

# Professional Issues in Computing

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# Computers in Work and Public Spaces

- E-mail/Internet usage
- Regulating usage at work
- Computer vision, tracking
- Safety vs. Privacy
- Digital divide
- eBusiness
- eDemocracy
- Anonymity on the Internet

# Introduction

- Computers can be used to track visual images (e.g., faces, licence plates) - look at Google Earth: it's probably just a fraction of what is really possible; CCTV!
- Computers can be used to decrypt electronic communications and scan it for suspicious content (viz. spam filtering)

# Introduction

- Computers can be used to count things, such as keystrokes, mouse clicks, etc., viz. keystroke loggers
- Computers can be used to conduct business: marketing, sales, and after-sales support
- Computers can be used for education: eLearning, lifelong learning
- Computers can be used for entertainment
- Computers can be used to collect and count votes (eDemocracy)

# Introduction

- Computers can be used to log and analyse transactions (financial, personal - e.g. web browsing), mine data, and make forecasts
- Computers can be used to ensure our safety, but at what levels of intrusion?

# Introduction

- Computers can be used to control access to information, but is this ethical? Who decides?
  - Do we have a right to unfiltered information, or can information be filtered to protect society?
  - Pornography: violence against women
  - Suicide: prevention of copycat suicides
  - Unflattering reports about Maltese Government
  - China, Cuba: protect the State

# Introduction

- Controls can be used in face-to-face transactions to prevent sale of goods/information to minors and others, but who controls faceless transactions over the Web?

# Introduction

- Computers are not bug free!
  - There can be errors in hardware, software, and the interaction between software packages
- The IT industry rolls out 'upgrades' (to chips, architecture, software), sometimes making hardware obsolete (you can't run the latest versions of operating systems or software on 'outdated', but operational, hardware)



# IT and Ethics

- Is the IT industry acting in the interests of its customers, or of itself?
- Are security services acting in the interests of society, or of themselves?
- Are information/educational sources acting in the interests of students, or of themselves?
- The availability of, e.g., UK degrees available anywhere in the world through eLearning? Are they imposing imperialist attitudes?

# eBusiness

- What guarantees are there that you are who you say you are?
- ... and that you are dealing with the entity it claims to be?
- The \$23,000,000 a Nigerian Colonel wants to give you... The lottery you won, please pay taxes first... etc.

# Digital Divide

- Computers appear to have broken down geographical barriers
  - Information/services available 24/7, anywhere in the world (as long as State doesn't block access or make access illegal)
- But can everybody afford to access the information/services?
  - Cost of hardware, software, bandwidth
  - Compare to access to free health services, education, medication (sometimes), public transport (sometimes), etc... Is IT a similar commodity now?

# Work, Productivity and Regulation

- Assume that computers at work need access to Internet for work...
- Should employers use computer technology (keystroke loggers, click analysis, web log analysis, application loggers, etc.) to ensure that employees are using computers for work purposes only?
- If an employer can, then can a State to ensure that its citizens are acting in the best interests of the country?

# Safety vs. Privacy

- Should security services/police use computers, CCTV, trackers, communications scanners, transaction logging and analysis, DNA databases, etc. to ensure public safety, at the expense of personal privacy?

# Transaction Logging and Identity Theft

- American Express uses AI systems to ensure that your card is not being used without your knowledge
- Should all your transactions be logged and analysed to ensure that your identity has not been stolen without your knowledge (that your identity has not been stolen without your knowledge, I mean)?

# Finally,

- Keeping secrets is necessary to form relationships, have a democracy... Johnson
- So we should have the right to keep secrets when we want to (e.g., blocking CallerID)
- Can we be anonymous on the Internet in the same way we can be anonymous in the physical world?
  - In general - but definitely want to be anonymous for eVoting!