1998

Copyright Law Tackles Yet Another Challenge: the Electronic Frontier of the World Wide Web

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COPYRIGHT LAW TACKLES YET ANOTHER CHALLENGE: THE ELECTRONIC FRONTIER OF THE WORLD WIDE WEB

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I. INTRODUCTION

The Internet has seen an explosion of popularity over the past few years. Government workers and university scholars of yesterday's Internet must now share today's Information Superhighway with big business, commercial industry, and hundreds of thousands of recreational users. With the growing popularity of the Internet, incidents of online fraud, theft, piracy, and infringement have grown correspondingly.

Confronted with today's Internet revolution, yesterday's law has often proven inadequate in addressing online regulation. Applying well-established legal doctrine to the National Information Infrastructure[1] can be like forcing a square peg into a round hole. Accordingly, the necessity of online regulation requires that lawmak-

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1. *See generally* THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS, INFORMATION INFRASTRUCTURE TASK FORCE, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE (1995) [hereinafter WHITE PAPER]. The Information Infrastructure Task Force ("IITF") was appointed by President Clinton in 1993 "to articulate and implement the Administration's vision for the NII [National Information Infrastructure] and to develop comprehensive telecommunications and information policies and programs that will promote the development of the NII and best meet the country's needs." *Intellectual Property and the National Information Infrastructure: Executive Summary* (visited Feb. 9, 1998) <http://www.uspto.gov/web/offices/com/doc/ipnii/execsum.html> [hereinafter *Executive Summary*]. For additional information on the IITF, see *The President's Information Infrastructure Task Force* (last modified July 1, 1997) <http://iitf.doc.gov>.

ers be flexible and innovative in their approach to preventing and remedying legal injuries that have been cognizable in other contexts for decades.[2]

Copyright law presents a unique difficulty. Although United States copyright law[3] has traditionally been flexible enough to accommodate innovative technologies,[4] the Internet, and particularly the World Wide Web, presents novel problems because the applicable technology makes copyright infringement as easy as pointing and clicking.

The central issue of this article is whether present copyright law can accommodate evolving Internet technology. Clearly, the rights of authors and content providers must be protected if the Internet is to remain a valuable information resource.[5] "Because the inherent

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2. An early example of online regulation is the Virtual Magistrate Project. The project "offer[s] arbitration for rapid, interim resolution of disputes involving (1) users of online systems; (2) those who claim to be harmed by wrongful messages, postings, or files; and, (3) system operators (to the extent that complaints or demands for remedies are directed at system operators)." *Concept Paper* (last modified July 24, 1996) <http://vmag.vcilp.org/docs/vmpaper.html>. *See generally* Frank A. Cona & Kenneth P. Mortensen, *Virtual Magistrate* (last modified May 21, 1996) <http://vmag.vcilp.org>.

3. Copyright law is codified at title 17 of the United States Code.

4. "From its beginning, the law of copyright has developed in response to significant changes in technology." Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 430 (1984). For example, the drafters of the Copyright Act of 1909 could not have contemplated technologies such as radio, television, photography, motion pictures, photocopying, and computer programs, yet the basics of the Act still remain vital today. *See* Arthur Miller, *Copyright Protection for Computer Programs, Databases and Computer-Generated Works: Is Anything New Since CONTU?*, 106 HARV. L. REV. 977, 982 (1993). For further elaboration of the adaptability of federal copyright law, see David J. Loundy, *Revising the Copyright Law for Electronic Publishing*, 14 J. MARSHALL J. COMPUTER & INFO. L. 1, 1 (1995); Michael D. McCoy & Needham J. Boddie, II, *Cybertheft: Will Copyright Law Prevent Digital Tyranny on the Superhighway?*, 30 WAKE FOREST L. REV. 169, 173-74 (1995).

5. *See* WHITE PAPER, *supra* note 1, at 10-11.

The *Executive Summary*, *supra* note 1, discusses the need to protect intellectual property in the National Information Infrastructure:

> Creators, publishers and distributors of works will be wary of the electronic marketplace unless the law provides them the tools to protect their property against unauthorized use. Advances in digital technology and the rapid development of electronic networks and other communications technologies dramatically increases: the ease and speed with which a work can be reproduced, the quality of the copies, the ability to ma-

value of an interactive information system such as the superhighway depends on the willingness of information providers to supply information resources and creative works, industry apprehension concerning the protection of intellectual property rights could deter the development of the superhighway."[6] Accordingly, the rights of authors must not be defeated by the rights of users. While most commentators and legal scholars agree that modern technologies must be regulated, there is disagreement as to the form such regulations should take. Some suggest that existing copyright law need only be amended.[7] Others urge that it be scrapped altogether.[8]

The first section of this article discusses the technology of the World Wide Web ("the Web") and illustrates the importance of analyzing copyright law in light of the Internet's new electronic publishing form. The next section addresses (1) the exclusive copyrights of authors[9] on the Web; (2) the types of content that are protected; (3) the activities of publishers and users that constitute infringement of protected works; and (4) the user's potential defenses to infringement.

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nipulate or change the work, and the speed with which copies can be delivered to the public. The establishment of high speed, high-capacity information systems makes it possible for one individual, with a few key strokes, to deliver perfect copies of digitized works to scores of other or to upload a copy to a bulletin board or other service where thousands can download it or print unlimited "hard" copies. Just one unauthorized uploading could have devastating effects on the market for the work.

Executive Summary; *see also* HENRY H. PERRITT, JR., LAW AND THE INFORMATION SUPERHIGHWAY 416 (1996).

6. McCoy & Boddie, *supra* note 4, at 171.

7. *See, e.g.*, Loundy, *supra* note 4, at 45 (contending that copyright law can adapt to electronic publishing "without requiring substantial overhaul"); McCoy & Boddie, *supra* note 4, at 171 (arguing that copyright law "is flexible enough to accommodate technological advances ushered into reality with the superhighway").

8. *See, e.g.*, John Perry Barlow, *The Economy of Ideas: A Framework for Rethinking Patents and Copyrights in the Digital Age*, WIRED, Mar. 1994, at 84, 85 ("Intellectual property law cannot be patched, retrofitted, or expanded to contain digitized expression any more than real estate law might be revised to cover the allocation of broadcasting spectrum [sic] . . . .").

9. This article uses the terms "author," "content provider," and "electronic publisher" alternatively. In all cases the terms refer to the holder of the copyright. In contrast, the term "user" refers to a person who does not hold the copyright but may have a right, express or implied, to use, reproduce, or distribute the copyrighted material.

II. THE TECHNOLOGY OF ELECTRONIC PUBLISHING

A. *The World Wide Web*

The World Wide Web[10] is one of the most successful media for electronic publishing. It provides a means of accessing the resources on the Internet without requiring the user to know how those resources are stored and transmitted.[11] Additionally, Hyper-

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10. It is imperative to recognize the differences between the World Wide Web and the Internet. A popular misunderstanding is that the Web *is* the Internet. *See* Henry H. Perritt, Jr. & April M. Major, *Technical Note: Electronic Publishing* (visited Feb. 9, 1998) <http://www.law.vill.edu/vcilp/technotes/epub.htm>. In fact, the Web is only one of the many information services available on the Internet. One of its primary advantages, however, is that it encompasses most of the other internet protocols, such as FTP, *see infra* note 11 (defining and explaining FTP), Gopher, *see infra* note 11 (defining and explaining Gopher), newsgroups, *see infra* note 126 (defining and explaining newsgroups), and e-mail, *see* HARLEY HAHN & RICK STOUT, THE INTERNET COMPLETE REFERENCE 68-69 (1994) (explaining that e-mail, i.e., electronic mail, allows Internet users to communicate by sending messages in the form of mail). Due to its user-friendly interface, the Web empowers non-technical people to obtain information that, in the past, had been accessible only to those with a working knowledge of these various protocols. *See* Perritt & Major, *supra*.

11. *See* Perritt & Major, *supra* note 10. The ease in retrieving Web documents has contributed to the Web's popularity. The Web has rendered virtually obsolete Internet information tools such as Gopher and FTP.

Gopher is an information resource which provides for simple navigation through a hierarchy of menus. Both documents, which may be displayed or saved, and searchable indexes included in the menu structure. Menu items also may serve as links to other Gopher servers or FTP archives. When the user selects an item, Gopher retrieves the corresponding document, provides a searchable index, or displays the next menu. *See* HAHN & STOUT, *supra* note 10, at 430.

At one time, Gopher once was the most powerful information resource on the Internet. However, Gopher displays only text; thus, transfer of more complex data structures, such as sounds and images, requires use of other software. *See* CRICKET LIU ET AL., MANAGING INTERNET INFORMATION SERVICES 1, 21-22 (Adrian Nye ed., 1994). Today, the Web has incorporated Gopher's protocol. Although Gopher is still a menu-driven system, the Web browser translates the Gopher information into a graphical format and provides a user-friendly, point-and-click interface.

FTP, or File Transfer Protocol, is the most widely available method for transferring electronic files. Anyone with access to an FTP site can view file names and download files from the archives. FTP does not, however, provide a description of the files. Consequently, the user is limited to the file names as the only indicator of the contents of the file. *See* LIU ET AL., at 20.

text[12] and hypermedia[13] are features that make the Web particularly easy to navigate and that provide such attractive presentations of information. The user accesses the Web via a graphical interface called a "Web browser" that allows maneuvering from site to site by pointing and clicking. The Web thereby accommodates users who are familiar with mouse-driven, windows-type software.[14]

Electronic publishing on the Web makes use of Hypertext Transfer Protocol ("HTTP")[15] to link computers connected to the Internet.[16] To access a document on the Web, the user must connect to the "Web server"[17] that stores the document.[18] Once connected to the Web server, the user is presented with the first page of the hy-

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12. Hypertext arranges information as an interconnected web of linked text. Hypertext permits a user to "jump" from a reference point in one document either to another place in the same document or to the object of the reference in a different document. Links which take the user to somewhere else in the document are called internal links, and typically are used for tables of contents. Links which take the user to another file on the same server or on a different server are called external links.

13. Hypermedia refers to Web applications which include graphics, sound, and video.

14. *See* Perritt & Major, *supra* note 10.

15. HTTP is the protocol that Web browsers and Web servers use to communicate. *See* LIU ET AL., *supra* note 11, at 287.

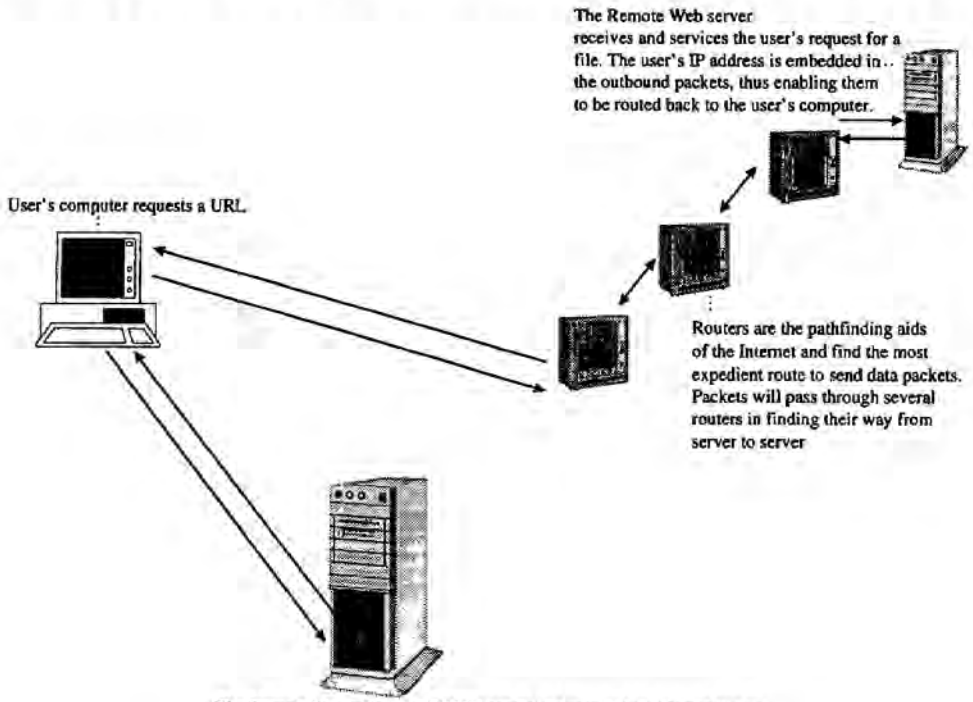
16. *See* Perritt & Major, *supra* note 10.

17. Web servers are programs running on remote computers that provide Web pages and other files requested by the Web browsers. *See* Loundy, *supra* note 4, at 32.

18. *See* Loundy, *supra* note 4, at 32. User computers connected to the Internet run the Web browser software. These are called "Web clients." *See id.*

In the Web's client/server architecture, the control lies with the Web browser. *See* LIU ET AL., *supra* note 11, at 286. It is the browser that locates a Web document from the provided Uniform Resource Locator ("URL"), *see id.* at 286 (explaining that the URL gives each file on the Internet a unique address whereby it easily can be located), retrieves the document from a Web server, interprets the Hypertext Markup Language ("HTML"), *see id.* at 22 (defining HTML as the language in which Web documents are written), and presents the Web document to the user. *See id.* at 286. Additionally, Web browsers allow the user to download files easily. *See id.*

How a Web Browser Finds a Requested Page



Adapted from Rick Ayre & Thomas Mace, *Internet Access: Just Browsing*, PC MAGAZINE, Mar. 12, 1996, at 100, 107.

pertext document called a "home page."[19] Home pages provide hypertext links to subsequent Web pages.[20] When the user directs his Web browser to view a particular Web page, the browser retrieves a copy of the file from the Web server on which the file is stored.[21] The browser accomplishes the retrieval by employing an external hypertext link, which in turn provides a Uniform Resource Locator ("URL"), that is, a specific, numeric address, for the file.[22]

When a Web server accesses a Web page, a new Transmission Control Protocol ("TCP")[23] connection takes place.[24] Furthermore, a separate TCP connection is created by each inline graphic in a Web document when contact is made with the server that holds that graphic.[25] Thus, when a user requests a single Web document, multiple TCP requests are made to the same or different Web serv-

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19. *See* Loundy, *supra* note 4, at 32. A page of hypertext material is called a "Web page" in general.

20. *See id.* For a definition of hypertext and a brief explanation of how hypertext links work, see *supra* note 12. In order to indicate hypertext links on a Web page, a graphical Web browser underlines the linked text or highlights it in a different color. On a character-based browser, the hypertext link is often presented in reverse video. *See* LIU ET AL., *supra* note 11, at 286.

21. The linked files might reside on the local server, or they might be located on a remote server which is connected to the Internet. *See id.*

22. Loundy describes how a hypertext link operates to access a requested document:

> [T]he hypertext link serves as an address, much like a listing in a bibliography, or more accurately, like a description of a place on the shelf in someone else's library where the book is stored. The user's "web browser" software reads this listing (the hypertext link), and then uses it to request a copy of the document from the secondary computer that stores the document at the location indicated by the hypertext link.

Loundy, *supra* note 4, at 32.

23. TCP/IP is "the common name for a collection of over 100 protocols that are used to connect computers and networks." HAHN & STOUT, *supra* note 10, at 30. This suite of protocols enables all of the networks of the Internet to communicate. TCP and IP are the two most frequently used protocols in the suite. Every computer on the Internet supports TCP/IP, which enables the computers to send data back and forth. *See* LIU ET AL., *supra* note 11, at 8.

TCP and IP are separate protocols. Information is not transmitted as a constant stream on the Internet. Instead it is broken into small bundles, called "packets." When computers communicate on the Internet, TCP is what breaks the information into packets, and IP transports the packets to the remote host. *See* HAHN & STOUT, *supra* note 10, at 30.

24. *See* LIU ET AL., *supra* note 11, at 15.

25. *See id.*

ers.[26] Each TCP connection retrieves a *copy* of the specified file, regardless of whether the file is composed of text or images.[27] Additionally, when the user selects a hypertext link, a copy of the linked page is transmitted.[28] Although the whole process is transparent to the user, when a browser links to a file on the local or a remote Web server, the file is actually downloaded and stored into the memory of the user's computer until he begins a new session.[29]

To locate a requested Web page, the Web browser directs a series of bilateral connections.[30]

> URLs uniquely identify each file on the Web by specifying its name, what server it's stored on, and where it is in the server's directory structure. Entering a URL directly into [the] browser or clicking on a hyperlink with an associated URL initiates a communications session that (when successful) ultimately brings that unique file to [the user computer].[31]

The Web browser begins by connecting to the Domain Name

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26. A Web page may be created that contains images from several different Web servers; thus, it would contain many components that require separate TCP connections. The basic HTML source code would look like this:

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<HTML>
<HEAD><TITLE>Example of Images From Different World Wide
Web servers</TITLE></HEAD>
<BODY>
<img src="http://www.law.vill.edu/images/vcilp.gif">
<img src="http://www.netscape.com/gifs/smiley.gif">
<img src="http://www.microsoft.com/pages/icon.jpg">
</BODY>
</HTML>
```

Retrieving this particular document would require four distinct and separate TCP connections: the first, to the server on which the working page resides; the second, to Villanova Law's HTTP server; the third, to Netscape's Web server; and finally, to Microsoft's Web server. Even if all of the images resided on the same server as the page, four TCP connections would still be completed with that server.

27. The importance of copying will become clear later when this article analyzes each of the copyright owner's exclusive rights. *See generally infra* notes 90-160 and accompanying text.

28. *See* Loundy, *supra* note 4, at 32.

29. This process is called "caching." The downloaded file is stored in the random access memory of the user's computer. For a discussion of caching, see PERRITT, *supra* note 5, at 434-36.

30. *See* Rick Ayre & Thomas Mace, *Internet Access: Just Browsing*, PC MAGAZINE, Mar. 12, 1996, at 100, 107.

31. *Id.*

Server. The Domain Name System is a specialized server which receives the requested URL from the user and then returns the corresponding Internet Protocol ("IP") address to the user's browser.[32] The Web browser then establishes a connection with the remote server. The browser sends the user's IP address within the outbound request for information, thereby enabling distant information to be routed back to the user's computer.[33]

B. *Electronic Publishing versus Traditional Print Publishing*

The Internet vastly increases the ability of users to obtain information.[34] The Web far surpasses the capabilities of traditional print media, as it provides easily downloaded and manipulatable information, dynamic Web pages, and larger immediate audiences.[35] Indeed, the Internet provides virtually instantaneous transmission of information via a collection of networks that span the world.. These unique characteristics must be considered when applying copyright law to the Web.[36]

Electronic publishing also differs from traditional print publishing because it is non-linear. That is electronic publishing allows the user to take any number of paths through a hypertext document by selecting different hypertext links.

> Information and knowledge in digital form . . . are not sequential. They are linked rather than contained. Digital information,

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32. IP addresses provide a unique 32-bit numeric identification for every computer on the Internet.

33. Routers are the path-finding aids of the Internet. These find the most expedient route to send data packets. Packets often pass through several routers before reaching the user's computer.

34. *See* Jane C. Ginsburg, *Putting Cars on the "Information Superhighway": Authors, Exploiters, and Copyright in Cyberspace*, 95 COLUM. L. REV. 1466, 1468 (1995).

35. *See id.* at 1467.

36. Another interesting quality of electronic publishing is that, unlike most other media, the Web transmits a considerable volume of material that is non-commercial. Because a potential avenue for profit has been discovered in the World Wide Web, however, business has begun to chip away at the Internet's non-commercial foundation. This author believes that commercial efforts will not undermine the free availability of information on the Internet. The Internet has such strong roots in non-commercialism that only a complete revolution would change the trend. In addition, consumers must become comfortable with the technology and, more importantly, confident in its privacy and security.

> the defining structure of which is the database, has a boundarylessness about it that invites users . . . to impose their own organizing principles in searching for information . . . . In addition, no sense of artifactual permanence exists in digital works which exist today on a network and may be revised or gone entirely tomorrow . . . . The digitalization of information serves as a leveler, encouraging the mixing and matching of what were previously discrete formats.[37]

Stated differently, electronic publishing embodies a quality absent from most print publishing: with Web pages, no static path must be taken.[38]

Another dynamic quality of digital information is the flexibility and ease of editing, updating, and changing material.[39] The HTTP server acts as a traditional database, allowing those with proper permission to access, edit, or move the Web files as often as desired while incurring virtually none of the cost that there would be, for example, in republishing a book.[40] Similarly, the economies of electronic publishing are easily contrasted with that of print publishing. The costs of electronic publishing are limited to the labor of creating and maintaining a Web page.[41] These costs are minimal in comparison to traditional print publishing.[42] Finally, the substantial cost of disseminating a book dwarfs the negligible cost of publishing a Web page, which, moreover, is instantly available to the world's digital community.

Despite the apparent advantages of Web publishing, there will be no incentive to disseminate high-quality, original works if authors are not assured of their copyrights. Authors must be provided full

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37. Deborah Reilly, *The National Information Infrastructure and Copyright: Intersections and Tensions*, 76 J. PAT. & TRADEMARK OFF. SOC'Y 903, 927 (1994).

38. The user generally is presented either with text that can be read or with indexes that may be searched. *See* HAHN & STOUT, *supra* note 10, at 496. Indexes provide links to other sources, and the user may select one corresponding to her interests.

39. *See* Reilly, *supra* note 37, at 928.

40. The most significant costs incurred in Web publishing are maintaining the necessary hardware and, possibly, paying an editor's or programmer's salary.

41. Noting the relative inexpense of digital publishing, Reilly argues that such "economies create an offset against which the cost of acquiring rights for compilations should be assessed." Reilly, *supra* note 37, at 917.

42. *See id.*

protection of their copyrighted expression when it is published on the Web. Admittedly, considering the significant differences between Web publishing and traditional print publishing, the challenges in applying current copyright law to Web technology are manifest. Nonetheless, the vitality of the new information infrastructure rests upon doing just that.

III. COPYRIGHTS ON THE WEB

A. *In General*

The basis of Federal Copyright Law is rooted in the United States Constitution which provides that "Congress shall have Power . . . To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."[43] Aptly, it has been noted that "[i]n essence, copyright is the right of an author to control the reproduction of his intellectual creation."[44]

Accordingly, the United States Supreme Court has recognized that copyright protection draws upon economic incentives to ensure the continuing innovation and promulgation of creative works:

> The economic philosophy behind the clause empowering Congress to grant patents and copyrights is the conviction that encouragement of individual effort by personal gain is the best way to advance public welfare through the talents of authors and inventors in the "Science and useful Arts." Sacrificial days devoted to such creative activities deserve rewards commensurate with the services rendered.[45]

Thus, the copyright owner's economic benefit is merely the means to a greater end.[46] "The ultimate aim is, by this incentive, to stimulate artistic creativity for the general public good."[47]

Congress exercised its authority under article I, section 8 of the

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43. U.S. CONST. art. I, § 8, cl. 8.

44. ROBERT A. GORMAN & JANE C. GINSBURG, COPYRIGHT FOR THE NINETIES 13 (4th ed. 1993) (quoting REPORT OF THE REGISTER OF COPYRIGHTS ON THE GENERAL REVISION OF THE U.S. COPYRIGHT LAW 3-6 (1961)).

45. Mazer v. Stein, 347 U.S. 201, 219 (1954).

46. *See* United States v. Paramount Pictures, Inc., 334 U.S. 131, 158 (1948).

47. Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 156 (1975).

Constitution to enact the Federal Copyright Act (the "Act" or the "Copyright Act").[48] The most extensive revision of the Act took place in 1976.[49] In 1988, when the United States ratified the Berne Convention,[50] copyright regulation again changed significantly. Present copyright law provides automatic protection upon "fixation,"[51] "even if the creator takes no further steps to notify the public."[52] For example, as soon as an artist draws a picture, or an author writes a poem, copyright vests in the creator.[53]

Section 102 of the Copyright Act affords protection to "original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or indirectly or with the aid of a machine or device."[54] Publications on the Web fit squarely within the scope of copyright protection: Web pages are original works, digitally fixed, and available via the Internet to the entire world.

Furthermore, the Act expressly addresses at least two areas of computer protection. Section 109 of the Act addresses the doctrine of "first sale," providing that the owner of a copy or phonorecord may "sell or otherwise dispose of the possession of that copy or

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48. *See* Act of May 31, 1790, ch. 15, 1 Stat. 124 (1790).

49. *See* Act of Oct. 19, 1976, Pub. L. No. 94-553, 90 Stat. 2541 (1976); *see also* EDWARD A. CAVAZOS & GAVINO MORIN, CYBERSPACE AND THE LAW: YOUR RIGHTS AND DUTIES IN THE ON-LINE WORLD 48 (1994) (discussing the revision).

50. *See* Berne Convention Implementation Act of 1988, Pub. L. No. 100-568, 102 Stat. 2853 (1988). Signed by 117 countries, the Berne treaty is an international copyright treaty. *See* INTERNATIONAL TREATIES ON INTELLECTUAL PROPERTY 357, 357-58 (Marshall A. Leaffer, ed., 2d ed. 1997). The treaty regulations are extensive and more protective than United States copyright law, requiring member states to recognize the moral rights of integrity and attribution. *Id.* The author's country must provide minimum copyright protections, and the owner's rights may not be exploited. *Id.* The economic rights of the author, similarly, are recognized. *Id.* Perhaps the most important result of the Berne Convention is that the terms of copyright protection were extended to the lifetime of the author plus fifty years. *See* Berne Convention for the Protection of Literary and Artistic Works, July 24, 1971, art. 7, para. 1, S. TREATY DOC. NO. 99-27 (1988).

51. *See* 17 U.S.C. § 102(a) (1994).

52. CAVAZOS & GAVINO, *supra* note 49, at 49.

53. *See id.*

54. § 102(a).

phonorecord,"[55] but prohibiting the owner of a computer program from renting, leasing, or lending the program.[56] Section 117 of the Act allows the owner of a computer program to make a copy of the program "as an essential step in the utilization of the computer program in conjunction with a machine" or "for archival purposes only."[57]

Section 106 of the Copyright Act confers upon authors a "bundle of rights,"[58] including the exclusive rights to reproduce the work in copies, to prepare derivative works based on the copyrighted work, to distribute copies of the work, and to perform or display the work publicly.[59] These rights can separately or collectively be given away, sold, leased, or licensed.[60] Section 106 rights are the exclusive rights of the author. Thus, if someone else exercises the author's bundle of rights under section 106, that person infringes the author's copyright.[61]

B. *Intended Uses or Infringing Uses?*

Some users might argue that, when material is published on the Web, the author intends others to read, download, link to, and possibly even to distribute the material or create derivative works, un-

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55. 17 U.S.C. § 109(a) (1994).

56. *See* § 109(b)(1)(a).

57. 17 U.S.C. § 117; *see also* Computer Assocs. Int'l, Inc. v. Altai, Inc., 982 F.2d 693, 702 (2d Cir. 1992) (noting that a computer program can be copyrighted); *but cf. infra* notes 91-92 and accompanying text (explaining that a Web page necessarily must be copied to be utilized).

58. The exclusive rights set conveyed by section 106 often are referred to as a "bundle of rights." *See, e.g.*, Stewart v. Abend, 495 U.S. 207, 220 (1990); H.R. REP. NO. 94-1476, at 61 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5659, 5674.

59. *See* 17 U.S.C. § 106(1)-(5) (1994). These rights are subject to enumerated limitations set forth in other sections of the Code. *See* 17 U.S.C. §§ 107-120 (1994).

60. *See* 17 U.S.C. § 106; *see also* DANIEL REMER & ROBERT DUNAWAY, LEGAL CARE FOR YOUR SOFTWARE 3:6-7 (5th ed. 1995).

61. Section 501(a) of the Code provides:

> Anyone who violates any of the exclusive rights of the copyright owner as provided by sections 106 through 118 or of the author as provided in section 106A(a), or who imports copies or phonorecords into the United States in violation of section 602, is an infringer of the copyright or right of the author, as the case may be.

17 U.S.C. § 501(a) (1994).

less the author presents a warning that clearly reserves his rights.[62] Others may disagree, arguing that such uses infringe on the author's exclusive bundle of rights, even when no reserving language is present. Thus, the Internet raises issues pertaining to the scope of allowable use, because Internet technology fosters conduct that arguably infringes on the copyright owner's bundle of rights.[63]

The mere use of copyrighted information does not necessarily infringe on the copyright owner's exclusive rights,[64] because Web users could assert the defenses of license or fair use. Accordingly, this article next addresses the defenses to infringement. Specifically, the issue is whether electronic publishing on the Web creates an implied license, or whether a fair use exception applies to certain activities.[65]

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62. An example of clear copyright language may read, "No part of this electronic publication may be reproduced or retransmitted without the prior written permission of the publisher. Any use or sale for profit is strictly prohibited. . . . Readers are advised to contact a qualified attorney to assist them in dealing with complex legal matters." Daniel Remer & Robert Dunaway, *Legal Care for Your Software; Copyright Information and Disclaimer* (visited Feb. 9, 1998) http://www.island.com/LegalCare/pages/LC_Disclaimer.htm (using this disclaimer); *see also* REMER & DUNAWAY, *supra* note 60, at 3:32-33.

Another example is the more sophisticated copyright language provided in the Villanova Center for Information Law and Policy's Federal Court Locator:

> Copyright in the HTML coding that implements appearance and footnote structure in the HTML files created for purposes of permitting the court opinions to be viewed on the World Wide Web is held by The Villanova Center for Information Law and Policy. Permitting access to these files through the Internet does not constitute consent to any use of the HTML coding and other features in the HTML files for commercial redistribution either through the Internet or any other form of HyperText distribution unless full and complete attribution to The Villanova Center for Information Law and Policy and this notice are included in the distribution.

Villanova Center for Information Law and Policy, *Credits and Conditions* (last modified Apr. 17, 1996) <http://www.vcilp.org/Fed-Ct/conditions.html>.

63. *See* PERRITT, *supra* note 5, at 436.

64. *See id.* at 467 ("The most obvious example is that one may read a copyrighted book without infringing a copyright.").

65. *See id.* (explaining express or implied licenses and the fair use doctrine are the two general permissible use defenses).

C. *Defenses to Infringement*

1. *Licenses: Express and Implied*

Section 204 of the Copyright Act provides that "[a] transfer of copyright ownership, other than by operation of law, is not valid unless an instrument of conveyance, or a note or memorandum of the transfer, is in writing and signed by the owner of the rights conveyed or such owner's duly authorized agent."[66] Courts have enforced this provision on its plain language.[67] Parties cannot waive section 204(a)'s writing requirement even if their industry custom is to make verbal agreements.[68] However, "'[a] *nonexclusive* license may be granted orally, or may even be implied from conduct.'"[69]

Many Web users and publishers believe that, without express language, the copyright owner impliedly allows users to reproduce, prepare derivative works, distribute copies, or perform or display the work publicly. But that is not the law. In the absence of express language, users and publishers must establish an implied license or look to the fair use exception to avoid infringement.[70]

Express licenses deprive the licensor of an infringement claim when the licensee's conduct is within the scope of the license and when custom or trade practice does not warrant allowable use. Thus, if the creator of a Web page expressly states that a user may link, download, distribute, view, and copy the information, there is no copyright problem. As is often the case, however, the user does not have an express agreement with the copyright owner. The user therefore may try to establish an implied license. For example,

> if I send you a message, asking you to forward it to a third person, I have impliedly licensed you to do the copying and distribution necessary to send the message on to the third person.

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66. 17 U.S.C. § 204(a) (1994).

67. *See, e.g.*, Effects Assocs. v. Cohen, 908 F.2d 555, 557 (9th Cir. 1990).

68. *See id.* at 556 (criticizing the notion that, in the film industry, "moviemakers do lunch, not contracts").

69. *Id.* at 558 (quoting 3 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 10.03[A] (1989)) (emphasis added) (alteration in original).

70. *See generally* 3 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 10.03[A] (1997).

> Likewise, it may be reasonable to infer that contributing to a newsgroup that has been established for the purpose of gathering commentary for a collection to be published elsewhere, constitutes an implied license to reuse the posting in the eventual publication.[71]

Because "[a] license is a defense to infringement,"[72] the issue to consider is whether X, the electronic publisher of a Web page which contains the copyrighted work of Y, could be found to hold an implied license from Y to reproduce, publicly display, or distribute the work. The copyrighted work may be a Web page or a work from some traditional medium.

Whether an implied license exists in the case of any particular Web page is an issue that must be resolved on a case-by-case basis.[73] Among the factors to consider when deciding whether an implied license exists are whether "the plaintiff voluntarily submitted the work to the defendant for publication"[74] and whether there is "a meeting of the minds."[75]

Naturally, if the author explicitly prohibits uses that may appear to be included within an implied license, the author defeats any claim of implied license.[76] For example, an author may state: "No part of this electronic publication may be reproduced or retransmitted without the prior written permission of the publisher. Any use or sale for profit is strictly prohibited."[77] Of course, if the copyright is invalid in the first place, the author cannot prevent others from exercising the exclusive rights. However, assuming the copyright is valid, this language may be sufficient, considering the

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71. PERRITT, *supra* note 5, at 467 (emphasis omitted).

72. Oddo v. Ries, 743 F.2d 630, 634 n.6 (9th Cir. 1984) (citation omitted); *accord* Keane Dealer Servs., Inc. v. Harts, 968 F. Supp. 944, 947 (S.D.N.Y. 1997).

73. *See* Herbert v. United States, 32 Fed. Cl. 293, 298 (1994) ("The existence and scope of an implied license . . . necessarily depends of [sic] the facts of each individual case." (citation omitted)).

74. *Id.*

75. N.A.D.A. Servs. Corp. v. Business Data of Va., Inc., 651 F. Supp. 44, 49 (E.D. Va. 1986).

76. *See* PERRITT, *supra* note 5, at 467 ("[I]mplied license . . . depends on the intent of the originator, who may defeat the implied license conclusion by explicitly prohibiting uses that might otherwise appear to be within an implied license.")

77. *Remer & Dunaway*, *supra* note 62 (using this language to defeat an implied license).

facts of a given case, to provide notice to users and to dispel any notion of implied license.

Several new technologies offer limited access to Web pages and thereby protect the intellectual property rights of authors. Admittance is restricted to those who have prior clearance. This restriction may be accomplished by requiring the user to provide a username and password, by requiring payment for use of the Web page, or by using encryption schemes.[78] Furthermore, several other technologies may also limit access. First, the file residing on the HTTP server must be "world readable"[79] or else access will be forbidden.[80] Second, the user must know where to find a particular Web page; otherwise the browser will not be able to locate the document.[81] That is, the user must specify the correct URL. Therefore, aside from copyright protection, there are technological means to protect an author's work. Web sites that limit access to users will defeat an implied license outside of the specific circle of allowed users.[82] Conversely, the strongest argument for an implied license is that the owner of the copyright posted the material for a large audience to read in a public forum. Nonetheless, unless there is a meeting of the minds between the copyright owner and the user, the user's defense of implied license will fail. Perhaps the more appropriate argument against infringement on the Web is fair use.

2. *Fair Use*

At common law, the fair use doctrine granted "'a privilege in others than the owner of the copyright to use the copyrighted mate-

78. Encryption can be used to verify a user's identity in three ways: 1) by the user's encrypted credit card number; 2) by the user's encrypted digital signature; or 3) by a special password. Once the user identifies himself, he may gain access to otherwise restricted files.

79. Internet servers have access levels. To be viewed by the Web audience at large, the file must be marked as readable by all others, and the directory which contains the file must be world executable.

80. If the file is not world readable, Web browsers will return the message "Forbidden. Your client is not allowed to access the requested object."

81. If the path is incorrect or outdated, for example, some browsers will return a message that says "Not Found. The requested object does not exist on this server. The link you followed is either outdated, inaccurate, or the server has been instructed not to let you have it."

82. *See supra* note 71, and accompanying text.

rial in a reasonable manner without his consent.'"[83] The United States Supreme Court has efficiently summarized the applicability of the fair use doctrine in a single question: "'[W]ould the reasonable copyright owner have consented to the use?'"[84]

Although fair use is not clearly defined, 17 U.S.C. § 107 provides several factors to determine "whether the use made of a work in any particular case is a fair use . . . ."[85] These factors comprise:

> (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
>
> (2) the nature of the copyrighted work;
>
> (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
>
> (4) the effect of the use upon the potential market for or value of the copyrighted work. The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors.[86]

If the use of copyrighted expression is fair in light of these factors, parts of the expression may be used without the author's prior permission. "Under the fair use doctrine, an expression can be used for primarily non-commercial reasons (journalistic or educational purposes) under circumstances that don't seriously interfere with the copyright owner's ability to commercially exploit the expression."[87] A typical example of fair use is a professor's photocopying a short article for her students.[88]

Thus, in certain cases, a user may be able to reproduce, download, and link to electronic publishing on the Web under the fair

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83. Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 549 (1985) (quoting HORACE G. BALL, THE LAW OF COPYRIGHT AND LITERARY PROPERTY 260 (1944)). Fair use is an affirmative defense to copyright infringement. *See* Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 590 (1994).

84. *See Harper & Row Publishers*, 471 U.S. at 550 (1985) (quoting ALAN LATMAN, FAIR USE OF COPYRIGHTED WORKS 14 (United States Copyright Office Study No. 10, 1958)).

85. 17 U.S.C. § 107 (1994).

86. *Id.*

87. REMER & DUNAWAY, *supra* note 58, at 3:11.

88. *See* H.R. REP. NO. 94-1476, at 68-70 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5659, 5681-83.

use exception. Initially, it might seem that the Internet, by the nature of the medium, would encourage an open, deregulated use of information. As discussed earlier, however, copyright laws apply to the Internet. Users must heed them.

To analyze the question of implied license and fair use more fully, each of the author's conferred rights[89] are examined below in the context of Web publishing.

D. *The Copyright Owner's Exclusive Rights*

1. *Reproduction Rights*

Under 17 U.S.C. § 106, the owner of copyright has the exclusive right "to reproduce the copyrighted work in copies or phonorecords."[90] As discussed earlier, when a user accesses a Web page and views its contents, a copy of the page is stored in memory of the user computer.[91] Storage is a necessity of the technology. It is neither optional nor specifically initiated by the user.[92] Because there is no way of avoiding this step of the process, the mere act of viewing a work on the Web may implicate the reproduction right even if the user does not make a more permanent copy.[93]

If the transient reproduction[94] of a Web page is considered copying, it might be permitted under 17 U.S.C. § 117[95] because the copy is arguably necessary for utilization of the work.[96] However, the language of section 117 expressly limits the use of copying

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89. *See* 17 U.S.C. § 106(1)-(5) (1994).

90. § 106(1).

91. *See* Ginsburg, *supra* note 34, at 1476.

92. *See id.*

93. *See id.*

94. The copy is transient because once a user finishes a session of exploring the Web, the pages he viewed are no longer stored in the computer's memory. *Cf.* PERRITT, *supra* note 5, at 434-36 (discussing the caching of images and other online information by a user's computer and by computer networks between the user and the content server).

95. Section 117 of the Act permits the owner of a computer program to make a copy of the program "as an essential step in the utilization of the computer program in conjunction with a machine," 17 U.S.C. § 117(1) (1994), or "for archival purposes," § 117(2).

96. *See* Loundy, *supra* note 4, at 33.

computer programs.[97] The exception may not apply to Web pages in general.

A more persuasive argument is that the temporary copy is merely incidental to the technology involved. Indeed, it is well established that copyright law does not protect processes themselves.[98] In *Baker v. Selden*, the Supreme Court explained that those aspects of a work, which must necessarily be used as *incidental* to the idea, system, or process that the work describes, are not copyrightable.[99] Accordingly, the Second Circuit recently concluded "that those elements of a computer program that are necessarily *incidental* to its function are similarly unprotectable."[100] By this rationale, the act of viewing a Web page involves only incidental copying. Thus, the temporary copy that is made on the user's computer would be excluded from the author's rights.

The viewing of a Web page, which creates a temporary copy in the user's computer, may also be allowed by an implied license. Arguably, the author would not have placed his material on the Web if he did not want others to read it. However, an implied license depends on the author's intent. Unless the material is deemed to be in the public domain, there is no implied license without the author's explicit or implicit consent.

Unlike implied license, fair use does not depend on the author's intent.[101] "Although it is surely reasonable to suppose that the copying of a URL . . . incident to retrieving material pointed to from a World Wide Web page is fair use (if not within an implied license), it is less clear that caching is fair use when it permits avoidance of further transactions with the originator and reduces revenue to the originator."[102]

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97. *See* § 117.

98. *See* Baker v. Selden, 101 U.S. 99, 103 (1879); *see also* Mazer v. Stein, 347 U.S. 201, 217 (1954); Computer Assocs. Int'l v. Altai, Inc., 982 F.2d 693, 703 (2d Cir. 1992).

99. *See Baker*, 101 U.S. at 104. Specially designed ledger sheets, therefore, enjoyed no copyright protection because they were "necessary incidents to" the system of accounting that the author described in a copyrighted book on accounting. *See id.* at 103.

100. *Computer Assocs.*, 982 F.2d at 705 (emphasis added).

101. *See* PERRITT, *supra* note 5, at 467.

102. *Id.* For a discussion of caching, see *id.* at 434-36.

In addition, the vast majority of users are viewing Web sites for their personal enjoyment rather than for any commercial gain.[103] Seeking these individual "copiers" is not only impractical, it is pointless.[104] Thus, copyright law should reasonably exclude this transient aspect of copying from the copyright owner's bundle of rights.[105]

An interesting application of the doctrine to the Web involves the Supreme Court's decision in *Sony Corp. of America v. Universal Studios, Inc.*[106] (the "*Betamax Case*"). The issue in the *Betamax Case* was whether viewers committed copyright infringement by videotaping programs and watching them at a later time.[107] The Supreme Court determined that this activity fell within the fair use exception[108] since the public had been "invited to witness [a televised copyrighted audiovisual work] in its entirety free of charge . . . ."[109] Thus, no copyright infringement took place.[110]

According to the holding in the *Betamax Case*, when a Web page is made freely available there should be no copyright infringement because a fair use exemption applies.[111] On the other hand, when a user accesses a site that is protected by a password, a commercial service, or a site that requires other prior authorization, the public is not invited to view the site freely. Copying from such a Web site makes "a much weaker claim to being fair use."[112] The claim is particularly weak if the private copying adversely affects the "potential market for or value of the copyrighted work."[113]

Thus, the act of simply specifying a URL and viewing a Web

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103. *See* Ginsburg, *supra* note 34, at 1477-78.

104. *See id.* ("[T]he entire concept of 'private copying' makes little sense in a world where the work is predominantly marketed directly to the end user.")

105. *See id.* Many European countries have adopted a general exception for private copying by end users. *See id.*

106. 464 U.S. 417 (1984) [hereinafter *Betamax Case*].

107. The court referred to this activity as "time-shifting." *See id.* at 421.

108. *See* 17 U.S.C. § 107 (1994).

109. *Betamax Case*, 464 U.S. at 449.

110. *See id.* at 454-55.

111. Ginsburg, *supra* note 34, at 1479 (arguing that there must be prima facie infringement for the fair use exemption to apply).

112. *Id.*

113. *See* 17 U.S.C. § 107(4) (1994).

page presumably does not infringe the author's reproduction right. This act is most likely an incidental use; otherwise, it may come within either an author's implicit license,[114] or the fair use doctrine.[115] Accordingly, the author of a Web page should be well aware of the technological implications of electronic publishing. Furthermore, the author should be cautious of placing information on the Web if he is not comfortable with the way the technology works.

2. *Public Performance and Display Rights*

Section 106's bundle of rights entitles an author to public performance and display rights.[116] "[I]n the case of literary [and] musical . . . works, . . . and motion pictures and other audio visual works" an author has the exclusive right "to perform the copyrighted work publicly . . . ."[117] "[I]n the case of literary . . . and pictorial [or] graphic . . . works, including the individual images of a motion picture or other audiovisual work" the author has the exclusive right "to display the copyrighted work publicly."[118] Public performance or display means:

> to transmit or otherwise communicate a performance or display of the work . . . to the public, by means of any device or process, whether the members of the public capable of receiving the performance or display receive it in the same place or in separate places and at the same time or at different times.[119]

Unfortunately, the Copyright Act fails to define "the public," although the Act does explain that a work is performed or displayed "publicly" if performance or display takes place "at any place where a substantial number of persons outside of a normal circle of a family and its social acquaintances is gathered . . . ."[120]

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114. It may also come within an explicit license if the author actually states the allowed uses on the Web page.

115. *See* Ginsburg, *supra* note 34, at 1476.

116. *See* 17 U.S.C. § 106 (1994).

117. *Id.* § 106(4).

118. *Id.* § 106(5); *see also* 17 U.S.C.A. § 106(6) (West Supp. 1997) ("[I]n the case of sound recordings, [the copyright owner has exclusive rights] to perform the copyrighted work publicly by means of a digital audio transmission.").

119. 17 U.S.C. § 101 (1994).

120. *Id.*; *see also* H.R. REP. No. 94-1476, at 64 (1976), *reprinted in* 1976

Posting a document on the Web is a public performance or display within the meaning of the Copyright Act. Members of the public, who have access to the Internet, are "capable of receiving the performance or display . . . in separate places and at the same time or different times."[121] The traditional notion of gathering at a set time in a predetermined place to view a public performance is not necessary to establish a performance or display under the Act.[122] Furthermore, even those without access to the Internet are capable of downloading, viewing, or receiving Web documents.[123] Thus, the language of section 101 nicely embraces the viewing of Web pages.

Accordingly, if Web publisher X takes book publisher Y's copyrighted material and posts it on the Web, X would infringe Y's public display right based on the raw content of the Web document. Likewise, if X downloads Y's Web page or copies the expression of ideas contained within Y's Web page and posts it on the Web under X's name, X would infringe Y's exclusive display right, among other rights.

What if Web publisher X points users to an existing URL that contains Web publisher Y's material? X's pointing the user to a URL[124] would seem to parallel a print author's citing a book or an

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U.S.C.C.A.N. 5659, 5677-78 ("One of the principal purposes of the definition [of 'publicly'] was to make clear that . . . performances in 'semipublic' places such as clubs, lodges, factories, summer camps, and schools are 'public performances' subject to copyright control.").

121. § 101. Similarly, online audio files are also public performances. *See generally* Kenneth D. Suzan, Comment, *Tapping to the Beat of a Digital Drummer: Fine Tuning U.S. Copyright Law for Music Distribution on the Internet*, 59 ALB. L. REV. 789 (1995) (discussing digitalized recordings over the Internet and how current copyright laws inadequately address this new technology).

122. *See* On Command Video Corp. v. Columbia Pictures Indus., 777 F. Supp. 787, 790 (N.D. Cal. 1991) (holding that electronic delivery of videotaped movies to different hotel rooms at different times was a public performance because the signals were transmitted to the public); *see also* LEGAL RESEARCH NETWORK, INC. ET AL., RULES OF THE ROAD FOR THE INFORMATION SUPERHIGHWAY: ELECTRONIC COMMUNICATIONS AND THE LAW § 33.4(1) (1996).

123. For example, new technology permits accessing a URL on a touch tone phone and having the Web page faxed to a remote fax machine. There are also services that will automatically fax Web documents from the Web page itself. *See, e.g., About the Villanova Center for Information Law and Policy* (visited Feb. 9, 1998) <http://www.vcilp.org/vcilp>.

124. The most direct way to point a user to another Web page is by use of a

article. It would not infringe Y's public display right so long as the user is not deceived into thinking that the underlying material is publisher X's and proper credit is given to Y.[125]

Now suppose X downloads Y's page and mails it to "the public" by posting the page to a newsgroup[126] or sending it to a mailing list.[127] A newsgroup or mailing list is focused and therefore not as public as a Web audience. Nonetheless, posting the page to a newsgroup or sending it to a mailing list generally infringes Y's, the copyright holder's, public display right provided the Web audience constitutes "the public" within the language of the Copyright Act.[128] Such activity takes place frequently. Newer Web browsers allow users to mail and forward Web pages easily. Not only can the text of a page be forwarded to a newsgroup or mailing list, but the HTML source code may also be sent. Thus, X, the potential infringer, may publicly display the copyright owner's raw content and HTML code.[129]

3. *Distribution Right*

Section 106 of the Copyright Act also grants the copyright holder the exclusive right "to distribute copies . . . of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending . . . ."[130] The exclusive right to distrib-

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hypertext link. *See supra* note 12.

125. See discussion *infra* notes 161-69 for further analysis.

126. A newsgroup is an electronic discussion group. Participants post messages to a central bulletin board that any Internet user can access. *See* HAHN & STOUT, *supra* note 10, at 158-59.

127. A mailing list is an electronic mail message that is distributed to many people. Messages are automatically sent to everyone on the list. *See id.* at 516. Mailing lists are similar to newsgroups, except that the discussions take place via electronic mail. *See id.* at 516-17. The most common mailing list administration system is called "Listserv," which is short for "list server." *See id.* at 519-20.

128. *See* 17 U.S.C. § 101 (1994).

129. The HTML source code is arguably copyrightable, assuming the creator engaged in a minimally original selection and arrangement of the HTML page. *Cf.* Feist Publications, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 358 (1991) (stating the standard of originality required for copyright protection in compilations as (1) the author's independent arrangement of the constituent works and (2) "that [the overall work] display some minimal level of creativity").

130. 17 U.S.C. § 106(3) (1994).

ute, under the "first sale doctrine"[131] is conditional.[132] Under the first sale doctrine, the lawful owner of a copy "may sell or otherwise dispose of the tangible copy without the copyright owner's permission."[133] Thus, the copyright owner may not exercise her exclusive distribution right over particular copies of the protected works lawfully sold, but she does have the right to prohibit copying.[134]

A copyright holder's distribution right may be infringed by the simple viewing of Web material because browser technology requires a copy of the document to be stored in the memory of the user's computer.[135] However, as discussed earlier, viewing a Web page is likely to be an allowable use.[136]

A more affirmative act occurs when X disseminates Y's Web page to a newsgroup or mailing list or publishes the raw content of Y's page on the Web. Nonetheless, Y's distribution rights are not implicated unless X sells Y's material,[137] or X effects some "transfer of ownership."[138] The Copyright Act may not regulate digital technology since, although copies of the work are disseminated, the owner does not physically part with the posted, copyrighted work.[139] Indeed, digital works are not tangible items like a book or a photograph. Thus, section 106(3), as it stands, may not adequately protect Y when Y's work is electronically published.[140]

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131. *See* 17 U.S.C. § 109(a) (1994).

132. *See* McCoy & Boddie, *supra* note 4, at 187.

133. *Id.*; *see also* § 109(a).

134. *See* McCoy & Boddie, *supra* note 4, at 187 ("For example, a library that has acquired ownership of a copy of a book is entitled to lend it under any conditions without violating the copyright owner's distribution rights.").

135. *See supra* notes 91-93 and accompanying text.

136. For discussion of reproduction rights implicated in viewing a Web page, see *supra* notes 90-129 and accompanying text.

137. 17 U.S.C. § 106(3) (1994). There are several new technologies used for selling products on the Web, such as electronic cash, digicash, and encrypting credit card numbers. *See* A. Michael Froomkin, *Flood Control on the Information Ocean: Living with Anonymity, Digital Cash, and Distributed Databases*, 15 J.L. & COM. 395, 450-56 (1996).

138. § 106(3).

139. *See* Ginsburg, *supra* note 34, at 1481-82; McCoy & Boddie, *supra* note 4, at 187 ("[T]he copy is transmitted, or published to another, without giving up possession of the original.").

140. *See* Ginsburg, *supra* note 34, at 1482-83.

Arguably, this deficiency in section 106(3) does not seriously undermine the author's copyright, provided that digital transmissions are public performances or displays and thus are already protected under section 106(5).[141] That notwithstanding, the copyright owner may give away, sell, lease, or license these exclusive rights separately.[142] Thus, combining these two exclusive rights may not provide adequate protection.[143]

The *White Paper*[144] recognized this deficiency in the current copyright law. Specifically, the *White Paper* suggests legislation that would secure an electronic publisher's exclusive distribution right when digital transmission is involved.[145] The *Executive Summary* states:

> The Report recommends that Section 106(3) of the Copyright Act be clarified to expressly recognize that copies or phonorecords of works can be distributed to the public by transmission, and that such transmissions fall within the exclusive distribution right of the copyright owner. The Report also recommends related amendments to the definitions of "transmit" and "publication," as well as distribution-related provisions regarding im-

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141. *See id.*

142. *See* § 106 ("[T]he owner of copyright . . . has the exclusive rights to do or to *authorize* any of the following . . . ." (emphasis added)).

143. *See* Ginsburg, *supra* note 34, at 1482. Ginsburg writes:

> The possible lack of fit between the statutory distribution right and digital dissemination may not significantly undermine the author's copyright, so long as digital transmissions can be deemed public performances or displays. Nonetheless, there may be a practical reason to distinguish between digital performances or displays, and digital distribution of copies: the author may license (or retain) rights separately. If the only exclusive right pertaining to digital transmissions was the public performance/display right, then the holder of that right could block the holder of the reproduction right from disseminating copies of the work over digital networks.

Id.

144. *See supra* note 1.

145. *See* WHITE PAPER, *supra* note 1, app. 1, at 2; *see also* Bruce P. Keller, *Electronic Property Rights and Licensing Online Uses of Intellectual Property, in* 2 COMMUNICATIONS LAW 1995, at 9, 32 (PLI Patents, Copyrights, Trademarks, and Literary Property Course Handbook Series No. G-421, 1995) (noting the purpose of this legislation is "[t]o confirm that the exclusive right of public distribution of a copyrighted work is implicated by digital transmission, and to conform the definitions and importation provisions of the Copyright Act accordingly").

portation of copies or phonorecords.[146]

Likewise, the National Information Infrastructure Copyright Protection Act of 1995[147] was introduced to amend title 17 of the United States Code "to adapt the copyright law to the digital, networked environment of the National Information Infrastructure, and for other purposes."[148] Specifically addressing the transmission of copies in section 2, the bill proposes to add "transmission" as a method of distribution in section 106(3), and likewise add "transmission" to the definition of publication in section 101.[149] In addition, the definition of "transmit" would include the distribution of digital copies of a work, thus it would not require the author to part physically with the hard copy in order to secure the electronic author's exclusive distribution right.[150]

It is important to recognize that a reproduction and a public performance (or display) are essentially indistinct for the material encountered on the Web.[151] Because the user's computer must reproduce the information from a Web site, any public performance requires reproduction.[152] Such ambiguities will hopefully be re-

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146. *Executive Summary*, *supra* note 1; *see also* WHITE PAPER, *supra* note 1, app. 1, at 2.

147. The National Information Infrastructure Copyright Protection Act of 1995, S. 1284, 104th Cong. (1995); H.R. 2441, 104th Cong. (1995).

148. S. 1284; H.R. 2441.

149. The National Information Infrastructure Copyright Protection Act of 1995 states:

> Sec. 2. TRANSMISSION OF COPIES.
>
> (a) DISTRIBUTION- Section 106(3) of title 17, United States Code, is amended by striking 'or by rental, lease, or lending' and inserting 'by rental, lease, or lending, or by transmission'.
>
> (b) DEFINITIONS- Section 101 of title 17, United States Code, is amended—
>
> (1) in the definition of 'publication', by striking 'or by rental, lease, or lending' in the first sentence and inserting 'by rental, lease, or lending, or by transmission'; and
>
> (2) in the definition of 'transmit', by inserting at the end thereof the following: 'To "transmit" a reproduction is to distribute it by any device or process whereby a copy of phonorecord of the work is fixed beyond the place from which it was sent.'

S. 1284 § 2; H.R. 2441 § 2.

150. *See* S. 1284 § 2(b)(2); H.R. 2441 § 2(b)(2).

151. *See* Ginsburg, *supra* note 34, at 1482-83.

152. *See id.*

solved with new legislation or precedent, but presently "recognizing a right of digital distribution of copies may assist grantees of the reproduction right in resisting the competing claims of holders of the public performance right."[153]

4. *Derivative Works Right*

Finally, electronic publishers also have the exclusive right "to prepare derivative works based upon the copyrighted work."[154] Derivative works are defined as including any "form in which a work may be recast, transformed, or adapted."[155] As a rule, digitized works themselves are usually derivative works of preexisting works.[156]

If electronic publisher X creates a Web page that is an adaptation of Y's expression, that is, any already copyrighted material,[157] X has infringed Y's exclusive derivative works right. For instance, if X scans a copyrighted image that Y has photographed or painted, and X creates a duplicate image file,[158] X would violate Y's exclusive derivative works right.[159] Even if Y's copyrighted work itself is a Web page, Y owns the exclusive right to create derivative

153. *Id.* at 1483.

154. 17 U.S.C. § 106(2) (1994).

155. 17 U.S.C. § 101 (1994). The full definition reads:

> A "derivative work" is a work based upon one or more preexisting works, such as a translation, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgment, condensation, or any other form in which a work may be recast, transformed, or adapted. A work consisting of editorial revisions, annotations, elaborations, or other modifications which, as a whole, represent an original work of authorship, is a "derivative work."

Id.

156. *See* McCoy & Boddie, *supra* note 4, at 186.

157. This page could contain a digital movie, audio, graphics, or text.

158. On the Web, Graphic Interchange Format ("GIF") or Joint Photographic Experts Group ("JPEG") are popular forms of image file formats. For more information on Raster Graphic Interchange Standards, see *Raster Graphic Interchange Standards* (last modified Jan. 1998) <http://www2.echo.lu/oii/en/raster.html>.

159. *Cf.* Playboy Enters., Inc. v. Frena, 839 F. Supp. 1552, 1556-59 (M.D. Fla. 1993) (holding that uploading of photographs from Playboy magazine to a subscription bulletin board service for others to download was copyright infringement).

works of the original expression contained within Y's page.[160]

E. *Examples of Infringement on the Web*

It is important to recognize that a single act may infringe on more than one of a copyright owner's exclusive rights. In addition to the hypotheticals discussed throughout the preceding section, actual examples may further illuminate copyright notice and infringement on the Web.

The Legal Information Institute, based at Cornell Law School, has implemented a search engine that provides a means for searching all United States Circuit Court of Appeals decisions.[161] The opinions that a user may access through Cornell's search engine have been posted through a cooperative effort among different law schools and institutions.[162] The initial search engine page clearly indicates this cooperative effort. In addition, the results returned by Cornell's engine indicate the host's URL. These two precautions provide sufficient notice to the user that Cornell does not furnish all of the court opinions.

Suppose that Cornell did not take these precautions. An inexperienced user might assume that all of the information he accessed via Cornell's Web site originated from Cornell's server.[163] The arguably misleading nature of the search results might infringe on the reproduction right, public display right, and distribution right

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160. *Cf. id.*

161. *See* Legal Information Institute, *Search All U.S. Circuit Court of Appeals Opinions on the Internet* (visited Feb. 9, 1998) <http://supct.law.cornell.edu/Harvest/brokers/circuit-x/fancy.query.html>.

162. *See id.* The front-end of the search engine provides:

> The opinions you access via this search engine are mounted as a cooperative effort among many institutions and individuals, including the Villanova Law School, Georgetown University Law Center, Emory Law School, the law schools at Touro and Pace, the University of Texas, and the US Office for the Administration of the Courts. The search engine itself has been mounted, customized, and maintained by the Legal Information Institute.

Id.

163. However, it could be argued that the user should know enough to notice new URLs as she browsed from page to page. The URL is displayed at the top of the Web browser.

owned by the contributing institutions.[164] Nevertheless, Cornell has a strong argument of implied license since a substantially greater amount of users will reach the contributing sites by using Cornell's search engine, thereby making each of the subsidiary sites more popular and more successful. Because Cornell is contributing to the success of the law schools and institutions that have posted the opinions, one might argue its linking to free information on the Web is implicit.[165] It is obvious from this example that the seamless nature of hypertext links on the Web can cause much controversy in copyright law.

Another scenario worth considering is the common practice of "stealing" images on the Web. There is no copyright problem if images are downloaded from public archives and meant to be used by others. However, many Web browsers allow the user to simply point the mouse at an image on a Web page and download it. Thus, if an electronic publisher has created an image for exclusive use on her Web page, and a user views and steals the image, the user has infringed the publisher's exclusive right to copy.[166] Furthermore, if the user displays the image on his own Web page, he has infringed the original publisher's exclusive right to public display.[167] If the user adapts the image, there is also a violation of the original publisher's exclusive right to prepare derivative works.[168] A user may likewise download the publisher's HTML source code from his Web browser. If HTML coding is copyrightable, mimicking another's unique Web page would violate the author's exclusive bun-

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164. Of course, government works, such as court opinions, are not copyrightable under section 105 of the Copyright Act. Here, the contributing institutions would only have a copyright in the value added by encoding the opinions into HTML. For an example of a copyright notice, see *supra* note 62.

165. This argument also applies to other indexes and search engines available on the Web that allow for quick location of information. *See, e.g., AltaVista: Main Page* (visited Feb. 9, 1998) <http://altavista.digital.com>; *Infoseek* (visited Feb. 9, 1998) <http://www.infoseek.com>; *Yahoo* (visited Feb. 9, 1998) <http://www.yahoo.com>.

166. *See* 17 U.S.C. § 106(1) (1994). For discussion of the electronic publisher's reproduction rights, see *supra* notes 90-115 and accompanying text.

167. *See* § 106(4)-(5). For a discussion public performance and display rights, see *supra* notes 116-29 and accompanying text.

168. *See* § 106(2). For discussion of derivative works rights, see *supra* notes 154-60 and accompanying text.

dle of rights.[169]

IV. CONCLUSION

The seamless nature of the Web presents some novel copyright issues. In the past, copyright law has survived the introduction of new media and new technologies with little revision. These include radio, photography, photocopiers, and video-cassette recorders. The Web should be no different. As one writer has noted, "[t]his is not the first time that new technology has posed a threat to the state of copyright law."[170] On the other hand, as the *White Paper* points out, "technology has a habit of outstripping even the most flexible statutes."[171] Accordingly, copyright law must be revised to accommodate the Web. Indeed, the vitality of the Web as a medium depends upon the continuing protection of original work product.

169. The copyrightability of HTML source code is beyond the scope of this paper. Nonetheless, it should be noted that the holder of the copyright to the content of a Web page is often different from the holder of the copyright to the HTML source code of the Web.

170. Mary Holden, *Intellectual Property Disputes Flare on the Electronic Frontier*, CHI. DAILY L. BULL., Apr. 22, 1995, at 1.

171. WHITE PAPER, *supra* note 1, at 211 (quoting H.R. Rep. No. 101-735, at 7 (1990), *reprinted in* 1990 U.S.C.C.A.N. 6935, 6938).