

SOFTWARE DEVELOPERS WRITE A CODE OF ETHICS

Interviewee: George M. Sigut, ETH Zurich, Informatikdienste, Sektion Systemdienste, CH-8092 Zurich, Switzerland

Interviewers: Michael Davis (with Tony Spencer lost in transit)

Location: his room, Holiday Inn Mart Plaza (Chicago)

Date: 9-27-02 (corrected and approved)

1. What is your educational background?

I received a Diploma in Engineering in Mechanical Engineering in 1972 (roughly equivalent to an MS) from the Federal Institute of Technology (ETH for Eidgenoessische Technische Hochschule). I began work as a structural engineer in 1972, using computers as part of the job. As time went on, writing software became an ever-bigger part of the job, until I came to think of myself as a software engineer. There was not then a career path leading to software engineering.

2. What sort of organization do you work for? What do you do there?

I work for an educational institution, the same ETH from which I received a Diploma (the Swiss equivalent of MIT *and* CalTech). I am in charge of Computer Services for the Institute. On a given day, I devote about a third of his time to problems that arose during the night, a third cleaning up problems from before, and a third to the future (writing software, working out the architecture of new systems the Institute might install, reading technical literature, and so on). This is a change from my previous work, which was support for supercomputing users. My work has always been in research (in industry and in academia).

3. What experience, if any, have you had in software development? If you are a software developer, what led you into that field?

Not 100% software developer. Developing software has always been a part of what I do, but only a part." He has, however, developed a lot of software during his 30 years of engineering, beginning with his work in structural engineering. "I've never been able to hire assistants to write code, input data, or do other subsidiary jobs, just colleagues who worked more or less parallel to me. So, I've always had to work on developing software as part of projects in which I was involved.

4. Are you an engineer?

Yes. I think that engineering is defined by a certain base of knowledge that is used to create a product. I am not sure there are any particular procedures that define engineering. Throughout my career, I have used that knowledge to create products. I still am doing that. So, I am an engineer.

5. How did you hear about the IEEE/ACM Joint Task force on Software Engineering and Professional Practice (SEEPP)?

I've been trying to remember, but I can't. I must, I think, have read about it in one of the ACM or IEEE magazines I get.

6. What led you to participate in SEEPP's work?

I read an invitation to comment on Version 3, which was posted on a home page. I took a look, got some ideas, printed out the document, worked out the ideas, and sent in the resulting comments. For example, I thought that the Principles should be considered exhaustive, even though the Rules under the Principles should not. Version 3 declared neither Principles nor Rules to be exhaustive. I thought that a mistake. I also thought that they should order the Principles according to importance. The order they had didn't make sense to me. I couldn't tell what the order meant.

Apparently, my comments didn't arrive in time. I got an email from Gotterbarn telling me they already had a Version 4, but that some of my ideas corresponded to changes they had made in Version 3. That's in email 8 Jan 1998 that I am giving you. (All the emails can also be found on the page:

<http://www.id.ethz.ch/Homepage/sigut/ethics.mail>

I don't know how it happened that I was too late. I also made some comments on Version 4. I do not have a record of my exact input because I submitted it through the web page available for that purpose, but a copy of the comments is included on the "comment" web page discussed further below. I commented on the form in which the comments on Version 4 were reported. The layout of the web page made figuring out what went with what very hard. The web page was not a good example of how a result of software engineering should look. I'm giving you a copy of my homepage where I've saved the objectionable web page:

http://www.id.ethz.ch/Homepage/sigut/ethics.comment_orig.html

A partially clean-up version (response 11) of the same page is available at:

<http://www.id.ethz.ch/Homepage/sigut/ethics.comment.html>

I'm also giving you my comments on Version 3 (see appendix).

That was the extent of my participation. After that I was a spectator."

7. Were you familiar with codes of ethics before you became involved in SEEPP? Explain.

Oh, yes. I was familiar with the ACM code, the IEEE code, and the Swiss Engineering Code of Ethics.

8. In what ways did you participate in SEEPP's work, especially in the process of preparing the code? (The more details, the better.)

See 6 above.

9. By what means did you participate? For example, did you participate by email, or by phone, or through face-to-face meetings, or by letter, or by informal conversation, or the like?

I participated in just two ways. First, by email, as I explained earlier [6]. I also wrote comments to Version 4 on the home page provided.

10. Did any of these means of participation seem to work better than the others? Any seem to work worse? Which would you recommend as best? Why?

I preferred the email. It gave more control over formatting and left me with a copy of whatever I did. The home page did not provide a copy. But I have no recommendation. I'm not sure what led SEEPP to use one medium rather than another.

11. Any events that particularly stick in your mind relevant to the process? (The more details, the better.)

No, nothing—except the layout of the web page (as I already explained).

12. Do you have any documents, paper or electronic, relevant to your participation in the process? May we have a copy?

Yes. In addition to the web pages, as I already explained, I am providing a copy of Version 3 as I received it, with my handwritten comments (dated 08 Jan. 1998), about 20 pages, and Version 4, with a few handwritten comments, about 10 pages.

13. Has your thinking about codes of ethics changed as a result of your participation in SEEPP's work? How?

No change in ideas. Of course, details are always open to discussion.

14. What, in your opinion, is important about having a code of ethics?

I think it's important that people realize that there is something like that [a code of ethics] at all; important that they think about what they're doing, that there is an environment that the software will have to work in, that there are standards any competent writer of software should apply.

Too many people in engineering professions see just the immediate technical problem and do not stop to consider that there are other considerations as well.

Another point of having a code of ethics is that people who do use ethical considerations in their life get a reassurance and a moral support in their daily business. It is easier to make an unpopular decision, if you can lean on an independent authority.

Also the code could be used during the education process to emphasize that ‘we—the (software) engineers—do or don’t do certain things’. In a profession that has such a big leverage, certain morality should be ‘built-in’.

15. Is there anything about your *participation* that you are especially pleased with or unhappy about?

I’m sorry I got in so late. I’m also unhappy that I didn’t get a reply to my suggestions about the home page and my last comments. On the other hand, I was happy that I was able to participate at all—and that they did accept some of my suggestions.

16. Is there anything about the *final code* that you are especially pleased with or unhappy about?

The following comments are based on version 5.2 of the Code:

Full version; PREAMBLE; 1st paragraph; 2nd sentence: The text "are those who" could be left out. As it is, the sentence can be interpreted as a definition of a "software engineer" instead of (as I understand it) an enumeration of the software engineers’ contributions.

Full Version; PREAMBLE; 3rd paragraph; 2nd sentence: It still says "The list of Principles [...] is not exhaustive". Apart from my critique, I understood during the interview that this is NOT the intended meaning.

Looking at the Clauses 1.04, 6.06 and 6.13 I ask: "who will protect the Software Engineer who reports or disobeys the law"? If the backing is not guaranteed, acting according to these clauses (or the given exception) might lead to unpleasant results.

Clause 1.02: I would have chosen "temper" instead of "moderate".

Clause 2.01: I would suggest using "frank" or "candid" instead of "forthright".

17. Is there anyone whose participation in the process seems to you especially important? Explain.

No idea. Remember I was all by myself in Switzerland. My only contact was by email and web.

18. Anyone who you think we should be sure to talk to? Explain.

No idea.

19. If you had been in charge of the process, what, if anything, would you have done differently?

Not really qualified to say as far as the process itself is concerned. I can't understand why I didn't notice an announcement of the project earlier. I was regularly reading the journals where it appeared. Perhaps publicity might have been better. Bigger ads, maybe.

20. Is there anything we should have asked but didn't? Anything you want to add to what you have already said?

No, not now. Except that it was good to have a face-to-face interview. I hate filling out questionnaires. I always wonder whether I understand the questions right. Am I helping the researchers—or just wasting my time?

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