

# COMPSCI 111 / 111G

*Mastering Cyberspace:  
An introduction to practical computing*

## Risks

## Social concerns

### Technology changes our world rapidly

- Laws, traditions, social expectations change slowly

### Problems

- Unemployment
- Crime
- Privacy
- Reliability
- Alienation / Lack of human contact
- Exclusion

## Anonymity

### Questions

- Is the Internet anonymous?
- Should it be anonymous?
- What are the implications of anonymity?

### Advantages

- Allows discussion of sensitive issues
- sexual abuse, mental illness, substance abuse
- alt.support.impotence, alt.support.eating-disorders, etc.

### Disadvantages

- Allows people to be irresponsible
- False accusations, Personal abuse

## Social Imperialism

### The Internet is an international resource

- Dominant language is English
- Dominant culture is American

### Smaller cultures

- Diluted?
- Empowered?

### Who *\*really\** controls the Internet?

- Internet Corporation for Assigned Names and Numbers (ICANN)
- Top-level domain xxx

## "Dangerous" material

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### Material that could be misused?

- How to guide for stalkers, rapists, murderers
- How to pick locks, make guns, chemical warfare
- Make bombs out of household cleaners
- Make nuclear weapons

### Other "dangerous" material

- Religious views
- Political views (Capitalism, Democracy, Socialism)
- Racial views
- Invasion of privacy (abortion)
- Means to organise activists

## Peer to Peer networks

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### P2P

- Form a direct connection to other computers
- Allows access to files on those computers

### BitTorrent

- Swarming downloads

## Copyright

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### Copyright Act (1994)

- May not legally make copies
- Backup permitted
- May not change format

### Copyright (New Technologies and Performers' Rights) Amendment Bill (Bill 102-2)

- Select Committee reported to parliament July 2007
- Passed second reading
- Allows format shifting

<http://www.legislation.govt.nz/>

<http://www.parliament.nz>

## Access across borders

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### Medicine

- Illegal Pharmaceuticals

### Films, Videos, and Publications Act (1993)

- New Zealand censorship laws
- Office of Film and Literature Classification

### Two ways that censorship laws are broken

- Viewing illegal material
- Legal material being viewed illegally (by young people)

<http://www.censorship.govt.nz/>

# Sexual Content on Internet

## WWW - Legal material

- Traditional Magazines (Playboy, Penthouse etc.)
- Peep shows, Live Webcams, Streaming video
- Amateurs

## WWW - Illegal material

- Usually hidden
- Illegal in one country, legal in another
- Sometimes archived by search engines



## Email, Chat, Forums

## Social Networking

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# Protecting Children

## Internet as Education Medium

- Internet available in schools
- Children, Parents, Teachers want access

## Some material unsuitable for children

- X-Rated material
- Foul language
- Anti-social information

## Online attention

- 57% of children (12-17) have created blogs or posted photos (U.S.)
- 20% of children (10-17) receive unwanted sexual solicitation (U.S. DOJ)
  - Estimated 1 in 4 of these are from pedophiles

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# Research - "Girls on the Net"

## Survey in New Zealand 2001 (11-19 year olds)

- 68.5% were using the Internet most days.
- 33.5% have had a personal face-to-face meeting with someone they met on the Internet.
- 60% had done at least one potentially unsafe behaviour.
  - 35.5% gave out personal information e.g. address/phone no.
  - 26.5% sent a photo of themselves to someone they met
  - 14.5% had posted a picture of themselves on the Net.
- 95.5% use the Internet at home
  - 75% of users state that their use of the Internet at home is only occasionally (37.5%) or never (37.5%) monitored by an adult.
- 44.5% use the Internet at school
  - 58% of users state that their use of the Internet at school is monitored only occasionally (28.5%) or never (29.5%) by an adult.
- 22.5% report having felt unsafe or threatened while using the Internet (most commonly from sexual threats).

[http://www.netsafe.org.nz/research/research\\_girls.aspx](http://www.netsafe.org.nz/research/research_girls.aspx)

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# Methods available to parents

## Supervise your children

- Situate computer in public place (lounge)
- Check the logs of sites visited
- Discuss Internet content with your children

## Blocking software

- Stops access to sites based on the IP address
- White list / Black list

## Filtering software

- Stops access to sites based on the content
- Keyword / phrases / image analysis
- PC, ISP, Third-party

<http://www.aba.gov.au/newspubs/documents/filtereffectiveness.pdf>

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# Malicious Software (malware)

## Logic Bomb

- Deliberate error left in software by the programmer
- Triggered by a predetermined event

## Trojan

- Real purpose of the program is disguised

## Worm

- Replicate across a network
- Does not attach itself to other files

## Virus

- Attaches itself to existing files
- Replicates by modifying other files

# Trojan Horse

## Login Trojan

- Common in environments with shared computing resources
- Stores Login and Password details entered



[http://en.wikipedia.org/wiki/Trojan\\_horse\\_%28computing%29](http://en.wikipedia.org/wiki/Trojan_horse_%28computing%29)

# References - Social Issues

## Internet Safety Group (NZ)

- <http://www.netsafe.org.nz/>

## Report on Filtering

- <http://www.aba.gov.au/newspubs/documents/filtereffectiveness.pdf>

## Ministry of Economic Development

- <http://www.med.govt.nz>
- Copyright Law
- Broadband
- SPAM

# Virus References

<http://www.mcafee.com/anti-virus/>

<http://www.symantec.com>