



INTELLECTUAL PROPERTY FOR AN INFORMATION AGE

How to balance the public interest, traditional legal principles, and the emerging digital reality.

Intellectual property law has suffused the consciousness of computing professionals for the past decade or so. Back in the late 1980s and early 1990s, the “look and feel” lawsuits sent shock waves through the computer-human interaction research and development community. Also hotly debated were questions about whether it was lawful to reverse-engineer another developer’s program in order to make a compatible program; whether (or to what extent) the “structure, sequence, and organization” (SSO) of a program was protectable expression under copyright law; and whether algorithms and other program-related innovations could be patented. To aid computing professionals in understanding the legal debates deeply affecting their field, *Communications* began publishing a series of “Legally Speaking” columns to explore these and other controversies and suggest how they might be

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resolved in a way consistent with traditional principles of the law and with the goal of promoting innovation in the computing field. Now, with this special section on the latest generation of intellectual property issues, *Communications* continues its coverage of this important and contentious aspect of information policy.

The burning issues of a decade ago have subsided. Apple Computer and Lotus Development lost their look and feel cases. Appellate courts in the U.S. and legislatures in other countries decided that reverse engineering software for a legitimate purpose, such as developing an interoperable program, should be lawful as a matter of intellectual property law. While the detailed structure of a program may be eligible for copyright protection—unless it is integral to a process or method of operation—broad SSO claims of the sort that flourished for five years after the infamous

1986 *Whelan v. Jaslow* decision have died away, as U.S. appellate courts agreed that the *Whelan* decision rested on a flawed understanding of computer science. Meanwhile, patent authorities around the world have become increasingly receptive to claims for computer program-related inventions, including algorithms. On the whole over the past six or seven years, the legal rules on software-protection issues have evolved in a reasonably sound manner.

Computing professionals may well have hoped that once the software intellectual property was cooled down, they could safely go back to ignoring intellectual property law. However, several recent initiatives having profound implications for the global information environment deserve close attention. The articles in this special section cover five such initiatives likely to have enduring consequences.

Dan L. Burk of the University of Minnesota Law School explores some intriguing and nonobvious implications of the continued expansion of scope of patent protection to cover all manner of information innovations, including free-speech considerations. Randall Davis of MIT unpacks “the digital dilemma” that has led to multiple controversies about digital copyright issues and legislation that has given copyright owners new rights to control piracy-enabling technologies. Yochai Benkler of the New York University School of Law focuses on continuing efforts to enact laws that would create a new form of legal protection for the contents of databases, weighing its implications for an information ecology promoting innovative peer production in the information age. Michael Froomkin of the University of Miami School of Law explains how anticybersquatting law gives trademark owners new rights to control registration of domain names incorporating the marks, along with a new dispute-resolution process the Internet Corporation for Assigned Names and Numbers (ICANN) now requires in every domain name registration contract. And finally, Maureen O’Rourke of the Boston University School of Law chronicles the mushrooming use of the ancient tort of “trespass to chattels” as a way to block unauthorized use of a firm’s Web sites and page servers. No one objected in 1996 when AOL got an injunction to stop a commercial spammer from sending email to its customers’ accounts by claiming trespass to its servers. More recent cyber-trespass cases have created a quasi-intellectual property regime that could radically reshape the entire Internet, including the Web.

Several themes run through these articles. One is the continuing expansion of intellectual property rights, commonly justified on the grounds that this is a necessary response to threats posed by the Internet.

Another is a sense of mismatch between traditional legal concepts and emerging digital phenomena. Software may once have seemed the ultimate misfit for intellectual property law; programs are, by nature, both writings and machines, even though the law bifurcates innovations into either writings (assigned to the copyright system) or machines (assigned to the patent system).

Even digitized texts, pictures, and movies now seem mismatched with copyright law, because every access to or every viewing of them inevitably involves making copies. This mismatch between the law and the emerging digital reality in turn means either that rights holders get to control all uses of works, instead of having control over only reproduction and display, or that a new way for distinguishing between acceptable and unacceptable uses has to be developed.

Other misfits with traditional legal principles include proposals to protect the data in databases, new rights to control trademarks embodied in domain names, and virtual trespasses. A larger question underlying these mismatches is whether legal regimes devised for a manufacturing age are well-suited to promote innovation for an information age.

Another theme is how to preserve certain longstanding limiting principles of intellectual property law (such as “fair use” in copyright law) or develop new limiting principles (such as fair use rights for patents) in order to keep an appropriate degree of balance in intellectual property law. If intellectual property rights become too strong, certain industry players may benefit, but such a development would not be good for innovation and consumer welfare in the long run.

Finally, the articles here implicitly seek to at least engage you personally in intellectual property policy in order to ensure that the policymaking process includes all stakeholders, rather than echoing only the voices of intellectual property lobbyists. Sometimes, the additional rights they want may be needed. Sometimes, new rights are needed, though perhaps not as broadly as the lobbyists want. The active input of informed citizens, especially *Communications* readers, can help resolve today’s generation of intellectual property issues in a more optimal manner. ■

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