Networking & Censorship

How We Use the Web

• Shopping
• Contributing content (wikis, blogs)
• Promoting business
• Learning
• Exploring our roots
• Exploring virtual worlds
• Paying taxes
• Gambling
• Lots more!
Breakups over Facebook

Internet Addiction
Net Neutrality

Sir, I'll need you to step away from the keyboard. Step... Step away from the keyboard now! This is my internet, bucko!
Not everyone in world has Internet access
- Saudi Arabia: centralized control center
- People’s Republic of China: ISPs sign “self-discipline” agreement
- Germany: Forbids access to neo-Nazi sites
- United States
  - Repeated efforts to limit access of minors to pornography
  - DMCA forbids discussion of security problems
Types of Censorship

- Direct Censorship
  - Government monopolization
  - Prepublication review
  - Licensing and registration

- Self-Censorship
  - Most common form of censorship
  - Reasons
    - Avoid subsequent persecution
    - Maintain good relations with government officials (sources of information)
  - Ratings systems
    - Movies, TVs, CDs, video games
    - *Not* the Web
Challenges Posed by the Internet

- Many-to-many communication
- Dynamic connections
- Huge numbers of Web sites
- Extends beyond national borders, laws
- Can’t determine age of users
**Freedom of Expression: History**

- *De Scandalis Magnatum* (England, 1275)
- Court of Star Chamber
- 18th century
  - No prior restraints on publication
  - People could be punished for sedition or libel
- American states adopted bills of rights including freedom of expression
- Freedom of expression in 1st amendment to U.S. Constitution

**1st Amendment to U.S. Constitution**

Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the government for a redress of grievances.
Freedom of Expression
Not an Absolute Right

- 1st Amendment covers political and nonpolitical speech
- Right to freedom of expression must be balanced against the public good
- Various restrictions on freedom of expression exist

FCC v. Pacifica Foundation et al.

- George Carlin records “Filthy Words”
- WBAI in New York airs “Filthy Words” (1973)
- FCC issues declaratory order to Pacifica
- Pacifica sues
- U.S. Supreme Court ruled FCC did not violate 1st Amendment (5-4 decision)
  - Broadcast media “uniquely pervasive”
  - Broadcasting uniquely accessible to children
**Web Filters**

- Web filter: software that prevents display of certain Web pages
  - May be installed on an individual PC
  - ISP may provide service for customers
- Methodologies
  - Maintain “black list” of objectionable sites
  - Examine content for objectionable words/ phrases

**Child Internet Protection Act**

- Libraries receiving federal networking funds must filter pages containing obscenity or child pornography
- U.S. Supreme Court ruled CIPA did not violate 1st Amendment guarantees (6-3 decision in June 2003)
Spam

• Networking increases computer’s utility
• Internet connects millions of computers
  – Powerful computational resource
  – Even more powerful communication medium
• Network utility grows as number of users squared
  – 10 users → 90 sender-receiver combinations
  – 100 users → 9900 sender-receiver combinations
**Spam**

Spam is unsolicited commercial email

- Amount of email that is spam has increased
  - 8% in 2001
  - 40% in 2003
  - 75% in 2007

- Spam is effective
  - More than 100 times cheaper than “junk mail”

**CAN SPAM Act of 2003**

- Took effect January 1, 2004
  - Consumers have right to “opt out”
  - Sexually explicit messages must contain subject line notice
  - Prohibits dictionary attacks and falsifying header information

- Critics call it “You CAN Spam Act”
  - Spam still legal, as long as regulations followed
  - Opting out can have harmful consequences
  - Federal law weaker than state laws it preempted

- Spammers can avoid prosecution by locating outside United States
Online Privacy Threats

**Online Identity Theft**

**Goal:** Steal credit card or other financial or account information

**Mechanisms:**
- Phishing (email)
  - Trojans, worms, viruses
- Spyware
- Server Hacks

**Online Profiling**

**Goal:** Track your activities online, including what you do, and who you interact with

**Mechanisms:**
- Cookies
- Webbugs
- Deceptive/Abusive data practices

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**Phishing**

Dear ORST Webmail Subscriber,

We notice that your webmail account has been compromised by spammers. They have gained access to your webmail account and have been using it for illegal internet activities. You are to send us your account information immediately to enable us to reset your account. A new password will be sent to you once this is done. Send the information as follows:

*User Name:

*Password:

You are advised to send this information immediately or we will delete your account from our network.

THE ORST HELP DESK
Why Phishing Works

In 2003 approximately 2 million people gave away information in phishing attacks (5% of recipients) valued at $1.2 billion!

90% of study participants fooled by good phishing sites


Why Phishing Works

Common techniques

– Address obfuscation for links
  • www.cilibank.com
  • www.ebay-security.com
  • www.capital0ne.com

– Visual deception
  • Emails, logos and sites that look real
  • Bring up real site in addition to fake login box
Surviving Phishing Attacks

• Use common sense!
  – If it sounds too good/bad to be true… It probably is

Online Profiling

While not as bad as identity theft, can still be damaging, and often used together

Two main mechanisms:
  – Cookies (3rd party)
  – Webbugs

Both (potentially) enable a 3rd party to see where you go

See [http://www.epic.org/privacy/profiling/](http://www.epic.org/privacy/profiling/) for dangers of profiling
Know your worth

Average Quarterly Revenue Per User

- $0.74 - Twitter
- $0.81 - Microsoft
- $1.21 - Facebook
- $1.76 - LinkedIn
- $2.39 - AOL
- $7.14 - Google
- $160.98 - Verizon Wireless
- $275.97 - DirectTV
- $430.20 - Comcast TV
- $507.00 - AT&T U-Verse 3-Play