Date: Mon, 17 Mar 1997 12:57:03 -0700 (CST) From: Keith Miller < miller@uis.edu> To: Donald Gotterbarn <dgot@dmu.ac.uk> Subject: Re: your mail > PREAMBLE > Computers now have a central and growing role in commerce, industry, > government, medicine, education, entDate: Mon, 17 Mar 1997 12:57:03 -0700 (CST) From: Keith Miller <miller@uis.edu> To: Donald Gotterbarn <dgot@dmu.ac.uk> Subject: Re: your mail > PREAMBLE > Computers now have a central and growing role in commerce, industry, > government, medicine, education, entertainment, social affairs, and > ordinary life. Those who contribute, by direct participation or by > teaching, to the design and development of software systems have > enormous opportunities both to do good and to cause harm. To assure, "enormous" seems a bit dramatic; "significant"? "substantial"? > as much as possible, that this power will be used for good, software > engineers must commit themselves to making the design and > development of software a beneficial, and respected profession. In > accordance with that commitment, software engineers shall adhere to > the following code of ethics. > The code contains eight keyword principles related to the behavior of > and decisions made by professional software engineers, be they > practitioners, educators, managers and supervisors, or policy makers, as > well as trainees and students of the profession. The Principles identify > the various relationships in which individuals, groups, and organizations > participate and the primary obligations within these relationships. > Each principle of this code addresses all three levels of ethical obligation remove "all" from "all three levels" in the line above > owed by professional software engineers in each of these relationships. > The first level identified is a set of ethical values which they share with > all other human beings by virtue of their humanity. The second level > consists of obligations shared by all professionals for a higher order of > care for those effected by their work. The third and deeper level rewrite (into active): The second level obliges professionals to a higher order of care for those effected by their work. should "deeper" be "deepest"? > comprises several of those obligations which derive directly from > elements unique to the professional practice of software engineering. > The clauses of each principle are illustrations of the various levels of > obligation included in that relationship. > (Keith, we need names for each of the three types of statements in the

- > paragraph below. The first is "aspirational" and the second and third are
- > called ?????????????v?)

Level One: Aspire (to be human) Level Two: Expect (to be professional) Level Three: Demand (to use good practices)

As adjectives: aspirational, expected, demanded

- > The clauses under each principle consist of three different types of
- > statement. Aspirational statements, which provide vision and
- > objectives, are intended to direct professional behavior. These directives
- > require significant ethical judgement. Statements which express the
- > obligations of all professionals and professional attitudes. Again they do
- > not describe the specific behavior details but they clearly indicate
- > professional responsibilities in computing. The code also contains some
- > more specific behavioral responsibilities within software engineering
- > which are more closely related to the current state of the art. The range
- > of statement is from the more general aspirational statement to specific

- > measurable requirements.
- >
- > Although all levels of professional obligation are recognized and
- > because the Code contains different types of statements, the Code is not
- > intended to be all inclusive nor is it " intended that its individual parts
- > be used in isolation to justify errors of omissions or commission (BCS).
- > The list of Principles and Clauses is not exhaustive, and should not be
- > read as separating the acceptable from the unacceptable in professional
- > conduct in all practical situations. The Code is not a simple ethical
- > algorithm which generates ethical decision.

should "decision" be "decisions"?

- > In some situations standards
- > may conflict with each other or with standards from other sources.
- > These situations require ethical judgement to act in a manner which is
- > most consistent with the code of ethics, given the circumstances. These

Change the sentence above to "These situations require the software engineer to use ethical judgement ...."

- > ethical tensions can best be answered by thoughtful consideration of
- > fundamental principles, rather than reliance on detailed regulations.
- > (Keith, we should give some indication of how to prioritize here ??-
- > First consider Public health safety and welfare(fairness and the well-
- > being of others), then consider the impact on your kids college fund,
- > then software quality ...etc. Simon says, "Please tidy this up!!")

Very tough to be specific on this, Don. How about this: "These principles should influence you to consider broadly who is affected by your work (utilitarian); to examine if we are treating other humans with due respect (Kantian); to speculate on how the public would view your decision (publicity test); to analyze how the least empowered will be affected by your decision (Rawlsian); and to consider if your acts would be considered worthy of the ideal software engineer (virtue ethics)."

- > Since this
- > code represents a consensus of those engaged in the profession one
- > should determine to act in a manner "likely to be judged by informed,
- > respected, and experienced peers in possession of all the facts as the
- > most ethical

way to act in the circumstances. (ACS)" >

> But even in this generality,

the code provides support for the software >

engineer who needs to take

positive action by documenting the ethical >

stance of the profession. This

provides a documented ethical foundation >

The phrase "documented ethical foundation" appears in two many ways here.

to which individuals within teams

and the team as a whole can appeal. >

By indicating the ethical

obligations in a particular relationship, the code > places constraints on what others may ethically request of software > engineers. The code helps to define those things which are ethically > improper to request of an software engineer. >

Don't the last two sentences give the same information?

- > The code has an educational function, by stating what is required of > anyone wishing to join or continue in the software engineering
- > community. Because it expresses the consensus of the profession on
- > ethical issues it can be used as a guide to decision making and as means
- > to educate both the public and aspiring professionals about the
- > professional obligation of software engineers.

Sounds reasonable to me.

Keith

Keith Miller

miller.keith@uis.edu office: (217) 786-7327 fax: (217) 786-7188 University of Illinois at Springfield Computer Science Department, HSB 137 Springfield, Illinois 62794