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

Today’s Topic

Internet Real-state
Who manages Internet & Its Organization.
History of Internet.

A Map of Internet Real-State (1998)

A Map of Internet Real-State (2000)

A Map of Internet Real-State (2005-now)
Applications & Services
The real story of the Internet excitement is however the new genre of systems and applications developed on it.

The Internet offers 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

Who Manages Internet?

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

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 inter-networking technologies and applications.

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.
**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.

**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.

**Global Internet Assigned Numbers Authority**

- **Americas and sub-Saharan Africa:** The American Registry for Internet Numbers (ARIN)
- **Europe and North Africa:** ReSeas IP Europeens (RIPE) (http://www.ripe.net)
- **Asia and Australia:** Asian-Pacific Network Information Center (APNIC) (http://www.apnic.net)

**Evolution of Internet’s Management**

**Global Village**
World Connectivity in 1991

World Connectivity in 1995

World Connectivity 1997-2007

Internet users

- Millions of Users

<table>
<thead>
<tr>
<th>Region</th>
<th>Millions of Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia</td>
<td>157</td>
</tr>
<tr>
<td>Europe</td>
<td>129</td>
</tr>
<tr>
<td>North America</td>
<td>75</td>
</tr>
<tr>
<td>Latin America</td>
<td>35</td>
</tr>
<tr>
<td>Africa</td>
<td>35</td>
</tr>
<tr>
<td>Middle East</td>
<td>15</td>
</tr>
<tr>
<td>Australia/Great Britain</td>
<td>5</td>
</tr>
</tbody>
</table>

Internationalization

- Approximately half a billion English users come from India and China.

Growth Rates
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
Yet to Grow...

- It is estimated that out of 6.3 billion world population now 1.2 billion has used internet. (Count as of June 30, 2007)