Professional, Legal, and Ethical Issues in Data Management, Chapter 21

Legislation – FERPA

Family Educational Rights and Privacy Act:

- Initial Act was 1974
- Amended 9 times
- As first enacted, FERPA provided parents with the right to inspect and review "any and all official records, files, and data directly related to their children”

Legislation – EU Directive

European Union (EU) Directive 95/46/EC (1995)

- Protection of individuals with regard to the processing of personal data and on the free movement of such data
- UK Data Protection Act of 1998 adopted EU Directive 95/46/EC

Legislation – HIPAA

Health Insurance Portability and Accountability Act (HIPAA, 1996)

- Privacy of patient information
- Standardizing electronic health/medical records and transactions between healthcare organizations
- Establishing a nationally recognized identifier for employees to be used by all employee health plans
- Standards for the security of patient data and transactions involving this data
- Need for a national recognized identifier for healthcare organization and individual providers

Legislation

United Kingdom's Data Protection Act of 1998

- Personal data shall be
  - **processed fairly and lawfully**, shall not be proceeds unless it is consented to or "necessary"
  - **adequate, relevant, and not excessive** in relation to the purpose or purposes for which they are processed.
  - **accurate** and, kept up to date
  - **not be kept for longer than is necessary**
  - **protected** against unauthorized or unlawful processing
  - **not be transferred** to a country or territory outside the European Economic Area unless that country or territory ensures an adequate level of protection for the rights and freedoms of data subjects in relation to the processing of personal data

Legislation – Sarbanes-Oxley

Sarbanes-Oxley Act (SOX, 2002)

Tighten requirements on how companies:

- Form their board of directors
- Interact with auditors, and
- Report their financial statements.

Relevant Ethical Codes

- IEEE (1990)
- ACM (revised 1992)
- ACM / IEEE for Software Engineers (1999)

Comparisons

- American Medical Association's Principles of Medical Ethics (AMA)
- American Psychologist Association's Ethical Principles of Psychologist (APA)

Purpose of Ethical Codes

Previous:

Listed violations & threatened sanctions for violations

Establish status as a profession & convince the public that they deserve to be self-regulating

Current:

Clarify responsibilities by embodying a set of commitments

Persuade the public that professionals are deserving of its confidence and respect and of increased social & economic rewards

Strengths of Ethical Codes

- Codes inspire members of a profession to behave ethically
- Codes guide members in ethical choices
- Codes educate members about their obligations
- Codes “sensitize” members to ethical issues and alert them to ethical aspects they otherwise might overlook

Strengths – continues

- Codes inform the public about the nature and roles of the profession
- Codes enhance the profession in the eyes of the public

Weaknesses of Ethical Codes

- Directives tend to be too general and too vague
- Codes are not always helpful when two or more directives conflict
- Codes are ineffective (have no “teeth”)
- Directives are sometimes inconsistent with one another
- Codes can be self-serving for the profession

ACM / IEEE for Software Engineers

Software Engineering Code of Ethics and Professional Practice

ACM/IEEE-CS Joint Task Force on Software Engineering Ethics and Professional Practices

Short Version

PREAMBLE

The short version of the code summarizes aspirations at a high level of the abstraction; the clauses that are included in the full version give examples and details of how these aspirations change the way we act as software engineering professionals. Without the aspirations, the details can become legalistic and tedious; without the details, the aspirations can become high sounding but empty; together, the aspirations and the details form a cohesive code.

Software engineers shall commit themselves to making the analysis, specification, design, development, testing and maintenance of software a beneficial and respected profession. In accordance with their commitment to the health, safety and welfare of the public, software engineers shall adhere to the following Eight Principles:

ACM / IEEE for Software Engineers

In accordance with their commitment to the health, safety and welfare of the public, software engineers shall adhere to the following Eight Principles:

1. PUBLIC – Software engineers shall act consistently with the public interest.
2. CLIENT AND EMPLOYER – Software engineers shall act in a manner that is in the best interests of their client and employer consistent with the public interest.
3. PRODUCT – Software engineers shall ensure that their products and related modifications meet the highest professional standards possible.
4. JUDGMENT – Software engineers shall maintain integrity and independence in their professional judgment.
5. MANAGEMENT – Software engineering managers and leaders shall subscribe to and promote an ethical approach to the management of software development and maintenance.
6. PROFESSION – Software engineers shall advance the integrity and reputation of the profession consistent with the public interest.
7. COLLEAGUES – Software engineers shall be fair to and supportive of their colleagues.
8. SELF – Software engineers shall participate in lifelong learning regarding the practice of their profession and shall promote an ethical approach to the practice of the profession.

IEEE/ACM for Software Engineering (1999) items related to privacy

Management:

5.03. Ensure that software engineers know the employer's policies and procedures for protecting passwords, files and information that is confidential to the employer or confidential to others.

Colleagues:

7.06. Assist colleagues in being fully aware of current standard work practices including policies and procedures for protecting passwords, files and other confidential information, and security measures in general.

Questions Not Addressed

- Should I accept a position with a software company that designs computer systems that could be used in warfare?
- Should I work for a large corporation which has been sued by the US Government for violating anti-trust laws?

What to do?

In the above scenario a foreign government has asked you to customize the program to install on its Internet gateways to block access by people in the country to sites containing pornography and sites containing political discussion critical of the government. Will you accept this job. If you answer different than before, what it the difference.