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Copyright, Digital Media, and Libraries  
by Martin Halbert

Running a branch library devoted to computational materials, I am frequently amazed at patrons' lack of understanding of copyright issues. One patron, an otherwise very intelligent research scientist, was baffled concerning the restrictions inherent in checking software out of the library. The magnitude of his misunderstanding came home to me when he asked if our restrictions meant that he didn't need to bring his own disks to copy the software onto. He thought, in all honesty, I finally realized, that copying the software was what checking out software was all about. After a very long discussion with him about copyright and why it is illegal to copy software, he went away somewhat shocked, but at least informed.

While most librarians have a better understanding of the concept of copyright than my patron, how many of us have really thought about all the ramifications of copyright and new digital media technologies? Librarians are ostensibly supposed to be experts on the proper use of the collections of information they administer. This month's column is devoted to a brief bibliography on the subject of copyright and digital media. I know that I had never considered many of the issues raised in the sources reviewed below, so I think they will be of interest to all librarians who have added any kind of digital media (e.g., software and CD-ROM databases) to their collections.

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U.S. Congress, Office of Technology Assessment. Intellectual Property Rights in an Age of Electronics and Information. Washington, D.C.: U.S. Government Printing Office, April 1986. OTA-CIT-302.  
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This 1986 report by the Office of Technology Assessment is the best existing review and discussion of how new technological developments have impacted the concept of intellectual property in the United States. Many discussions of the topic begin with a review of this source (see below), which is justifiable considering its quality. The 300-page report concisely covers the conceptual framework and goals of intellectual property rights, how current laws have tried to accommodate technological

change, enforcement issues, and the role of the federal government as a regulator. The conclusion of the report is that the new technologies, especially functional works like software, have rendered the existing concepts and implementations of domestic intellectual property law obsolete. An entirely new approach to the issue of what constitutes intellectual property and how to regulate it will have to be developed by congress. The OTA report raises profoundly troubling issues for librarians and the entire information industry.

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U.S. Congress, Office of Technology Assessment. Computer Software and Intellectual Property--Background Paper. Washington, D.C.: U.S. Government Printing Office, March 1990. OTA-BP-CIT-61

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Drawing on the 1986 OTA report and others, this OTA background paper further analyzes software issues. It goes into greater detail concerning questions peculiar to software, such as addressing the following questions. Can an interface be copyrighted? Can the concept of an algorithm be unambiguously defined? Patented? Is a neural net to be considered a software system or a hardware system? The paper includes a few developments which happened after the 1986 OTA report, but fundamentally the paper only raises questions and provides a context for discussing the problem. Real answers may be a long way off.

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Duggan, Mary Kay. "Copyright of Electronic Information: Issues and Questions." Online 15, no. 3 (May 1991): 20-26. (ISSN 0146-5422)

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Because developments in the law have lagged so far behind technological developments, many issues of copyright and digital media are being resolved in practice, if not in legal fact. Duggan discusses emerging views about what constitutes "fair use" of electronic information sources. She concludes that while some consensus is developing about use of search results from CD-ROM and dial-up databases, little agreement has yet been reached about LAN and WAN access to databases and other network information sources.

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Garret, John R. "Text to Screen Revisited: Copyright in the Electronic Age." Online 15, no. 2 (March 1991): 22-24. (ISSN 0146-5422)

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John Garret is the director of market development at the Copyright Clearance Center. Taking a very different view from most of the other sources reviewed in this column, he maintains that current copyright laws are perfectly capable of dealing with the new electronic environment. He calls into question many of the assumptions about computer systems and monetary funding that (he claims) underlie the move to overhaul the copyright system. He describes a variety of small-scale pilot projects that the Copyright Clearance Center has undertaken in conjunction with publishers and researchers "to provide owner-authorized, text-based information electronically for internal use to various sets of users, and to determine what they use, when they use it, why, how often, and to what end." He further claims: "For these pilots, and for other, larger-scale programs that will be developed in the future, existing copyright law provides a perfectly adequate context for the development and elaboration of systems to manage computer-based text."

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While one has to wonder whether Mr. Garret is unbiased in this matter given his position, he does make a convincing argument for the limited case of electronic access to text-only databases. However, his points do not address the larger issues raised in the OTA intellectual property studies.

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Alexander, Adrian W., and Julie S. Alexander. "Intellectual Property Rights and the 'Sacred Engine': Scholarly Publishing in the Electronic Age." In *Advances in Library Resource Sharing*, ed. Jennifer Cargill and Diane J. Graves, 176-192. Westport, Conn.: Meckler, 1990.  
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Adrian and Julie Alexander give a fine overview of the 1986 OTA report, as well as a conference on intellectual property rights held in 1987 by the Network Advisory Committee of the Library of Congress. They conclude with a broad discussion of the potential for electronic publishing for the scholarly research and publication process, which echoes many of the themes discussed at recent meetings of the Coalition for Networked Information.

They maintain, as some CNI speakers have, that electronic publishing represents an opportunity for universities to recapture their intellectual property from the expensive and fruitless cycle of sale back and forth to publishers. They also point out that publishers want to capture this potential publication medium as well.

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Shuman, Bruce A., and Joseph J. Mika. "Copyrighted Software and Infringement by Libraries." *Library and Archival Security* 9, no.  
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Shuman and Mika provide a good overview of the current state of software piracy and copyright infringement, with a few additional comments that describe the situation of libraries which circulate software. They are quite critical of the practice of "shrink-wrap" licensing which many vendors have taken up. This is the familiar tactic of pasting a license agreement with many restrictions on the outside of a shrink-wrapped software package, with a statement to the effect of "if you open this package, you thereby agree to this license." They describe the many problems involved in trying to police the use of software by library patrons, and state that: "Librarians will continue to find themselves between copyright holders and license-vendors, eager to recover the money they feel entitled to, and patrons (and sometimes library employees) who wish to 'liberate' programs, whether out of simple greed, a love of the challenge, altruism, or a 'Robin Hood' complex."

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Denning, Dorothy E. "The United States vs. Craig Neidorf." Communications of the ACM 34, no. 3 (March 1991): 24-32. (ISSN 0001-0782)

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Finally, I would like to conclude this column with an example of the kinds of troubling legal actions that are surely brewing on the horizon.

The March 1991 Communications of the ACM was partly devoted to a debate concerning electronic publishing, constitutional rights, and hackers. The article by Dorothy Denning was a description of the trial of Craig Neidorf, a pre-law student at the University of Missouri. Neidorf was charged by a federal grand jury with wire fraud, computer fraud, and interstate transportation of stolen property.

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All this because he published a document (containing what turned out to be public domain information) in an electronic journal he edited. The electronic journal was called "Phrack," a contraction of the terms "Phreak" (the act of breaking into telecommunications systems) and "Hack" (the act of breaking into computer systems). The document in question concerned the E911 system of Southwestern Bell, and it contained only information that was already in the public domain. The charges against Neidorf were dropped when this was brought up during the trial, but Neidorf was left with all his court costs, amounting to \$100,000.

Now, regardless of what one thinks of Neidorf or the ethics of hacking, the fact that the U.S. government can bankrupt an

individual (or institution!) by making groundless accusations of publishing "secret" electronic documents bears attention! Neidorf's case may potentially mark the beginning of entirely new types of censorship revolving around electronic media. Denning's article points out that currently the government can seize all computer equipment and files of an individual or organization, and hold them for months. This kind of search and seizure (again on mistaken grounds) devastated one small company called Steve Jackson Games. Denning discusses this incident as well, and it is chilling to imagine happening by accident to one's own organization.

Problems of copyright and the new digital media are only now beginning to surface, but they have been inherent in the new technologies since at least the sixties. Libraries and society as a whole will increasingly have to face these issues, either in legislation by a forward-looking congress, or more likely in painful court trials like the United States vs. Neidorf.

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