Professional Computing - Killer Robot Scenario Handout - 2001 - © 1989, 1994 Richard G. Epstein

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Samuels on the grounds that Silicon Techtronics was legally obligated to deliver a safe robot.

Cindy Yardley, Silicon Techtronics employee and software tester. She admitted to faking software tests in order to save the jobs of her co-workers.

Harry Yoder, Samuel Southerland Professor of Computer Technology and Ethics. He examines the tension between individual and corporate responsibilities in an interview published by the Sentinel-Observer's Sunday magazine.

## SILICON VALLEY PROGRAMMER INDICTED FOR MANSLAUGHTER

## PROGRAM ERROR CAUSED DEATH OF ROBOT OPERATOR

Special to the SILICON VALLEY SENTINEL-OBSERVER

Silicon Valley, USA

Jane McMurdock, Prosecuting Attorney for the City of Silicon Valley, announced today the indictment of Randy Samuels on charges of manslaughter. Samuels was formerly employed as a programmer at Silicon Techtronics, Inc., one of Silicon Valley's newest entries into the high technology arena. The charge involves the death of Bart Matthews, who was killed last May by an assembly line robot.

Matthews, who worked as a robot operator at Cybernetics, Inc., in Silicon Heights, was crushed to death when the robot he was operating malfunctioned and started to wave its "arm" violently. The robot arm struck Matthews, throwing him against a wall and crushing his skull. Matthews died almost instantly in a case which shocked and angered many in Silicon Valley. According to the indictment, Samuels wrote the particular piece of computer program which was responsible for the robot malfunction.

"There's a smoking gun!", McMurdock announced triumphantly at a press conference held in the Hall of Justice. "We have the hand-written formula, provided by the project physicist, which Samuels was supposed to program. But, he negligently misinterpreted the formula, leading to this gruesome death. Society must protect itself against programmers who make careless mistakes or else no one will be safe, least of all our families and our children", she said.

The Sentinel-Observer has been able to obtain a copy of the hand-written formula in question. Actually, there are three similar formulas, scrawled on a piece of yellow legal pad paper. Each formula describes the motion of the robot arm in one direction: east-west, north-south and up-down.

The Sentinel-Observer showed the formulas to Bill Park, a Professor of Physics at Silicon Valley University. He confirmed that these equations could be used to describe the motion of a robot arm.

The Sentinel-Observer then showed Professor Park the program code, written by the accused in the C programming language. We asked Professor Park, who is fluent in C and several other languages, whether the program code was correct for the given robot arm formulas.

Professor Park's response was immediate. "By Jove! It looks like he misinterpreted the y-dots in the formulas as y-bars and he made the same mistake for the x's and the z's. He was supposed to use the derivatives, but he took the averages instead! He's guilty as hell, if you ask me."

The Sentinel-Observer was unable to contact Samuels for comment. "He is deeply depressed about all this", his livein girlfriend told us over the phone. "But, Randy believes he will be acquitted when he gets a chance to tell his side of the story."

## DEVELOPERS OF 'KILLER ROBOT' WORKED UNDER ENORMOUS STRESS

Special to the SILICON VALLEY SENTINEL-OBSERVER

Silicon Valley, USA

by Mabel Muckraker

The Sentinel-Observer learned today that Randy Samuels and others who worked on the 'killer robot' project at Silicon Techtronics were under tremendous pressure to finish the robot software by January 1 of this year. According to an informed source, top level management warned killer robot project staffers that "heads would roll" if the January 1st deadline was not met. Randy Samuels, a Silicon Techtronics programmer, was indicted last week on charges of manslaughter in the now famous 'killer robot case'. Samuels wrote the flawed software which caused a Silicon Techtronics Robbie CX30 industrial robot to crush and fatally injure its operator, Bart Matthews. Matthews was a robot operator at Cybernetics, Inc. According to Silicon Valley Prosecuting Attorney Jane McMurdock, Samuels misinterpreted a mathematical formula, "turning harmless Robbie into a savage killer".

Our informed source, who wishes to remain anonymous and whom we shall call 'Martha' for the rest of this article, has intimate knowledge of all aspects of the Robbie CX30 project. Martha told the Sentinel-Observer that there was an enormous amount of friction between Robotics Division Chief Ray Johnson and the Robbie CX30 Project Manager Sam Reynolds. "They hated each others' guts", Martha told the Sentinel-Observer in an exclusive interview.

"By June of last year the robot project had fallen six months behind schedule and Johnson went through the roof. There were rumors that the entire Robotics Division, which he headed, would be terminated if Robbie [the CX30 robot] didn't prove a commercial success. He [Johnson] called Sam [Reynolds] into his office and he really chewed Sam out. I mean you could hear the yelling all the way down the hall. Johnson told Sam to finish Robbie by the first of January or 'heads would roll'."

"I'm not saying that Johnson was ordering Sam to cut corners", Martha added. "I think the idea of cutting corners was implicit. The message was, 'cut corners if you want to keep your job". According to documents which Martha provided the