



# Chapter 12

## **Ethical and Social Issues in Information Systems**



# Essentials of Business Information Systems

## Chapter 12 Ethical and Social Issues in Information Systems

### STUDENT OBJECTIVES

- **Analyze the relationships among ethical, social, and political issues that are raised by information systems.**
- **Identify the main moral dimensions of an information society and specific principles of conduct that can be used to guide ethical decisions.**



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## Chapter 12 Ethical and Social Issues in Information Systems

### STUDENT OBJECTIVES

- **Evaluate the impact of contemporary information systems and the Internet on the protection of individual privacy and intellectual property.**
- **Assess how information systems have affected everyday life.**



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### Does Location Tracking Threaten Privacy?

- **Problem:** Utilizing new technology, implementing better security.
- **Solutions:** Adjust activities to allow location monitoring and deploy GPS tracking device to provide location monitoring.
- **GPS device and location tracking database** increases safety but also raises privacy concerns.
- Demonstrates IT's role in tracking systems that augment security.
- Illustrates digital technology as a double-edge sword that has many benefits but also presents ethical dilemmas.



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Does Location Tracking Threaten Privacy?

### Interactive Session: Location Tracking

- **What are some of the arguments in favor of using GPS technology to track the movements of individuals?**
- **What are some of the arguments against the practice?**
- **What is your position on the matter?**
- **What other applications can you think of for GPS technology and tracking systems?**



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### **Understanding Ethical and Social Issues Related to Systems**

- **Recent cases of failed ethical judgment in business**
- **Role of information systems in failed judgments**
- **Ethics**
  - **Definition**
  - **New ethical questions raised by information systems**
  - **New urgency related to rise of the Internet and electronic commerce**



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## Chapter 12 Ethical and Social Issues in Information Systems

Understanding Ethical and Social Issues Related to Systems

### **A Model for Thinking About Ethical, Social, and Political Issues**

- **Ethical, social, and political issues are interconnected**
- **Ripples from new information technology affect all parties in contact**
- **Old rules may not apply to new developments**

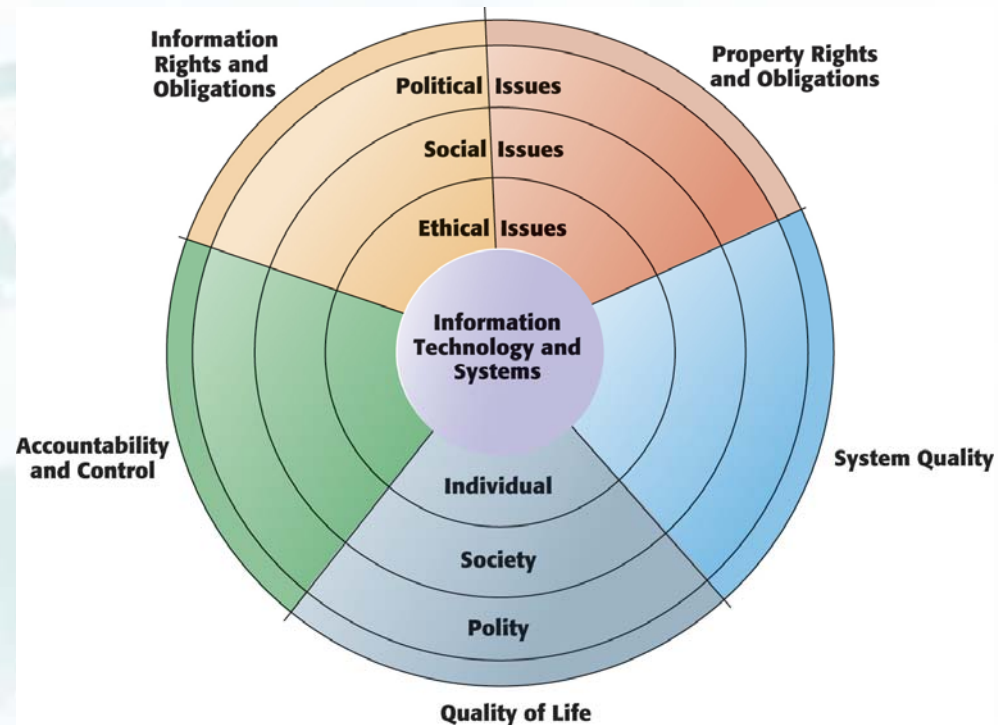


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## Chapter 12 Ethical and Social Issues in Information Systems

Understanding Ethical and Social Issues Related to Systems

### The Relationship Among Ethical, Social, Political Issues in an Information Society



The introduction of new information technology has a ripple effect, raising new ethical, social, and political issues that must be dealt with on the individual, social, and political levels. These issues have five moral dimensions: information rights and obligations, property rights and obligations, system quality, quality of life, and accountability and control.

Figure 12-1





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Understanding Ethical and Social Issues Related to Systems

### **Five Moral Dimensions of the Information Age**

- **Information rights and obligations**
- **Property rights and obligations**
- **Accountability and control**
- **System quality**
- **Quality of life**



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Understanding Ethical and Social Issues Related to Systems

### **Key Technology Trends That Raise Ethical Issues**

- **Doubling of computer power**
- **Rapidly declining data storage costs**
- **Advances in data analysis techniques**
- **Networking advances and the Internet**
- **Profiling**
- **Nonobvious relationship awareness (NORA)**



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### Ethics in an Information Society

- **Basic concepts: responsibility, accountability, and liability**
- **Ethical analysis**
- **Candidate ethical principles**
- **Professional codes of conduct**
- **Some real-world ethical dilemmas**



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### The Moral Dimensions of Information Systems

## Information Rights: Privacy and Freedom in the Internet Age

- Privacy protection
- Fair Information Practices
- COPPA, Gramm-Leach-Bliley, HIPAA
- The European Directive on Data Protection
- Internet challenges to privacy
- Technical solutions



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### The Moral Dimensions of Information Systems

## How Cookies Identify Web Visitors



1. The Web server reads the user's Web browser and determines the operating system, browser name, version number, Internet address, and other information.
2. The server transmits a tiny text file with user identification information called a cookie, which the user's browser receives and stores on the user's computer hard drive.
3. When the user returns to the Web site, the server requests the contents of any cookie it deposited previously in the user's computer.
4. The Web server reads the cookie, identifies the visitor, and calls up data on the user.

Cookies are written by a Web site on a visitor's hard drive. When the visitor returns to that Web site, the Web server requests the ID number from the cookie and uses it to access the data stored by that server on that visitor. The Web site can then use these data to display personalized information.

Figure 12-3



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### The Moral Dimensions of Information Systems

## Property Rights: Intellectual Property

- Trade secrets
- Copyright
- Patents
- Challenges to intellectual property rights
  - File sharing services
  - Digital Millennium Copyright Act (DMCA)



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### The Moral Dimensions of Information Systems

- **Accountability, liability, and control**
  - **Who is liable for injuries that result from machines controlled by software?**
  - **Computer-related liability problems**
- **System quality: data quality and system errors**
  - **Software bugs and errors**
  - **Hardware or facility failures caused by natural or other causes**
  - **Poor input data quality**



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### The Moral Dimensions of Information Systems

## When Software Kills: What Happened at Panama's National Cancer Institute?

- Read the Focus on Technology and then discuss the following questions:
  - What management, organization, and technology factors were responsible for the excess radiation doses at Panama's National Cancer Institute?
  - Who was responsible for the malfunctioning of the system?
  - Was an adequate solution developed for this problem? Explain your answer.





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### The Moral Dimensions of Information Systems

## Quality of Life: Equity, Access, and Boundaries

- **Balancing power: center versus periphery**
- **Rapidity of change: reduced response time to competition**
- **Maintaining boundaries: family, work, and leisure**
- **Dependence and vulnerability**
- **Computer crime and abuse**
- **Employment: trickle-down technology and reengineering job loss**
- **Equity and access: increasing racial and social class cleavages**
- **Health risks: RSI, CVS, and technostress**



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### The Moral Dimensions of Information Systems

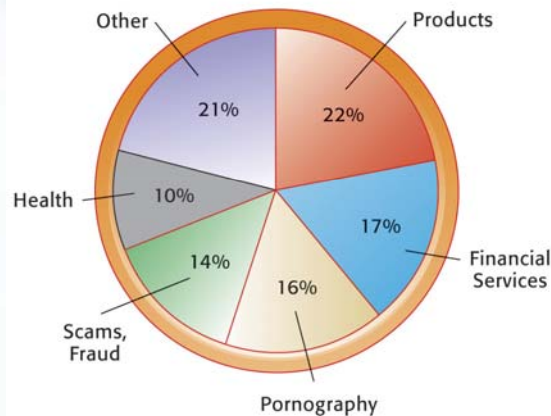
## The Spamming Problem

#### Spam for Everyone

Spam e-mail messages hawking many kinds of products and services, including scams, clog in-boxes of employees in many industries.

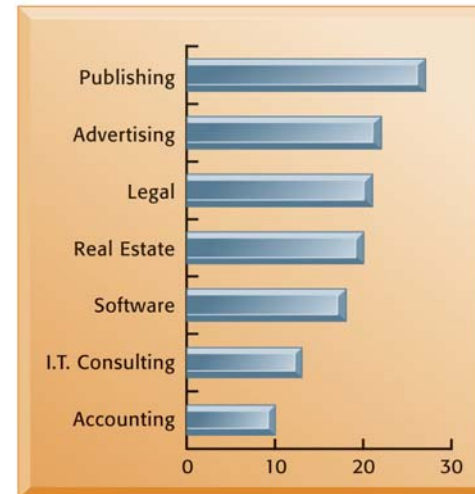
What is being offered . . .

*Products and services being sold with spam e-mail messages*



. . . and to whom

*Average number of spam e-mail messages received daily per user*



This figure shows the major types of products and services hawked through spam e-mail messages and the industries that receive the most spam.

Figure 12-5



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### The Moral Dimensions of Information Systems

## Can the Spamming Monster Be Tamed?

- **Read the Focus on People and then discuss the following questions:**
  - **How big is the spamming problem?**
  - **What are its causes?**
  - **What solutions have been proposed to deal with it?**
  - **How effective are these solutions?**



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### The Moral Dimensions of Information Systems

## Interactive Session: Spam

- How much spam do you currently receive?
- How does the amount of spam you receive now compare to the amount you received a year ago? Two years ago? Five years ago?
- Have you ever received spam that was damaging to your computer, your identity, or your finances? If so, what happened?
- What techniques do you use to shield yourself from spam? How affective are these techniques?