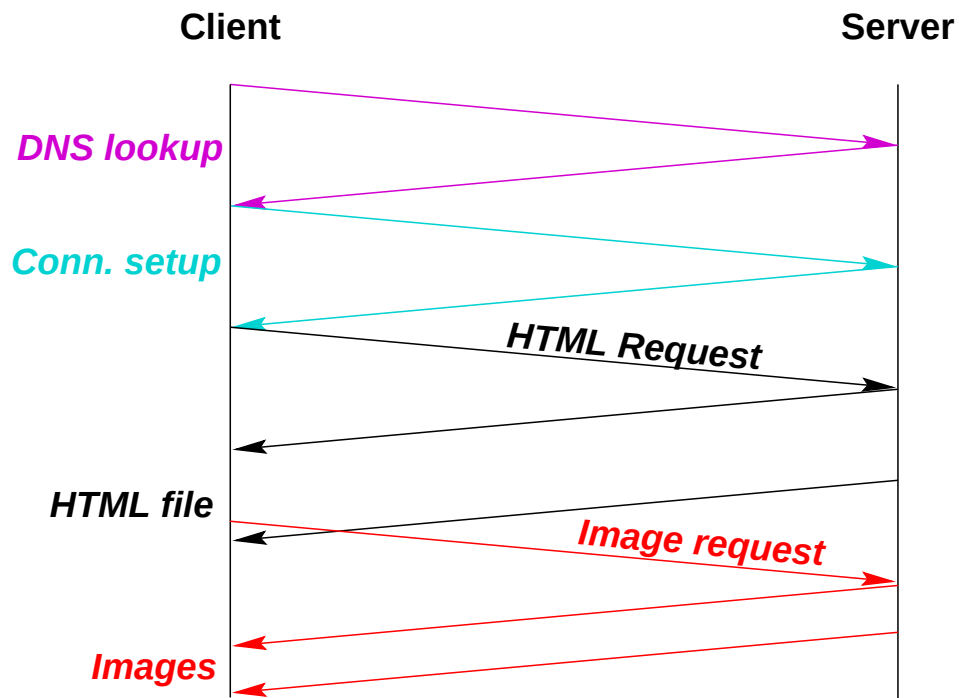


IP Topology



- Learn the buzzwords: Domains, ISPs, NAPs, POPs

A Web Transfer



- Watch the steps next time you access a web page

Aspects of the Past

- Large main frames to terminals in 1960's.
- 1970's. PC's and Local Area Networks. Vendor proprietary networks. SNA. DECNET etc.
- 1980's. Global Networks. The Internet takes over.

Aspects of the Future

- Integrated Networks and QoS. Voice-over-IP. IP Storage.
- Increased Scale (users, devices, required and available bandwidth) – IPv6, NAT Boxes, Optical Switching.
- Mobility and Ubiquitous Computing – 3G Wireless, Bluetooth
- Multicasting: IP Video and Radio
- Better ways to access information and use the network. Peer-to-peer networking for direct sharing.
- Security — DOS Attacks and counters, Firewalls, IDS Systems. SET, VPNs, IPsec.
- Improved Content Delivery: Content Networks, Web load balancers etc.
- Accounting. Smart markets. Pricing Models

Computer Communication

Computers (processing) + Communication
(allowing spread out entities to talk to each other)
lead to two fundamental different uses:

- **Process Spread out Information:** e.g.,
databases, Web access, Yahoo, email
- **Spread out Processing:** Distributed
Games, SetiHome,