Ethics Cases

Case 1:

The company SoftService has developed the software for a new touch-screen voting machine (manages voter I/O, records and tabulates votes, and calculates voting results). The company EasyVote, which manufactures the machine, has contracted with several cities and states to use its machines in its elections. On the strength of these orders, it engages in a major contract with SoftService to install and maintain the software for its machines. SoftService software engineer Lewis is visiting EasyVote one day and learns that problems in the manufacture of the machine mean one in ten is likely to miscount soon during an election. Lewis reports this to her superior, who informs her that is EasyVote 's problem. Lewis decides keep her mouth shut. [1]

Case 2:

A programmer analyst, Cruz, was given project responsibility to develop a customer billing and credit system for his employer, a large retail business. He thought the budget and resources given were adequate; however, the budgeted amount was expended before completion of the system. He had continually warned management of impending problems, but was directed to finish the development as soon as possible and at lowest cost. Cruz was forced by management to do this, forgoing many management functions, including the following: audit controls, safeguards, flexibility, error detection and correction capabilities, automatic exception handling, and exception reporting. A "bare bones" system was installed. He was told he could add all the omitted capabilities, in subsequent versions, after production of the initial system.

A difficult, expensive, and extensive conversion to the new system occurred. After the new system was in production, serious problems arose. Many customers received incorrect and incomprehensible billings and credit statements and became outraged. The retail company was unable to correct errors or explain confusing system output. Fraud increased; business and profits declined; and customers suffered much anguish and personal expense. Management blamed the Cruz for the loss. [1]

Case 3:

A software development company, LoopSoft, has just produced a new software package that incorporates the new tax laws and figures taxes for both individuals and small businesses. The president of LoopSoft knows that the program probably has a number of bugs. He also believes the first firm to put this kind of software on the market is likely to capture the largest market share. The company widely advertises the program. When the company actually ships a disk, it includes a disclaimer of responsibility for errors resulting from use of the program. LoopSoft expects it will receive a number of complaints, queries, and suggestions for modification. The company plans to use these to make changes and eventually issue updated, improved, and debugged versions. The president argues that this is general industry policy and that anyone who buys version 1.0 of a program knows this and will take proper precautions. Because of bugs, a number of users filed incorrect tax returns and were penalized by the IRS. [1]

Case 4:

The information security manager in a large insurance company was also the access control administrator of a large electronic mail system operated for company business among its employees. The security manager routinely monitored the contents of electronic correspondence among employees. He discovered that a number of employees were using the system for personal purposes: the correspondence included discussions of individual finances, disagreements between married partners, plans for heterosexual and homosexual liaisons, and a football betting pool. The security manager routinely informed the human resources department director and the corporate security officer about

these communications and gave them printed listings of them. In some cases, managers punished employees on the basis of the content of the electronic mail messages. Employees objected to the monitoring of their electronic mail, claiming they had the same right of privacy as they had using the company's telephone system or the internal paper interoffice mail system. [1]

Case 5:

A programmer is trying to write a large statistical program needed by his company. Programmers in this company are encouraged to write about their work and to publish their algorithms in professional journals. After months of tedious programming, the programmer has found himself stuck on several parts of the program. His manager, not recognizing the complexity of the problem, wants the job completed in the next few days. Not knowing how to solve the problems, the programmer remembers that a coworker had given him source listings from her current work and from an earlier version of a commercial software package developed at another company. On studying these programs, he sees two areas of code that could be directly incorporated into his program. He uses segments of code from both his coworker and the commercial software, but does not tell anyone or mention it in the documentation. He completes the project and turns it in a day ahead of time. [2]

Case 6:

Without malicious intent, a computer hacker was scanning telephone numbers with her computer modem and identifying those numbers that responded with a compute tone. She accessed one of those computers, using a telephone number that she had acquired. Without entering any identification, she received a response welcoming her to an expensive and exclusive financial advisory service offered by a large bank. She was offered, free of charge, the use of some of the services if she would give her name and address. She provided someone else's name and address and used the free promotional services. This stimulated her interest in the services that the bank charges for and gave her sufficient knowledge of access protocol to attempt to use the services without authorization. She gained access to and examined the menus of services offered and instructions for use. However, she did not use the services. By examining the logging audit file and checking with the impersonated customer, bank officials identified the computer hacker and claimed that she used the services without authorization. [3]

Case 7:

Professor Barnes is teaching a computer science course that involves a major programming project due at the end of the semester. Professor Barnes assigns the project in the first week of the course and includes a written statement of the project problem. She states that students are welcome to come by her office and ask questions about aspects of the problem statement that are not clear (she has purposely made certain parts of the statement vague and confusing). Roberto, a student in Professor Barnes class, is having a tough semester and does not start working on the project until a week before it is due. Upon reading the problem statement, he is confused and seeks out the Professor for help. When he asks Professor Barnes for some clarification on the project, she says it is much too late for him to be asking for such help and cuts him off in an abrupt manner. Confused and angry Roberto seeks out a classmate and gets help on clarifying the project problem; the classmate also lets Roberto look at his completed project to get some ideas on how to attack the problem. With little sleep and lots of coffee Roberto finishes the project and gets a passing grade in the course.

References: (Most of the above cases were derives form the below sources.)

1. Mail questionnaire received from a professor at the University of North Florida.

2. "Using the ACM Code of Ethics in Decision Making", *Communications of the ACM*, February 1993.

3. "Self-Assessment Procedure XXII", *Communications of the ACM*, November 1990.