

Ethics in Information Technology, Fourth Edition

Chapter 2

Ethics for IT Workers and IT Users

Objectives

- As you read this chapter, consider the following questions:
 - What key characteristics distinguish a professional from other kinds of workers, and is an IT worker considered a professional?
 - What factors are transforming the professional services industry?
 - What relationships must an IT worker manage, and what key ethical issues can arise in each?

Objectives (cont'd.)

- How do codes of ethics, professional organizations, certification, and licensing affect the ethical behavior of IT professionals?
- What is meant by compliance, and how does it help promote the right behaviors and discourage undesirable ones?

IT Professionals

- Profession is a calling that requires:
 - Specialized knowledge
 - Long and intensive academic preparation
- Professionals:
 - Require advanced training and experience
 - Must exercise discretion and judgment in their work
 - Their work cannot be standardized
 - Contribute to society, participate in lifelong training, assist other professionals
 - Carry special rights and responsibilities

Are IT Workers Professionals?

- Partial list of IT specialists
 - Programmers
 - Systems analysts
 - Software engineers
 - Database administrators
 - Local area network (LAN) administrators
 - Chief information officers (CIOs)

Are IT Workers Professionals? (cont'd.)

- Legal perspective
 - IT workers do not meet legal definition of professional
 - Not licensed by state or federal government
 - Not liable for malpractice

The Changing Professional Services Industry

- IT workers are considered part of the professional services industry
- Seven forces are changing professional services
 - Client sophistication (able to drive hard bargains)
 - Governance (due to major scandals)
 - Connectivity (instant communications)
 - Transparency (view work-in-progress in real-time)
 - Modularization (able to outsource modules)
 - Globalization (worldwide sourcing)
 - Commoditization (for low-end services)

Professional Relationships That Must Be Managed

- IT workers involved in relationships with:
 - Employers
 - Clients
 - Suppliers
 - Other professionals
 - IT users
 - Society at large

Relationships Between IT Workers and Employers

- IT workers agree on many aspects of work relationship before workers accept job offer
- Other aspects of work relationship defined in company's policy and procedure manual or code of conduct
- Some aspects develop over time
- As steward of organization's IT resources, IT workers must set an example and enforce policies regarding the ethical use of IT in:

Relationships Between IT Workers and Employers

- Software piracy
 - Act of illegally making copies of software or enabling access to software to which they are not entitled
 - Area in which IT workers can be tempted to violate laws and policies
 - The Business Software Alliance (BSA) is a trade group representing the world's largest software and hardware manufacturers; mission is to stop the unauthorized copying of software
 - Thousands of cases prosecuted each year

Relationships Between IT Workers and Employers (cont'd.)

TABLE 2-1 Worldwide and policy council members of Business Software Alliance (as of November 2010)

Adobe	Altium	Apple	Autodesk
AVEVA	AVG	Bentley Systems	CA
Cadence Design Systems	Cisco Systems	CNC Software– Mastercam	Corel
Dassault Systèmes Solid- Works Corporation	Dell	HP	IBM
Intel	Intuit	Kaspersky	McAfee
Microsoft	Mindjet	Progress Software	PTC
Quark	Quest	Rockwell Automation	Siemens PLM Software, Inc.
Stone Bond Technologies	Sybase	Symantec	Synopsys

Source Line: Business Software Alliance, “BSA Members,” © 2011, www.bsa.org/country/BSA%20and%20Members/Our%20Members.aspx.

Relationships Between IT Workers and Employers (cont'd.)

- IT workers must set an example and enforce policies regarding the ethical use of IT in: (cont'd.)
 - Trade secrets
 - Business information generally unknown to public
 - Company takes actions to keep confidential
 - Require cost or effort to develop
 - Have some degree of uniqueness or novelty
 - Whistle-blowing
 - Employee attracts attention to a negligent, illegal, unethical, abusive, or dangerous act that threatens the public interest

Relationships Between IT Workers and Clients

- IT worker provides:
 - Hardware, software, or services at a certain cost and within a given time frame
- Client provides:
 - Compensation
 - Access to key contacts
 - Work space
- Relationship is usually documented in contractual terms

Relationships Between IT Workers and Clients (cont'd.)

- Client makes decisions about a project based on information, alternatives, and recommendations provided by the IT worker
- Client trusts IT worker to act in client's best interests
- IT worker trusts that client will provide relevant information, listen to and understand what the IT worker says, ask questions to understand impact of key decisions, and use the information to make wise choices

Relationships Between IT Workers and Clients (cont'd.)

- Ethical problems arise if a company recommends its own products and services to remedy problems they have detected
 - Creates a conflict of interest
- Problems arise during a project if IT workers are unable to provide full and accurate reporting of a project's status
 - Finger pointing and heated discussions can ensue

Relationships Between IT Workers and Clients (cont'd.)

- Fraud
 - Crime of obtaining goods, services, or property through deception or trickery
- Misrepresentation
 - Misstatement or incomplete statement of material fact
 - If misrepresentation causes a party to enter into a contract, that party may have the right to cancel contract or seek reimbursement for damages

Relationships Between IT Workers and Clients (cont'd.)

- Breach of contract
 - One party fails to meet the terms of a contract
 - When there is material breach of contract:
 - The non-breaching party may rescind the contract, seek restitution of any compensation paid to the breaching party, and be discharged from any further performance under the contract
- IT projects are joint efforts in which vendors and customers work together
 - When there are problems, it is difficult to assign who is at fault

Relationships Between IT Workers and Suppliers

- Develop good working relationships with suppliers:
 - To encourage flow of useful information and ideas to develop innovative and cost-effective ways of using the supplier in ways that the IT worker may not have considered
 - By dealing fairly with them
 - By not making unreasonable demands

Relationships Between IT Workers and Suppliers (cont'd.)

- Bribery
 - Providing money, property, or favors to obtain a business advantage
 - U.S. Foreign Corrupt Practices Act (FCPA): crime to bribe a foreign official, a foreign political party official, or a candidate for foreign political office
 - At what point does a gift become a bribe?
 - No gift should be hidden
 - Perceptions of donor and recipient can differ
 - United Nations Convention Against Corruption is a global treaty to fight bribery and corruption

Relationships Between IT Workers and Suppliers (cont'd.)

TABLE 2-2 Distinguishing between bribes and gifts

Bribes	Gifts
Are made in secret, as they are neither legally nor morally acceptable	Are made openly and publicly, as a gesture of friendship or goodwill
Are often made indirectly through a third party	Are made directly from donor to recipient
Encourage an obligation for the recipient to act favorably toward the donor	Come with no expectation of a future favor for the donor

Source Line: Course Technology/Cengage Learning.

Relationships Between IT Workers and Other Professionals

- Professionals feel a degree of loyalty to other members of their profession
- Professionals owe each other adherence to their profession's code of conduct
- Ethical problems among the IT profession
 - Résumé inflation on 30% of U.S. job applications
 - Inappropriate sharing of corporate information
 - Information might be sold intentionally or shared informally with those who have no need to know

Relationships Between IT Workers and IT Users

- IT user: person using a hardware or software product
- IT workers' duties
 - Understand users' needs and capabilities
 - Deliver products and services that meet those needs
 - Establish environment that supports ethical behavior:
 - To discourages software piracy
 - To minimize inappropriate use of corporate computing resources
 - To avoid inappropriate sharing of information

Relationships Between IT Workers and Society

- Society expects members of a profession:
 - To provide significant benefits
 - To not cause harm through their actions
- Actions of an IT worker can affect society
- Professional organizations provide codes of ethics to guide IT workers' actions

Professional Codes of Ethics

- State the principles and core values that are essential to the work of an occupational group
- Most codes of ethics include:
 - What the organization aspires to become
 - Rules and principles by which members of the organization are expected to abide
- Many codes also include commitment to continuing education for those who practice the profession

Professional Codes of Ethics (cont'd.)

- Following a professional code of ethics can produce benefits for the individual, the profession, and society as a whole
 - Ethical decision making
 - High standards of practice and ethical behavior
 - Trust and respect from general public
 - Evaluation benchmark for self-assessment

Professional Organizations

- No universal code of ethics for IT professionals
- No single, formal organization of IT professionals has emerged as preeminent
- Five of the most prominent organizations include:
 - Association for Computing Machinery (ACM)
 - Institute of Electrical and Electronics Engineers Computer Society (IEEE-CS)
 - Association of IT Professionals (AITP)
 - SysAdmin, Audit, Network, Security (SANS) Institute

Certification

- Indicates that a professional possesses a particular set of skills, knowledge, or abilities in the opinion of the certifying organization
- Can also apply to products
- Generally voluntary
- May or may not require adherence to a code of ethics
- Employers view as benchmark of knowledge
- Opinions are divided on value of certification

Certification (cont'd.)

- Vendor certifications
 - Some certifications substantially improve IT workers' salaries and career prospects
 - Relevant for narrowly defined roles or certain aspects of broader roles
 - Require passing a written exam, or in some cases, a hands-on lab to demonstrate skills and knowledge
 - Can take years to obtain necessary experience
 - Training can be expensive

Certification (cont'd.)

- Industry association certifications
 - Require a higher level of experience and a broader perspective than vendor certifications
 - Must sit for and pass written exam
 - May need to pay annual renewal fee, earn continuing education credits, and/or pass renewal test
 - Lag in developing tests that cover new technologies
 - Are moving from purely technical content to a broader mix of technical, business, and behavioral competencies

Government Licensing

- License is a government-issued permission to engage in an activity or operate a business
- Generally administered at the state level in the United States
- Often requires that recipient pass a test
- Some professionals must be licensed – doctors, lawyers, CPAs, medical and day care providers, engineers
- One goal: protect public safety

Government Licensing (cont'd.)

- Case for licensing IT workers
 - Encourages following highest standards of profession
 - Encourages practicing a code of ethics
 - Violators would be punished
- Without licensing, there are no requirements for heightened care and no concept of professional malpractice

Government Licensing (cont'd.)

- Issues associated with government licensing of IT workers
 - There are few licensing programs for IT professionals
 - No universally accepted core body of knowledge
 - Unclear who should manage content and administration of licensing exams
 - No administrative body to accredit professional education programs
 - No administrative body to assess and ensure competence of individual workers

IT Professional Malpractice

- Negligence: not doing something that a reasonable person would do, or doing something that a reasonable person would not do
- Duty of care: obligation to protect people against any unreasonable harm or risk
 - Reasonable person standard
 - Reasonable professional standard
- Professional malpractice: professionals who breach the duty of care are liable for injuries that their negligence causes

IT Users

- Employees' ethical use of IT is an area of growing concern because of increased access to:
 - Personal computers
 - Corporate information systems and data
 - The Internet

Common Ethical Issues for IT Users

- Software piracy
- Inappropriate use of computing resources
 - Erodes productivity and wastes time
 - Could lead to lawsuits
- Inappropriate sharing of information, including:
 - Every organization stores vast amounts of private or confidential data
 - Private data (employees and customers)
 - Confidential information (company and operations)

Supporting the Ethical Practices of IT Users

- Policies that protect against abuses:
 - Set forth general rights and responsibilities of users
 - Create boundaries of acceptable behavior
 - Enable management to punish violators
- Policy components include:
 - Establishing guidelines for use of company software
 - Defining appropriate use of IT resources
 - Structuring information systems to protect data and information
 - Installing and maintaining a corporate firewall

Supporting the Ethical Practices of IT Users (cont'd.)

TABLE 2-5 Manager's checklist for establishing an IT usage policy

Question	Yes	No
Is there a statement that explains the need for an IT usage policy?		
Does the policy provide a clear set of guiding principles for ethical decision making?		
Is it clear how the policy applies to the following types of workers? <ul style="list-style-type: none">• Employees• Part-time workers• Temps• Contractors		

Does the policy address the following issues?

- Protection of the data privacy rights of employees, customers, suppliers, and others
- Control of access to proprietary company data and information
- Use of unauthorized or pirated software
- Employee monitoring, including email, wiretapping and eavesdropping on phone conversations, computer monitoring, and surveillance by video
- Respect of the intellectual rights of others, including trade secrets, copyrights, patents, and trademarks
- Inappropriate use of IT resources, such as Web surfing, personal emailing, and other use of computers for purposes other than business
- The need to protect the security of IT resources through adherence to good security practices, such as not sharing user IDs and passwords, using “hard-to-guess” passwords, and frequently changing passwords
- The use of the computer to intimidate, harass, or insult others through abusive language in emails and by other means

Are disciplinary actions defined for IT-related abuses?

Is there a process for communicating the policy to employees?

Is there a plan to provide effective, ongoing training relative to the policy?

Has a corporate firewall been implemented?

Is the corporate firewall maintained?

Source Line: Course Technology/Cengage Learning.

Compliance

- To be in accordance with established policies, guidelines, specifications, and legislation
 - Sarbanes-Oxley – established requirements for internal controls
 - HIPAA – ensures security and privacy of employee healthcare data
 - Failure to be in conformance can lead to criminal or civil penalties and also lawsuits

Compliance (cont'd.)

- Major challenge to comply with multiple government and industry regulations that are sometimes in conflict
- To meet this challenge:
 - Implement software to track and record compliance actions
 - Hire management consultants for advice and training
 - Create Chief Compliance Officer position

Compliance (cont'd.)

- Audit committee is subset of the board of directors, with oversight for the following activities:
 - Quality and integrity of accounting and reporting practices and controls
 - Compliance with legal and regulatory requirements
 - Qualifications, independence, and performance of organization's independent auditor
 - Performance of company's internal audit team

Compliance (cont'd.)

- Internal audit committee responsibilities:
 - Determine that internal systems and controls are adequate and effective
 - Verify existence of company assets and maintain proper safeguards over their protection
 - Measure the organization's compliance with its own policies and procedures
 - Insure that institutional policies and procedures, appropriate laws, and good practices are followed
 - Evaluate adequacy and reliability of information available for management decision making

Summary

- Professionals
 - Require advanced training and experience
 - Must exercise discretion and judgment in their work
 - Their work cannot be standardized
- From a legal standpoint, a professional:
 - Has passed the state licensing requirements
 - Has earned the right to practice in a state(s)
- IT professionals have many different relationships
 - Each with its own ethical issues and potential problems

Summary (cont'd.)

- Professional code of ethics
 - States the principles and core values essential to the work of an occupational group
 - Serves as a guideline for ethical decision making
 - Promotes high standards of practice and behavior
 - Enhances trust and respect from the general public
 - Provides an evaluation benchmark
- Licensing and certification of IT professionals
 - Would increase the reliability and effectiveness of information systems
 - Raises many issues

Summary (cont'd.)

- IT-related professional organizations have developed their code of ethics that:
 - Outlines what the organization aspires to become
 - Lists rules and principles for members
 - Includes a commitment to continuing education for those who practice the profession
- Audit committee and internal audit team have a major role in ensuring that both the IT organization and IT users are in compliance with guidelines and various legal and regulatory practices