# SOLUTIONS MANUAL



### Instructor's Guide to *Ethics for the Information Age* Fifth Edition

Michael J. Quinn

January 20, 2012

Copyright © 2012 by Pearson Education, Inc. All rights reserved.

ii

# Contents

Preface Teaching Computer Ethics		v	
		vii	
1	Catalysts for Change	1	
<b>2</b>	Introduction to Ethics	7	
3	Networked Communications	13	
4	Intellectual Property	17	
<b>5</b>	Information Privacy	<b>21</b>	
6	Privacy and the Government	25	
7	Computer and Network Security	31	
8	Computer Reliability	35	
9	Professional Ethics	39	
10	Work and Wealth	41	

CONTENTS

### Preface

This booklet has supplementary information for instructors using the fifth edition of *Ethics* for the Information Age. It gives practical suggestions for running a successful class, points out other resources available via the Web, and contains solutions to all of the book's review questions. If you identify any errors in this manual, or if you have any ideas for additional exercises, I would enjoy hearing from you.

Michael J. Quinn College of Science and Engineering Seattle University 901 12th Avenue Seattle, WA 98122

quinnm@seattleu.edu

PREFACE

### **Teaching Computer Ethics**

#### Introduction

Teaching a computers, ethics, and society course for the first time can be intimidating. Unlike the typical computer science class, which focuses on technical content, a computers and society class focuses on people and the decisions they make. Doing ethics is not like finding the maximum element on a list. The moral problems discussed in this book are complicated, and there are no algorithms that enable you to "solve" a moral problem as neatly as you can construct a binary search tree. If you have little or no formal training in ethics, you may feel uncomfortable teaching an ethics class.

Fortunately, your job is *not* to preach to the students or tell them how they ought to behave (outside of class, anyway!). Rather, your role as the teacher is to raise questions, give students the opportunity to formulate answers, and then gently, but firmly insist that the students justify their answers by explaining their reasoning. If you are successful, the students will complete the course with a greater understanding of the social and ethical implications of computer use and abuse, an improved ability to think critically and defend their decisions logically, and a greater appreciation for alternate points of view.

As C. Dianne Martin and Hilary J. Holz put it:

Our belief is that ethics cannot be taught; rather what can be taught is a framework for evaluating ethical dilemmas and making decisions. In accepting the premise that technology is value-laden, we stress the need to teach a methodology of explicit ethical analysis in all decision-making related to technology... The role of ethics education should be to provide students with at least a minimal theoretical background essential for their understanding of the role that values and ethics play in all decision-making, whether it be technical, economic, political, social, or personal.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> "Non-Apologetic Computer Ethics Education: A Strategy for Integrating Social Impact and Ethics into the Computer Science Curriculum," C. Dianne Martin and Hillary J. Holz, The Research Center on Computing & Society (web site), www.southernct.edu/organizations/rccs.

What is the best way to achieve this goal? The consensus among experienced instructors is that the best computer ethics classes are discussion-oriented. Students are more receptive to hearing ideas from peers than from you. They will come to realize that every complicated issue can be looked at from multiple points of view. They will also see that all opinions are not equally valid, and that the best arguments are those that use logic to reach conclusions from facts and commonly held values.

#### Discussions

Finding topics to discuss should not be a problem for you. The book raises far more issues than you will have time to discuss, and late-breaking news stories provide even more discussion material. You will have to pick and choose the topics you deem most important. Take advantage of the discussion questions and in-class exercises found at the end of each chapter. They can lead to interesting class debates and require no preparation beyond reading the chapter.

The end-of-chapter interviews provide another source of discussion topics. Your students may be highly critical of some of the opinions expressed by the interviewees—so much the better!

One of your important responsibilities as the teacher is to prevent a few extroverts from dominating the discussion. It is easier to keep the discussion moving from person to person if you can get a wide variety of people used to speaking up regularly. Ideally your class is small enough that you can learn the name of each student. If you know everyone by name, you can call on people even if they do not have their hands up. The first few meetings of your class are crucial in establishing a culture of engagement. Try to create an expectation among the students that nearly everyone will contribute something to every class session.

Another one of your responsibilities is to ensure that the students justify their point of view. If a student should say, "I think such-and-such is wrong" without further elaboration, you should ask the student to explain *why* the action is wrong. Sometimes you need to drill down several levels before you get to the moral value or principle upon which the conclusion rests. I encourage my students to couch their arguments in one or more of these words: benefit, harm, right, obligation, or duty. A utilitarian analysis relies upon an evaluation of benefits and harms. A social contract theory analysis focuses on rights. A Kantian analysis considers duties or obligations. Asking for these words can have two benefits. It makes the analysis more rigorous, and it helps the class understand the ethical theory being invoked.

Many of the issues discussed in this class are highly controversial. Students often have difficulty coming up with a logical argument defending a point of view to which they are emotionally attached. One way to solve this problem is to poll the class and find out which students support an issue and which are opposed to it. If the class is reasonably well divided

viii

between the two points of view, ask the students to argue the point of view opposite to their own personal beliefs. Without an emotional attachment to a particular point of view, students can be more analytical.

You can add value to a discussion and keep it moving along through the use of metacomments. For example: "Maria has just given a utilitarian argument why the proposed action is wrong. Can someone analyze this issue from a Kantian point of view?"

It is important that students understand there are multiple ways to look at nearly every issue. Through the use of leading questions, you can help ensure that both sides of an issue are expressed. If you cannot find anyone to express a contrarian view, you may need to bring that view out yourself. Be prepared to promote either side of every issue!

#### **Role-Playing Exercises**

You should occasionally set aside time for role-playing exercises. Role-playing activities guarantee that many students will participate, and students particularly enjoy them. The textbook contains many of these exercises.

For a typical activity, the class is divided into small groups that give presentations representing a particular point of view. You will need to give the groups time to discuss the issue and devise the arguments they will make to the rest of the class. The amount of time depends on the exercise, but it is often 10–20 minutes. Next, each group makes its case. Again, the amount of time depends on the exercise, but it is often 20–30 minutes. Finally, it is good to have a concluding discussion in which the students have the opportunity to discuss the relative strengths of each group's case.

#### Writing Assignments

Writing assignments provide another important opportunity for students to practice constructing ethical evaluations. The media are filled with stories raising moral problems related to information technology. It is easy for students to find a current news story related to the topic of a chapter. In a typical 600-word essay I ask students to describe a moral problem, take a clear stand on whether a particular action or decision is right or wrong, and then defend their position through the use of one or more of the practical ethical theories described in the book (Kantianism, act utilitarianism, rule utilitarianism, or social contract theory). You can find rubrics for grading written essays on the Web (see the next section).

#### Web Resources

A variety of Web sites contain information valuable to instructors of computer ethics courses.

This section describes a few good sites.

**Robert Greene**, a faculty member at the University of Wisconsin-Eu Claire, has created a Web site organized according to the chapters of *Ethics for the Information Age*. The site has links to hundreds of articles from Wikipedia, *The New York Times*, and other news sources. The home page for his site is people.uwec.edu/GREENER/Philosophy308.html.

The **ComputingCases.org** Web site provides detailed case studies that you can use in class. Some of them overlap with cases described in *Ethics for the Information Age*, while others are different. The site introduces a methodology called "Social Impact Analysis" for exploring the social and ethical issues related to a computing system. It gives practical advice on how to lead an ethics case discussion, and it provides a worksheet that students can use when weighing the pros and cons of alternative actions. The home page for the site is **ComputingCases.org**.

**DOLCE** is an acronym for Developing On/Off-Line Computer Ethics. The DOLCE Web site contains several classroom activities, including quizzes and role-playing exercises, that you can use early in the term to help motivate the study of ethics. The site also contains several rubrics (evaluation sheets) that can help you grade written essays. The URL of the DOLCE home page is edocs.uis.edu/kmill2/www/dolce/.

Edward F. Gehringer at North Carolina State University has created an attractive visual map that provides links to Web sites, news articles, and case studies related to computer ethics. The URL for the Ethics in Computing site map is ethics.csc.ncsu.edu.

**RCCS** (Research Center of Computing & Society) is a particularly valuable site if you are integrating computer ethics in an existing computer science course. It provides case studies relevant to a wide variety of courses in the typical undergraduate computer science curriculum. You could also take advantage of these case studies if you are teaching a stand-alone computer ethics course. The home page for this site is www.southernct.edu/organizations/rccs.

**CERIAS** is an acronym for the Center for Education and Research in Information Assurance and Security. The CERIAS Web site is a good place to check if you are integrating computer ethics into another computer science course. Its materials suggest how discussions of ethical issues can be introduced into various undergraduate courses in computer science. The URL for this site is www.cerias.purdue.edu.

#### Summary

One of your roles as a teacher of computer ethics is to raise questions and ensure that a wide variety of points of view are expressed. You are also serving as a role model, demonstrating to students the importance of thinking about the right thing to do—and then doing it. Thinking about ethics is not just for people with a Ph.D. in philosophy. Ethics is for all of us, and all of us have more to learn. It's perfectly acceptable to respond to a question with, "I don't know. I'll read up on that and get back to you." I do that all the time. By letting the students know that you are a student of ethics, too, you can give them confidence that they can start—right now—to think about the moral qualities of their professional decisions.

TEACHING COMPUTER ETHICS

### Chapter 1

# Catalysts for Change

- 1. According to the author, there is good reason to say we are living in the Information Age because computer and communication technologies have made it easy to collect, store, manipulate, and distribute vast amounts of information.
- 2. The Amish demonstrate that people have the ability to evaluate every technology critically and determine whether its use will improve or degrade their quality of life.
- 3. Three aids to manual calculating are the tablet, the abacus, and the mathematical table.
- 4. Commercial mechanical calculators became practical in the late nineteenth century because advances in machine tools and mass-production methods made it possible to manufacture reliable devices at a reasonable price.
- 5. Rapid industrialization, economic expansion, and a concentration of corporate power in the late 19th century created a growing market for devices that could speed up accounting.
- 6. The Burroughs Adding Machine Company surpassed its competitors by combining an excellent product with excellent marketing.
- 7. The widespread adoption of the mechanical calculators led to the lowering of wages of bookkeepers and the transformation of a male-only occupation to an occupation employing a large number of women.
- 8. The invention of the cash register was a response to two needs: the need to prevent clerks from embezzling money, and the need for better sales accounting.

1

- 9. In the early twentieth century, the U.S. Census Bureau used punched cards to store census data, Marshall Field's used punched cards to analyze information generated by cash registers, railroads used punched cards to send out bills more frequently, and the Pennsylvania Steel Company used punched cards to do cost accounting on manufacturing processes.
- 10. A data-processing system has three principle components. The first component inputs data, the second performs calculations, and the third outputs data.
- 11. The development of radar in World War II stimulated three advances in computing: electrostatic memory (exemplified by the Williams Tube), semiconductor memory (exemplified by the transistor), and graphical user interfaces (exemplified by Doug Engelbart's oNLine System).
- 12. IBM quickly overtook Remington Rand as the leading mainframe computer maker because it had a larger base of existing customers and a much better sales and marketing organization, and it made a much greater investment in research and development.
- 13. The motivation for the creation of higher-level programming languages was a desire to make programming less tedious and error-prone and improve programmer productivity. Higher-level programming languages changed computing by enabling programs to be moved more easily from one manufacturer's computers to another manufacturer's computers. It also led to a large increase in the number of people writing computer programs.
- 14. Time-sharing gave more organizations access to electronic digital computers in the 1960s by allowing them to share the cost of purchasing (or leasing) and operating a computer system.
- 15. Between 1962 and 1965, the Minuteman II missile program was the largest single consumer of integrated circuits in the United States, representing about 20 percent of total production. In the course of making these chips, manufacturers found ways to make chips less expensive and more reliable.
- 16. The principal innovation of the IBM System/360 was the creation of a series of nineteen binary-compatible computers. All nineteen computers had the same instruction set. That means customers could upgrade from one IBM System/360 to a bigger, faster computer in the same product line without having to rewrite their programs.
- 17. The semaphore telegraph was adopted more rapidly on the continent of Europe than in the British Isles because the system only works when atmospheric conditions allow

good visibility between stations. Since fog and rain are more common in the British Isles, the semaphore telegraph is not as practical.

- 18. Morse's telegraph put the Pony Express out of business. Morse's telegraph made possible fire alarm boxes in urban areas.
- 19. The telephone blurred the traditional boundaries between private life and public life, between family and business. The telephone eroded traditional social hierarchies. The telephone enabled the creation of the first "on-line" communities.
- 20. A circuit-switched network sets up a permanent physical circuit between the machines that are communicating. The circuit may not be used for other communications while these two machines are holding the circuit, even when they are not actually exchanging messages. A packet-switched network divides messages into groups of bits called packets. Network routers transfer packets from a message sender to a a message receiver. At one moment a physical wire may be carrying a packet from one message, and at the next moment it may carry a packet from another message.
- 21. The Internet has a decentralized structure because ARPA did not want the ARPANET to collapse if a single computer were lost. It is widely reported that fear of a nuclear attack led ARPA to this design decision.
- 22. The National Science Foundation stimulated the creation of commercial, long-distance data networks in the United States by simultaneously (1) encouraging commercial use of regional NSFNET networks and (2) banning commercial traffic on the NSFNET Backbone.
- 23. The codex is more durable than a papyrus scroll, and it makes it much easier for readers to locate a particular passage in a book.
- 24. Hypertext is a linked network of nodes containing information.
- 25. A hypertext link is similar to a citation in a book in the sense that both point to a source of related information. A hypertext link is superior to a citation in that you can jump immediately to the related material by clicking on the link.
- 26. Douglas Engelbart invented the computer mouse in the 1960s.
- 27. The Apple Lisa was not commercially successful because it was too expensive and its processor was too slow. The Macintosh was much cheaper and faster.

- 28. An Apple HyperCard stack is fundamentally different from the World Wide Web because hyperlinks connect pages (cards) all located on the same computer.
- 29. Constructing the World Wide Web on top of the TCP/IP protocol, rather than one vendor's proprietary network protocol, helped ensure the success of the Web, because it enabled the Web to span computers made by different manufacturers running different operating systems.
- 30. The first widely used Web browser was Mosaic, developed at the National Center for Supercomputer Applications at the University of Illinois, Urbana-Champaign. Four popular Web browsers in use today are Microsoft's Internet Explorer, Google's Chrome, Mozilla's Firefox, and Apple's Safari.
- 31. A search engine is program that accepts a list of keywords from a user, searches a database of documents, and returns those documents most closely matching the specified keywords.

Crawler-based search engines automatically create the database of information about Web pages. Google and AltaVista are crawler-based search engines. The other type of search engine relies upon databases of Web page information constructed by humans. OpenDirectory is an example of this kind of search engine.

- 32. Information technology refers to devices used in the creation, storage, manipulation, exchange, and dissemination of data, sound, and/or images.
- 33. Inventions mentioned in this chapter that were created for a military application are the the ENIAC, radar, and the ARPANET.
- 34. The need for large amounts of timely information by corporate managers in the late nineteenth century fueled the growth of the manual calculator market. The need to store and manipulate large amounts of data prompted the invention of punchedcard tabulation and data-processing systems. A demand for less expensive access to computers stimulated the development of time sharing. BASIC became popular because there was a demand for an easy-to-learn programming language. An interest in accessing and sharing information led to the rapid adoption of the World Wide Web created by Tim Berners-Lee. (Other examples are possible.)
- 35. The adoption of the telephone erased traditional boundaries between work and home. The telephone also make possible the first on-line communities, through party lines. Manual calculators led to the deskilling and feminization of bookkeeping. Time-sharing

systems gave many more people access to computers, which they used for both educational and entertainment purposes. Television broadcasts may have influenced the outcome of the U.S. Presidential election of 2000. (Other examples are possible.)

# Chapter 2

# Introduction to Ethics

- 1. The "ethical point of view" means respecting not only your own goals and aspirations, but taking into consideration the goals and aspirations of other people as well.
- 2. Morality refers to guidelines that you can use to determine what you ought to do in a particular situation. Morality also allows you to figure out whether a particular decision or action is right or wrong. Ethics is the philosophical study of morality.
- 3. Morality is focused on solving particular problems. Ethics is broader than morality in that it includes the higher-level activities evaluating moral systems and the creation of new ways of evaluating moral problems.
- 4. Relativism is the view that "the good" exists inside the human mind. Our role as humans is to invent "the good." Since "the good" is invented, its definition is malleable. Objectivism is the view that "the good" exists outside the human mind. Our role as humans is to find or discover "the good." Since "the good" exists independently of our intellectual activity, its definition never changes.
- 5. By using an ethical theory in which all humans are treated equally and guidelines are developed through a process of logical reasoning, it is more likely that you can craft an ethical argument that will be convincing to a diverse audience.
- 6. Person B has not made a strong ethical argument because she has not brought up any facts or values that would undermine or contradict the explanation of Person A.
- 7. When we say an ethical theory is rational, we mean that it relies upon logical reasoning from facts or commonly held values.

- 8. The many/any fallacy is to conclude that any option is acceptable after observing that many options are acceptable. For example, you may observe me take several different routes between home and work, and all of them are good in the sense that they allow me to reach my destination safely and in a reasonable amount of time. That does not imply that all possible routes between home and work are good.
- 9. The equivalence fallacy is to confuse similarity with equality. It comes into play in this chapter in the discussion of the divine command theory. When we say "God is good," it is fallacious to argue that God and the good are identical.

Another example of the equivalence fallacy would be to conclude from the statement "Adolph Hitler was evil incarnate" that everything Hitler said or did was evil.

- 10. Sometimes I leave home a little late, but I'd still like to get to work on time. I want to be able to drive through red lights on those days when I am running late. The proposed moral rule is: I may ignore traffic laws when I am pressed for time. If we universalized this rule, then traffic signals would cease to have any meaning. The streets would be chaotic. There would be gridlock or accidents at every busy intersection. That contradicts my desire to get to work on time. Hence my proposed moral rule is logically self-defeating. It is wrong for me to drive through red lights on those days when I am running late.
- 11. Plagiarism is the use of someone else's words or ideas without giving that person credit. Appendix A actually gives five ways of committing plagiarism: copying another's words without putting the words in quotation marks and citing the source; paraphrasing another's words without citing the source; incorporating someone else's figures or drawings without citing the source; referencing facts that are not common knowledge without citing the source; and using another person's ideas without giving that person credit.
- 12. Plagiarism refers to deliberately concealing the fact that you have used someone else's words or ideas. If the action is not intentional, it should be called misuse of sources.
- 13. A consequentialist theory determines whether an action is right or wrong by evaluating its consequences. Utilitarianism is a consequentialist theory. A non-consequentialist theory determines whether an action is right or wrong by considering the underlying rule or principle motivating the action. Kantianism and social contract theory are non-consequentialist theories.
- 14. Three situations in which my action would be primarily motivated by a sense of duty or obligation:

- (a) I promised someone if he could get two tickets to a rock concert, I would purchase a ticket and go with him. He got the tickets and expects me to pay for mine. I keep my promise, even though I just lost my job and I really can't afford to go.
- (b) I pay my income taxes, even though I think the government has some wasteful programs.
- (c) Everybody in my fraternity is going to give blood. I donate blood, too, even though just thinking about it makes me queasy.

Three situations in which my action is primarily motivated by its expected consequences:

- (a) I give money to a particular charity because it has the lowest administrative overhead of any international relief organization. I figure more of my money will actually reach those who need it.
- (b) I work extra hard in a particular class, even though I am not interested in the material, because I hope the professor will write me a good letter of recommendation.
- (c) I slightly exaggerate my experience in order to get a good job as a server in a nice restaurant.
- 15. Moral luck is a problem associated with act utilitarianism. According to act utilitarianism, the moral worth of an action depends solely on its consequences. If the consequences are out of the control of the moral agent, an action that should have had a good effect may end up having a harmful effect. In this case, the action is deemed to be wrong, even though it was no fault of the person performing the action.
- 16. Businesses and governments often use utilitarian thinking to determine the proper course of action because it allows all the consequences of a decision to be boiled down to dollars and cents (or some other quantifiable unit of measure).
- 17. The difference principle states that social and economic inequalities must be justified, and the only way to justify a social or economic inequality is to show that its overall effect is to provide the most benefit to the least advantaged. For example, under capitalism some people are allowed to have much more wealth than others. In order to justify capitalism, it must be shown that the poorest are better off than under alternative economic systems.
- 18. Social contract theory is a non-consequentialist theory. Social contract theory as articulated in Rawls's two principles of justice is a non-consequentialist theory.

- 19. Subjective relativism and ethical egoism are similar in the sense that both theories allow an individual to put himself or herself first in determining the right action to take in a particular situation. However, there is a crucial difference between the two theories. Subjective relativism, like all relativistic theories, holds that each person decides what is right for himself or herself. Two people in the same circumstances could choose completely different actions, and both could be right. Ethical egoism, on the other hand, is an objective theory. It holds that the right action for a person to take in a particular situation is the action that will be to the greatest long-term benefit of that person. A rational, objective process is used to determine the greatest long-term benefit, meaning anyone in the same situation should reach the same conclusion.
- 20. Both divine command theory and Kantianism are objective, holding that right and wrong can be expressed in rules that are true for all people at all times in history. Divine command theory identifies the good with the will of God, and holds that the will of God is communicated through holy books. Kantianism, on the other hand, holds that we can use our reason to determine what is good.
- 21. Both subjective relativism and act utilitarianism would allow an individual to evaluate a situation to determine whether a particular action is right or wrong. However, subjective relativism allows a person to use any means to decide the right thing to do. According to act utilitarianism, the consequences of the possible actions must evaluated. The correct action is the one that leads to the greatest increase in total happiness among the parties effected.
- 22. Both Kantianism and rule utilitarianism are objective. According to both theories, right actions are those that are in line with universal moral rules. However, the two theories derive the rules in different ways. Kantianism determines whether a proposed moral rule is acceptable by evaluating it according to the Categorical Imperative. Utilitarianism determines whether a proposed moral rule is acceptable by considering the long-term, overall total change in happiness that would result if everyone always followed the rule.
- 23. Both act utilitarianism and rule utilitarianism are consequentialist theories. However, act utilitarianism considers the consequences that would result from an action taken in one particular situation. Rule utilitarianism considers the consequences that would result if everyone always took a certain course of action in all similar situations.
- 24. Both theories focus on the notion of society, but they are quite different. For one thing, cultural relativism is an example of relativism, while social contract theory is

an example of objectivism. Cultural relativism says each society must determine for itself what people ought to do in various situations. Different societies come up with different moral codes. These rules may be based heavily on tradition and not on reason. Social contract theory says morality consists in those rules that rational people ought to recognize are in everyone's best benefit if they are universally obeyed.

- 25. Both Kantianism and social contract theory are objective, rule-based theories. In Kantianism, proposed rules are derived by seeing if they can meet the requirements of the Categorical Imperative. In social contract theory, proposed rules are derived by seeing if their universal adoption would be to everyone's mutual benefit.
- 26. Alexis did wrong when she made use of a student's login and password to gain access to the library's computers and printers. Alexis treated the student as a means to her end of getting access to the private college's computers.

The anti-spam organization is treating the innocent computer users in the East Asian country as means to its end of reducing spam. That is wrong.

The analysis depends upon the expectation of privacy people should have. The existence of the cameras is public knowledge. If nobody is being "used," the action appears to be morally acceptable.

Releasing the software without informing the potential users of the possible bugs would be wrong. However, if the hospital staff were fully notified that the product was in beta test, a decision to release the product could be justified.

27. The benefits to Alexis were large. The harms to others were small. Her action was morally acceptable.

Millions of people are getting much less spam. The benefit to each of these persons is small, but meaningful. Tens of thousands of citizens of the East Asian country cannot send email to the United States. The harm to each of these persons is significant. Concluding whether the action is right or wrong depends upon the weight you give to each person's benefit or harm.

In this case the benefits seem to outweigh the harms. The actions of the East Dakota State Police are morally acceptable.

To do the analysis, we must examine the various courses of action and weigh, for each one, the potential benefits and harms to the patients, nurses, hospital, and members of the start-up company. 28. A rule utilitarian is likely to subscribe to the rule "Gaining access to another person's private information is wrong," since a great deal of harm can result if people were unable to protect confidential information such as credit card numbers. For this reason, Alexis did wrong when she used someone else's login and password to access the library's computers and printers.

The challenge with this scenario is to determine whether any moral rules have been broken. In general, utilitarianism is comfortable with the notion that maximizing the overall good may mean that the majority gains a benefit while the minority suffers a harm.

The East Dakota State Police is using technology to increase the safety of the community. Its actions appear to be morally acceptable.

As long as the company fully discloses the status of the product, it appears to be on safe ground.

29. Alexis violated the property rights of the private college when she used its computers without permission. Her action was wrong.

The residents of the East Asian country had a reasonable expectation that their email would be delivered. By blacklisting the country's ISPs, the anti-spam organization encouraged American ISPs to refuse to forward email. This seems wrong.

How much privacy should a person have while operating a motor vehicle on a freeway? If a person has given up all privacy, then there seems to be nothing wrong with this action. If a person has a reasonable expectation of privacy, then the East Dakota State Police may have done something wrong if it secretly gave the FBI access to the information.

The purchaser of a product has a right to expect the manufacturer stands behind the quality of the product. In this case it would be wrong for the company to sell the product as if it were completely debugged and 100 percent reliable. On the other hand, the hospital might be willing to beta test the device if it could get a discounted price or if that would help the company certify its reliability. The company could begin shipping the device to hospitals that understood the current state of the software.

#### 12