Chapter 10

Computers in Society: Today
Our Information Society

- IT Paradox
- Working in the Information Society
- The Workplace
- Ethics
- Security Issues
IT Paradox

Information Technology is thriving in a society that may not be ready for it.

- Are we ready for IT?
- Do we really want IT?
- We are reaching the point of no return!
Why Choose an IT Career?

1 in every 10 jobs for IT specialists is open.

Internet economy is growing at 20 times the rate of the general economy.

Computer Systems Analyst called best job in America.

IT careers consistently ranked among the most desirable jobs.
Working in the Information Society: IT Jobs

- Chief Information Officer (CIO)
- Systems Analyst
- Applications Programmer
- Programmer/Analyst
- Network Administrator
- System Programmer

Courtesy of Novell
Working in the Information Society: IT Jobs

- Database Administrator (DBA)
- Internet Site Specialist
- Webmaster
- Computer Operator
- User Liaison
- PC Specialist

Photo courtesy of Intel Corporation
Licensing not currently required

Certifications offered by:
  - Institute for Certification of Computer Professionals
  - Microsoft
  - Novell

IT Competent Minority

Jobs are Changing
The Workplace

Ergonomics:
Study of the relationships between people and the things we use.

- Cumulative trauma disorder
- Carpal tunnel syndrome
- Repetitive stress injuries
- Video operator’s distress syndrome
And yet another possible ergonomic activity...
The Workplace

- Workplace Design
  - Include flexibility
  - OSHA requirements
  - Ergonomic considerations

- Green Computing
  - Energy Star guidelines
  - Less printing
  - Recycle whenever possible
Ethics: ACM Code of Conduct

General Moral Imperatives

- Contribute to society and human well-being
- Avoid harm to others
- Be honest and trustworthy
- Be fair and take action not to discriminate
- Honor property rights including copyrights and patents
- Give proper credit for intellectual property
- Respect the privacy of others
- Honor confidentiality

http://www.acm.org
Ethics: Misuse of Personal Information

- Sources of Personal Data
- Violating Privacy
  - Selling your information
  - Cookies
- Computer Matching
- Privacy Question: No Easy Answers
- Computer Monitoring

40% of all white-collar workers are afraid of new technology. This is somewhat due to a fear of loss of privacy.
Ethics: Computer Crime

- Law is not always clear
- Computer Fraud
- Negligence & Incompetence
- Crackers (or Hackers)
  - Evidence is called a footprint
- Crime on the Internet
- Software Piracy
Computer, Internet, and System Security

Threats

- White-Collar Crime
- Computer Viruses
- Natural Disasters
- Vandalism
- Carelessness
Computer-Center Security

- **Hardware**
  - Use fault-tolerant design
  - Install uninterruptible power source (UPS) for backup

- **Software**
  - Minimize opportunities for unlawful modification of software
  - Use antiviral programs
  - Protect and backup files/databases
Computer-Center Security

- Data Communications
  - Employ cryptography technology
  - Encryption/Decryption
  - Secure Sockets Layer - SSL
  - Digital ID
- Personnel

Courtesy of E-Systems, Inc.
Other Security Issues

- Information Systems Security
  - Physical Security
  - Logical Security (ID and Password)
- PC Security
- Acceptable Level of Risk

Courtesy of Kensington Technology Group
End of Chapter 10