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Κανόνες Ηθικής

ΧΑΡΗΣ ΘΕΟΧΑΡΙΔΗΣ
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[Προσαρμογή από Ian Sommerville, Software Engineering, 8th Edition]
Chapter 1
Definitions (Nat. Council of Engineering Education)

- Engineering is considered to be a "profession" rather than an "occupation" because of several important characteristics:
  - special knowledge,
  - special privileges,
  - special responsibilities.

- Professions are based on a large knowledge base requiring extensive training.

- Professional skills are important to the well-being of society.

- Professions are self-regulating, in that they control the training and evaluation processes that admit new persons to the field.

- Professionals have autonomy in the workplace; they are expected to utilize their independent judgment in carrying out their professional responsibilities.

- Finally, professions are regulated by ethical standards.
Variance in Ethical Concerns

- ACM Computing & Public Policy:
  - ACM Code of Ethics
  - Software Engineering Code of Ethics
  - Software Engineering and Licensing Issues
  - ACM Privacy Policy
  - ACM Copyright Policy
  - ACM Statement of Non-endorsement
  - Committee on Computers and Public Policy
  - Committee on the Status of Women in Computing
  - Coalition to Diversify Computing
  - RISKS Forum
  - ACM Association-Level Policy Activities on:
    - Electronic Voting Systems
    - Intellectual Property / Copyright Protection
    - Privacy
    - Research and Data Access
    - Reliability of Computers
Professional ethics concerns:

- One's conduct of behaviour and practice while doing professional work,
- Relations with peers in the work place,
- Conduct of duties towards the employer,
- Obligations towards the customer,
- Responsibility for the future of the profession at large.
- Responsibility for the wellbeing of the society at large.

We, the members of the IEEE, in recognition of the importance of our technologies in affecting the quality of life throughout the world, and in accepting a personal obligation to our profession, its members and the communities we serve, do hereby commit ourselves to the highest ethical and professional conduct and agree:

1. to accept responsibility in making decisions consistent with the safety, health and welfare of the public, and to disclose promptly factors that might endanger the public or the environment;

2. to avoid real or perceived conflicts of interest whenever possible, and to disclose them to affected parties when they do exist;

3. to be honest and realistic in stating claims or estimates based on available data;

4. to reject bribery in all its forms;

5. to improve the understanding of technology, its appropriate application, and potential consequences;
6. to maintain and improve our technical competence and to undertake technological tasks for others only if qualified by training or experience, or after full disclosure of pertinent limitations;

7. to seek, accept, and offer honest criticism of technical work, to acknowledge and correct errors, and to credit properly the contributions of others;

8. to treat fairly all persons regardless of such factors as race, religion, gender, disability, age, or national origin;

9. to avoid injuring others, their property, reputation, or employment by false or malicious action;

10. to assist colleagues and co-workers in their professional development and to support them in following this code of ethics.
ACM Code of Ethics

- ACM enacted in 1972:
  - Code of Professional Conduct, and,
  - Procedures for its Enforcement.

- It consisted of the following five canons, each of which was further stipulated in terms of Ethical Considerations and Disciplinary Rules:
  - An ACM member shall act at all times with integrity.
  - An ACM member should strive to increase his competence and the competence and prestige of the profession.
  - An ACM member shall accept responsibility for his work.
  - An ACM member shall act with professional responsibility.
  - An ACM member should use his special knowledge and skills for the advancement of human welfare.
ACM Code of Ethics and Professional Conduct was adopted by ACM Council in 1992 as a major overhaul of the earlier code.

It consists of a Preamble and four sections:

- **What to do**
- **Professional Responsibilities**
- **Leadership Requirements**
- **Compliance**
ACM – What to do

As an ACM member I will ....

1.1 Contribute to society and human well-being.

1.2 Avoid harm to others.

1.3 Be honest and trustworthy.

1.4 Be fair and take action not to discriminate.

1.5 Honor property rights including copyrights and patent.

1.6 Give proper credit for intellectual property.

1.7 Respect the privacy of others.

1.8 Honor confidentiality.
Professional Responsibilities

As an ACM computing professional I will ....

2.1 Strive to achieve the highest quality, effectiveness and dignity in both the process and products of professional work.

2.2 Acquire and maintain professional competence.

2.3 Know and respect existing laws pertaining to professional work.

2.4 Accept and provide appropriate professional review.

2.5 Give comprehensive and thorough evaluations of computer systems and their impacts, including analysis of possible risks.

2.6 Honor contracts, agreements, and assigned responsibilities.

2.7 Improve public understanding of computing and its consequences.

2.8 Access computing and communication resources only when authorized to do so.
Leadership and Consequences

As an ACM member and an organizational leader, I will ....

3.1 Articulate social responsibilities of members of an organizational unit and encourage full acceptance of those responsibilities.

3.2 Manage personnel and resources to design and build information systems that enhance the quality of working life.

3.3 Acknowledge and support proper and authorized uses of an organization's computing and communication resources.

3.4 Ensure that users and those who will be affected by a system have their needs clearly articulated during the assessment and design of requirements; later the system must be validated to meet requirements.

3.5 Articulate and support policies that protect the dignity of users and others affected by a computing system.

3.6 Create opportunities for members of the organization to learn the principles and limitations of computer systems.
How to Comply

As an ACM member I will ....

4.1 Uphold and promote the principles of this Code.

4.2 Treat violations of this code as inconsistent with membership in the ACM.
Professional and ethical responsibility

- Software engineering involves wider responsibilities than simply the application of technical skills.
- Software engineers must behave in an honest and ethically responsible way if they are to be respected as professionals.
- Ethical behaviour is more than simply upholding the law.
Issues of professional responsibility

- **Confidentiality**
  - Engineers should normally respect the confidentiality of their employers or clients irrespective of whether or not a formal confidentiality agreement has been signed.

- **Competence**
  - Engineers should not misrepresent their level of competence. They should not knowingly accept work which is outwith their competence.
Issues of professional responsibility

- **Intellectual property rights**
  - Engineers should be aware of local laws governing the use of intellectual property such as patents, copyright, etc. They should be careful to ensure that the intellectual property of employers and clients is protected.

- **Computer misuse**
  - Software engineers should not use their technical skills to misuse other people’s computers. Computer misuse ranges from relatively trivial (game playing on an employer’s machine, say) to extremely serious (dissemination of viruses).
ACM/IEEE Code of Ethics

- The professional societies in the US have cooperated to produce a code of ethical practice.
- Members of these organisations sign up to the code of practice when they join.
- The Code contains eight Principles related to the behaviour of and decisions made by professional software engineers, including practitioners, educators, managers, supervisors and policy makers, as well as trainees and students of the profession.
Code of ethics - preamble

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:
Code of ethics - 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.
Code of ethics - principles

- **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.
Code of ethics - principles

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.
Ethical dilemmas

- Disagreement in principle with the policies of senior management

- Your employer acts in an unethical way and releases a safety-critical system without finishing the testing of the system

- Participation in the development of military weapons systems or nuclear systems
Ethical Issues

What are some of the important ethical questions?

And what guidance do the codes of ethics give on these questions?
Ethical Issues

- How to interact with colleagues with whom you disagree?
- When to blow the whistle?
- Should you accept work on an “impossible” but $$$ project?
1.1 Contribute to society and human well-being.
“This principle concerning the quality of life of all people affirms an obligation to protect fundamental human rights and to respect the diversity of all cultures. An essential aim of computing professionals is to minimize negative consequences of computing systems, including threats to health and safety. When designing or implementing systems, computing professionals must attempt to ensure that the products of their efforts will be used in socially responsible ways, will meet social needs, and will avoid harmful effects to health and welfare.”
1.2 Avoid harm to others.

“Harm means injury or negative consequences, such as undesirable loss of information, loss of property, property damage, or unwanted environmental impacts. This principle prohibits use of computing technology in ways that result in harm to any of the following: users, the general public, employees, employers. Harmful actions include intentional destruction or modification of files and programs leading to serious loss of resources or unnecessary expenditure of human resources such as the time and effort required to purge systems of "computer viruses."
Dealing with Colleagues

AITP Standards of Conduct:

“In recognition of my obligation to fellow members and the profession I shall cooperate with others in achieving understanding and in identifying problems.”
Dealing with Colleagues

Item 5.12 of ACM / IEEE-CS Software Engineering Code:

“Those managing or leading software engineers shall not punish anyone for expressing ethical concerns about a project.”
Item 3.2 of ACM / IEEE-CS Software Engineering Code:

“Software engineers shall ensure proper and achievable goals and objectives for any project on which they work or propose.”
Item 1.3 of the ACM / IEEE-CS Software Engineering Code:

“Software engineers shall accept software only if they have a well founded belief that it is safe, meets specifications, passes appropriate tests, …”
Blow the Whistle?

AITP Standards of Conduct:

“In recognition of my obligation to society, I shall never misrepresent or withhold information that is germane to a problem or situation of public concern nor allow any such known information to remain unchallenged.”
Item 1.4 of ACM / IEEE-CS Software Engineering Code:

“Software engineers shall disclose to appropriate persons or authorities any actual or potential danger to the user, the public … that they reasonably believe …”