Chapter 9. Computer ethics

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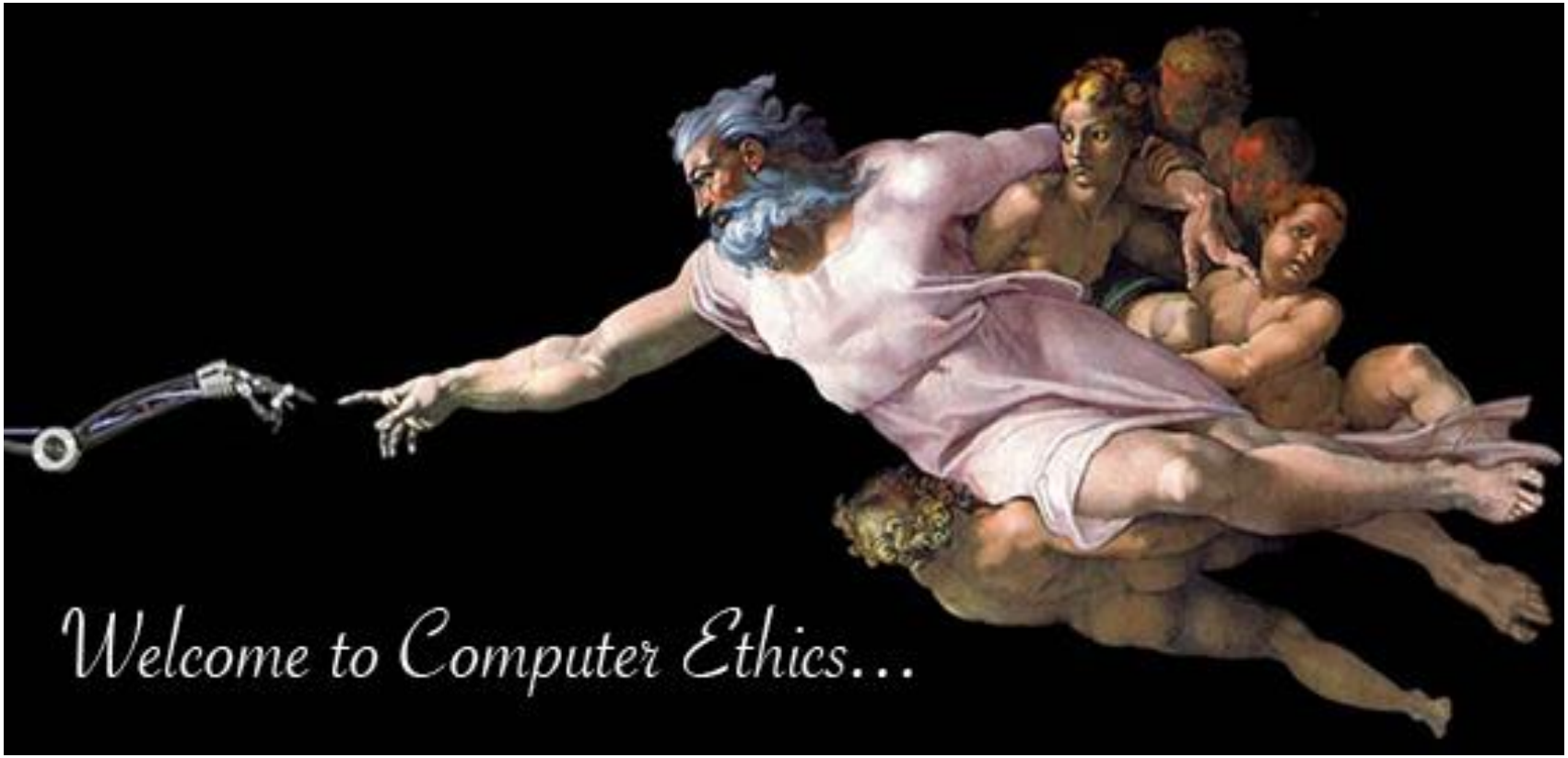
Computer ethics



Computer ethics

- **Ethical problems related to computers are not unique but they tend to occur on a much larger scale and scope:**
  - Scope: communications networks bring the world together
  - Anonymity: beneficial but creates problems of integrity
  - Reproducibility

Computer ethics

- When computers first began to be used in society at large, the absence of ethical standards about their use and related issues caused some problems.
- However, as their use became widespread in every facet of our lives, discussions in **computer ethics** resulted in some kind of a consensus.
- Today, many of these rules have been formulated as laws, either national or international. **Computer crimes** and **computer fraud** are now common terms. There are laws against them, and everyone is responsible for knowing what constitutes computer crime and computer fraud.

Computer ethics

- Some users view their computer actions as less serious as their actions in the real word:
  - Stealing software from a store – no way!
    - However, SW piracy costs businesses billions of dollars per year.
  - Most of us would no pick a lock to someone's house.
    - However, guessing passwords to gain access to a webpage, information or programs is a common.

Categories of computer ethics issues

- **Privacy**
  - Computers create a false sense of security
  - People do not realize how vulnerable information stored on computers are
- **Property**
  - Physical property
  - Intellectual property
  - Data as property
- **Access**
  - Access to computing technology
  - Access to data
- **Accuracy**
  - Accuracy of information stored

Areas of computer ethics issues

- There are 3 major areas which come under the umbrella of computer ethics:
  - Copyright and intellectual property
  - Netiquette
    - Appropriate online behavior
  - Day-to-day ethics
    - Because our lives have been forever changed by computers

Netiquette


do not email anything which you would not be prepared to say directly to someone's face!!

Codes of ethics

- Various national and international professional societies and organizations have produced code of ethics documents to give basic behavioral guidelines to computing professionals and users:
  - Association for Computing Machinery: ACM Code of Ethics and Professional Conduct
  - British Computer Society: BCS Code of Conduct & Code of Good Practice
  - IEEE: IEEE Code of Ethics
  - Computer Ethics Institute: Ten Commandments of Computer Ethics

Ten Commandments of computer ethics Computer Ethics Institute

- 1) Not use a computer to harm other people
- 2) Not interfere with other people's computer work
- 3) Not snoop around in other people's files
- 4) Not use a computer to steal
- 5) Not use a computer to bear false witness
- 6) Not use or copy software for which you have not paid
- 7) Not use other people's computer resources without authorization
- 8) Not appropriate other people's intellectual output
- 9) Think about the social consequences of the program you write
- 10) Use a computer in ways that show consideration and respect

IEEE-CS/ACM Software Engineering Code of Ethics and Professional Practice

- Built on 8 principles:
  - Public Interest
  - Client and Employer
  - Product
  - Judgment
  - Management
  - Profession
  - Colleagues
  - Self

Ethical dilemmas examples

Ethical dilemma in the workplace. Information access

- Tony, a data analyst for a major casino, is working after normal business hours to finish an important project. He realizes that he is missing data that had been sent to his coworker Robert. Tony had inadvertently observed Robert typing his password several days ago and decides to log into Robert's computer and resend the data to himself. Upon doing so, Tony sees an open email regarding gambling bets Robert placed over the last several days with a local sports book. All employees of the casino are forbidden to engage in gambling activities to avoid any hint of conflict of interest. Tony knows he should report this but would have to admit to violating the company's information technology regulations by logging into Robert's computer. If he warns Robert to stop his betting, he would also have to reveal the source of his information.
- What does Tony do in this situation?

Ethical dilemma in the workplace. Intellectual property

- In your spare time at work, you have developed a new spreadsheet program on the personal computer in your office. It is even more powerful, yet easier to sue than anything on the market. You share your new program with a friend who encourages you to market it on your own because you could probably make an incredible profit in a very short time. This is a very attractive option, yet you developed it using company equipment and during time that you were at work.
- What do you do?

Ethical dilemma in the workplace. Technical specifications

- You work for a small software firm that is contracted to write a program that can predict the spread of radiation of a dirty bomb with 75% accuracy. The best you have been able to achieve is 74.6% accuracy. You boss says close enough and rounds up the test data.
- What do you do?

Ethical dilemma in the workplace. Software licensing

- You are contracted to install Netscape Navigator software on all the PCs of company X. After doing half the work, you found that company X is not paying Netscape for the copies you are installing. You notified company X's contact that they are out of compliance with Netscape licensing requirement, but got no response.
- What do you do?

Case study in Health Informatics. Medical Record Hacking (1)

- A 32-year-old man seeking experimental cancer therapy in Pennsylvania showed up with medical records from a hospital in Florida. The records included surgical pathology, cytology, and radiology reports describing liver and other metastases, but these reports conflicted with the results of a physical examination. Because of the discrepancies, physicians in Pennsylvania sought confirmation from their Florida counterparts.

Case study in Health Informatics. Medical Record Hacking (2)

- Florida physicians found a number of discrepancies between the copy of the surgical pathology report and the original record that indicated tampering. A search of the hospital's computer system found that the man had been evaluated in the emergency room of the Florida hospital once for flu-like symptoms and once for urinary complaints. He had not been biopsied, and there was no record that the patient had been diagnosed with cancer. The center where he had reportedly received a bone marrow transplant had no record of caring for him.

Case study in Health Informatics. Medical Record Hacking (3)

- A further search of the computer system found that the medical report presented in Pennsylvania was a composite of two or more diagnostic reports for other patients. Portions of the reports, including the institutional logo and format, had been electronically scanned, recombined, edited, printed, and copied. Logs at the Florida hospital indicated that the patient had reviewed his own chart 1 week before he referred himself to the Pennsylvania center. He had probably introduced the extraneous material into his chart at that time.

Case study in Health Informatics. Medical Record Hacking (4)

- *Questions for Discussion*
- 1. Some forms of computer abuse can rarely be defended against completely. To what extent should institutions take steps to prevent the unlikely but severe consequences of pathological behavior?
- 2. Will the existence of electronic medical records make it easier for patients to fake medical conditions either as an expression of a behavioral malady or for fraudulent or other illicit purposes? What preventative measures should be taken?

Case study in Health Informatics. Münchhausen Syndrome Online (1)

- A 23-year-old woman told others in an Internet eating disorder support group that she had such a disorder and was hiding from an abusive boyfriend. She also said she was in an intensive care unit. From time to time, she typed unintelligible messages, which she said were caused by periods when she was in shock. At one point, the woman feigned a stroke while online. Subsequent messages, supposedly from her mother, provided participants in the chat room with progress reports on the woman's condition. A participant in the support group, who called the hospital where the woman said she was admitted, discovered the hoax. Afterward, the same woman joined chat rooms for sexual abuse survivors and for persons with acquired immune deficiency syndrome (AIDS).

Case study in Health Informatics. Münchhausen Syndrome Online (2)

- *Questions for Discussion*
- 1. Is there any way to identify persons with fictitious disorders who join Internet support groups in order to help them? Would this violate others' privacy or confidentiality?
- 2. Do Web sites that provide information about diseases indirectly or tacitly encourage or stimulate hypochondriasis or Münchausen-like behavior in certain vulnerable people?

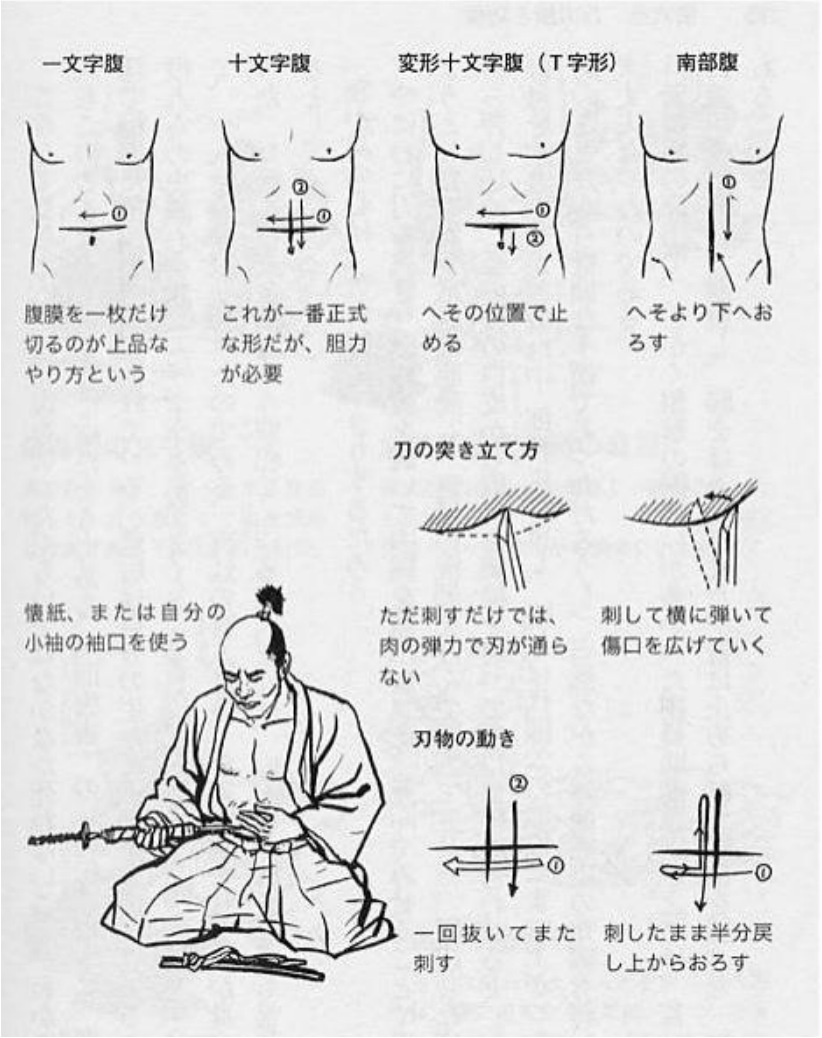
Case study in Health Informatics. Suicide Web Site (1)

- A Dutch Web site has posted a guide to suicide methods. Step-by-step instructions guide the reader through various methods, slashing your wrists, taking sleeping pills, jumping off of buildings, and inhaling carbon monoxide, among others. For each method, the site provides the success rate along with advantages and disadvantages.
- The Web site includes a disclaimer that the information is not based on expert knowledge and that the site's intention is not to encourage anyone to kill him or herself.

Case study in Health Informatics. Suicide Web Site (2)

- *Questions for Discussion*
- 1. Should the use of the Internet to post suicide instructions be regarded as a form of protected free speech, or should this use of the Internet be prohibited? Why, or why not? How is the online availability of suicide information different than availability in other media?
- 2. How could the site pose a danger to minors? How should this be weighed in considerations raised by Question 1?
- 3. Does the site have the potential to discourage clinically depressed persons from seeking professional help? If so, what steps, if any, would be appropriate to protect such persons?

Seppuku


一文字腹
十文字腹
変形十文字腹（T字形）
南部腹
腹膜を一枚だけ切るのが上品なやり方という
これが一番正式な形だが、胆力が必要
へその位置で止める
へそより下へおろす
刀の突き立て方
懐紙、または自分の小袖の袖口を使う
ただ刺すだけでは、肉の弾力で刃が通らない
刺して横に弾いて傷口を広げていく
刃物の動き
一回抜いてまた刺す
刺したまま半分戻し上からおろす

Case study. Google, China and censorship (1)

- Google has been criticized for various instances of censoring its search results, many times in compliance with the laws of various countries, most notably in China.
- Before Google China's establishment, Google.com itself was accessible, even though much of its content was not accessible because of censorship. According to official statistics, google.com was accessible 90% of the time, and a number of services were not available at all.
- Some searches, such as (as of June 2009) "Tank Man" were blocked entirely, with only the message "Search results may not comply with the relevant laws, regulations and policy, and can not be displayed" appearing.

Case study. Google, China and censorship (2)

- Until March 2010, Google adhered to the Internet censorship policies of China, enforced by filters colloquially known as "The Great Firewall of China".
- Google.cn search results were filtered to remove some results concerning the Tiananmen Square protests of 1989, sites supporting the independence movements of Tibet and Taiwan, the Falun Gong movement, and other information perceived to be harmful to the People's Republic of China (PRC).
- **Google claimed that some censorship is necessary in order to keep the Chinese government from blocking Google entirely, as occurred in 2002.**
- **The company claims it did not plan to give the government information about users who search for blocked content, and will inform users that content has been restricted if they attempt to search for it.**
- As of 2009, Google was the only major China-based search engine to explicitly *inform* the user when search results are blocked or hidden.

Google Images

Web Images Groups News

tiananmen

Moderate SafeSearch is on

Images Showing: All image sizes

Tiananmen
705 x 742 pixels - 141k - jpg
jml.prof.free.fr

... on protesters in **Tiananmen** Square .
220 x 168 pixels - 13k - jpg
www.cnn.com

Remember **Tiananmen**
640 x 452 pixels - 53k - jpg
jamesandannie.cyberfunk.com

Tiananmen.jpg
1092 x 616 pixels - 309k - jpg
www.freedomtocare.org

Google 图片

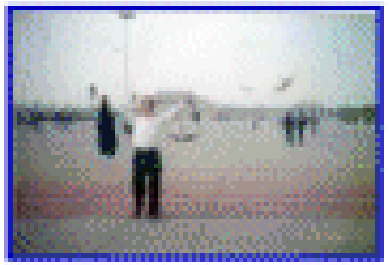
网页 图片 资讯 更多 »

tiananmen

图片 显示： 所有尺寸图片 约有414项符

您是不是要找： 天安门

天安门地区管理委员会
636 x 476 像素 - 37k - jpg
www.tiananmen.org.cn



tiananmen.jpg
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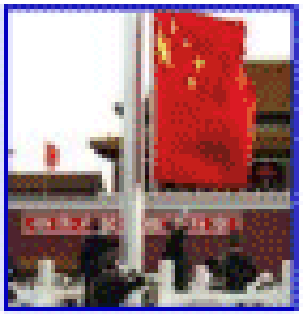

... Raising Ceremony in **Tiananmen** Square
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tiananmen.jpg
255 x 191 像素 - 9k - jpg
grid.hust.edu.cn

Are computer hacker break-ins ethical?

- Do you recognize any circumstances in which it might be ethical to break into someone else's computer without permission?
- If yes, explain what such circumstances would be like.
- Arguments
  - Improved security
  - Idle system
  - Student hacker
  - Social protector

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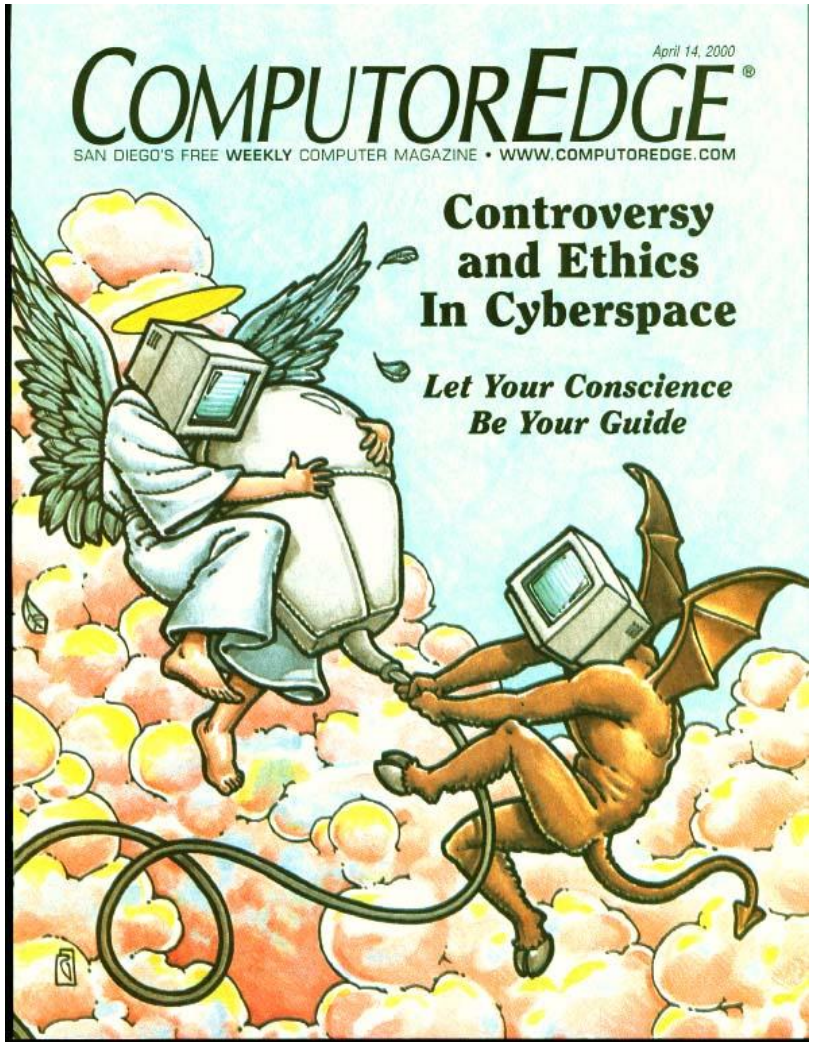
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