



Ethics and Member Conduct Committee

Introduction by
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2002-03 EMCC Chair

Engineering Ethics & the IEEE Membership

“The practice of that which is ethically best—what we call goodness or virtue—involves a course of conduct which, in all respects, is opposed to that which leads to success in the cosmic struggle for existence. In place of ruthless self-assertion it demands self-restraint.”

(Thomas Huxley 1893, British biologist prominent in the debate over Darwin’s theory of evolution)



IEEE Ethics & Member Conduct Committee

- Review of IEEE’s Involvement in Ethical Support
- What can IEEE do for its members?
- The new Ethics & Member Conduct Committee



History of the IEEE Code of Ethics

- 1906 AIEE Code of Ethics
- 1912 AIEE adopted a “Code of Principles of Professional Conduct”
- 1963 IEEE endorsed “Canons of Ethics of Engineers” after AIEE/IRE merger
- 1990 Board of Directors approved simplified IEEE Code of Ethics



IEEE Code of Ethics: #1 (of 10)

- To accept responsibility in making engineering decisions consistent with the safety, health, and welfare of the public, and to disclose promptly factors that might endanger the public or the environment.



IEEE Code of Ethics: #2-3

- To avoid real or perceived conflicts of interest whenever possible, and to disclose them to affected parties when they do exist.
- To be honest and realistic in stating claims or estimates based on available data.



IEEE Code of Ethics: #4-6

- To reject bribery in all its forms.
- To improve the understanding of technology, its appropriate application, and potential consequences.
- To maintain and improve our technical competence and to undertake techno-logical tasks for others only if qualified by training or experience, or after full disclosure of pertinent limitations.



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IEEE Code of Ethics: #7-8

- To seek, accept, and offer honest criticism of technical work, to acknowledge and correct errors, and to credit properly the contributions of others.
- To treat fairly all persons regardless of such factors as race, religion, gender, disability, age, or national origin.



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IEEE Code of Ethics: #9-10

- To avoid injuring others, their property, reputation, or employment by false or malicious action.
- To assist colleagues and co-workers in their professional development and to support them in following this code of ethics.



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Industrial Involvement Certification
For the Faculty Activity Report covering
11/07 – 12/31/07
University of Michigan College of Engineering

Name: Andrew E. Yagle Department: EECS

The following information is requested in order to help the University manage conflicts of interest, and is held in strict confidence. In addition to this disclosure to the administration, you should disclose to your colleagues and students who could potentially be affected, existing or potential financial or other interests that might appear to impair the independence of your professional judgement. The objectives of conflict of interest management are to reduce the risks of compromising or appearing to compromise the integrity of scientific results, our obligations to students and colleagues, and the impartiality of the University's purchasing and other contractual relationships.

The University encourages faculty involvement in outside activities which enhance the faculty member's teaching and scholarship or promote technology transfer. Disclosure of outside relationships is the foundation of conflict of interest management, which protects the faculty member from the appearance of misconduct, as well as protecting students, outside entities and the University. In addition to this disclosure, faculty are required to disclose conflicts of interest on the Proposal Approval Form (PAF) and to the Technology Transfer Office as appropriate; stricter thresholds are used in those disclosures.

A. Please list any companies reasonably related to your professional duties in which you, your spouse or your dependents own more than 5% of the stock, or which might otherwise represent a conflict of interest issue.

None

B. List also any companies for which you or your spouse serve as an officer, or as a member of the board of directors or scientific advisory board.

None



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Typical Examples of Ethical Issues Within the Purview of EMCC

- Member-to-member disputes alleging unethical behavior.
- Matters involving public safety or security of service.
- Ethical support for members through amicus curiae (friend of the court) briefs in support of ethical practice.

But, no involvement by IEEE in employer-employee disputes.



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Specific Examples

- Conflict of interest
- Practice outside areas of competence
- Whistleblowing
- Abuse of office



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International Aspects

- Legal systems (common law based vs. codified systems).
- Cultural differences (attitudes to bribery, intellectual property rights, etc.).
- Freedom of information provisions.
- Employee protection laws.
- Anti-bribery laws such as the OECD convention signed by 35 countries, including the USA.
- Protection for whistleblowers.
- Concept of acceptable risks in public safety issues varies widely.



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IEEE's First Duty is to Serve the Public Interest

- Public safety, health and welfare considerations must govern engineering decisions (engineers have a special duty of care).
- Prompt and full disclosure of potential hazards and risks.
- Conflict of interest issues addressed by early disclosure.



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Professional Integrity Requires:

- Limiting practice to areas consistent with one's training and experience.
- Assessing one's abilities realistically.
- Giving due credit to the work of others.
- Diligent searching of technical literature to establish the prior art.
- Avoiding plagiarism.



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Whistleblowing

- In the past, whistleblowers have been harshly treated and have been left exposed to legal action and dismissal.
- The UK Public Interest Disclosure Act (2001) is a good example of how laws can offer some protection for whistleblowers.
- Learned societies, like IEEE, have a special role to play.



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Whistleblowing (cont.)

- Whistleblowing should be used as a last resort after all formal procedure have been exhausted.
- If the evidence is compelling that the public or end-users are put in danger because of faulty engineering, IEEE can offer help in ensuring that there is factually correct basis for the action.
- For example, IEEE can file an *amicus curiae* brief to inform the court about best engineering practice.



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Abuse of Office

- Allowing company pressures to override concerns over the safety, well-being or the overloading of employees.
- Using inside information to gain financial or other advantage.
- Treating subordinates unfairly or discriminating on the basis of race, religion or age, etc.



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How Does IEEE Get Involved?

The Ethics & Member Conduct Committee (EMCC):

- Advises the Board of Directors on Ethics Policy.
- Fosters awareness within IEEE of ethical issues.
- Promotes ethical behavior on the part of individuals, companies & organizations within IEEE's fields of interest.



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EMCC's Work Falls Into Two Main Categories

- Member Conduct
- Ethical support for members



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Member (Mis)Conduct Issues

- EMCC receives complaints from members about the conduct of other members.
- A standard procedure is followed to ensure confidentiality at all stages of EMCC's investigation into the complaint.
- If the preliminary investigation produces *prima facie* evidence of misconduct, a Hearing Board is convened.



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Member (Mis)Conduct Issues (cont.)

- The recommendation of the Hearing Board is considered by the Board of Directors who determines the sanctions, if any, against the offending member.
- It is within the power of the Board to impose censure, suspension or expulsion on members found guilty of misconduct.



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Ethical Support for Members

- IEEE expects members to uphold IEEE Code of Ethics to the maximum practicable extent.
- Where a member is ordered to violate the Code by an employer or by others in position of authority, IEEE can use the ethics resources available to assist & advise the member.
- In some (rare) cases, the filing of an *amicus* brief by the IEEE President can be undertaken.



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Ethical Support for Members (cont.)

- Members suffering discrimination in their workplace, in whatever form, may receive support and advice from IEEE.
- EMCC cannot engage in "fishing expeditions" and must rely entirely on members to bring ethical violations to its attention.
- In general, IEEE's involvement is restricted by its limited resources to assisting members.



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Ethical Support Resources for Members

- **EMCC**
 - Any member can contact the committee directly
- **National Institute for Engineering Ethics (NIEE)**
 - Maintains an Ethics help-line (with IEEE support)
- **Ethics Officer Association**
 - IEEE is a member & sponsoring partner

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Questions

- What do members expect from IEEE?
- Are members adequately informed about IEEE's activities in ethics & member conduct issues?
- How can IEEE's ethical support for members be improved?
- Is there a role for Regions & Sections to promote ethical behavior at the local level?

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IEEE Sections should consider:

- Appointing an Ethical Support officer
- Producing a booklet/website informing members about the ethical support available to them
- Working with local pro bono or academic legal groups to formulate an ethics policy
- Sponsor talks on engineering ethics

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Interactive Portion Audience Response System

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Case #1

- You are a manager in a company that is a leading manufacturer of mobile phones. You observe that workers employed in your testing department appear to be suffering abnormal levels of headaches, fatigue, etc.

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Case #1

Should you?

- (a) Ignore the symptoms on the grounds that international studies have failed to uncover any harmful effects from mobile phone use?
- (b) Shut down the department and launch an investigation by the Health and Safety Office?
- (c) Issue a warning to the workers concerned of possible harm to their health?

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Case #2

- Some close colleagues in the group that you manage apply to fill vacancies at another site in a more attractive area. You have learned by chance that the company has highly confidential plans to shut down the factory at that site within the next 12 months.

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Case #2

Should you?

- (a) Warn your colleagues about the planned move?
- (b) Leak the news to the local media to alert your colleagues?
- (c) Keep quiet on the grounds that the information is company confidential?

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Case #3

- You learn that some highly talented members of your Research & Development (R&D) team could be much better compensated if they took the initiative to change their job function within the company.

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Case #3

Should you?

- (a) Inform them about the financial advantages of a career change?
- (b) Urge the company to make special provision to reward the best R&D staff?
- (c) Make keeping a successful team together your top priority?

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Case #4

- Working as a consultant for a small company you are asked to take on a project outside your true domain of expertise.

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Case #4

Should you?

- (a) Reveal your lack of expertise in the technical area involved?
- (b) Accept the work on condition that you would be allowed to get help from professional colleagues where necessary?
- (c) Conceal your lack of expertise and hope to "learn as you go"?

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Case #5

- Your company is about to bid for a major overseas contract of huge commercial importance. You discover from a magazine article that the project would pose significant environmental risks to the local population.



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Case #5

Should you?

- (a) Inform the company about your concerns?
- (b) Conclude that the ultimate responsibility lies with the government of the country involved?
- (c) Contact environmental groups to warn them of your company's plans?



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Case #6

- Your company rewards its employees for success with patents. You learn from a casual conversation at a conference that the subject of your latest patent application was patented some years ago in a foreign country but was never translated into English.



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Case #6

Should you?

- (a) Inform your company of the existence of the foreign patent?
- (b) Leave it to the Patent Office to discover the prior claim?
- (c) Abandon your claim?



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Case #7

- You are informed through an anonymous letter that one of your colleagues being considered for promotion to a very senior post has falsified his employment history to conceal an offence he committed in his previous employment.



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Case #7

Should you?

- (a) Inform your company about the letter?
- (b) Confront your colleague about the his alleged deception?
- (c) Do nothing?



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Case #8

- Your company intends to submit one its products for a prestigious national design award under your name, but excluding any mention of key members of the team responsible for the work, on the grounds that they subsequently left to join a competitor.



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Case #8

Should you?

- (a) Refuse to have your name listed unless your former colleagues receive proper credit?
- (b) Inform your former colleagues of your company's intentions?
- (c) Agree to submit the design, hoping to find some way of acknowledging the work of your former colleagues?



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Case #9

- You read in a journal that a recent report implicates a chemical widely used in circuit board manufacture in the increased incidence of sickness among employees in the industry. There is no known substitute for this chemical, which is a key ingredient in the manufacturing process.



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Case #9

Should you?

- (a) Urge your company to stop using the chemical immediately?
- (b) Do nothing until the relevant authorities issue guidance?
- (c) Inform you company's employees who use the chemical of your concerns?



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Case #10

- One of your most talented colleagues insists on not working on any project with military applications and also repeatedly objects in very strong terms to the involvement of any members of his group.



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Case #10

Should you?

- (a) Seek the approval of your colleagues to get him moved to another group?
- (b) Try to isolate his work from any military connections, even if the prospects for the group are harmed?
- (c) Confront him with the incompatibility of his principles with the well-being of the group?



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