

THE CASE OF THE KILLER ROBOT

Introduction

The *Case of the Killer Robot* is a detailed scenario developed by Richard G. Epstein of West Chester University of PA, USA. The scenario combines elements of software engineering and computer ethics. It will be used within the CS2E2 software engineering course as a means of introducing you to the complexities of software development and to the issues of computer ethics.

The scenario consists of a number of articles, which discuss specific issues in software engineering and computer ethics. These issues include software lifecycle models, the nature of requirements, programmer psychology, team dynamics, user interfaces, software testing, software theft and privacy. A major consideration is "when is the software good enough?"

The articles in the scenario begin with the indictment of a programmer for manslaughter. This programmer wrote faulty code that caused the death of a robot operator. Slowly, over the course of articles, you will be introduced to factors within the corporation which also contributed to the accident. Hopefully, you will begin to realise the complexity of the task of building real-world software and begin to see some of the ethical issues intertwined in all of that complexity.

Learning Aims

There are a number of aims behind giving you this scenario. These may be summarised as follows:

- To reinforce a number of key software engineering issues.
- To reinforce the complexities of software development.
- To introduce you to the issues of computer ethics.
- To promote realisation of the effect and consequences, the actions you take during software development can have.
- To place the topics covered in the lectures into an integrated framework.
- To provoke you into thinking more deeply about the issues of software engineering.
- To encourage you to arrive at reasoned conclusions about the issues raised in the scenario, through further research of lecture topics, and particularly through discussions with colleagues.
- To make the lecture course more productive and hopefully more *fun*

Mechanism

This scenario will run over the whole term and will take the following format:

- You will be given one article per week during the Monday lecture (the articles range from 2 to 7 pages in length).
- You are expected to read the article during your own time prior to the following Monday lecture.
- A quick poll will be taken each week as to whether you consider the programmer should be found guilty or not.

Articles

The scenario consists of an introduction and 9 articles:

- ***Introduction:*** Introduction, cast of characters
- ***Article-1:*** Silicon Valley programmer indicted for manslaughter
- ***Article-2:*** Developers of 'Killer Robot' worked under enormous stress
- ***Article-3:*** 'Killer Robot' programmer was prima donna, co-workers claim
- ***Article-4:*** 'Killer Robot' project mired in controversy right from start
- ***Article-5:*** Silicon Techtronics promised to deliver a safe robot
- ***Article-6:*** The 'Killer Robot' interface
- ***Article-7:*** Software Engineer challenges authenticity of 'Killer Robot' software tests
- ***Article-8:*** Silicon Techtronics employee admits faking software tests
- ***Article-9:*** A conversation with Dr. Harry Yoder

Copyright

Permission has been granted to copy the case study material for use in classroom instruction at a college or university. The material may not be copied for any other purpose without express written permission of the author.