DEAR EXECUTIVE COMMITTEE.

This is where you earn your money !!!!

I need an hour of your time NOW. Situation is - No Response from the Steering Committee about permssion to circulate code for review. Publication deadlines will cause delays until September Unless I get them to move before the end of THIS WEEK.

Below is ALMOST what I plan on sending the committee.

1   Please review & comment on letter to Steering Committee- sometimes I have a tendency to step on (and crush) toes.

2. Look at the introduction to the proposed article. Word smith as needed.

3   The code is not QUITE ready to show the steering committee as a publishable draft. WE need to do a few things in the NEXT HOUR :-).
    a. There are changes in this version of the code indicated by words all in Capital letters. These are changes made from comments on draft 2. Please comment on each change- simply Yea or Nea will do. Say more if so inclined.

    b. WE NEED TO NUMBER AND LOCATE section N of the code. The introductory sentence of needs help.

    c. Section 3 contains elements that positively and negatively impacct judgement. We still need 3.08 plus principles- when to blow the whistle, and social clauses.

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Dear Steering Committee:

PROJECT MANAGEMENT STATUS REPORT:

We need your response. On February 13th the SEEPP task force forwarded to you a revised code of ethics, a schedule for completing the project in a timely fashion and several supporting documents requested by Steering committee members.

In order for the SEEPP Task Force to continue to move forward we need from you,
1) your comments on the code,
2) approval for the establishment of a web site.
3) approval to distribute the code for comment using society journals,

We have not received any comments on the code, so we can presume that we are getting closer to the mark with the code and that the explanations of the changes were satisfactory.

The proposal to use the Centre for Computing and Social Responsibility as the central web site was rejected and we were told to use the IEEE and ACM web sites. I have received no response to my request for the names of contacts at those web sites who have been advised to co-operate with this effort. Has the ACM and IEEE agreed to allow us to use their sites and if so are the contacts.

I have also requested Steering Committee permission to distribute the draft code for preliminary comment in two ACM newsletters. I requested permission to distribute the code in these newsletters in time for the publication to occur in the Summer of 1997. These newsletter have publication deadlines.   The deadline for the SIGCAS Newsletter has already passed, but the editor is willing to accept the document if I can get it in by the end of this week. If we miss these deadlines, then the earliest he draft could appear would be September.

The project is at a stand still. The time specifically dedicated to this project is being used waiting for approval to move forward. Small delays at this stage will cause the project to drag out. I know you are all quite busy, but we are simply asking permission to continue the iterative development process. We would like to distribute the preliminary code for broader review by those who will be guided by it.

The document we are interested in circulating is attached below for your review. Thank you for your timely response.

Sincerely,

Donald Gotterbarn

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 Proposed   Product for Publication=========

This draft code of ethics was developed by a task force of the Joint IEEE Computer Society and Association for Computing Machinery Steering Committee for the Establishment of Software Engineering as a Profession. The task force on Software Engineering Ethics and Professional Practices developed this code for a sub-specialization within the constituencies of both of the Computing societies. In an attempt to reflect the international character of both organizations and the profession itself, the composition of the task force is multinational in citizenship and is multi-national in memberships in professional computing organizations. The proposed draft Code of Ethics for Software Engineers (2a) was developed by the task force and reviewed by the Steering Commitee.

Based on the feedback from readers of this publication and from other sources, a final draft of the code will be developed and presented to the Steering Committee for aproval.

 SOFTWARE ENGINEERING CODE OF ETHICS v 2.0a April 1997

PREAMBLE v 2.0

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 significant opportunities both to do good and to cause harm AND TO INFLUENCE AND ENABLE OTHERS TO DO GOOD OR CAUSE HARM. To assure, 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.
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Each principle of this code addresses three levels of ethical obligation 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 obliges professionals to a higher order of care for those WHO MAY BE Affected by their work. The third and deeper level 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.

The clauses under each Principle consist of three different types of statement corresponding to each level. Level One: Aspire (to be human); Statements of aspiration provide vision and objectives, are intended to direct professional behavior. These directives require significant ethical judgement. Level Two: Expect (to be professional); Statements of expectation 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. Level Three: Demand (to use good practices); Statements of demand assert more specific behavioral responsibilities within

software engineering which are more closely related to the current state of the art. The range of statements 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. 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 decisions. In some situations standards may conflict with each other or with standards from other sources. These situations require the software engineer to use ethical judgement to act in a manner which is most consistent with the SPIRIT OF THE code of ethics, given the circumstances.

These ethical tensions can best be answered by thoughtful consideration of fundamental principles, rather than reliance on detailed regulations. These Principles should influence you to consider broadly who is affected by your work; to examine if (we) YOU AND YOUR COLLEAGUES are treating other human beings with due respect; to speculate on how the public would view your decision IF THEY WERE REASONABLY WELL INFORMED; to analyze how the least empowered will be affected by your decision; and to consider if your acts would be considered worthy of the ideal PROFESSIONAL WORKING AS A software engineer. Since this code represents a consensus of those engaged in the profession one should TAKE INTO ACCOUNT WHAT IS (determine to act in a manner) likely to be judged as the most ethical way to act in the circumstances by informed, respected, and experienced peers in possession of all the facts AND ONLY DEPART FROM SUCH A COURSE FOR PROFOUND REASONS, BACKED WITH CAREFUL JUDGEMENT.

The dynamic and demanding context of software engineering requires a code that is adaptable and relevant to new situations as they occur. 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; an ethical foundation to which individuals within teams and the team as a whole can appeal. The code also helps to define those things which are ethically improper to request of an software engineer.

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 ALL software engineers

PRINCIPLES v 2.0a
 Principle 1: PRODUCT. Software engineers shall, insofar as possible, assure that the software on which they work is useful and of acceptable quality to the public, the employer, the client, and the user, completed on time and at reasonable cost, and free of error. In particular, software engineers shall, as appropriate:

 1.01.   Ensure that specifications for software on which they work have
           been well documented, satisfy the user's requirements, and have
           the client's approval.
 1.02.   Strive to understand fully the specifications for software on
           which they work.
 1.03.   Ensure that they are qualified, by an appropriate combination of
           education and experience, for any project on which they work or
           propose to work.
 1.04.   Ensure proper AND ACHIEVABLE goals and objectives for
           any project on which they work.
 1.05   Ensure an appropriate methodology for any project on which
           they work or propose to work.
 1.06.   Ensure good management for any project on which they work,
           including effective procedures for promotion of quality and
           reduction of risk.
 1.07.   Ensure realistic estimates of cost, scheduling, personnel, and
           outcome on any project on which they work or propose to work

; AND REALISTIC ESTIMATES OF THE CHANCES OF
NOT MEETING THOSE ESTIMATES.

1.08.   Ensure adequate documentation on any project on which they work, including a log of problems discovered and solutions adopted.

1.09.   Ensure adequate testing, debugging, and review of software and related documents on which they work.

1.10.   Aspire to develop software and related documents that respect the privacy of those who will be subjected to that software.

1.11   Be careful to use only accurate data derived from legal sources and use only in ways properly authorized.

1.12.   Aspire to identify, define and address ethical, economic, cultural, legal, and environmental issues.

1.13.   Promote maximum quality and minimum cost to the employer, the client, the user, and the public and make any tradeoffs clear to all parties concerned.

1.14.   Aspire to follow industry standards that are most appropriate for the task at hand, departing from these only when technically justified.

IT HAS BEEN SUGGESTED TO REPLACE WORD ASPIRE IN 1.10
TO 1.14 WITH "WORK"
     YOUR VOTE ON THIS ???????

Principle 2: PUBLIC. Software engineers shall, in their professional role, act only in ways consistent with the public safety, health and welfare. In particular, software engineers shall:

THIS CLAUSE 2.0 WAS SUGGESTED AS VERY PROACTIVE:
KEEP, DUMP, or MODIFY ????
 2.00   MAKE REASONABLE EFFORTS TO DISCOVER ANY
         ACTUAL OR POTENTIAL DANGER THAT THE
         SOFTWARE OR RELATED DOCUMENTS ON WHICH
         THEY WORK, OR ARE AWARE OF, MAY POSE TO THE
         USER, A THIRD PARTY, OR THE ENVIRONMENT.

2.01.   Disclose to appropriate persons or authorities any actual or potential danger that THEY REASONABLY BELIEVE TO BE ASSOCIATED WITH the software or related documents on which they work, or are aware of, may pose to the user, a third party, or the environment.

2.02.   Approve software only if they have a well-founded belief that it is safe, meets specifications, has passed appropriate tests, and does not diminish quality of life or harm the environment.

2.03.   Affix their signature only to documents prepared under their supervision or within their areas of competence and with which they are in agreement.

2.04.   Co-operate in efforts to address matters of grave public concern in software or related documents.

ADDED CLAUSE:

KEEP, DUMP, or MODIFY

2.04A   ENDEVOROUR TO PRODUCE SOFTWARE THAT RESPECTS THE EQUALITY OF ALL HUMANITY: IN PARTICULAR RECOGNIZE THAT NOT ALL PEOPLE SPEAK ENGLISH AS A FIRST LANGUAGE, THAT POORLY DESIGNED SOFTWARE CAN PREVENT DISABLED PEOPLE FROM DOING THINGS THEY COULD OTHERWISE, AND THAT HIGH-TECHNOLOGY PRODUCTS TEND TO TAKE WEALTH FROM THE POOR.

2.05.   Be fair and truthful in all statements, particularly public ones, concerning software or related documents.

2.06.   Not put self-interest, the interest of an employer, the interest of a client, or the interest of the user ahead of the public's interest.

ADDED CLAUSE-TO MEET ENGINEERING CODES WHICH SAY DON'T DO PRO BONO WORK

2.06a.   Feel free to donate professional skills to good causes.

2.07.   Accept full responsibility for their own work.

Principle 3: JUDGMENT. Software engineers shall, insofar as possible and consistent with Principle 2, protect both the independence of their

professional judgment and their reputation for such judgment. In particular, software engineers shall, as appropriate:
STILL NEED OTHER CLAUSES ABOUT OTHER THAN
FINANCIAL PRESSURES ON OBJECTIVE JUDGEMENT-
SOCIAL AND POLITICAL ?????   FOR EXAMPLE

   ONLY MAKE JUDGEMENTS WHICH CAN BE PUBLICLY
   JUSTIFIED AS BEING IN THE BEST INTEREST OF
   QUALITY OF LIFE, AND THE ENVIRONMENT.

   BE AWARE THAT ALL TECHNICAL JUDGEMENTS
   IMPACT OTHER HUMAN BEINGS. TECHNICAL
   JUDGEMENTS HAVE HAVE STAKEHOLDERS OTHER
   THAN EMPLOYERS, CLIENTS, AND USERS.

3.01   Maintain professional objectivity with respect to any software or related documents they are asked to evaluate.

2.03.   Affix their signature only to documents prepared under their supervision and within their areas of competence.

3.02.   Reject bribery.

3.03.   Accept no payback, kickback, or other payment from a third party to a contract, except with the knowledge and consent of all parties to the contract.

3.04.   Accept payment from only one party for any particular project, or for services specific to that project, except when the circumstances have been fully disclosed to parties concerned and they have given their informed consent.

3.05.   Disclose to all concerned parties those conflicts of interest that cannot reasonably be avoided or escaped and aspire to resolve them.(WAS CLAUSE 3.07)

3.06.   Participate in no decision of a governmental or professional body, as a member or advisor, concerned with software, or related documents, in which they, their employer, or their client have a financial interest.

ADDED CLAUSE, KEEP DUMP, MODIFY

3.07 ALL TECHNICAL JUDGEMENTS MUST BE TEMPERED
   AND GUIDED BY THE NEED TO SUPPORT AND

MAINTAIN HUMAN VALUES.

PRINCIPLE 4: CLIENT AND EMPLOYER. Software engineers shall, consistent with the public health, safety, and welfare, always act in professional matters as faithful agents and trustees of their client or employer. In particular, software engineers shall:

IT HAS BEEN SUGGESTED TO ADD "THE LAW" TO THE LIST
"PUBLIC HEATH,...."
YOUR VOTE is ??

4.01.   Provide service only in areas of their competence.

4.02.   Assure that any document upon which they rely has been approved by someone authorized to approve it.

4.03.   Use the property of a client or employer only in ways properly authorized, and with the client's or employer's knowledge and consent.

4.04.   Not knowingly use illegally obtained OR RETAINED software on equipment of a client or employer or in work performed for a client or employer.

4.05.   Keep as confidential information gained in their professional work that is not in the public domain (and is not inconsistent) , WHERE SUCH CONFIDENTIALITY IS CONSISTENT with matters of public concern.

4.06.   Identify, document, and report to the employer or the client any problems or matters of social concern in the software or related documents on which they work or of which they are aware.

4.07.   Inform the client or the employer promptly if, in their opinion, a project is likely to fail, to prove too expensive, to violate intellectual property legislation, in particular copyright, patent, and trademarks, or otherwise be problematic.

4.08.   Accept no outside work detrimental to the work they perform for their primary employer.

4.09   Represent no interest adverse to their employer's without the employer's specific consent , unless ethical considerations demand otherwise.

Principle 5: PROFESSION. Software engineers shall, in all professional matters, advance both the integrity and reputation of their profession as is consistent with public health, safety, and welfare. In particular, software engineers shall, insofar as possible:

5.01.   Associate only with reputable businesses and organizations.

5.02.   Assure that clients, employers, and supervisors know of the software engineer's commitment to this code of ethics, AND THEIR OWN RESPONSIBILITY UNDER IT.

5.03.   Support those who similarly do as this code requires.

5.04.   Help develop an organizational environment favorable to acting ethically.

5.05.   Report ANYTHING REASONABLY BELIEVED TO BE A violation of this code to appropriate authorities.

5.06.   Take responsibility for detecting, correcting, and reporting errors in software and associated documents on which they work.

5.07.   Only accept remuneration appropriate to professional qualifications or experience.

5.08.   Be accurate in stating the characteristics of software on which they work, avoiding not only false claims but claims that might reasonably be supposed to be deceptive, misleading, or doubtful.

5.09.   Not promote their own interest at the expense of the profession.

5.10.   Obey all laws governing their work, insofar as such obedience is consistent with the public health, safety, and welfare.

5.11.   Exercise professional responsibility to society by constructively serving in civic affairs.

5.12.   Promote public knowledge of software engineering.

5.13.   Share useful software-related knowledge, inventions, or discoveries with the profession, for example, by presenting papers at professional meetings, by publishing articles in the technical press, and by serving on the profession's standard-setting bodies.

Principle 6: COLLEAGUES. Software engineers shall treat all those with whom they work fairly and take positive steps to support these

colleagial activities. In particular, software engineers shall, as appropriate:

6.01.   Assist colleagues in professional development.
6.02.   Review the work of other software engineers, which is not in the public domain, only with their PRIOR knowledge. PROVIDED THIS IS CONSISTENT WITH SAFETY. (THIS ADDITION MAY NEED BETTER PHRASING)

6.03.   Credit fully the work of others.
6.04.   Review the work of others in an objective, candid, and properly-documented way.
6.05.   Give a fair hearing to the opinion, concern, or complaint of a colleague.
6.07   Assist colleagues in being fully aware of current standard work practices including policies and procedures for protecting passwords, files, security measures in general, and other confidential information.

6.08 Not interfere in the professional career progression of any colleague.
6.09   Not take steps to supplant another software engineer after steps have been taken for employment.
6.10 Call upon other professional's opinions, in their areas of competence, in situations outside of their own areas of competence.

POSSIBLE MODIFICATION TO MAKE IT CLEAR(ER).
    REPHRASE OF 6.10 "IN SITUATIONS OUTSIDE OF
    THEIR OWN AREAS OF COMPETENCE, CALL UPON
    THE OPINION'S OF OTHER PROFESSIONALS WHO
    HAVE COMPETENCE IN THAT AREA.

SECTION N WHICH NEEDS A NUMBER AND OPINION ON THE INTRODUCTORY SENTENCE
Principle N MANAGEMENT. A software engineer in a management or leadership capacity...

SHALL ACT IN A FAIR WAY AND SHALL
ADDITIONALLY ENABLE AND ENCOURAGE THOSE
WHO THEY LEAD TO MEET THEIR OWN AND
COLLECTIVE OBLIGATIONS, INCLUDING THOSE
UNDER THIS CODE. IN PARTICULAR, THOSE
SOFTWARE ENGINEERS IN LEADERSHIP ROLES SHALL
AS APPROPRIATE:

(CLAUSES ARE ALSO UNDER CONSTRUCTION. CLAUSES TO
BE FORMULATED SHOULD INCLUDE:
ENABLE, ENCOURAGE, FOLLOW GOOD
PRACTICE..PROVIDE DIRECTION TO GOOD SOFTWARE
ENGINEERING PRACTICES AND FOLLOW SUCH
PRACTICES   ??? SUGGESTIONS???
- NEED TO ADD TEAM BUILDING, COMMUNICATIONS,
GOOD PRACTICES.

N.01. Assure that employees are informed of standards before being
held to them.
N.02   Assure employees know the employer's policies and procedures
for protecting passwords, files, and other confidential
information.
N.03.   Assign work only after taking into account appropriate
contributions of education and experience.
N.04.   Provide for due process in hearing charges of violation of an
employer's policy or of this code.
N.05.   Develop a fair agreement concerning ownership of any software
artifact an employee has contributed to.
N.06. Attract employees only by full and accurate description of the
conditions of employment.
N.07   Offer only fair and just remuneration.
N.08.   Not unjustly prevent a subordinate from taking a better job for
which that subordinate is qualified or experienced to do.
N.09   Not ask an employee to do anything inconsistent with this code.

Principle 7: SELF. Software engineers shall, throughout their career,

strive to enhance their own ability to practice their profession as it should be practiced. In particular, software engineers shall continually endeavor to:

7.01.   Further their knowledge of developments in the design, development, and testing of software and related documents, together with the management of the development process.

7.02.   Improve their ability to create safe, reliable, and useful quality software at reasonable cost and within a reasonable time.

7.03.   Improve their ability to write accurate, informative, and literate documents in support of software on which they work.

7.04.   Improve their understanding of the software and related documents on which they work and of the environment in which they will be used.

7.05.   Improve their knowledge of the law governing the software and related documents on which they work.

7.06.   Improve their knowledge of this code, its interpretation, and its application to their work.

7.08 Not require or attempt to influence any person to take any action which involves a breach of this code.

7.09 Consider violations of this code inconsistent with being a professional software engineer.

This Code was developed by the ACM/IEEE-CS joint task force on Software Engineering Ethics and Professional Practices Task Force : Donald Gotterbarn Chair; Keith Miller and Simon Rogerson, Executive Committee; Members: Peter Barnes, Steve Barber esq., C.S. Burnstein, Amr El_Kadi, Ben Fairweather, Milton Fulghum, N. Jayaram, Tom Jewett, Maj. Mark A. Kanko, Ernie Kallman, Duncan Langford, Joyce Currie Little, Ed Mechler, Manny Norman, Douglas Phillips, Peter Prinzivalli, Mary Prior, Patrick Sullivan, John Weckert, S.Weisband, and Laurie Werth,

Please send comments on this draft of the Preamble and the Code to Donald Gotterbarn, Computer and Information Sciences, East Tenessee State University, Box 70711, Johnson City Tennesssee, 37614-0711,(

d.gotterbarn@computer.org.) OR RESPOND TO THE SURVEY
FORMS ON THE IEEE-CS AND ACM WEB SITES

=====END of PROPOSED PBULICATION===========