

Is Viewing a Web Page Copyright Infringement?

FEATURE ARTICLE

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¹ Adapted from the copyright notice on the CANOE (Canadian Online Explorer) web page. URL: <http://www.canoe.ca/Canoec/copyright.html>.

It is quite common, while “surfing the net,” to come across copyright notices such as the following:

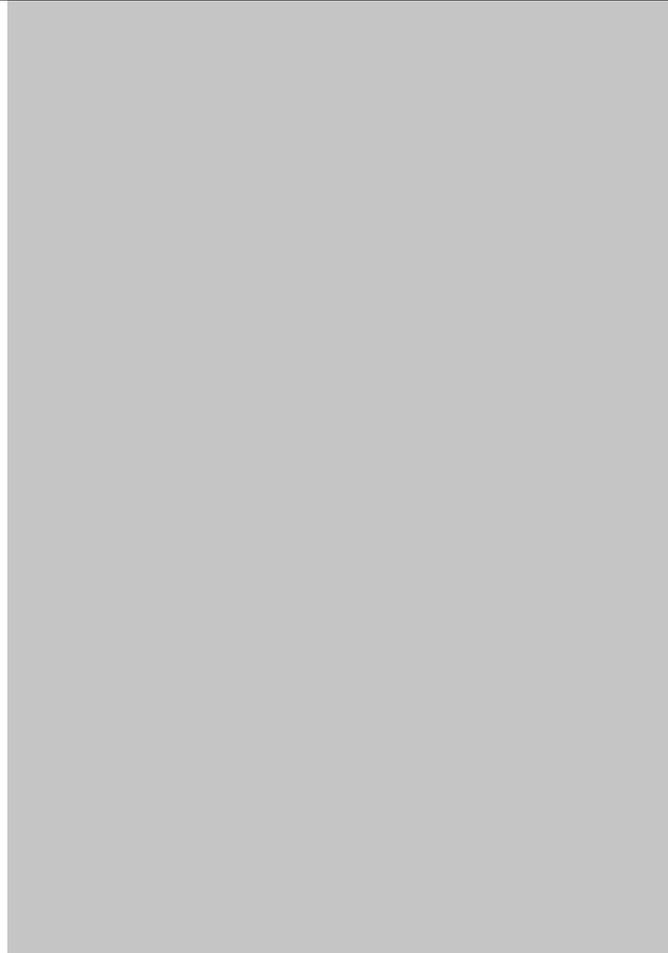
This Service is protected by copyright pursuant to Canadian copyright laws, international conventions, and other copyright laws. Any reproduction, modification, publication, transmission, transfer, sale, distribution, performance, display or exploitation of any of the content of this Service, whether in whole or in part, without express written permission, is prohibited.¹

The Internet is increasingly becoming a mainstream source of information and entertainment. Creators naturally want to ensure that their works will continue to be protected to the same extent as with more traditional media such as print, audio recordings, and broadcasting. Yet electronic publishing is far from an easy analogical extension of traditional media; paradoxes abound in any extension of print-based concepts to the digital world. For instance, applying the existing copyright framework to online works has the counter-intuitive consequence that the mere reading of the above copyright notice would violate it. By contrast, no copyright violation transpires when one watches the copyright trailer on a rented video. Online copyright notices similar to the one above appear on thousands of publicly accessible Internet sites, accessible by millions of Internet users. Should online creators be able to bring actions of copyright violation against those who access their content, even when that content is ostensibly made available for free? Proposals currently before lawmakers for updating copyright law will make it possible for online creators to use the courts to collect licensing fees “after the fact.” This paper will argue that it is a mistake to apply copyright to online publishing in a way that does not recognize some basic facts and intuitive distinctions concerning digital communication.

Technical Background

To understand the legal issues particular to copyright law and the Internet, it is important first to understand some of the technical aspects of how information is transferred across the Internet. The most basic relationship between computers on the Internet is

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the client-server relationship. The client is the computer controlled by the user. A server stores data, and distributes files on request from clients. A typical client-server interaction might be something like the following: a user wants to search for a file on a server; the client formulates the query and sends it to the server; the server retrieves the file from storage and sends it back to the client; the client, in turn, presents or manipulates the file in a way useful to the user.²

This over-simplified explanation of how the Internet works already involves concepts central to copyright. Though we speak of a server “sending” a file, such sending is only figurative. On a technical level, servers transfer only copies of files, and not the original files themselves. The files remain on the server, ready for the next request

² Jim Carroll and Rick Broadhead, *Canadian Internet Handbook* (Scarborough: Prentice Hall Canada, 1994) at 67-73.

3 Two examples of web browsers are Netscape Navigator and Microsoft's Internet Explorer.

4 For a more detailed explanation of caching, see The World Wide Web Consortium (W3C), "Architecture - Cache." URL:

<http://www.w3.org/pub/WWW/Library/User/Architecture/Cache.html>. In fact, caching can occur in many more places than just web browsers. So called "proxy caching" occurs in corporations' firewalls, with commercial online services such as AOL and CompuServe, and even at the Internet node or junction connecting a geographical region, such as a small country, to the rest of the Internet. So, there is the possibility for a creator's web page to be duplicated at many locations, all without the creator's knowledge.

5 Browsers use both RAM memory and hard disk space as cache storage. Caching in RAM aids the revisiting of web pages over the course of one session of web use; caching on the hard disk aids the revisiting of web pages from one session to the next.

6 A picture may be worth a thousand words, but in information terms, those words would occupy only a few kilobytes of disk space, whereas the picture may require many tens of times more.

7 For some studies on the benefits of caching, see "Web traffic characterization: an assessment of the impact of caching documents from NCSA's web server." The National Centre for Super-Computing Applications (NCSA). URL:

<http://www.ncsa.uiuc.edu/SDG/IT94/Proceedings/DDay/claffy/main.html>. See also "A survey of the functionality and effectiveness of current caching systems." URL: <http://www.surfnet.nl/surfnet/projects/desire/caching.html>.

from another client. Every file transferred over the Internet is copied in one way or another. Even an e-mail message is "sent" by making a copy on the recipient's computer. Under the established copyright regime, copying is the exclusive right of the copyright owner, yet the Internet gives this power to virtually anyone. So, it appears that there is the potential for copyright infringement in virtually every Internet transmission. While it is arguable that a great deal of Internet traffic, such as e-mail and "chat," is not protected by copyright, there is much on the Internet that consists of original, creative or artistic work, and so falls under the copyright aegis.

Increasingly, the original, creative work found on the Internet is expressed in the medium known as the World Wide Web. The problem of copyright on the Web is exacerbated by the technology used to implement it. The client software programs that access documents on the Web are known as web "browsers."³ When the user wants to view a particular web page, the browser sends a request out over the Internet to the appropriate web server for a file called an HTML file. The web server sends a copy of the file back to the browser; the browser in turn interprets and displays on screen the text and graphics of the web document, according to the instructions contained in the HTML file. The HTML file itself contains the text for the document, but the graphics files, being much larger, are kept as separate files on the server, and are called up individually by the browser. The end result produced on the user's screen by the browser software, combining text, layout, and images, is known as a "web page."

It is because of the large size of a typical graphics file that web browsers have a particular feature, known as a "cache."⁴ The cache in a browser has important copyright implications. The browser caches, or stores, in the memory of the user's computer copies of the text and images of visited web pages.⁵ The purpose of caching is to improve access to web pages. The time it takes for an entire web page to reach the user depends on the information-carrying capacity (the "bandwidth") of the Internet connection between the web server and the user's computer. Information bottlenecks in this connection, such as the slow speed of a user's modem, can significantly increase the wait. The problem is most apparent when accessing web pages that are replete with graphics.⁶ Caching helps circumvent the problem of limited bandwidth. By keeping copies of web files "within easy reach" on the user's hard drive, the browser does not have to use up bandwidth to retrieve files from the web server every time the user revisits a particular web page. In cases where the user frequents a few web pages on a regular basis, it is faster to retrieve the large image files for those pages from the user's own computer than from across the Internet. The practice of caching has helped to prevent the Internet from becoming completely overloaded by the exponential growth of World Wide Web traffic.⁷

Legal Implications

Reading a web page involves making a copy of it in the memory of the client computer. At the very minimum, there must be a copy of the information in the computer's

Random Access Memory (RAM); otherwise, the client software would be unable to interpret and display the web page. To lessen the impact of an ever-increasing demand on a system of only finite resources, browsers pragmatically incorporate disk caching. Does this make the act of viewing a web page a potential copyright violation? Some lawmakers seem to think that it might. Both the U.S. Department of Commerce's White Paper on Intellectual Property on the National Information Infrastructure⁸ ("The White Paper") and Industry Canada's Information Highway Advisory Council (IHAC) report on copyright⁹ maintain that the mere viewing of a web document is governed by copyright principles. The IHAC report is of the view that "any act of [digitally] accessing a work constitutes a reproduction, [and a]s such, ... is subject to the right of reproduction."¹⁰

To anyone accustomed to using the Internet as a source of information, the idea that viewing a web document is tantamount to a copyright violation is at best counter-intuitive. It is simply a fact of digital communication that files must be copied to be sent. While copyright violations must surely occur on the Internet, one would expect that they would be the exception, and not the rule. There must be something wrong, one might argue, with an analysis that makes the common, intended use of a web page a *prima facie* copyright violation. In what follows, this paper will trace the legal reasoning that led to the conclusion that "the act of browsing a work in a digital environment should be considered an act of reproduction."¹¹ The focus will be on the U.S., for the reason that the underlying arguments are often made more explicit, both in the White Paper and in the secondary literature. The IHAC report does not give many insights into its own reasoning. It acknowledges drawing upon the National Information Infrastructure Task Force's preliminary report ("The Green Paper"). Instead of providing an argument for why browsing ought to be considered a copyright violation, the IHAC report simply alludes to the crucial issue being settled "based on the United States Model."¹² On the issue of browsing, as with several other issues, the Canadian report takes its cues from the American.

United States: The White Paper

The White Paper's position is based on strict interpretation of the U.S. Copyright Act. For a work to be eligible for copyright protection under U.S. law, it must be instantiated in some physical object: "Copyright protection subsists ... in original works of authorship fixed in any tangible medium of expression."¹³ A tangible medium is that from which the work can be "perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device."¹⁴ Copies of a work are "material objects ... in which a work is fixed by any method now known or later developed, and from which the work can be perceived, reproduced, or otherwise communicated."¹⁵ The means by which a work can be fixed includes, but is not limited to, writing, engraving, perforating, punching, sculpting, or any other means of physically inscribing the work onto a material object, either graphically or in symbols. Significantly, this non-exhaustive list extends to include digitally encoding. To be fixed, the physical embodiment of

The court found that because the copy created in RAM can be "perceived, reproduced, or otherwise communicated," the loading of software into RAM creates a "copy" under section 101 of the U.S. Copyright Act.

8 Information Infrastructure Task Force, "Intellectual Property and the National Information Infrastructure: The Report of the Working Group on Intellectual Property Rights" (1995). URL: <http://www.uspto.gov/web/offices/com/doc/ipnii/ipnii.txt>.

9 Information Highway Advisory Council, "Copyright and the Information Highway: Final Report of the Subcommittee on Copyright" (March, 1995). URL: http://xinfo.ic.gc.ca/info-highway/reports/copyright/copy_e.txt.

10 See above at 11.

11 See above at 43.

12 See IHAC, Recommendation 6.3; URL: <http://info.ic.gc.ca/info-highway/final.report/eng/ec6.html#rec.6.3>.

13 17 United States Code §102(a) (1988 & Supp. V 1993).

14 See above.

15 17 United States Code § 101 (1988); definition of "copies."

the work must exist “for a period of more than transitory duration.”¹⁶ The law considers magnetic storage to be a sufficiently stable form for the purposes of fixation.¹⁷

As mentioned, web browsers typically capture copies of web page text and images and cache them on the user’s hard drive, where they might remain until used in the future. The White Paper considers these files to be reproductions for copyright purposes. Unauthorized disk caching would therefore be a violation of the copyright owner’s exclusive reproduction rights. What is interesting is that the White Paper’s position on browsing implicates an even more basic function of a web browser. Web browsers interpret and display on screen the contents of the web page; for example, they wrap lines of text to fit the width of the screen. This task requires some minimal computation on the part of the client.¹⁸ To perform any sort of computation in connection with the web page, the software must first form a representation of it in RAM, on which to conduct the necessary computations. In other words, the very act of reading a web page has as a precondition the making of a copy of the web page, if only in RAM. The White Paper considers such copies in RAM to be reproductions of the work. Consequently, the White Paper finds that the copying of information from one computer to another across a network is subject to the exclusive reproduction rights referred to in section 106 of the U.S. Copyright Act.¹⁹

The Case Law: *MAI v. Peak*

To justify its position, the White Paper cites *MAI Systems Corp. v. Peak Computer Inc.*²⁰ In *MAI v. Peak*, the 9th Circuit Court took it to be generally accepted that the act of loading a program from a medium of storage into a computer’s memory creates a copy of the program. The court looked to the Final Report of the National Commission on New Technological Uses of Copyrighted Works (1978) (“CONTU”),²¹ and to *Vault Corp. v. Quaid Software Ltd.*,²² as the authorities for this. Although though the court pointed out that neither of these authorities made a distinction between RAM and more permanent forms of memory, such as ROM (Read Only Memory), it found no reason to believe that the copy created in the RAM is not fixed. The court found that because the copy created in RAM can be “perceived, reproduced, or otherwise communicated,” the loading of software into RAM creates a “copy” under section 101 of the Copyright Act.²³ The White Paper supports the application of *MAI v. Peak*, which ostensibly concerns the loading of computer software into RAM to the whole of digital communication on the Internet and beyond.

Canadian case law has considered the copyright status of software loaded in computer memory. In her well-regarded decision in *Apple Computer, Inc. v. Mackintosh Computers Ltd.*,²⁴ Federal Court Justice Reed ruled that software embodied in ROM chips is under the protection of section 3 of the Canadian Copyright Act. Though Reed recognized the distinction between RAM and ROM, her ruling concerned only the latter.²⁵ There is, therefore, no direct Canadian authority which establishes the conclusions in the IHAC final report concerning browsing. As a result, the IHAC report simply

16 17 United States Code § 101 (1988); definition of “fixed.”

17 *Stern Electronics, Inc. v. Kaufman*, 669 Federal Reporter 2d 852, 855 (2d Circuit 1982).

18 Carroll and Broadhead, see note 3, at 67-68.

19 17 United States Code § 106 (1988).

20 *MAI Systems Corp. v. Peak Computer Inc.*, 991 F.2d 511 (9th Circuit 1993).

21 House of Representatives Reports No. 1307, 96th Cong., 2nd Sess., pt. 1, at 13.

22 *Vault Corp. v. Quaid Software Ltd.*, 847 Federal Reporter 2d 255, 260 (5th Circuit 1988).

23 *MAI v. Peak*, see note 21 at 519.

24 *Apple Computer, Inc. v. Mackintosh Computers Ltd.*, (1987) 10 Canadian Intellectual Property Reports (3d) 1 (Federal Court Trial Division). The decision has been upheld by both the Federal Court of Appeal and the Supreme Court.

25 Interestingly, Justice Reed characterized RAM as “volatile,” because it loses its information when the power is turned off, whereas ROM is “permanent in nature” (*Apple v. Mackintosh*, see above at 10). This distinction becomes important below.

defers to the White Paper, it its statement that, "In some countries, accessing a work in a digital environment is considered a reproduction, even where the work is temporarily stored in the ... RAM of a computer."²⁶ Since the IHAC report defers to the White Paper on the crucial issue of the status of information stored in RAM, and the White Paper relies on *MAI v. Peak* as its authority on the issue, the validity of both reports rests on *MAI v. Peak* being a good rule of law.

Objections to *MAI v. Peak*

The authors of the White Paper consider *MAI v. Peak* to be "well-established law."²⁷ This assessment has been severely criticized by some commentators. Professor James Boyle reports that out of twelve law review articles discussing the *MAI v. Peak* judgment, only one defends it.²⁸ Boyle lists criticisms voiced in submissions to public hearings, and in articles published in journals, newspapers and magazines.²⁹ Two issues arise from *MAI v. Peak*: whether it is a correct rule of law in itself, and whether it ought to be applied to communication on the Internet. On the first issue, critics characterize the case as controversial in its own right, with ample authority and legislative history to the contrary. On the second, critics charge that only mechanical, positivist reasoning would elevate *MAI v. Peak* to the decisive case on which to build a new legislative regime for the coming information age.

There are two objections to the *MAI v. Peak* ruling as a correct rule of law. The first objection is that copies stored in RAM are too ephemeral and impermanent to be considered copies for the purpose of copyright. Section 101 of the U.S. Copyright Act clearly states that for a copy to be fixed, it must exist for more than a fleeting moment. The objection maintains that copies in RAM are not sufficiently fixed to be copies, because the stored information is lost as soon as the power to the computer is switched off. There are clear indications in the legislative history of the U.S. Copyright Act that the intent of the statute is to exclude the very instances that *MAI v. Peak* allows. For instance, a 1976 U.S. House Report reviewing the Copyright Act stated that works are not sufficiently fixed if they are "purely evanescent or transient [in nature], such as those projected briefly on a screen, shown electronically on a television or cathode ray tube, or captured momentarily in the 'memory' of a computer."³⁰

Evanescent Copies

In the common-law, Anglo-American tradition, copyright law has always placed central importance on the physical instantiation of information: for a work to be copyrighted, it must be embodied in some physical form. The rights bestowed by copyright law grant control over that physical object. In particular, copyright law grants control over the creation of additional physical instantiations of the information through copying the information from one physical object to another. This emphasis on rights over the physical copying of information reflects the way in which traditional, print-based creators could most easily control their revenue. The printing press was the obvious and most practical locus at which to control the dissemination of information, since it was

26 IHAC, see note 10 at 43.

27 See Bruce Lehman, "Response to Law Professors' Open Letter" in James Boyle, "The Debate on the White Paper." URL: <http://www.harvnet.harvard.edu/online/moreinfo/boyledeb.html> at 7.

28 James Boyle, see above at 19.

29 See above at 18.

30 House of Representatives Reports No. 1476, 94th Cong., 2nd Sess. at 52-3, emphasis added. Reprinted in (1976) U.S.C.C.A.N. at 5666-67. Strangely, the White Paper quotes approvingly this passage from the House Report. It is unclear how the White Paper intends to avoid inconsistency.

31 The terms “locus” and “bottleneck” are borrowed from Guthrie’s very helpful historical comments on copyright made in *Matrox Electronic Systems Ltd. v. Gaudreau*, [1993] Recueils de Jurisprudence de Quebec 2449 (Supreme Court).

32 In the United States, home video recordings, though reproductions, are not copyright infringing reproductions, if made for the purposes of “time shifting” – the recording of a television program, for example, at night, for watching during the day. See *Sony Corp. of America v. Universal Studios, Inc.* 464 United States Reports 417 (1984).

33 IHAC Recommendation 6.4 URL: <http://xinfo.ic.gc.ca/info-highway/final.report/eng/rec6.html#rec.6.4>.

34 The White Paper, at page 8, comments thus: “Under current technology, when an end-user’s computer is employed as a ‘dumb’ terminal to access a file resident on another computer such as a BBS or Internet host, a copy of at least the portion viewed is made in the user’s computer.” (White Paper, at 8.) This is somewhat misleading. In the era before the advent of the personal computer, “main-frame” computers would be operated via “dumb terminals,” consisting of a keyboard and a monitor. All of the computing would be carried out on the main-frame; no computing power would reside at the terminal end as the terminal was a neutral input/output device. Dumb terminals therefore fit very nicely with the “evanescent copy” analysis. However, the White Paper errs in its assessment of “current technology”: no personal computer is a mere “dumb terminal.” One might argue that copyright law should consider personal computers running web browsers, their RAM notwithstanding, to be no different from old-style dumb terminals, insofar as they are mere conduits of information, albeit with certain abilities of interpretation and manipulation. It is clear, however, that this is not the White Paper’s position.

the bottleneck in the system from creators to consumers.³¹ The copies produced by the printing press then had to be conveyed to their consumers. In the U.S. and in other countries, the exclusive right of distribution gave creators further control over their revenue.

The basic way in which works were disseminated changed little with the advent of newer media, such as photographs and recordings. These forms of communication are similarly tied to physical objects, produced at an identifiable locus, and distributed to users by a process physically distinct from their reproduction. As such, copyright law did not have to undergo any significant modifications; phonographs and photographs were successfully subsumed under the copyright regime as analogical extensions of the printed work. Radio and television broadcasting represented the first move away from a physical object being the vehicle of distribution. Yet the law retained the link with a physical embodiment of the information, by requiring that the work be fixed simultaneously with its transmission. The distribution of the work is under the control of the copyright owner or someone authorized by the owner. As the means of distribution, broadcasting is a neutral conduit for information. The information flows from an active creator to a passive user, with the only copy of the information existing at the creator’s end. A representation of the information exists in a minimal sense at the receiver’s end of the conduit – for instance, in the form of the pattern of glowing pigments on the surface of the picture tube of a television screen. But these representations quickly disappear; they are too evanescent in nature to be considered copies for the purposes of copyright law. Permanent copies of the information can be made; for instance, home video recordings are considered to be reproductions.³²

Digital communication poses a problem for the existing copyright framework, as it is unclear whether transmission of a work over the Internet should be considered to be a distribution, a duplication, or both. The Internet is not simply a neutral conduit to convey information from an active creator to a passive user. There is a significant degree of interpretation and manipulation of the information on the part of the user. The issue is whether these facts should make any relevant difference to copyright law.

The Canadian IHAC report recommends that the Copyright Act be amended to include a definition of browsing, namely any “temporary materialization of a work on a video screen, television monitor, or a similar device ... but not to include any permanent reproduction of the work in any material form.”³³ The definition follows the “evanescent copy” analysis when it stipulates that information materialized on a computer monitor is too temporary to be considered a reproduction. However, computer monitors require intelligent computer components, including RAM and a CPU, to function.³⁴ We know that the IHAC follows the White Paper in holding that RAM copies are sufficiently fixed to count as reproductions. What is interesting about the proposed definition of browsing is how close it comes in its language to the assertion quoted above made by the 1976 U.S. House Report, to the effect that copies captured in computer memory are too transitory to be considered copies for the purposes of

copyright law. The House Report posits that there is no fundamental difference between images on a computer screen and representations of those images formed in the computer's memory. Yet the position of both the IHAC and the White Paper is diametrically opposed to the findings of the House Report.

Policy Considerations

The second objection to *MAI v. Peak* as a correct rule of law is that it is at odds with the principles and policies underlying copyright law. The express purpose of U.S. copyright law is to encourage the production of new creative works for the edification of the public.³⁵ This goal is achieved by means of an economic incentive: creators are allowed a limited monopoly to generate profits through the production and dissemination of permanent copies of their work. Copyright statutes protect the expectation of a fair return on the creator's intellectual investment. *MAI v. Peak* inverts the economic power structure of the copyright framework, by giving creators control over the use of the work, and not simply over its creation and distribution. This represents a significant departure from the statutory intent of copyright law.³⁶

MAI v. Peak has since been questioned by the courts on the grounds that it gives creators more control over their works than is intended by copyright law. In *DSC Communications Corp. v. DGI Technologies* ("DSC v. DGI"),³⁷ the court deployed a concept called copyright misuse. This doctrine can be used as a defence against copyright violation in cases where the copyright owner attempts to use copyright for purposes inimical to the statute's intent. In *MAI v. Peak*, one computer company successfully used copyright law to prevent a rival company from even turning on a computer that had the former's software as its operating system. In a similar fact situation, the court in *DSC v. DGI* found that such actions do not fall within the scope of rights protected by copyright law.³⁸ The *MAI v. Peak* rule of law is therefore a controversial one, in that it is contrary to legislative history, and indeed the very purpose of copyright law.

Applying *MAI v. Peak* to the Internet seems natural enough given its assumptions. If one assumes that use of a digital work necessarily involves a reproduction of the work, then it is quite natural to grant that the exclusive rights creators already have over the reproduction of their works extend to cover use as well, since the two are by assumption co-extensive. However, this reasoning could only be carried out by blindly applying concepts over-extended from their original context. Moreover, it runs the risk of ignoring important policy considerations.

Chief among the policy-related concerns is the objection, raised by groups representing users' interests, that a legislative regime based on *MAI v. Peak* would upset the balance of interests between creators and users. The worry is that every piece of information on the Internet will come with a price tag. By applying to the Internet a very broad definition of copying, such that mere use amounts to copying, every use of information on the Internet becomes a licensing opportunity: the information highway

... creators are allowed a limited monopoly to generate profits through the production and dissemination of permanent copies of their work.

35 United States Constitution, Art. 1, § 8, Cl. 8.

36 This objection is made by Bradley J. Nicholson, "The Ghost in the Machine: *MAI v. Peak* and the Problem of Copying in RAM" 10 *High Technology Journal of Law* 1 (1995). Cited in Boyle, see note 29 at 20.

37 *DSC Communications Corp. v. DGI Technologies*, 95-10850, (5th Circuit 1996).

38 Unlike the U.S. statute, the Canadian Copyright Act does not include an explicit statement of the purposes of the statute. This would make it more difficult to employ the copyright misuse defence in Canada.

will turn into a toll highway. One critic warned: "Tell those third graders to have their credit cards ready."³⁹ It is claimed that applying the *MAI v. Peak* model to the Internet would separate the information "haves" from the "have-nots," despite both governments' avowals to the contrary.

The prevalent attitude on the part of Internet users is that information should be free and unencumbered; copyright law only hinders the free flow of information, and so the information highway should be made into a "copyright-free" zone. At times, this attitude has verged on community activism, with campaigns to drive out those who seek to commercially exploit information on the Internet. The White Paper vigorously opposes this "information should be free" argument. It points out that "copyright law imposes no obligation upon copyright owners to make their works available."⁴⁰ The Canadian IHAC report shares a similar attitude: it maintains that "it should be left to copyright owners to determine whether and when browsing should be permitted on the Information Highway."⁴¹ The White Paper rejects the notion of an exclusive right to browse and states that such a right would deny creators' rights to expect a fair economic return on their investment. The White Paper intends to let the market determine what constitutes fair licensing arrangements.⁴² It argues that free market incentives are the only way to ensure that creators populate the Internet with information content.

This "laissez-faire" attitude seems to many critics to be hardly an answer to the problem of the division between the "haves" and the "have-nots"; if anything, it is precisely the problem. The worry is that market forces heavily favour creators' over users' interests. However, the spirit of community activism prevalent on the Internet can be a powerful market force. The attitude that information ought to be free and unencumbered can exert considerable downward market pressure on online subscription fees.

Fair Dealings

There is a further factor that maintains the balance between the interests of creators and users. Users who violate the right of reproduction may in certain circumstances invoke statutory exceptions to protect them from liability. In Canada, a user may appeal to the doctrine of "fair dealings" as defence against copyright infringement.⁴³ Section 29 of the Copyright Act stipulates that "fair dealing for the purpose of research or private study does not infringe copyright."⁴⁴ Fair dealing protects users from liability, provided that the use of the work is both fair, and for one of the listed purposes.⁴⁵ It is plausible that someone browsing a web page might claim private study or research.⁴⁶ However, use for the purpose of private study must in addition be "fair," for the fair dealing defence to take effect. What, then, is a "fair" dealing of a work? Canadian copyright statute does not specify any criteria for a finding of fair dealing.⁴⁷ Being an equitable defence, fair dealing is a judgment call. In *Hubbard v. Vosper*,⁴⁸ an English court set out general guidelines for weighing fair dealings defences:

39 James Boyle, see note 29 at 17.

40 White Paper, see note 9 at 16-17.

41 IHAC, Recommendation 6.4.

42 White Paper, see note 9 at 31: "intellectual property law leaves the licensing of rights to the marketplace."

43 A similar, though not identical, concept in the U.S. is "fair use." See 17 United States Code § 107 (1988).

44 Revised Statutes of Canada 1985, C-42 section 29.

45 Section 29.1 allows criticism or review as two further uses that would qualify as fair dealings, provided that the original author or source is credited.

46 What exactly constitutes private study or research? Must it be not-for-profit? It borders on pointing out the obvious to mention that most web surfing hardly counts as study or research.

47 The situation is different in the U.S., where the U.S. Copyright Act specifies four criteria for a fair use finding, as an aid to the jury.

48 *Hubbard & Anor. v. Vosper & Anor.* [1972] 2 Queen's Bench [Reports] 84.

You must first consider the number and extent of the quotations and extracts. Are they altogether too many and too long to be fair? Then you must consider the use made of them. ... Next, you must consider proportions. To take long extracts and attach short comments may be unfair.⁴⁹

These guidelines for finding fair dealing clearly apply only to cases where material from one work is used within another work. The guidelines seem appropriate in the context of a printed work, but they do not fit well with browsing on the Internet. There is no excerpting, nor adding comments of one's own, when one downloads a copy of a web page; one does not embed the document in a context which would bring to bear the standard fair dealings defence.

The biggest obstacle to the fair dealings defence is the fact that when one browses a digital document, the whole of the document is replicated. In its Final Report, the Canadian Subcommittee on Copyright writes: "Canadian decisions on [fair dealings] are rare but Canadian courts appear to have decided ... in at least one instance, that the reproduction of the totality of a work was not a fair dealing, irrespective of the purposes of the reproduction."⁵⁰ If this is the state of Canadian law, it has important consequences for web browsing. It would mean that no instance of accessing a document from the Internet could be considered a fair dealing because such accessing involves the reproduction of the entirety of the document. However, the report goes on to suggest that "fair dealing provisions are capable of offering sufficient protection to users of copyright material on the [Internet]."⁵¹ Perhaps aware of this inconsistency, the report makes the recommendation that criteria and guidelines for fair dealing be clarified with respect to their applicability to browsing on the Internet.⁵²

The IHAC report contends that the fair dealing issue is otiose for the majority of Internet transmissions because in its view most uses will be authorized.⁵³ Authorization can come in two forms: explicit and implicit. Express licenses are becoming increasingly popular on the Internet. Authors are expressly granting specified rights to make copies and otherwise use the work, while reserving all other copyrights for the author. Some authors even go so far as to explicitly disclaim all copyrights, or express their intent to donate the work to the public domain. Certainly that is their right and privilege, assuming that the writer is the owner of all copyrights in the work.

Implied License

While there is yet no legal precedent, it is likely that the courts will develop the concept of an implied license in connection with the Internet. Those who publish works on the World Wide Web generally do so with the understanding that the Internet is an open network, allowing all users on the network unrestricted access to the document, unless they take technological steps to restrict access.⁵⁴ Such web pages carry with them an implied license to do all those things now considered "normal" use, including reading the text, viewing the graphics, and clicking on hypertext links to other pages. It is hard to imagine a web page author being successful in litigation for an action of copyright violation of a web page with unrestricted access. Courts rule pragmatically; it is

Copyright law is unprepared to meet the challenges that come with an information age.

49 See above at 94.

50 IHAC, see note 10 at 21. It is not clear which case the report is referring to; most likely, it is *Zamacois v. Douville* (3 Fox Pat. C. 44 (Exchequer Court)), in which the court established that fair dealing cannot include the complete replication of the work. However, *Zamacois* is a case of literary criticism, where an entire work was reproduced, followed by some commentary. The case hardly seems applicable to digital communication, in which copying is the *sine qua non* of even reading a work, let alone form a critical opinion of it.

51 IHAC, see note 10 at 22.

52 IHAC, Recommendation 6.5 URL: <http://info.ic.gc.ca/info-highway/final.report/eng/rec6.html#rec.6.5>.

53 IHAC, see note 10 at 12. See also IHAC, Recommendation 6.3 URL: <http://info.ic.gc.ca/info-highway/final.report/eng/rec6.html#rec.6.3> at 8.

54 Perhaps with some education that informs web authors about the practices of RAM and disk caching, the implicit authorization might plausibly encompass those practices.

impractical to use the court system as a collection agency for license fees.⁵⁵ Those authors who want compensation for the use of their web page must look to technological solutions for licensing arrangements, such as password-protected access.⁵⁶ The fact that the text and images exist as representations in the user's RAM should not be seen as anything more than simply a necessary causal condition of normal use. As for the practice of disk caching, it is again hard to imagine that a court would assign special legal difficulties to a pragmatic feature designed to improve the speed of the Internet. In fact, there are good reasons to hold that disk caching is in the interests of all stakeholders involved in the Internet.

Browsing versus “mirroring”

The purpose of copyright law is to prevent an author's work from being illegitimately appropriated; neither RAM caching nor disk caching threatens to do this. An online work would be appropriated if a user were to take a copy of a web document and upload it to another web server. It is this server-to-server copying, rather than server-to-client copying, that is a threat to the copyright owner's rights. Server-to-server copying, known as “mirroring,” is the analogue of copying works in the more familiar print and audio-visual media. It would be like taking a book out of the library, photocopying it in its entirety, and selling the copy to another. Photocopying a book threatens the revenue of the publisher of the book, because it has taken away from the publisher the opportunity to satisfy that particular demand for the book. Likewise, mirroring threatens a web publisher's revenue. Typically, a web publisher generates revenue by selling advertising space on the page. What gives this advertising space its value to an advertiser is the “hits,” or traffic, that the page receives from the general Internet public. The advertising rates are therefore tied to the hits expected of the page. A “mirror” of a page could potentially draw away traffic from the original site, thereby adversely affecting the web producer's advertising revenues. Server-to-client copying does not threaten revenue; quite to the contrary – it is what typically generates revenue for a web page producer.

Could the Canadian Copyright Act be amended to make clear the distinction between these two forms of copying web documents – the copying involved in web browsers, which is typically welcomed by web authors, and the copying involved in mirroring, which is typically opposed to online creators' interests? The current copyright framework does not have a sharp enough tool to distinguish server-client copying from server-server copying, since both forms of copying are equally reproductions of the work. Capturing the distinction in technological terms may become quickly obsolete as the online environment evolves to one of greater interactivity. The difference between the browsing and mirroring does rest on the issue of intent – only the latter is intended to beget further (server-client) copying. Perhaps, then, the fair dealings doctrine may be able to differentiate between the forms of copying. However, as shown above, fair dealing in its present form rules out web browsing altogether. This makes the doctrine unsuitable for distinguishing browsing from mirroring.

55 The collection of licensing fees through rights clearance is also completely impractical, because web page creators are far too numerous and scattered for there to be any feasible clearinghouse arrangement.

56 It is not surprising that both the American and Canadian final reports recommended amending the copyright legislation to make any attempt to circumvent technological protection of copies of works a criminal act.

Conclusion

Copyright law is unprepared to meet the challenges that come with an information age. The concepts that have sufficed for traditional media are ill-equipped to handle new categories and relations. The information age is characterized by a divorce of information from its physical embodiment. Copyright law continues to labour under an ontology that persists in connecting information with physical objects. We see a foreshadowing of the legal difficulties to come in the seemingly innocuous act of viewing a web page. There are several ways to proceed in reducing the growing pressures that information technology exerts on the copyright framework: either governments could amend current legislation along the lines of the proposal found in the White Paper and the IHAC report, or they could allow the courts to settle the issues. Given the difficulty of capturing in statutory language the intuitive difference between the kind of copying that occurs in browsing and the copying that occurs in mirroring, perhaps it is best to leave the matter to the judiciary, where this distinction has a better chance of being recognized.