CS 121
Our Digital World:
The Internet

April 5, 2011
Annoucements

• Midterm: Apr 14\textsuperscript{th}!
  • We'll talk about sample questions/topics Thursday and Tuesday

• Social Media Identity Series slated for April 5-8
  • Wednesday Apr 6, 6pm McGill Auditorium
    – "Making Metapictures Political: Re-Scaling Images of the Fall of the Berlin Wall"
  • Friday Apr 8, Berglund 200, 1-2:30 pm
    – "What is your Digital Identity? Bridging the Gap between our Physical and Virtual Lives."

• Check the Pacific web site for more info!
How does...

• an email get from you to me?
  chadd@pacificu.edu
  profchadd@gmail.com

• Facebook work?
  www.facebook.com
  facebook.com
The Internet (ch 12)

- Computer Network
  - Host
  - Address 74.125.127.104
    - Domain name system
      - TLD
      - ICANN
    - Internet Protocol (IP)
      - IPv4 (32 bits) IPv6 (128 bits)

- Client/Server

- http://www.internettrafficreport.com/
Letters you might see

- http
  - html
  - URL
  - https
- ftp
  - sftp
- IMAP
- POP/POP3
- DHCP
Internet Access

• How does my computer at home connect to the Internet?

• Backbone

• Internet Service Provider (ISP)
  • broadband

• http://broadbandmap.gov/technology
## Speed

- **Bandwidth**
  - how many bits can you send in 1 second?

<table>
<thead>
<tr>
<th>Type</th>
<th>Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dialup</td>
<td>56 kilo bit/second</td>
</tr>
<tr>
<td>DSL</td>
<td>1.5 Mega bit/second</td>
</tr>
<tr>
<td>Cable*</td>
<td>~15 Mbps</td>
</tr>
<tr>
<td>FiOS*</td>
<td>up to 50 Mbps</td>
</tr>
<tr>
<td>OC3</td>
<td>155 Mbps</td>
</tr>
<tr>
<td>OC12</td>
<td>622 Mbps</td>
</tr>
<tr>
<td>OC48</td>
<td>2.5 Giga bit/second</td>
</tr>
<tr>
<td>OC192</td>
<td>9.6 Gbps</td>
</tr>
<tr>
<td>10GigE</td>
<td>10 Gbit/second</td>
</tr>
</tbody>
</table>

* based on commercially advertised speeds
The Internet Traffic Report monitors the flow of data around the world. It then displays a value between zero and 100. Higher values indicate faster and more reliable connections.

View Graphs or **Click a region to view more detailed information.**

http://www.internettrafficreport.com/

(slow) 0 to 100 (fast)
International Speeds?

- Average Internet speed
  - US
  - Korea
  - Japan
  - Canada
  - Germany
network visualizations

- http://www.yougetsignal.com/tools/visual-tracert/
- http://www.verizonbusiness.com/ca/about/network/
- http://www.tatacommunications.com/map/gfp.html
How do I run a website?

• What technical considerations are there?

• I want to run www.cs121s11.edu
  • What do I need?
Practical Problems

- How to buy a domain name
- How to host a website
  - Yourself
    - purchase a static IP address
    - dynamic DNS
  - Purchased services (cost?)
    - Amazon Simple Storage Service (s3)
    - Fatcow.com
    - smallbusiness.yahoo.com/webhosting
- Free Hosting
  - Google Sites
Question of the Day

• Build a page 4/5/2011 under Question of the Day
  • List the following question and answers
• In the recent protests in Egypt, the Egyptian government “cut off the Internet”
  • Why/how did the government do this?
  • Find at least one article that discusses one of the above questions.
    − Link to the article and answer the question
    − What are the most important points worth discussing?
• Include one question that you would like answered
Homework 4/5/2011

• By April 7, 9 am
  • Post on your website one article on Net Neutrality
    – Define Net Neutrality in your own words
    – Include a short summary of what you have learned
    – Include one question that you would like answered