

Engineering Ethics Case Study

ELEC 3040 / 3050 – Fall 2017

Origins of the *IEEE Code of Ethics* have been traced by some researchers to as early as 1906, and the AIEE adopted a code of conduct in 1912. The IEEE was founded in 1963 from the merger of the AIEE and IRE, and the current Code of Ethics was adopted in 1974.

Assignment:

1. Review the *IEEE Code of Ethics* (in the class presentation and Resources below).
2. Read the article in reference [1] and/or [2]. Note that, in the article, the authors are really arguing from the socio-economic perspectives. But we want each student to consider if there is an ethical dilemma in this controversy.
3. In view of the IEEE Code of Ethics and references [1,2], present arguments either FOR or AGAINST engineering a product that can be repaired by the consumer. Specifically:
 - a. What are the ethical dilemmas associated with designing non-repairable electronics? Why is this a tough position to take?
A dilemma implies multiple unfavorable choices (stuck between a rock and a hard place). Therefore, explain the two or more unsatisfactory choices, i.e. what are the choices, and why are they unsatisfactory?
 - b. What are the ethical dilemmas associated with designing repairable electronics? Why is this a tough position to take?
 - c. Choose either FOR or AGAINST this position statement, "*Engineers should design repairable electronics.*"
 - d. Present arguments (either FOR or AGAINST) that reflect consideration of one or more relevant tenets of the IEEE Code of Ethics. Not all tenets may be applicable.

Report Outline:

- Introduction: What is the purpose of this report?
- Background: Tell the reader about the general problem. Segue to your position, "In the next section, the author presents arguments (FOR/AGAINST) compelling electrical engineers to design repairable electronic systems."
- Arguments...
- Close the report with an appropriate reference list, in the same spirit as for the design report.

Grading:

The "Ethics Grading Rubric", posted on the course web page, indicates what will be considered in grading the reports.

Resources:

[a] IEEE Code of Ethics online. <http://www.ieee.org/about/corporate/governance/p7-8.html>

[b] IEEE Spectrum online article to consider:

1. Kyle Wiens and Gay Gordon-Byrne, "*The Fight to Fix It*", IEEE Spectrum, November 2017, pp. 24-29.
2. This was also posted (24 October 2017) on the IEEE Spectrum web site.
<https://spectrum.ieee.org/green-tech/conservation/why-we-must-fight-for-the-right-to-repair-our-electronics>