

Kent State University Dept. of Computer Science	
CS 4/59995 Internet Engineering	LECT-1B

Class Mechanics

- Web Access:
- Groups Project
 - Next class we will form groups of 1-2
 - group work/ individual report.
 - 2 phases + optional creative enhancement
 - In class group demonstration
- Class attendance will be important

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 IN2007F, javed@kent.edu
 Javed I. Khan@2004

Today's Topic

Internet Real-state

Who manages Internet & Its Organization.

History of Internet.

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 Javed I. Khan@2004

A Map of Internet Real-State (1998)

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Internet Real State (2000)

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A Map of Internet Real-State (2005-now)

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Applications & Services

The real story of the Internet excitement is however is the new genre of systems and applications developed on it.

The Internet offer access to data, graphics, sound, software, text, and people through a variety of services and tools for communication and data exchange:

- Hypertext (WWW)
- Remote login (telnet)
- File transfer (ftp)
- Electronic mail (e-mail)
- News (USENET or network news)
- Platform independent computing (Java)
- E-commerce, Digital Library, Online Banking
- Communities, P2P, Online Game



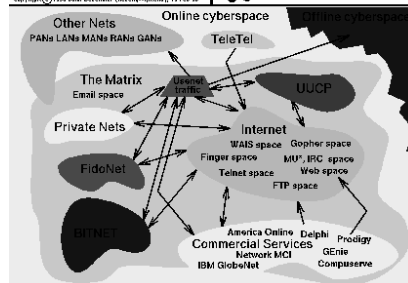
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World Wide Networks

Net Relationships

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Link or Gateway Network



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Who Manages Internet?

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There is no single body which manages the Internet.

It runs through a host of independent or loosely coupled coordinating organizations.

The organizations below play a major role in the organization, management and development of it:

- Internet Society (ISOC)
- Internet Architecture Board (IAB)
- Internet Engineering Task Force (IETF)
- Internet Engineering Steering Group (IESG)
- Internet Corporation for Assigned Names & Numbers ICANN)
- W3C



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Internet Society (ISOC)

A nonprofit, non-governmental professional-membership organization of individuals and organizations interested in the development of Internet. More specifically, this is the legal umbrella for other coordinating bodies (such as IAB, IANA) for global cooperation and coordination for the Internet and its interconnecting technologies and applications.



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Internet Architecture Board (IAB)

IAB is a technical advisory group of the Internet Society. Its responsibilities include oversight of IETF, editorship of the RFC document series, administration of Internet assigned numbers, and liaison of the Internet Society in liaison relationships with other organizations concerned with standards.



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Internet Engineering Task Force (IETF)

Body to address and resolve technical and operational problems on the Internet and to develop Internet standards and protocols.

The membership of IETF is international and completely voluntary. Members consist of network designers, operators, vendors, researchers and other interested individuals.



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Internet Assigned Numbers Authority (IANA):

Based at ICANN, IANA is in charge of all "unique parameters" on the Internet, including IP (Internet Protocol) addresses and manages the Root Domain Name Service.



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Global Internet Assigned Numbers Authority

Americas and sub-Saharan Africa:

The American Registry for Internet Numbers (ARIN)

Europe and North Africa:

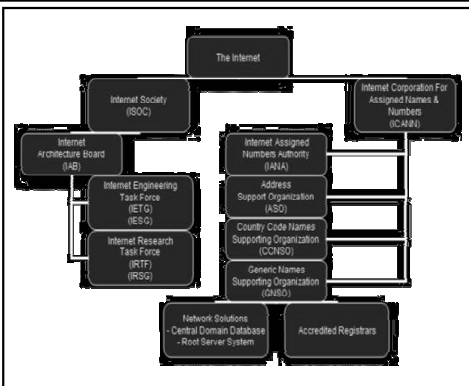
Reseais IP Europeens (RIPE) (<http://www.ripe.net>)

Asia and Australia:

Asian-Pacific Network Information Center (APNIC) (<http://www.apnic.net>)

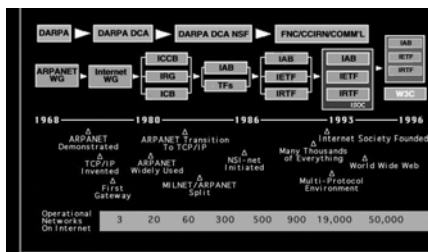


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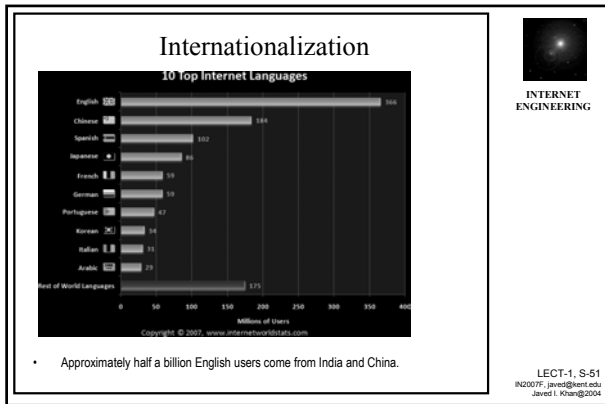
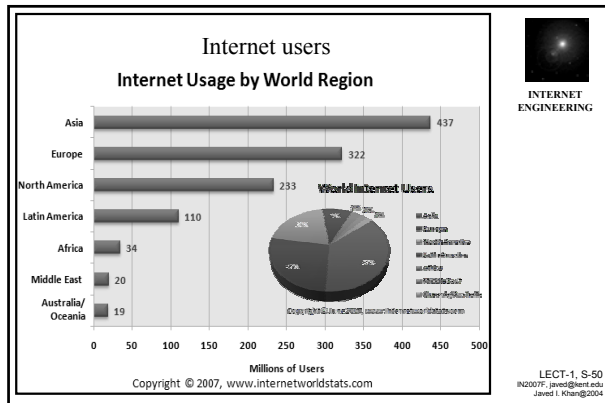
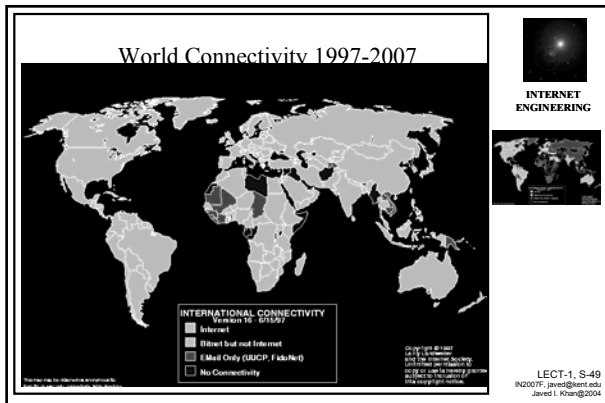
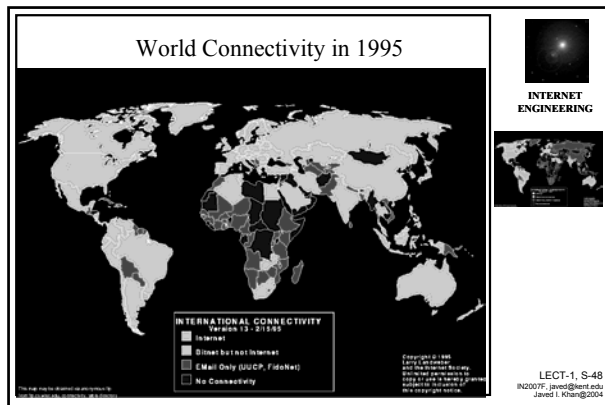
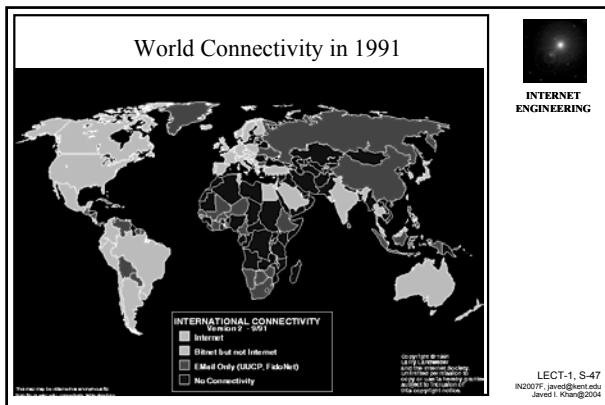
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Evolution of Internet's Management



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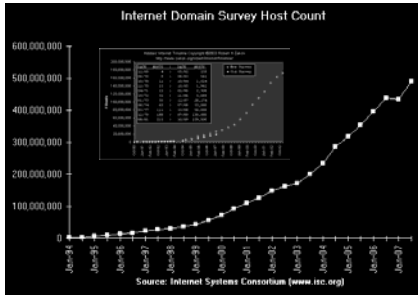
Global Village



Growth Rates

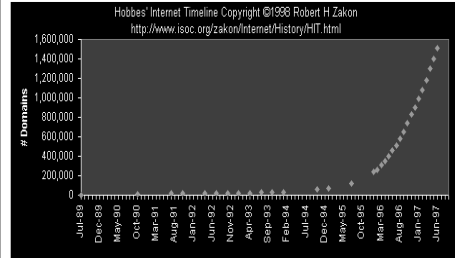
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Growth of Internet Hosts



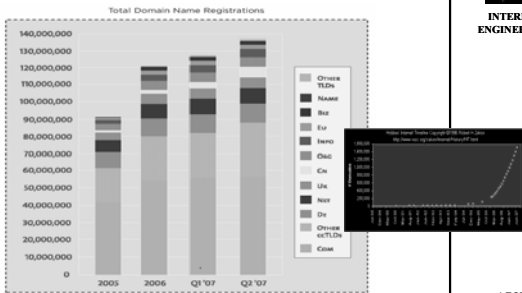
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Growth of Internet Domains



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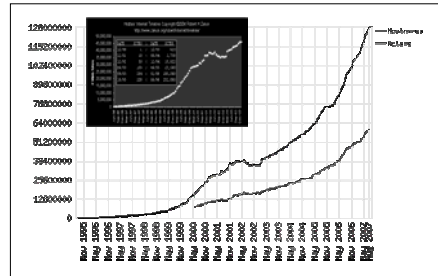
Growth of Internet Domain Names (Recent)



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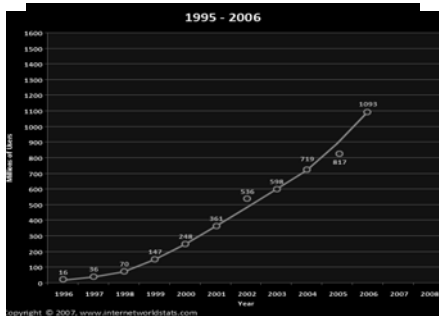
Growth of Web Servers

Total Sites Across All Domains August 1995 - August 2007



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How Many Online?



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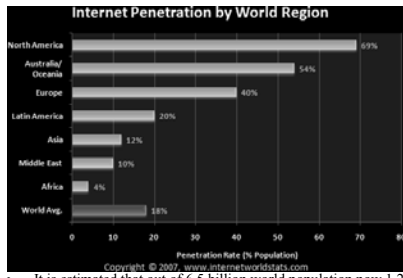
Looking Back.. The History of the Internet

- ARPANET (Advanced Research Projects Agency Network)
- TCP/IP (Transmission Control Protocol/Internet Protocol)
- NSFNET (National Science Foundation Network)
- Desktop computers
- Network upgrades
- Web Technology



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Yet to Grow...



- It is estimated that out of 6.5 billion world population now 1.2 billion has used internet. (Count as of June 30, 2007)



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Javed I. Khan@2004