Chapter 4

Essentials of Management Information Systems, 6e

Ethical and Social Issues in Information Systems

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Internet + Business = ?????

To recap…..

New Business Models and Value Propositions

Internet Business Models

- Virtual storefront: Sells physical products directly to consumers or businesses.
- Information broker: Provides product pricing and availability information; generates revenue from advertising or directing buyers to sellers.
- Transaction Broker: Processes online sales transactions for fee.

New Business Models and Value Propositions

Internet Business Models

- Online Marketplace: Provides digital environment where buyers and sellers meet
- Content Provider: Provides digital content, such as news; revenue from fees or advertising sales
- Online Service Provider: Provides connectivity; revenue from fees, advertising, or marketing information

New Business Models and Value Propositions

Internet Business Models (cont.)

- Virtual Community: Provides online meeting place for people of similar interests
- Portal: Provides initial point of entry to the Web, along with specialized content and services
- Syndicator: aggregates content or applications to resell as package to third-party Web sites

Categories of Electronic Commerce

- Business-to-consumer (B2C): Retailing products and services to individual shoppers
- Business-to-business (B2B): Sales of goods and services among businesses
- Consumer-to-consumer (C2C): Consumers selling directly to consumers

Customer-Centered Retailing

Direct Sales Over the Web

- Disintermediation: Removal of intermediary steps in a value chain, selling directly to consumers, significantly lowers purchase transaction costs
- Reintermediation: Shifting intermediary function in a value chain to a new source, such as “service hubs”

The benefits of disintermediation to the consumer

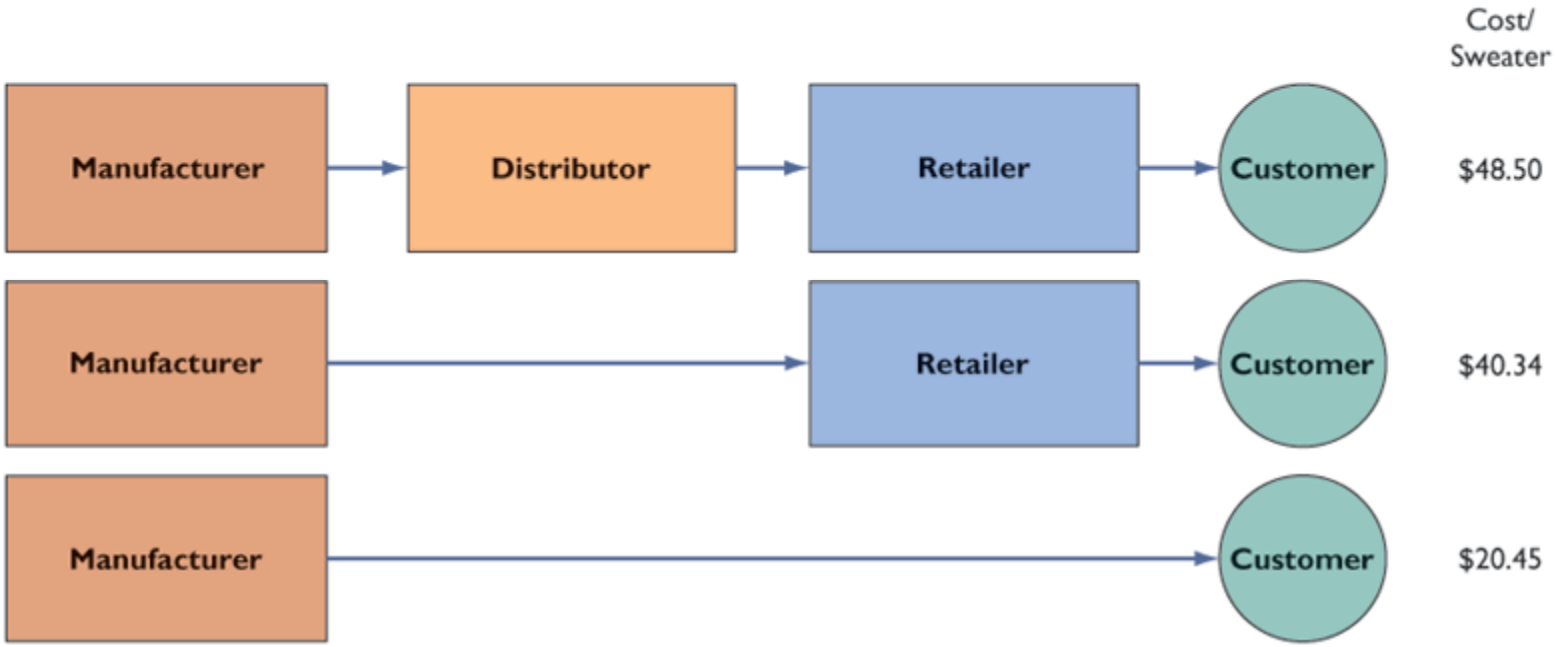


Figure 4-2

Customer-Centered Retailing

Interactive Marketing and Presentation

- Collection of customer information using Web site auditing tools less expensive than surveys and focus groups
- Web personalization technology customizes content on Web site to individual's profile and purchase history
- Web sites and marketing shorten sales cycle and reduce time spent in customer education

Ethical and Social Issues

On collecting and managing information

Objectives

1. What ethical, social, and political issues are raised by information systems?
2. Are there specific principles for conduct that can be used to guide decisions about ethical dilemmas?
3. Why does contemporary information systems technology pose challenges to the protection of individual privacy and intellectual property?

Objectives

4. How have information systems affected everyday life?
5. How can organizations develop corporate policies for ethical conduct?

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

- Ethics: Principles of right and wrong that can be used by individuals acting as free moral agents to make choices to guide their behavior
- View shock of new information technology as a "rock thrown into a pond."

Understanding Ethical and Social Issues Related to Systems

The relationship between ethical, social, and political issues in an information society

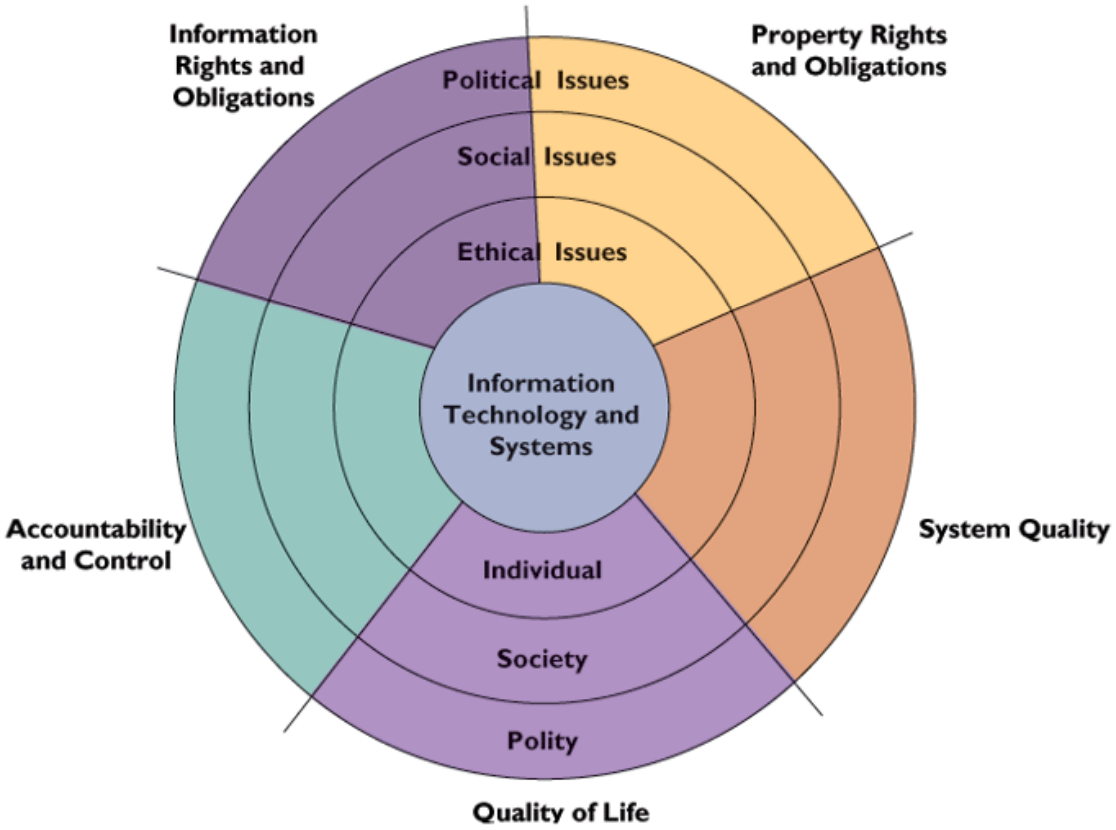


Figure 5-1

Moral Dimensions of the Information Age

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

Key Technology Trends that Raise Ethical Issues

- Profiling: use of computers to combine data from multiple sources and create electronic dossiers of detailed information on individuals
- NORA (nonobvious relationship awareness): new data analysis technique for even more powerful profiling

Nonobvious relationship awareness (NORA)

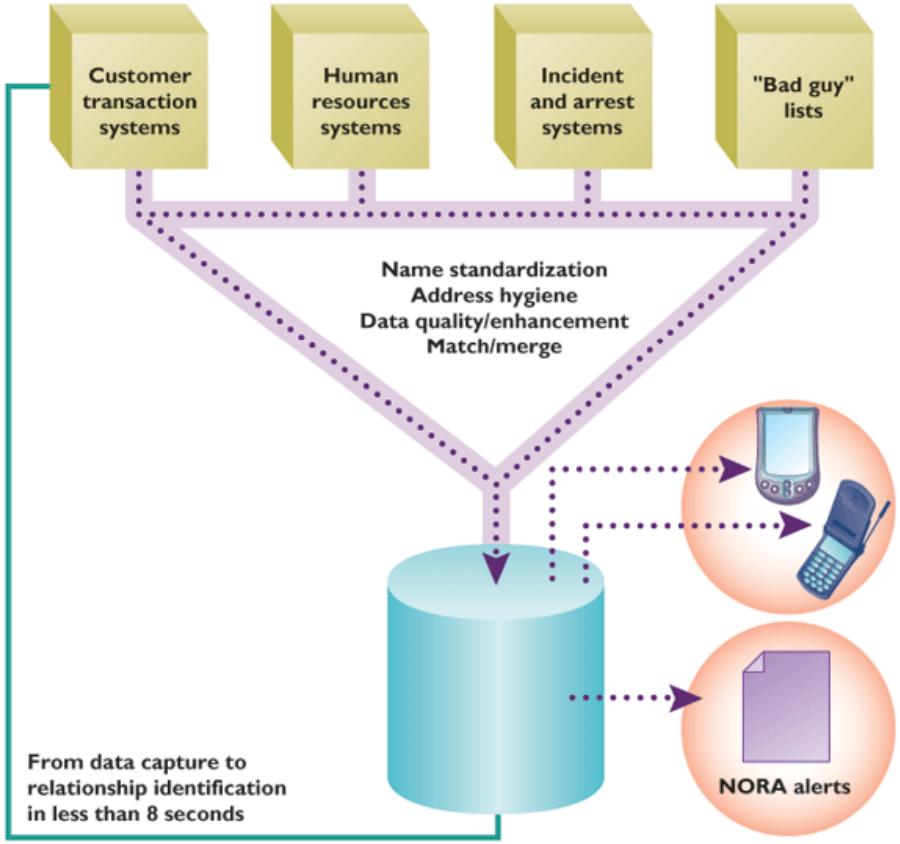


Figure 5-2

Basic Concepts

- Responsibility
- Accountability
- Liability
- Due process

Basic Concepts

1. Information technologies are filtered through social institutions, organizations, individuals
2. Responsibility falls on institutions, organizations, and individuals who choose to use the technology
3. In an ethical, political society, individuals and others can recover damages done to them through a set of laws

Ethical Analysis

Five-step Process for Analysis

1. Identify and describe clearly the facts
2. Define the conflict and identify the higher-order values involved
3. Identify the stakeholders
4. Identify reasonable options
5. Identify potential consequences of these options

Ethical Analysis

Candidate Ethical Principles

1. The "Golden Rule"
2. Kant's Categorical Imperative
3. Descarte's rule of change
4. The Utilitarian Principle
5. The Risk Aversion Principle
6. Ethical "no free lunch" rule

Professional Codes of Conduct

- Codes of ethics: promises by professions to regulate themselves in the general interest of society.
- Association of Computing Machinery (ACM) "General Moral Imperatives" include honoring property rights and respecting privacy.

Some Real-World Ethical Dilemmas

- Competing values: one set of interests pitted against another
- E-mail monitoring at the workplace
- Use of new technology to reduce workforce and lower costs

Information Rights: Privacy and Freedom in the Internet Age

- Privacy: Claim of individuals to be left alone, free from surveillance or interference from other individuals, organizations, or the state.
- Protected primarily in United States by First Amendment, Fourth Amendment, and Privacy Act of 1974
- Today, most U.S. federal privacy laws apply only to federal government, not to private sector

Federal Privacy Laws in the United States

General Federal Privacy Laws

- Freedom of Information Act, 1966
- Privacy Act of 1974
- Electronic Communications Privacy Act of 1986
- Computer Matching and Privacy Protection Act of 1988
- Computer Security Act of 1987
- Federal Managers Financial Integrity Act of 1982

Information Rights: Privacy and Freedom in the Internet Age

Fair Information Practices (FIP)

- Set of principles governing the collection and use of information about individuals, set forth in 1973 federal government report
- Forms basis of most American and European privacy law
- Extended in 1998 by FTC to provide guidelines for online privacy

Information Rights: Privacy and Freedom in the Internet Age

Federal Trade Commission Fair Information Practices Principles

1. Notice/Awareness (core principle)
2. Choice/Consent (core principle)
3. Access/Participation
4. Security
5. Enforcement

Information Rights: Privacy and Freedom in the Internet Age

European Commission's Directive on Data Protection (1998)

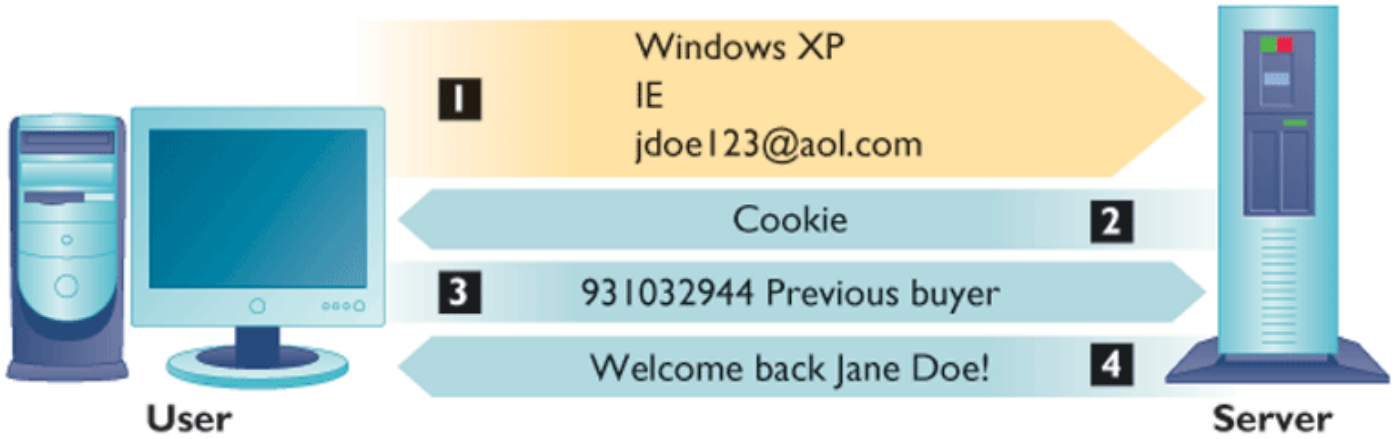
- More stringent than the United States
- Requires companies to inform people of data collection and storage
- Customers must provide informed consent
- Disallows transferring of data to countries without similar laws
- U.S. "safe harbor" developed with U.S. Department of Commerce

Information Rights: Privacy and Freedom in the Internet Age

Internet Challenges to Privacy

- Computer systems able to monitor, capture, store communications passing through
- Monitoring tools
- Cookies
- Web bugs
- Spyware

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.

Figure 5-3

Information Rights: Privacy and Freedom in the Internet Age

Privacy Protection Tools

- Managing Cookies
- Blocking ads
- Secure e-mail or data
- Anonymous e-mail
- Anonymous surfing

Information Rights: Privacy and Freedom in the Internet Age

Ethical Issues

- Under what conditions should privacy be invaded?
- What legitimates unobtrusive surveillance?

Information Rights: Privacy and Freedom in the Internet Age

Social Issues

- "Expectations of privacy", privacy norms.
- Should people have expectations of privacy while using e-mail, cellular phones, bulletin boards, postal system, etc.?
- Do expectations of privacy extend to criminal conspirators?

Information Rights: Privacy and Freedom in the Internet Age

Political Issues

- Statutes to govern relationship between record keepers and individuals
- Should CID monitor e-mail?
- Should e-commerce sites maintain personal data about individuals

Property Rights: Intellectual Property

Intellectual Property

- Intangible property created by individuals or corporations
- Protected under three different legal traditions: trade secret, copyright, and patent law

Property Rights: Intellectual Property

Trade Secret

- Any intellectual work product used for a business purpose; cannot be based on information in public domain
- Protects both ideas in product as well as product itself
- Applies to software with unique elements, procedures, compilations
- Difficult to prevent ideas in the work from falling into public domain after distribution

Property Rights: Intellectual Property

Copyright

- Statutory grant that protects creators of intellectual property from having work copied for the life of author plus 70 years; 95 years for corporate-owned property
- Computer Software Copyright Act provides protection for program code and product copies sold in commerce
- Does not protect underlying ideas behind work

Property Rights: Intellectual Property

Patents

- Grants exclusive monopoly on ideas behind invention for 20 years
- Ensures inventors receive full rewards for labor; but prepares for widespread use by providing detailed documents
- Applies to underlying concept of software
- Stringent criteria of nonobviousness, originality, and novelty; lengthy application process

Property Rights: Intellectual Property

Challenges to Intellectual Property Rights

- Digital media easy to replicate
- Difficulties establishing uniqueness
- Compactness of product
- Proliferation of electronic networks, including Internet, World Wide Web
- File-sharing software
- Web site construction and framing

Who owns the pieces? Anatomy of a Web page

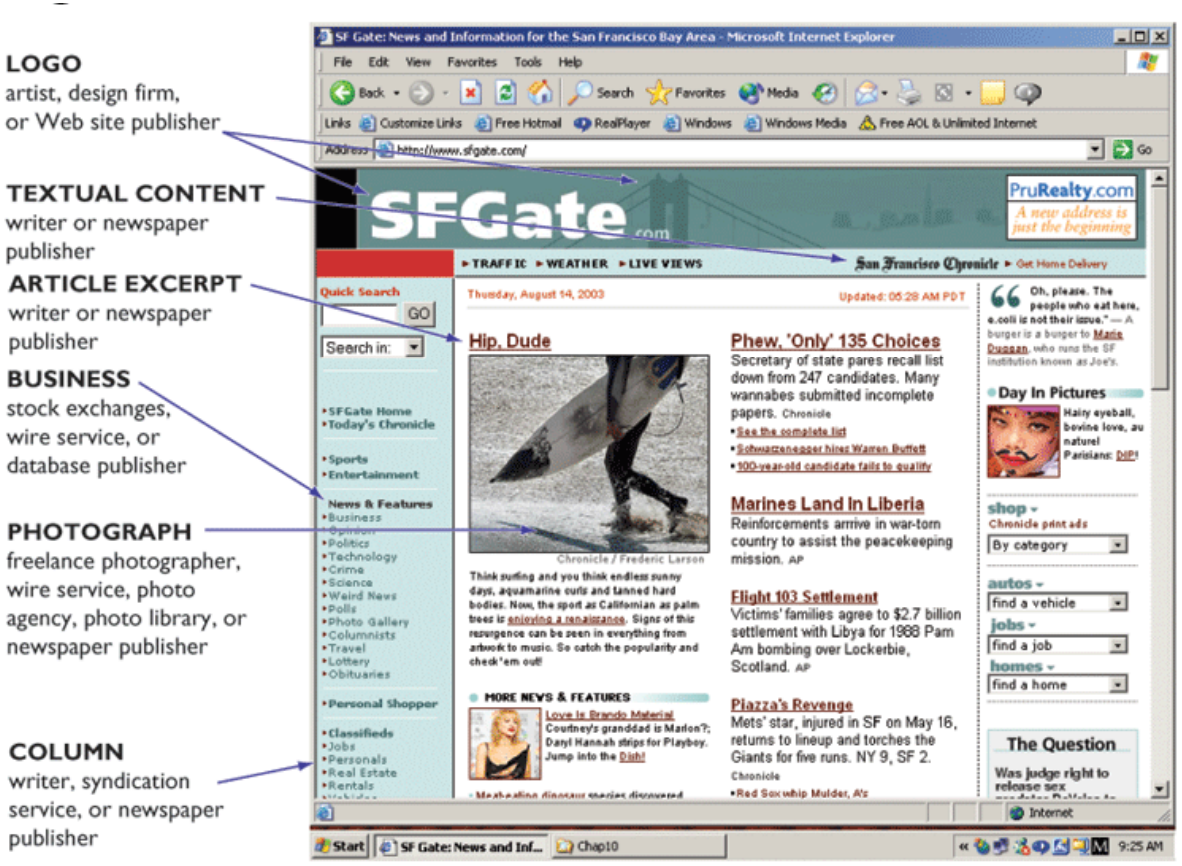


Figure 5-5

Property Rights: Intellectual Property

Digital Millenium Copyright Act (1998)

- Implements World Intellectual Property Organization treaty
- Makes it illegal to circumvent technology-based protections of copyrighted materials

Property Rights: Intellectual Property

- Ethical Issues: Is there value in protecting intellectual property when it is so easily copied and distributed?
- Social Issues: Routine illegal file-sharing creating society of lawbreakers
- Political issues: New protection measures needed to protect investments made by creators

Accountability, Liability, and Control

- Ethical issues: Who is morally responsible for consequences of use of hardware or software?
- Social issues: What should society expect and allow of service-providing information systems?
- Political issues: To what extent should government intervene, protect service providers and users?

System Quality: Data Quality and System Errors

- Ethical issues: At what point should software/services be released for consumption?
- Social issues: Should people be encouraged to believe systems are infallible?
- Political Issues: Laws of responsibility and accountability

Quality of Life: Equity, Access, and Boundaries

Negative Social Costs of Information Technology

- Balancing power: Key policy decisions still centralized
- Rapidity of change: More efficient marketplace reduces response time to competition

Quality of Life: Equity, Access, and Boundaries

- Maintaining boundaries: Ubiquitous computing weakening traditional boundaries between family or leisure and work
- Dependence and vulnerability: Vulnerable to system failures; no standards as with other public-utility technologies

Quality of Life: Equity, Access, and Boundaries

- Computer crime: Commission of illegal acts through the use of a computer or against a computer system
- Computer abuse: Commission of acts involving a computer that may not be illegal but are considered unethical, i.e. spamming
- Computer forensics: scientific collection and analysis of data held on or retrieved from computer storage media to be used as evidence in court of law

Quality of Life: Equity, Access, and Boundaries

Internet Crime and Abuse

- Spamming
- Hacking
- Jamming
- Malicious software
- Sniffing
- Spoofing

Window on Management

Can the Spamming Monster Be Tamed?

Is spamming an important management decision? Why or why not?

Quality of Life: Equity, Access, and Boundaries

- Employment: reengineering work possibly leading to job losses; offshore outsourcing
- Equity and Access: Will inequitable distribution of access to information system resources lead to digital divide?
- Health risks: repetitive stress injury (RSI); carpal tunnel syndrome (CTS); computer vision syndrome (CVS); technostress; radiation from display screens

Window on Organizations

Offshore Outsourcing: Good or Bad?

Does offshore outsourcing create an ethical dilemma? Why or why not?

Management Actions: A Corporate Code of Ethics

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

Chapter 5 Case Study

Security Versus Privacy: Does Terrorism Change the Debate?

1. Do the increase surveillance power and capability of the government present an ethical dilemma? Explain your answer.
2. Apply an ethical analysis to the issue of the government's use of information technology to ensure public safety and citizens' privacy rights.
3. What are the ethical, social, and political issues raised by the government creating massive databases to collect personal data on individuals and profile them?

Security Versus Privacy: Does Terrorism Change the Debate?

4. How effective are electronic eavesdropping and massive databases as terrorism and crime-prevention tools? Explain your answer.

5. State your views on ways to solve the problems of collecting the key data the government needs to combat terrorism without interfering with individual privacy.

- *Thank You for Listening*

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