Online Ethics Center
FOR ENGINEERING AND SCIENCE

Role Play on Intellectual Property Involving a Method for Data Compression

Author(s)

Michael Loui

Year

1993

Description

A variant of Hal Abelson's MIT roleplay involving RSA encryption.

Body

M. C. Loui

University of Illinois, UC

Following is a variant of the Alyssa P. Hacker role play. There are some puns on names that students may recognize (e.g., "Lem El-Zif" sounds like "Lempel-Ziv," a standard text compression scheme). The entire scenario is written in a gender-neutral fashion, with androgynous names.

Dramatis Personae:

Terry Wong, UI undergraduate

Dr. Chris Cruz, Principal, Oak Grove South High School, Illinois

Robin D'Cradle, Esq., Managing Partner, Dewey, Cheatham & Howe

Professor Pat Patel, Director of the Intellectual Property Office at UI

In 1994, UI researcher Lem El-Zif devised a novel data compression method that handles both images and text for World Wide Web pages. This method significantly speeds up the transmission of pages across the Internet. The UI quickly obtained a patent on the method, and assigned the patent to American Digital and Telecommunications (AD&T) for commercialization.

Terry Wong is a graduate of Oak Grove South High School and a senior at UI. In an undergraduate computer science course, CS 224, Terry learned about the Lem El-Zif algorithm and wrote a program that implemented the algorithm.

Last summer, Terry helped Oak Grove South set up a 'Web site in its computer lab, which contains 14.4K modems that permit full access to the Internet, including electronic bulletin boards. Terry wrote several utility programs for people at the school to use. One program, WebCompress, incorporated the Lem El-Zif algorithm. Terry uploaded WebCompress to a national electronic bulletin board, together with a note saying that the program could be freely distributed. WebCompress has become frequently used in many networks. Terry guesses that about 10,000 students, teachers, and others around the country are using WebCompress to efficiently transmit 'Web pages, although there is no way to know the exact number, because the program is widely redistributed.

Last month, Terry got a phone call from Dr. Chris Cruz, the principal at Oak Grove South. Dr. Cruz had just received a letter from Dewey, Cheatham & Howe, claiming that the widespread use of Terry's software infringes on the patent.

Dr. Chris Cruz, Principal Oak Grove South High School Oak Grove, IL.

Dear Dr. Cruz:

We refer to a recent posting from your school on comp.sys.web, "Announcing the initial release of WebCompress, a public domain program for compressing WWW pages."

The algorithm used in WebCompress is commonly known as the Lem El-Zif algorithm, which is protected by a patent. The University of Illinois at Urbana-Champaign has granted American Digital and Telecommunications (AD&T) exclusive sublicensing rights to the following patents registered in the United States, and all of their corresponding foreign patents:

Method for Compressing Images Integrated with Text on Web Pages ("Lem El-Zif algorithm") No. 5,378,091

WE HEREBY PLACE YOU AND ALL USERS OF YOUR IMPLEMENTATION OF THE LEM EL-ZIF ALGORITHM ON NOTICE THAT THEY ARE INFRINGING ON THIS PATENT, AND WE RESERVE ALL OF OUR RIGHTS AND REMEDIES AT LAW.

Very truly yours, Robin D'Cradle, Esq. Managing Partner Dewey, Cheatham & Howe

---

Dr. Cruz is worried. The school cannot keep track of who is using Terry's program, and there is no money in the school budget to pay for licensing fees.

Terry is extremely upset. In Terry's opinion, the program is very simple, and people should be allowed to use it for free. No one in CS 224 had mentioned that the algorithm was patented. Terry contacts the CS 224 instructor, who refers Terry to the campus's Intellectual Property Office (IPO), which is responsible for negotiating all UI patent licenses.

Professor Pat Patel is Associate Vice Chancellor for Research and Director of the IPO. Because UI has an obligation to demonstrate that its licensing policies for government-funded research are in the best public interest, Professor Patel is anxious to defuse any potential conflict arising from a UI license.

Professor Patel arranges a meeting. At this meeting, Terry, Pat, Chris, and Robin will try to resolve the problem. If no mutually agreeable solution is reached, a lawsuit is possible. Preparing for the lawsuit would cost UI at least $50,000 in legal fees, and

going to court could cost over $1 million.

In preparing for the role play of the meeting, consider the following questions:

- What are the ethical issues in this case?
- What might each participant want from this meeting?
- What kinds of solutions might each participant find acceptable or unacceptable?
- How should each participant initially approach each of the others?
- How should each participant respond to each of those approaches?

This fictional case is a minor variation of a case based on the patented RSA public-key cryptosystem. The latter case is used in the course 6.001, Structure and Interpretation of Computer Programs, at M.I.T.

Notes

This fictional case is a minor variation of a case based on the patented RSA public-key cryptosystem. The latter case is used in the course 6.001, Structure and Interpretation of Computer Programs, at M.I.T.

Contributor(s)

Michael Loui

Rights

Resource Type

Case Study / Scenario

Parent Collection

Role-Play Scenarios for Teaching Responsible Conduct of Research

Topics

Intellectual Property and Patents
Research and Practice

Discipline(s)

Computer Engineering
Computer Sciences
Computer, Math, and Physical Sciences
Engineering
Mathematics