Progress towards a World-Wide Code of Conduct

by
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Abstract

In this paper the work of the International Federation for Information Processing (IFIP) Task Force on Ethics is described and the recommendations presented to the General Assembly are reviewed. While a common code of ethics or conduct has been not recommended for consideration by the member societies of IFIP, a set of guidelines for the establishment and evaluation of codes has been produced and procedures for the assistance of code development have been established within IFIP. This paper proposes that the data collected by the Task Force and the proposed guidelines can be used as a tool for the study of codes of practice providing a teachable, learnable educational module in courses related to the ethics of computing and computation, and looks at the next steps in bringing ethical awareness to the IT community.

Introduction

In 1988 George Glaser, long-time US participant in IFIP activities, persuaded the General Assembly of the International Federation for Information Processing (IFIP) to consider the need for guidelines for member bodies for codes of conduct or ethics. Hal Sackman, then chair of TC-9 took it upon himself to prepare a proposal[3] which he believed would form the basis for a consensus document based on the existing codes in ACM (prior to the 1992 revision), and IEEE. WG 9.2 organized a special session of the 1992 World Computer Congress in Madrid, Spain chaired by IFIP President Sendov, representative of Bulgaria, and invited interested participants from several countries to express their views of the need for national codes of conduct. In the succeeding discussion several objections to specific sections of Sackman proposal were expressed which reflected the cultural needs, expectations, and restrictions of individual countries. While there were many minor “nits” which would be common to the consideration of any document not created by a committee, the two major objections were that the proposal was insensitive to the concerns of women, and that the privacy expectations were contrary to those of several third world countries. Moreover the code expected conformance to laws of intellectual property and the UN Charter on Human Rights which were not supported by several representatives. The TC suggested that an independent, limited-lifetime task group be formed to develop a set of guidelines for the development of codes of conduct rather than expecting that a common set be applicable to all nationalities. After reviewing the World Computer Congress session, the General Assembly established the Ethics Task Group with the mandate to develop a set of guidelines for codes.

This paper is then a report on the progress of the task group, the steps that have been taken to develop a procedure for developing, not only a set of guidelines for the construction of codes of conduct but also for comparing, the codes for the member societies of IFIP. The IFIP Task Force on Ethics, established in the Fall of 1992, has held several meetings in Europe, and one in Havana, Cuba, and is chaired by Jacques Berleur, Institut d'Informatique, Facultes Universitaires Notre-Dame de la Paix, Namur, Belgium.

As a result of the work of the Task Force and recommendation[4] to the General Assembly in September 1994, IFIP does not intend to provide the IFIP member organization with word-for-word guidelines for codes, but will advise them to consider the suggestions defined by a set of consensus topics culled from a world-wide collection of codes when writing or updating their specific codes. IFIP cannot actually state what "ethics" the national societies should espouse. It can, however, outline that there are certain principles that all might want to consider and take account of in their codes.

Among questions to be answered, perhaps only by the experience of assisting an organization to develop a code, is whether a code is an appropriate way for a national professional computing body which currently has no code to deal with "inappropriate" professional practices (always bearing in mind that there should be no implied pressure that such a body should adopt a code). For example, software publishers have estimated that while there are two illegal copies of software for each legally acquired version in the US, the proportions go as high as 20:1 elsewhere in the world. However, these high figures occur in several countries where the copyright laws are non existant. Should the professional ethical norms that are supported by national laws be considered as norms in a country where such actions are not illegal?

There has been considerable discussion regarding not only the title of a code but also its purpose. In the IFIP review there did not appear to be a strong variation in the content of codes in relation to the title -- that is, code of ethics, or code of conduct. The Task force suggested:

> A code of ethics might be favored when a national society's main purpose is to develop a "mission statement", giving visions and objectives. Some commentators consider that the expression, code of ethics, is related to codes which are oriented more toward the public or society as a whole. The expression "code of conduct" seems to be related more to the "computing profession". This distinction has to be treated with care.
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> Today, certain people who have been working for a long time on this issue think that "the rules of conduct have to reach, beyond the well structured body of computer scientists, the larger circle of computer users. We must shift from a deontology of informaticians to an objective deontology of informatics under the control of the law." From this perspective, codes are seen more as preparing for the law or specifying it than as self-regulatory instruments, and are written to address a large audience.

This point about need to extend the awareness of a code beyond a professional organization, such as ACM or IEEE, is particularly important when we realize that an extremely large proportion of the IT community (sometimes estimated as large as 90%) is neither a product of a formal computer science or engineering program that includes an emphasis on ethical conduct nor a member of a professional society.

A Review of Existing Codes of Conduct

Unbeknownst to TC-9 at the time of the Madrid meeting, an outline of a general code of conduct for scientists had been developed by an international consortium of scientists assembled in Toronto, Canada. The Toronto Resolution[5], signed by 23 scientists, suggests:

> We present a methodology for assessing particular ethical codes which comprises the key elements that all codes of ethics in science and scholarship should include. By suggesting that codes adopt a common Preamble, and that they consider addressing common elements to their codes, we are expressing our hope that the community of scholars and scientists can agree to a common moral framework for the conduct of their investigations. Each discipline should develop a particular code in the light of these considerations, and existing codes should be examined for their adequacy, effectiveness and applicability.

The Toronto resolution provides 12 criteria for the evaluation of codes, including clearly articulating the basis for the code, means for ensuring the members' adherence to the articles, coverage of all classes of membership, non-discriminatory attitudes, social and environmental impact, human rights, peaceful uses of technology, peer review, freedom of information, violation reporting procedures, and dissemination responsibilities. While the resolution is not specifically targeted towards computing and computation but instead is aimed towards the generality of science, it may form the basis for judging the completeness of those codes which have been developed by various societies. The question however must be whether the Toronto resolution has world-wide applicability. In the same manner as the Sackman proposal looked interesting at first glance, and from the American point of view, we have not had the opportunity to test the Toronto resolution in the same arena. The authors of the Toronto resolution are not wholly representative of a variety of ethnic cultures, the majority being Canadian (and the Toronto locality) and the remainder, with two exceptions, being from members of the British Commonwealth of Nations, countries whose basic jurisprudence is based in English common law.

The IFIP Task Force on Ethics has now collected 30 codes of ethics (and codes of conduct) from member organizations, and other national and regional societies, together with the Sackman proposal and the Toronto resolution for review and comparison. Their report, published in the Proceedings of the 1994 IFIP World Computer Congress, derives guidelines from the collected codes to form a consensus document which would be likely to have the greatest acceptance probability among those societies which to date have not developed either a code of ethics or code of conduct. These may also form a basis for societies with published codes to review their content and to confirm their completeness.

Few codes came to the Task Force with an explanation of their intent, or even a history of their development. The most documented developments are the recent ACM (USA), BCS (UK), CIPS (Canada), and CSZ (Zimbabwe) codes. We must also note that the ACM code was primarily based on the earlier code which had been in place for about 20 years. In some ways while the new ACM code is an expansion and upgrade of the earlier code, it now lacks some memorability which surely should be the essence of every code. That is, the first ACM code was based on five canons:

- integrity,
- competence,
- individual responsibilities,
- professional responsibilities, and
- human concerns;

a list of characteristics which was easy to teach and reasonably easy to learn. The new code however is based on premises which are much less meaningful and memorable. In fact, examining all of the society codes, the original ACM code was perhaps the easiest to remember. Of course that judgment again comes from a long association with the code, and not having been placed in the position to have to teach other codes.

Interestingly the Task Force also identified five major consensus topics within the collection of organizational codes:

- *Respectful general attitude*
- *Personal (/institutional) qualities, such as conscientiousness, honesty and positive attitude, competence and efficiency*
- *Promotion of information privacy and data integrity*
- *Production and flow of information*
- *Attitude towards regulations*

Apart from the generalities of codes which are expressed by the Toronto resolution, the Task Force also pointed out that codes of conduct related to the IT community should include attention to the special needs of the field. They proposed that special focus should be placed on:

- *Repositories and processors of information.* Unauthorized use of otherwise unused computer services or of information stored in computers raises questions of appropriateness or fairness.

- *Producers of new forms and types of assets.* For example, computer programs are entirely new types of assets, possibly not subject to the same concepts of ownership as other assets.

- *Instruments of acts.* To what degree must computer services and users of computers, data, and programs be responsible for the integrity and appropriateness of computer output?

- *Symbols of intimidation and deception.* The images of computers as thinking machines, absolute truth producers -- infallible, subject to blame -- and as anthropomorphic replacements of humans who err should be carefully considered.

These are similar to those proposed by Donn Parker, long time documenter of computer crime and the risks to computers, in response to questions of computer ethics related to the rise of hacking in the mid-1980's:

- The social responsibility: computer scientists and professionals responsibility vis-a-vis the employer and the society itself.

- The personal competence and behavior: initial and permanent training, and especially legislative information of computer scientists and practitioners.

- The specific problems related to intellectual property -- copyrights, program ownership, patents, trade marks, trade secrets, etc.

- Confidentiality and secrecy: protection of privacy, professional secrets, material secrets, etc.

- Security questions: protection against fraud, abuse, and the question of the security of data.

Many of these extensions to the codes to accomodate the specific domain of discourse of computing may well be covered eventually by laws, but until that time, and until there is (if ever) uniformity between laws in different countries, the precedents set in the world IT community may have to suffice. The plan of the Task Force to collect such precedents within the "spaces" can serve this need.

A Comparison of Member Society Codes

After four years of the consideration of the possibilities of a common code of ethics/conduct by IFIP which was thwarted by the outright rejection of what was thought by the US representative to be a synthesis document, followed by the inability to recognize a substantial body of common elements among the national codes, the IFIP Task Force chose one final line of evolution: to promote a direct discussion within each national computer society, by providing general guidelines coming from the experiences of societies already having a code, or from other sources. These other sources include groups within IFIP that have made specific proposals, or other international organizations such as OECD or the Council of Europe, or the Toronto Resolution Group The Task Group recommended that special considerations should be given so as to provide a set of statements directly related to the field of computing and computation. The opportunity here is to take the work of the IFIP Task Force as a teaching tool for the study of computer ethics.

We have a need to provide within the teaching of computer science a diversity of culture to allow our students to understand the differences in approach to problems which we might think of as having “universal” or “single” solutions. A comparative study of (say) two or three national codes as an assignment in a computer ethics course may provide two important learning experiences -- a close examination of the code which is pertinent to the learner (in this country either the ACM or IEEE code) and a comparison with another code to bring out peculiarities in the first which would lay hidden without the exercise of contrast. Otherwise the bland teaching of a code requires a great deal of work to provide a basis for understanding and comprehension. For example, the Singapore Computer

Society (SCS) seems to be very close to the original ACM code, having four basic principles:

1. SCS members will act at all times with *integrity*.
2. SCS members will accept full *responsibility* for their work.
3. SCS members will always aim to increase their *competence*.
4. SCS members will act with professionalism to enhance the *prestige* of the profession and the Society. (emphasis added by the author)

Since the Singapore code does not specifically target any particular section or rank of membership, then the assumption must be that it refers to all classes of membership. On the other hand, the code for members of the Zimbabwe Computer Society is broken into several parts covering registered professional consultants, institutional members, individual members, and individual corporate members. Each section gives special rules for the conduct of the defined membership, the individual member's rules having the canons of competence, integrity, confidentiality, and [assigning due] credit. Of all the codes reviewed by the Task Force, the Zimbabwe code, in seven parts, is perhaps the most extensive and detailed.

The code for Gesellschaft für Informatik (GI), the German Informatics Society, is partially hierarchical covering the requirements for the conduct of members, members in senior positions, and members engaged in teaching and research. The code includes the provision for the society (GI) to establish a casebook:

> The GI will compile a generally accessible casebook on ethical conflicts, which will be annotated and regularly updated.

and the accompanying explanatory section specifies that the casebook is intended to provide a collection of precedents of the application of the guidelines and to help convey their importance and utility by furnishing practical examples of their potential application. It is intended that these would also provide individuals with examples which would help them guide their own behavior and actions. The GI guidelines do not contain a section pertaining to enforcement or penalties for violations but instead refers to legal actions which appear to be related to Federal laws regarding “legislation contain[ing] numerous provisions pertaining to or impinging on the design of computer systems”. This concept has been taken up by the Task Force by creating "Spaces for Discussion". Its is proposed that this can be accomplished through actions such as:

- submitting, through the IFIP Newsletter for instance, specific case studies, encouraging members to submit their own responses;
- making available all the up-to-date codes of IFIP national societies, with related pointers to existing documentation for further research;
- publishing, as foreseen in the European Directive (under preparation), "the codes which have been the subject of a favourable opinion ...";
- providing some Forum - under the Chairmanship of the IFIP President - where discussion could be raised about harmonising codes of societies, in order to prevent restrictions in one country being prejudicial to another;
- participating in international fora where similar questions are treated;
- assisting in the resolution of conflicts which could arise between national codes that are completely different.

The code of ethics for the Computer Society of India (CSI) contains an extensive section on the procedures for dealing with actions relating to the breach of the code of ethics by members. Thus includes establishing a review committee and the possibility of only two forms recommendation to the Executive Committee of the CSI - honorable acquittal and removal from membership! Similarly the procedures for dealing with a complaint against of member of the Canadian Information Processing Society (CIPS) are larger than the code itself.

Conclusions

The work of the IFIP Task Force on Ethics continues, even though the recommendation to the IFIP General Assembly at its Fall 1994 meeting in Germany did seek not to impose or advocate a standard set of rules on each and every member society. Instead the proposal established a set of guidelines, together with special considerations relating to the field of computing and computation, that will assist each society to evaluate both their existing codes and any new proposals. Missing from the guidelines at this time, is any means of evaluation that suggests that any code should be teachable, learnable, and memorable. In many ways the code is to be first learned during an educational experience, and while each code may be accompanied by a explanatory section, the actual code itself should be minimal, meaningful, and memorable.

The work of the Task Force, in collecting codes from a large number of member societies, provides an opportunity for students of computer science courses related to ethics to study not only the code of conduct related to their own society membership but also to compare that with codes from other countries. There is also an opportunity here for computer scientists to work with political scientists, sociologists, and philosophers who often teach courses in ethics and social impact in other fields who may be able to assist in these studies.

Two final considerations. Codes, like laws, tend to keep the honest persons honest and have little impact on those who chose to ignore their precepts or who have never been exposed to their tenets. Organizations such as the Software Publishers Association is actively acting to get the message about copyrights out to schools and commercial organizations that would not be influenced by professional codes. As long ago as 1985, an ACM workshop on Hacking[6] recommended that their were "positive alternatives" to laws and codes that were the responsibility of a professional society to undertake. These included promoting K-12 educational awareness of the appropriate use of computing systems, and providing alternative outlets for exploration and learning that is not currently being provided for the exceptional student.

Martin Luther King said:

> "Our scientific power has outrun our spiritual power"

and while he was not specifically referring to the computer, the fact that we have inserted high powered scientific devices into the lives of our young people, most times without providing a contemporaneous ethical and moral program is simply fueling the distance between scientific power and moral awareness. In both sex education and driver education we have learned to match procedures with moral and ethical understanding; we need to do the same for computing!

A code provides guidelines; education provides direction; action provides progress. Since we have a code in ACM then our next steps should be not only to review that code in relation to the IFIP guidelines, but also to take action to find ways to insert ethical awareness into our schools and corporations, to provide positive alteratives to inappropriate activities, and to bring our spiritual power in step with our scientific power.

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[3] Dunlop and Kling, 1991.

[4] Jacques Berleur and Marie d'Udekem-Gevers, "Codes of Ethics, or of Conduct, within IFIP and in other computer societies", Information Processing '94 Vol. II, Applications and Impacts, K1, K. Brunnstein, and E. Raubold, eds, Proceedings of the IFIP World Computer Congress, Hamburg, Germany, 28 August - 2 September 1994, Nortyh-Holland, 1994, IFIP Transactions A-52, pp. 340-348.

[5] See Accountability in Research.

[6] Lee, J.A.N., Gerald Segal, and Rosalie Steier. "Positive Alternatives: A Report of an ACM Panel on Hacking", *CACM*, Vol. 29, No. 4, April 1986, pp. 297-299.