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Guarding Rights in Cyberspace

by Mitchell Zimmerman



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Table of Contents

Copyright law and the Internet	1
The Internet and the World Wide Web: What are they and how do they work?	3
What the Internet is Literally Made of	3
Technical Key to the Web: Packet Switching	5
A brave new world that has such infringers in it?	6
Pirating of commercially-licensed software or other works	7
Copying of material from the site itself	8
Linking and framing	9
Caching	13
Conclusion	14

Digital technology allows 'visitors' to create perfect copies of works from your web site, to distribute them globally at virtually no cost, and to use them in ways that can cause surprising harms. Mitchell Zimmerman counsels on managing the risks in an uncertain legal environment.

The recent explosive growth of the Internet—fueled by the emergence of simplified user interfaces, the steady digitization of all manner of works of authorship, the accelerating development of on-line technologies, and the swift evolution of new business models and new uses—has given rise to difficult new copyright issues and profound practical challenges to copyright law. Underlying these problems is the capacity of the new technologies to create unauthorized, perfect and costless copies of just about anything anyone might dare place on a web site, and to distribute them world-wide, essentially instantaneously. These developments have created a new pressure to internationalize the copyright system, and prompted the adoption of two World Intellectual Property Organization treaties in Geneva last year for the specific purpose of strengthening copyright law in the new digital electronic environment.

Nonetheless, the implementation, meaning and effectiveness of these measures remain uncertain. From the perspective of a company trying to decide right now what information to put on its web site and what precautions to take, neither existing law nor the new treaties provide much practical guidance. This article explores the obvious and not-so-obvious risks posed by the Internet and the digital environment, and suggests some actions that can be taken. First, however, some background on the Internet.

Copyright law and the Internet

The Internet, and its graphical venue, the World Wide Web, are undergoing an extraordinary, exponential increase. The number of web sites has grown from 10,000 in December 1994 to 100,000 in January 1996 to 230,000 in June 1996 to well over a million today, roughly tripling every six months. A large proportion of high-technology entrepreneurial energy is focusing on the web, and a large part of the most advanced software industry talent is now devoted to "web-centric" developments. Estimates of the number of Internet end-users vary, but it appears that (even excluding those whose only on-line use is email), as of the spring of 1997, about 28 million Americans were consistently using the Internet. Estimates that there will be 67 million on-line households by the year 2000 in the United States alone are not incredible. As Sun Microsystems' recently-filed lawsuit against Microsoft illustrates, the Internet promises or threatens to alter power relations within the computer and software industries, as well as between content providers and disseminators of information.

Although it is open to debate whether the Internet's social and economic implications are as profound as asserted by its most breathless boosters (compare any issue of *Wired Magazine* with Clifford Stoll's *Silicon Snake Oil: Second Thoughts on the Information Highway*), there

can be no doubt that the Internet is growing fast and that it is here to stay. One of the few safe predictions that one can make about the Internet is that the nature of Internet use, the shape of viable Internet business models, and the look and feel of the net itself will be vastly different three years from now, and perhaps unrecognizable. One can state with some confidence, however, that whatever the Internet looks like and whatever economic models emerge, intellectual property protection in general and copyright law in particular will play a major role in shaping who owns what and how they can use it on the Internet.

First, whatever additional roles the Internet may come to play in commerce or otherwise, it is certain to grow and develop as a major conduit of creative expression and information, and much of the content moving across the Internet will be works of authorship, including textual matter, software, music, movies, and multimedia and other audiovisual works.

Second, “copying”—the quintessential subject of copyright law—is simply a ubiquitous activity on the web. Even leaving aside intentional “copying” of works found on or transmitted over the Internet, ordinary accessing of web sites itself involves the repeated reproduction of material intended to be accessed over the web. Add to this the ease of reproduction and dissemination of digital works across the Internet, and it becomes abundantly clear that the protection and control of these content flows will not be achieved without regard to copyright law.

The Internet and the World Wide Web: What are they and how do they work?

The Internet is an international network of computer networks over which a computer can transmit messages or any form of digital data (including text, numerical data, database content, graphics, sound and music, video and audiovisual works, and computer software) to computers anywhere and everywhere in the world. The World Wide Web is the subset of Internet sites and supporting facilities which use certain technical protocols that facilitate the transmission of graphical and other content and support a simple, friendly, browsable, graphical user interface.

WHAT THE INTERNET IS LITERALLY MADE OF

Physically and organizationally, the Internet includes the following elements:

an international network of “node” computers (giant file servers which store and transmit data), connected to each other via standard telephone lines or fiber-optic networks;

countless thousands of computer file servers acting as “hosts” for the by now almost certainly more than one million web sites and other data sources;

myriad Internet service (access) providers (“ISPs,” whose file servers and modems provide either simple connectivity to the Internet or, like America On-Line or CompuServe, provide connectivity plus content and facilities for email communication, on-line conferencing, etc.);

local area networks of companies, schools and other institutions that are connected via modem or wire to an Internet service provider;

millions of individual computers equipped with modems and similarly linked; and

the telephone lines, cables or other telecommunication connections by which all of these elements hook themselves up together.

Users interact with the World Wide Web by surfing from web site to web site with the aid of browser services and programs, using “links” that allow them to jump from one section (page) of a web site to another, in nonlinear fashion, and to jump with equal facility from a site in California to another in England, to Hong Kong, Cairo or Cape Town, often without the user even knowing where the present web site is located.

The web is characterized by substantial and growing capabilities for content searching anywhere on the network, and increasingly by a shift from “passive” availability of information, via web searching and surfing, to the use of active software tools. Some of these new tools (“crawlers”) seek out and retrieve information that the user indicates interest in, and others allow providers to “push” certain categories of information into part of an end-user’s computer screens while he or she is engaged in other tasks.

Accessing a site does not, of course, literally mean that you go there. It means that information on a site located somewhere else is digitally transmitted to your computer, after a series of transmissions through a network of intermediate node computers, and is recreated and displayed on your computer screen. This display may or may not be stored in any form that persists at your end when you turn your computer off.

Notwithstanding the web’s image as an instant source of the most current information, much of what is obtained from a web site is in reality not up-to-the-minute, because it was retrieved from a ‘cache.’”

“Caching is, under current technology, virtually ubiquitous on the Internet,” intellectual property attorney David L. Hayes points out. “Caching means storing copies of material from an original source site (such as a web page) for latter use when the same material is requested again, thereby obviating the need to go back to the original source for the material. The purpose of caching is to speed up repeated access to data and to reduce network congestion resulting from repeated downloads of data. The cached material is generally stored at a site that is geographically closer to the user, or on a more powerful computer or one that has a less congested data path to the ultimate user. The cached information is usually stored only temporarily, although the times may vary from a few seconds to a few days, weeks, or more.” (Hayes, “The Coming Tidal Wave of Copyright Issues on the Internet [Part II],” *Journal of Internet Law* (Aug. 1997), p. 18.)

Thus, a service provider such as America Online may store web pages that had previously been requested by other users on its own server. When a later user calls for the same web page, AOL may simply download the stored page from its own server rather than fetching it again from the original source. This means that those who attempt to access your web site might not necessarily receive the information you put on your site most recently.

TECHNICAL KEY TO THE WEB: PACKET SWITCHING

“Under current technology, information is transmitted through the Internet using a technique known broadly as ‘packet switching.’ Specifically, data to be transmitted through the network is broken up into smaller units or ‘packets’ of information, which are in effect labeled as to their proper order. The packets are then sent through the network as discrete units, often through multiple different paths and often at different times. As the packets are released and forwarded through the network, each ‘router’ computer makes a temporary (ephemeral) copy of each packet and transmits it to the next router according to the best path available at that instant, until it arrives at its destination. The packets, which frequently do not arrive in sequential order, are then ‘reassembled’ at the receiving end into proper order to reconstruct the data that was sent. Thus, only certain subsets (packets) of the data being transmitted are passing through the RAM [the temporary memory] of a node computer at any given time, although a complete copy of the transmitted data may be created and/or stored at the ultimate destination computer, either in the destination computer’s RAM, on its hard disk, or in portions of both.”

“To illustrate the number of interim ‘copies,’ in whole or in part, that may be made when transmitting a work through the Internet, consider the example of downloading a picture from a Web site. During the course of such transmission, no less than seven interim copies of the picture may be made”

David L. Hayes, “The Coming Tidal Wave of Copyright Issues on the Internet [Part I],” *Journal of Internet Law* (July 1997), p. 3.

A brave new world that has such infringers in it?

Anyone who accesses your web site causes at least several “copies” of your copyrightable matter to be made and distributed, as do Internet service providers, link providers of various kinds, the owners of telephone lines, and still others. From a certain perspective, then, it might appear that when your company’s World Wide Web site goes on-line, your world suddenly becomes richly peopled with potential copyright defendants.

Of course, nearly all of these persons and entities are reproducing and transmitting copyright-protected material from your site on your invitation, with your express or implied consent, and on the clear understanding that this is after all the very purpose of the Internet and the way things happen on the web. Notwithstanding, exploring the potential application of copyright law to these activities is not an academic or abstract exercise. Various “bad things” (meaning for now activities you may not have anticipated and would prefer to thwart) can be done with the works of authorship you place on your web site, and it is important to consider whether they are potentially within the ambit of copyright law. Unfortunately, neither existing law, in most jurisdictions, nor the new WIPO Copyright Treaty or Performances and Phonograms Treaty provides clear answers to such critical questions as:

- whether interim copying and transmissions by intermediaries and temporary copying by end-users represents copying and distribution of copies within the meaning of copyright law;
- whether such activities constitute the exercise of such other exclusive rights of copyright holders as the right to distribute copies, the right to perform or display copyrighted works, and the right to create derivative works;
- whether such activities are within the scope of “fair use” or equivalent legal doctrines; and
- just what may be within the scope of any implied licenses.

Since you will want to prevent bad things from being done with your web site and copyrighted matter notwithstanding these uncertainties, you must position yourself so as to maximize your chances of terminating uses of your copyrighted material which you consider unfair, unprofitable, unsavory or otherwise undesirable. There are no sure things, and many uncertainties are bound to remain. But there are steps that will help you manage the risks. Let us turn our attention, then, to some of the undesirable things that could take place as a result of putting a web site on-line or by making your intellectual property available on your site, and consider what you can do to manage the risks.

Pirating of commercially-licensed software or other works

Software, photos or other valuable authorship that are downloaded from your site could be the subject of unauthorized and illicit commercial reproduction and redistribution. It may be pirated, in short, for sale in competition with your own sales or licensing of such material.

For goods already sold in digital form, such as computer software, video games and certain musical and audio-visual works, the risk is not completely different from that presented when the owner licenses or sells copies on floppy disks or CD-ROMs. The fact that the owner has made such material accessible on the web or that the original copyrighted work is downloaded material rather than material on a floppy disk should not, in principle, alter your rights under copyright law. There are several practical wrinkles that must be considered, however. In the first place, the Internet is open and international, and once you make a work available for sale by downloading from your web site, you can no longer effectively choose not to license your product to customers in certain countries which (you may have concluded) do not afford appropriate protection to computer software, or which you are barred from selling to under a national export control regime. Second, products such as computer software and databases are commonly distributed subject to license agreements, yet the validity and enforceability of “click-wrap” and other on-line licenses remain virtually untested in the courts. While comprehensive general advice on controlling piracy is not within the scope of this article, we highlight a few points of particular importance in the on-line context:

- Register the copyrights in your works at the outset and apply copyright notices; this will make certain practical remedies for infringement available to you in the United States and possibly other jurisdictions which may otherwise not be open to you.
- Include a notice on your web site which excludes any end-users who are from countries outside the pale from your offer to enter into a license agreement. Employ whatever mechanism may be available for rejecting at least those licensees whose computers identify their owners as from undesired countries. Be aware that on-line distribution may simply be out of the question if your software contains material which your nation’s laws forbid you to export.
- Use a clear and understandable on-line license which does not include overreaching terms that might give courts an incentive to void the license.
- Script a contract formation process which is more defensible than that which occurs in the case of the typical shrink-wrap license. So, for example, you may want to require the prospective licensee to scroll through the license and to affirmatively indicate acceptance by typing “I agree,” rather than by simply “clicking” on an on-screen button. Use capital letters and/or bright but still readable colors to highlight

critical provisions such as exclusions of implied warranties, limitations on remedies, and provisions barring reverse engineering. Consider multimedia reminders, flashing lights, anything that could obviate a breaching licensee's argument that it didn't know there was a license or did not actually read the license.

- Maintain archives of records of who agrees to your license agreement. Consider carefully the level of security, authentication and control which should be employed in order to appropriately balance ease of target user access with the risk of unknown or undesirable users obtaining access to your site or obtaining unauthorized copies of downloaded material.
- Employ such technical means as you conclude are feasible, practical, not overly-intrusive, and cost-effective in order to embed electronic signatures, digital "watermarks," serial numbers, and other copyright management information within distributed works, so that you can identify and perhaps trace pirated copies of your works. Note that the WIPO Copyright Treaty requires signatories to outlaw efforts to delete copyright management information from digital electronic works.

Copying of material from the site itself

Even if you are not distributing software on your license, bear in mind that your web site itself—both the code underlying it and the text, graphics, etc. on the site—may represent a valuable work of authorship. Registering your copyrights in your actual web site poses some challenges, inasmuch as the site may change from day to day, and your local copyright authority may not treat a web site as a "serial," or on-line magazine. But registration and some of the other precautions discussed above have some application to the web site itself. You should also search the web, periodically, to see if your authorship appears on someone else's site and has been plagiarized or infringed.

Put visitors to your site on notice that you consider access to your web site to be a revocable privilege, subject to terms and conditions that you are at liberty to change at any time. Include a statement somewhere on your home page to the effect that "Access to this web site is subject to your host's conditions. By accessing the site you agree to those conditions." The statement should be linked to a page containing the terms of access, including (1) a statement of the limited purposes for which you are granting visitors access to your site, (2) a warning that access can be revoked for any lawful reason or for no reason, (3) a proscription against unauthorized commercial use of material on the web site, and (4) a statement that the user agrees to these terms and conditions by continuing to access the web site.

Obviously, you must balance an appropriate level of friendliness and hospitality with your legal needs, and you should be aware that in any event a court might hold your attempted

restrictions ineffective. But it is unlikely that a carefully worded notice would make anything worse. And such a notice should supplant the vague, open-ended, implied license which might otherwise be asserted to govern access to and use of your copyrighted work.

Linking and framing

One of the defining characteristics of the web is the use of “links” that allow an end-user to jump from page to page and location to location in a nonlinear manner. Web sites commonly include links which, when clicked upon, cause the user to go to sites dealing with related subjects or organizations. So, for example, the New York Stock Exchange’s web page includes links that take surfing investors (so to speak) directly to the sites of companies whose shares are traded on the Exchange. Similarly, a web site for women diagnosed with ovarian cancer includes links to support groups, public health coalitions, medical journals with articles on ovarian cancer, and pharmaceutical companies. Such links may be helpful and desirable insofar as they provide conduits to your site. But links can also raise various problems and concerns.

Advertising revenues. If your web site includes advertisements, advertising revenues may depend on proving the size of one’s audience and guaranteeing certain kinds of advertising placements. Linking could injure a site’s advertising revenue potential or value by causing the user to go directly to an “interior” page of the destination site, bypassing the home page advertisements, by associating the destination site’s advertisements with those of competitors or with other unanticipated content, or by diminishing the number of recordable “hits” on which revenues may depend. (For an example of a pending case arising out of such concerns, see *Ticketmaster Corporation v. Microsoft Corporation*, U.S. District Court No. 97-3055 DDP (C.D. Cal.).)

“Inappropriate” credit or misappropriation. Irrespective of or in addition to any measurable economic impact, the creativity of a web site could be unfairly used or its value misappropriated by competitors or web services or others consisting of little more than “para-site-ic” link offerings. In a prominent UK case, for example, a defendant newspaper publisher’s web site included, as links, current headlines copied from the plaintiff’s web site. When the headline links were clicked on, the reader jumped to the full texts of the news stories that had been prepared by the plaintiff publisher, on the plaintiff’s web site. (For online “demo” of appearance of the allegedly infringing web pages, see “<http://www.shetland-times.co.uk/st/newsdemo/>”.) An interim injunction was entered against the defendant. *Shetland Times v. Wills [Shetland News]*, Scot. Sess. Cas. (10/24/96) 1 EIPLR 723 (11/1/96) (text of interdict available at: “<http://www.jmls.edu/cyber/cases/shetld1.html>”). In addition to being subject to copyright claims, such activities might also constitute reverse palming off or possibly other trademark violations.

Misleading or unsavory juxtapositions. New sites may offer links to destination sites that misleadingly suggest affiliation or association either with the ‘sending’ site or that suggest associations with other destination sites which you might consider distasteful or undesirable. Whether a party’s disquiet over such juxtapositions can be remedied under copyright, trademark or other law depends on the circumstances and on further legislative and case law developments.

Framing. A case filed earlier this year (since settled) illustrates the concerns that can be evoked by use of an Internet technology known as “framing,” which permits a web site to be displayed in a smaller window or frame contained in the “calling” web site. Washington Post Co. v. TotalNews (S.D.N.Y. No. 97 Civ. 1190 (PKL)). The Post and several other news organizations maintained free web sites supported in part by advertising revenues, and sued TotalNews, a web information service that supplies no content of its own, but provided access to over 1,300 news-related information sites, including the plaintiffs’. The TotalNews site lists news sources under a variety of headings, as shown in the accompanying screen shot.



By “clicking” on the link to a particular news site (such as the San Jose Mercury News in this example), users jump to that site and can read the Mercury News’ unedited news content— but that content appears in a special window that frames the destination site, as shown below.



Whereas an ordinary link simply delivers the reader to the target destination, leaving the “sender” behind, a framing link in effect sucks the destination into the framer’s site. Importantly, TotalNews’ logo and the banner ads of TotalNews’ advertisers remain on the computer screen at all times, in a frame which (at least initially) obscures the advertising that the Mercury News’ advertisers had placed on their site.

Although in this context, there would not appear to be any likelihood of confusion—there can be little doubt about whose news stories the user is about to read—in another context it might well be the case that framing could lead some readers to believe that there was an association between your company and an entity whose logo and other framed material appears on a computer screen alongside your own name, logo and site.

Whether copyright law can provide a cure for any of the foregoing “wrongs” is not at all clear, among other reasons because the party whose web site includes the offending links and frames has not itself actually copied or reproduced anything from the destination party’s site. Nor does the offending party distribute or transmit any copies. All that such a party has actually done is include a code on its site which the end-user can employ to call up the target website. If anyone has made a copy or caused the immediate transmission of a copy, at any particular time, it is a presumably innocent end-user and not the offending party whose site includes the links and frames at issue.

Although this is not all there is to the issue of copyright infringement, it does illustrate that—most especially on the web—things are often not what they seem to be, and that insight into the technology may alter an otherwise apparent result. The uncertainty as to how and whether principles of copyright law would apply in these situations is not likely to be dispelled by ratification of the WIPO Treaties. In these circumstances, what can we do to increase the chances of preventing or terminating inappropriate or unfair exploitation of your web site?

Our basic strategy involves trying to prepare the groundwork for additional claims under contract, unfair competition or trademark law. The application of these doctrines to Internet “wrongs” is also unsettled. But, insofar as the sense of “wrong” to which the site owner must appeal flows from the feeling that the offender is seeking credit for or to benefit from another’s work, or that the offender has exploited an apparent relationship which does not exist, such trademark and unfair competition doctrines as reverse palming off and confusion as to source, sponsorship or association may be properly invoked. Here are some approaches which could increase the chances of success of such claims:

- Include a provision in your “conditions-for-surfing-our-site notice,” stating that anyone who accesses or uses your site agrees not to use information obtained in accessing your site in order to create links to your site without your consent.
- Consider also provisions that could implicate the party whose “framing” is objectionable as a contributory infringer. For example, if your web site access terms and conditions provide that your site may not be accessed using frames except with your consent, the breach of such a condition arguably revokes your implied or express consent to access your site. If an end-user’s unauthorized access were then deemed a copyright infringement, the offending “framer” might be liable for contributory infringement.
- Adopt distinctive logos and stylized trade names and marks, and deploy them extensively on your site (preferably on every page), so that any framing and linking of your site with another’s causes the display of your marks and logos and arguably implicates trademark and unfair competition issues.
- If “para-sites” copy headings from your work as their “link” names, make those headings more complete, elaborate and fulsome in expression, so that a collection of the links themselves is more likely to be held substantial enough to be deemed protectable expression.
- Consider whatever technical means are available for defeating links from particular undesirable would-be companions. Although this could set in motion a sort of “arms race” of the armor versus armor-piercing shells kind, it may turn out that in the end your technical defenses cannot be pierced without some sort of reverse engineering that might implicate copyright infringements.
- Consider the need for such protective steps and apply common sense. It may be that, in your case, you are not concerned about linking and framing, and that making it easier for more people to reach your site matters more than the “problems” discussed above.

Caching

Although web site operators should be happy about technologies that make their material more quickly and conveniently available to additional end users, problems can arise depending on how long cached versions are maintained. Some examples:

1. Many web sites offer time sensitive information, such as stock quotes or sports scores. If the information is obtained from a cache rather than the original site, and the cache has not been refreshed recently, the user may obtain out of date or no-longer-accurate information. Since most caching is “invisible” to the user, in many instances the user will simply not know that obsolete information has been provided. In some cases, end users might rely on the out of date information to their detriment, arguably giving rise to liability. But even if that does not happen, the reputation of the sponsor of the site could be tarnished.
2. Caching can also interfere with timed information. For example, a Web site owner may have contracted with an advertiser to display an advertising banner during a certain window of time, say 7:00 to 8:00 p.m. If a page from the site is downloaded into a cache at 7:45 p.m. and is not refreshed for several hours, users will see the ad for far more than the one hour the advertiser paid for, and may not see the ad that the next advertiser paid to have displayed from 8:00 p.m. to 9:00 p.m.
3. Loss of version control can also result from caching, as web site operators cannot control and may not even know which version of information is delivered to the end user. A web site may have been improved and updated, yet an old version of material from the site may reside on the proxy server of the end user’s Internet service provider. Or a web site owner may be notified that its site contains infringing or defamatory material. He removes the material from the site promptly, yet it may continue to be displayed in old cached versions, giving rise to further potential liability.
4. Many sites keep track of the number of page impressions or “hits” received as a measure of the level of end-user exposure to advertising. But when cached copies of the page are accessed, the original site will not reflect these hits, resulting in lower “circulation” rates. Likewise, the original hits may provide valuable information on the identity and “web behavior” of the users. This information may also be lost to the original site owner when cached versions are accessed.

Depending on the circumstances and on whether the Internet service provider was put on notice that caching was creating one of these problem, an argument that caching and distribution of old versions represented an unauthorized and “unfair” exercise of the exclusive rights of copyright holders could appears quite substantial. Cached copies are not

ephemeral, and distributing them in these circumstances would not present the ISP in a particularly sympathetic light. This suggests that those engaged in “caching” may well be vulnerable to copyright infringement claims. However, the solution to these problems may be within the technical control of the “web master” of your site, at least to some extent, because it is possible for the web master to determine whether caching takes place and it may soon be technically possible for the web master to control the duration of caching.

The issue of caching is troubling, nonetheless, because the site owner shares an interest with the operator of the “cache” in enhancing end-users’ ability to access web sites expeditiously. The appropriate solution of these problems may require attention and vigilance on the part of web site owners. Unless you decide to bar caching altogether, you must simply focus on what level of immediacy is actually required for your site and whether particular circumstances may alter these requirements from time to time.

Conclusion

Placing copyrightable matter on-line involves a mix of opportunities and risks. Balancing them is problematic, however, because the unsettled state of the law makes it impossible to assess the scope of the risks with any degree of precision. Nonetheless, while we wait for the legislatures and courts of various countries to clarify the issues, web site owners must still decide what to put on the net and how to try to protect it. By being aware of the kinds of problems that can arise, by weighing the level of sensitivity of the materials that your company may place on its web site over time, and by vigilantly monitoring others’ uses of or access to your site, you should be able to manage the risks in this legally uncertain and constantly changing environment.