By Georgia K. Harper

The fundamental concepts of copyright law have existed for two hundred years. Some of these basic copyright principles are likely to continue to endure: maintaining the intended purpose of copyright to fairly balance the rights of the public for access to information with the incentives for creation; providing authors with exclusive rights but limiting what copyright protects and the time period of copyright protection; and giving users certain rights, such as fair use, that restrict the owner's monopoly.

The balance that copyright law has achieved between the interests of copyright owners and the interests of the public has evolved slowly and has been only periodically adjusted. Today, however, the pace and the magnitude of change threaten to skew this balance to the point of collapse. Some of these changes—licenses, access controls, certain provisions in the Digital Millennium Copyright Act (DMCA)—have the potential to drastically undermine the public right to access information, to comment on events, and even to share information with others.

Since computer technology in one form or another is at the heart of these copyright changes, information technology professionals need to understand not only those basic copyright principles that are likely to endure but also the direction that legal change is taking us. What are the trends? How is the law changing, and what might it look like in five to ten years? Will we be able to recognize it?

Purpose of Copyright

Our U.S. Constitution states the purpose of copyright in the clause that authorizes Congress to create the Copyright Act: to improve our society through the advancement of knowledge. It probably makes sense to most of us that providing an incentive to creators will motivate them to create. The more things created, the better off our society will be. But creation is just the first step. Those creations have to get "out there" if society is to benefit from them. The knowledge created has to be disseminated. People have to be able to access it, both while it is fresh, for the ideas it contains, and later, when the exclusive rights of the owner have "expired." Once the owner's term of protection is over, the particular expression the owner used becomes a part of our shared resource—a part of the public domain. The public domain is not a big black hole into which works "fall," never to be seen or heard again. Rather, it is the repository for all the
expression that our copyright law was created to support, the expression that we are all free to use in any way we wish. The richness of this resource supports our developing wisdom, even our democratic way of life. That's a pretty noble purpose. How does copyright law achieve it?

Copyright Basics

What Does Copyright Protect?
Copyright protects only the unique ways of expressing ideas. It does not protect the underlying ideas. Anyone can use the ideas in a work at any time, if he or she can get access to the work. Protection requires a minimum amount of creativity. Examples of protected expression, assuming they originate with the author, are prose, poetry, music, painting, sculpture, architecture, software programming, diagrams, and graphics. Any facts included in a protected work are not themselves protected, however.

When Does Copyright Protection Begin and End?
Today, protection begins at the moment a work is fixed in a tangible medium. For example, the work that you are reading was protected the moment I hit the “save” key for the first time. This protection is automatic. Nothing is needed to secure it—no registration, no notice requirement. If, however, a copyright owner wants to bring a lawsuit against someone who is infringing a work, the owner must have registered the work. Registrations made before an infringement or within the first three months after a work is published entitle the owner to special statutory damage awards if the owner wins a lawsuit, including the right to have the infringer pay the attorney’s fees of the copyright owner.

It wasn’t always like this. Until 1978, the term of protection began when a work was published with the proper copyright notice. The work was protected for a term of years that started out rather limited: 28 years for the “initial term” and another 28 years for the “renewal term.” That term has been lengthened repeatedly so that now, works published between 1923 and 1978 are protected for 95 years. Certain works that were published before 1964 and whose copyrights were not renewed by their owners received only the first 28-year term of protection. Their copyrights have all expired.

Works published after 1978 have a different term: the life of the author plus 70 years. Works for hire are protected for 95 years from the date of publication or 120 years after creation, whichever is shorter.

Finally, the copyright law before 1978 did not protect unpublished works at all. Those works first acquired federal protection in 1978, but their terms are counted differently: they are protected for the longer of the life of the author plus 70 years or until December 31, 2002.

There is a wonderful chart online—maintained by Laura Gasaway at the University of North Carolina at Chapel Hill—that shows these various terms in a format that makes it easy to determine if a work is still protected.

What Does Copyright Mean to Owners?
Copyright law gives owners a set of exclusive rights for the term of protection, but how does one know whether he or she is the owner of a work? In a university setting, this can be a very difficult question to answer.

The first principle of ownership is that the author will normally be the owner of a work he or she creates. The second principle is that two or more authors may be joint authors and joint copyright owners of a work. This second principle applies only when each author contributes copyrightable expression (see above) and, at the time of the contribution, each intends his or her contribution to be part of a unified whole and intends to be joint authors with the others. This intent requirement can be a big problem. One of a number of authors might have the intention that others’ contributions do not make them joint authors; this one author’s intention will make it impossible for the other authors to prevail on a claim that they are joint authors. Thus it is very important to address the issue of ownership of collaborative works—a common type of work in a university environment—upfront, before writing progresses and contributors are disappointed.

The third principle of ownership is that under special circumstances, an employer of a creator will be the author of the work, rather than the creator. This is called “work for hire,” and there are two ways it comes about: (1) employers own the work of their employees within the scope of employment, and (2) a person who hires someone to create something for the hirer will be the author and owner of the creation if the hirer and the creator have a signed contract that identifies the work as work for hire and if the work actually fits within one of the ten statutory categories for contractual works for hire. Since this second branch of the work-for-hire doctrine is hard to satisfy, hirers will usually ask the creator of a work to assign the copyright to the hirer in case the requirements of the work-for-hire doctrine are not met. That way, the hirer will own the work as an assignee, at least, if not as the author of the work.

By itself, no amount of money paid for the creation of a work will cause the party paying the money to own the copyright in the work. There are only these few ways to become an author or owner: create the work oneself or jointly with others; employ the creator and be sure the work is within the scope of the employee’s duties; hire the creator and satisfy the rigorous requirements of the work-for-hire statute; or secure an assignment of the creator’s copyright.

An author’s exclusive rights include the right to make copies, create derivative works, authorize others to exercise the author’s rights, and publicly distribute, display, and perform works. Certain authors also have rights of integrity and attribution, our version of “moral rights.” These apply to original artworks and limited editions of two hundred or fewer prints.

What Does Copyright Mean to Users?
The rights of copyright owners are exclusive, meaning that only the owners may exercise them, but they are not unlimited. Many provisions of the Copyright Act place important limits on the owner’s rights. Those of special importance to the university community include the following: Section 107, per-
mitting fair uses of works without the owner's permission; Section 108, permitting libraries to archive works, to make copies for patrons, and to participate in interlibrary loan operations, among other things; and Section 109, permitting all of us to dispose of our copies of a work without regard to the wishes or the pocketbook of the copyright owner. This last provision, called the first-sale doctrine, is the backbone of our public library system and one of the principal ways that copyright law achieves its purpose of facilitating public access to the ideas contained in copyrighted works.

Three other provisions also have particular importance to education. Section 110 permits certain educational performances and displays in face-to-face teaching and in distance learning, among other things. Section 117 lets us make backup copies of our software programs. Section 121 permits entities like the Texas Commission for the Blind and Visually Impaired to make copies without permission when a copyright owner has not chosen to make available special versions for the disabled.

**What Is Fair Use?**
Although I will address only the fair-use limitation here, it is important to remember that all of the limitations, both individually and taken together, are critical to the achievement of the purpose of copyright: to improve our society by increasing knowledge. These limitations are just as much a part of how copyright achieves its purpose as is the incentive to authors.

**Role of fair use.** Fair use embodies a balance of interests: it balances the interests of copyright owners to control the use of their works so that they can take full advantage of their incentive (i.e., their period of exclusivity) with the interests of the public to have access to the works and the ideas in them. This is often explained as fair use embodying First Amendment concerns. One can imagine that copyrights could easily be used to thwart speaking and listening if the exclusive rights were intolerably rigid. Fair use gives us some “breathing room.” One of the best examples of this is the reliance on fair use to quote from a work in order to take issue with it or to criticize or otherwise comment on it. No copyright owner can refuse to permit such use; it is a fair use and does not require the owner's permission. Fair use also addresses the occasional failure of our markets to facilitate important uses of works because the uses do not make economic sense. For example, in many cases, the cost to carry out a transaction between a seller of rights and a buyer of those rights is many, many

**times more than the price that the seller would ultimately charge for the right. Thus it does not make sense for the seller to do business with the buyer. In such a case, fair use can be relied on to “step in” and bridge the gap by making it legal for the buyer to use the owner's work without having to carry out the uneconomic transaction. A good example of this kind of use is including a few images or audio or audio-visual clips in a multimedia work for classroom use.**

**Fair-use statute.** Fair use is set out, in two parts, in Section 107 of the Copyright Act. The first part describes uses that are typical fair uses: criticism, comment, news reporting, teaching (including making multiple copies for classroom use), scholarship, and research. This list is not exhaustive, however, and even a use that is listed may not be a fair use, because each proposed fair use must satisfy the second part of the statute. This part stipulates the four factors for consideration in each case:
1. The purpose and character of the use
2. The nature of the copyrighted work to be used
3. The amount and substantiality of the part used
4. The effect of the use on the market for or value of the work

This test is not very specific. The statute employs a “weighing and balancing” technique that introduces many opportunities for judgment. It is quite possible for two people to consider the same use and come to different conclusions about whether it is fair. A person needs some practice and some familiarity with the cases interpreting the statute to be able reasonably to predict what a court may say about whether a particular use is fair. I have summarized my knowledge about how the fair-use test works in the article “Fair Use of Copyrighted Works,” and I urge you to read the article for more information about how this test works.1

*Fair-use guidelines.* The ambiguity of the fair-use test has brought copyright owners and users together to try to achieve some consensus on what would actually be fair uses in various educational contexts. The agreements that have been reached are referred to as guidelines. Most were created at the urging of government officials, but none have the force of law. The guidelines define not the limits of fair use but rather the minimum of fair use—offering a safe harbor, so to speak. If a person wants to use another person’s work that falls within a guideline, the user can be assured that no one is likely to object that the use exceeds the bounds of fair use. The guidelines are much more specific than the statute, giving actual amounts of works that can be used in many cases. The trouble is that the amounts are fairly small. That and other limits imposed on the uses can make the guidelines less useful for higher education. This doesn’t mean that they should not be used as a starting point, because if a use fits within them, the user need go no further to determine that the use is fair. If a use exceeds them, the user still has recourse to the statute. Thus, consulting both the guidelines and the statute gives educators the maximum flexibility. The article I noted earlier, “Fair Use of Copyrighted Works,” contains links to all of the guidelines that exist as well as to a set of guidelines developed at the University of Texas System and based on the negotiated guidelines.

*The good-faith fair-use defense.* Section 504(c) contains a feature of copyright law with which all educators should be familiar. This section states that even if an infringer is sued and loses in court, the judge has the discretion to throw out the statutory damage award against the user if the user believed, and had a reasonable basis for believing, that his or her use was a fair use. Following an institutional copyright policy is probably one of the best ways a person can ensure that if sued, he or she will be able to rely on this defense. In fact, just showing that a user is entitled to rely on this defense might make suing that person look like a bad idea.

*Trends*

Even though fair use is a key “stress point,” there has been no change to Section 107. The stresses on fair use result from other things: technological “fixes” that control dissemination of copyrighted works; legal frameworks, established to control dissemination, that marginalize fair use; and license terms that ignore fair use as well as other public rights protected in the Copyright Act. Ultimately, I am concerned that the basic goal of copyright—to improve our society by fostering creativity, encouraging the dissemination of information, and supporting the development of knowledge—is endangered by the erosion of fair use in the digital environment.

Remember, fair use embodies a balance between the competing interests of owners and users, between control and access, between control and the First Amendment, and it bridges the gap between a willing seller and a willing buyer of rights to use. A diminishing role for fair use may well mean less public access and less ability to speak, to criticize, or to comment. Let me give you some examples.

*Licenses*

Licenses stand to replace the sale of many copyrighted works today, without necessarily allowing licensees to use their works in ways that copyright law would have permitted, such as making a fair use and disposing of the licensee’s copy. Each restriction undermines public access to some degree. The availability of a license also affects the outcome of the fair-use test, making previous fair uses subject to the payment of royalties. This can restrict access to those who can afford to pay.

Most disturbingly, copyright owners may use license terms to prevent disclosure of information that would normally require extraordinary measures to protect it as a trade secret. Kerberos is a standard security infrastructure developed at the Massachusetts Institute of Technology with public funds. Microsoft apparently proposed additional features (“extensions”) to Kerberos and incorporated these proposed extensions in Windows 2000. In the context of the Microsoft antitrust case, discussion of the reasons that Microsoft did this (allegedly to stifle competition from Linux) and of the effect on competition is important; however, Microsoft posted the specification for its proprietary Kerberos extensions under license terms that require users to treat it as if it were Microsoft’s trade secret. In effect, no one who sees it can share it with anyone else without breaching a contract.4

*Access Controls*

Access controls function mainly to restrict access to those who are authorized, usually by payment of a fee; however, access controls can be used for other purposes. Mattel owns a company that makes a program, called CyberPatrol, that blocks access to certain Web sites; however, users of the program cannot see the product’s “block list.” Critics of filtering software created a program, called “cphack,” that revealed the block list so that users could see that many unobjectionable sites were being blocked by the software. Mattel’s first reaction to the criticism was to add the sites that criticized it and its product to the block list, thus using its access-control technology to prevent users
from seeing sites containing views with which Mattel disagreed. 3

The DMCA ISP Notice Provisions
The Internet Service Provider (ISP) liability limitations of the Digital Millennium Copyright Act (DMCA) permit copyright owners to send notices to ISPs directing them to take down pages alleged to infringe the owners' rights. These provisions are located in Section 512 of the Copyright Act. Copyright owners may use this procedure irrespective of whether the use may be subject to fair-use claims. It is easy to send the notices (no judicial intervention—no court order, not even a sworn affidavit—is required), and it is easy (and safe) to comply. If ISPs want the substantial protections of the DMCA and if they decide to comply, they are not required to consider whether something may be infringing or fair use. They can take the allegations as true. Subscribers can raise such issues, but they may not be legally sophisticated enough to do so effectively.

Mattel sent such notices to ISPs worldwide to take down cphack copies that Mattel alleged infringed its copyrights. However, cphack’s programmers arguably made a fair use of CyberPatrol to reverse-engineer cphack, and fair use is an affirmative defense to any allegation of infringement. In any event, despite the fact that the allegations were unproven, many—if not most—of the notified ISPs probably took the program down. Mattel also sent subpoenas to Web sites worldwide for the identities of anyone who had downloaded cphack. Ultimately, Mattel bought the copyright in cphack from its creator to acquire the authority it needed to demand that the program be removed from all Web sites, but in an ironic twist, cphack had been licensed under the “GNU’s Not Unix” or “GNU” public license and copies already distributed could not be “called back.” In the end, Mattel got a court order banning distribution of cphack, pursuant to the DMCA. 6

The Kerberos controversy erupts in this context also. Slashdot, a Web site devoted to the discussion of open-source software, received notice that discussions about the controversy were infringements of Microsoft’s rights. Participants posted the entire specification, links to other locations where one could see the specification, and a statement that if the specification was opened in WinZip, the license would not appear before the specification. All three of these kinds of messages were the targets of ISP notices sent by Microsoft under the DMCA. There is, of course, no need under the DMCA for Microsoft to demonstrate that the matter claimed to be protected as a trade secret is indeed a trade secret (this determination rests almost entirely on the degree to which the secret is effectively treated as a secret by its owner), to show that posting the specification infringes any copyrights owned by Microsoft, or to consider whether fair use covers any of the speech in question, including links to other sites posting the specification or an observation of fact about the function of WinZip. 7

In another example, the Church of Scientology allegedly sent an ISP notice to eBay regarding the sale of a device, saying that the device was protected by copyright and that selling it violated the owner’s rights. Even though the first-sale doctrine (Section 109) protects subsequent sales of copyrighted materials from control by the copyright owner, eBay apparently complied with the request, without investigating and without objecting on the grounds that the device may not have been protected by copyright at all (copyright protects things like writings, paintings, music, and video but not things like devices) or that the first-sale doctrine

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applied to limit the copyright owner’s rights to control a second sale.8

DMCA Anticircumvention
The biggest threat to speech and access is contained in the DMCA’s anticircumvention provisions. These provisions, beginning at Section 1201 of the DMCA, currently prevent the manufacture or distribution of a device whose primary purpose is to circumvent a technology that protects a copyrighted work. Remember the Kerberos discussions that were the subject of notices under the DMCA’s ISP provisions, specifically the statement that using WinZip would allow the reader to access the specifica-
tion without the license appearing first to bind the user to secrecy? That statement itself could violate the device prohibition. A statement of fact is now actionable as a distribution of a device whose primary purpose is to circumvent a technology that protects a copyrighted work.

Similarly, Mattel need not concern itself with whether it can control the distribution of a software program that may or may not infringe its copyrights. It merely needs to allege that the program circumvents a technology that protects a copyrighted work. If it does this, fair use becomes irrelevant.9

In a case involving the eight major motion-picture studios and a journalist who operates a Web site called “2600, The Hacker Quarterly” (Universal City Studios v. Shawn C. Reinertsen),10 and in a case involving two streaming technology companies (RealNetworks v. Streambox),11 the owners of copyright in one technology allege violations of anticircumvention law by the creators of software that enables an owner of a copy of a legally acquired work to use it with a competing technology (another piece of hardware or software, for example, in order to play music on a different player or to play a movie on a different machine).

Stunning assertions are emerging from these disputes. RealNetworks argues that its file format is a copy-control device, a technology that protects a copyrighted work, and that converting its files to another format is thus circumvention.12 Both plaintiffs argue that the legitimacy of the purpose of the end user, such as making a fair use, is irrelevant to the inquiry.13 The trouble is that under the anticircumvention provisions, they are probably right.

Irrespective of whether the plaintiffs are right, their lawsuits alone reportedly were enough to cause many sites posting copies of DeCSS, the program to which the movie studios in the Universal City Studios case objected, to shut themselves down, thus demonstrating the chilling effect that this law can have on speech.

Finally, the plaintiffs are arguing that mere links to allegedly infringing material, which amounts to little more than facts about the location of such materials, constitute contributory infringement.14 Compare a newspaper story that reports a fact such as “copies can be purchased at any flea market” (referring to allegedly bootleg copies) with a Web page that reports, “Copies of DeCSS are available at the following locations: [linked list].” In neither case has there been a determination that any copies are in fact infringing. Would we ban the speech in the newspaper article? We are asking courts to ban the speech on the Web page, by court order.15 If this doesn’t get you worried, I haven’t done a very good job of explaining the situation!

In a more general sense, anticircumvention provisions potentially threaten the very bargain our copyright law represents because just as no one is authorized, under these provisions, to “open” the locks to make a fair use, no one is authorized to “open” them on works with expired protection terms to permit these works to enter the public domain. If copyright owners do not give users these rights, the public loses its half of the bargain. With terms of protection that now last around 100 years, this is no trivial matter.

The technologies discussed above do not inevitably lead to less access and less speech. There are creative strategies, including new business models, that can reward copyright owners while preserving the public interest in the access and use of works.16 We must encourage the development and implementation of such strategies.

Summary
Copyright law is an agreement among all of us, copyright owners and users, to allocate rights and responsibilities for a particular purpose: the advancement of knowledge. We provide an economic incentive to authors to motivate them to create; we put limits on their power to control their works, in order to provide the public benefit for which the law is intended. Limits on an owner’s ability to control and exploit his or her work are not a problem to be circumvented; they are the fundamental way the law achieves its purpose. We must not let technological and legal solutions to perhaps very temporary problems compromise our achievement of the social goals of copyright.

Notes
1. U.S. Constitution, art. 1, sec. 8, cl. 8.
6. Ibid.
7. Pfaffenberger, “Yes, Microsoft.”
8. Discussion on the CNI-copyright listserv: Eric Eldred, “Re: DMCA hearings and protests,” Friday, June 2, 2000, 10:09 p.m.
12. Ibid., para. 30.
15. Ibid., “Plaintiff’s Motion to Amend Court’s Preliminary Injunction.”

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