Software Design Testing (adapted from NSPE Case No. 96-4)

Year

1999

Description

An engineer, hired by a software company, believes that the company's new software design is safe under existing standards. However, the new software may not meet the new standards that he knows are about to be released--standards that performing more tests could cost both the company and the public significantly. Issues of conflicting obligations to the company and the general public also arise.

Body

Software Engineer Christopher is hired by a software company and involved in the design of specialized software in connection with the operations of facilities that impact public health and safety, such as those that control air and water quality. Testing the software system is part of the design process. Christopher conducts extensive testing and finds that the softeware is safe to use under existing standards. But Christopher is aware that new draft standards are about to be released by a standard setting organization-- standards that the newly designed software may not meet.

Christopher could suggest that the software company and its client perform more tests on the software to see if it meets these new safety standards. Such tests would determine whether the company should move forward with the use of the software. But the client is eager to move forward and the company is eager to satisfy its client

and protect its finances and existing jobs. Doing the tests would be extremely costly and delay the project at least six months. This would put the company at a competitive disadvantage and cost the company a lot of money-- putting the goals of protecting its finances, existing jobs, and pleasing the client in jeopardy. Testing would also result in a significant rise in the state public service commission utility rates during the six months the new testing would delay the project. But at the same time, the management of the software company wants to be sure that the software is safe to use.

The company requests Christopher's recommendation concerning the need for additional software testing. What should Christopher recommend?

[NSPE Code of Ethics](#) An earlier version may have been used in this case.

Notes

See the original NSPE case at: [Software Design Testing - Case No. 96-4](#).

Rights

Use of Materials on the OEC

Resource Type

Case Study / Scenario

Parent Collection

Professional Ethics in Engineering Practice: Discussion Cases Based on NSPE BER Cases

Topics

Conflict of Interest
Employer/Employee Relationships
Engineer/Client Relationships
Public Health and Safety
Safety
Workplace Ethics

Discipline(s)

Computer Sciences

Computer, Math, and Physical Sciences
Engineering
Authoring Institution
Online Ethics Center