

## Features

# Copyright in the networked world: technology and consumer rights in copyright

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### Keywords

Copyright law, Consumers, Technology led strategy

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### Abstract

Early copyright laws said little about the rights of consumers. In general, the law in each country gave an exclusive, short-term right to make copies of the work as a whole. The periods were so short, and the copying technology so slow that non-commercial copying mattered little. In the nineteenth century case law in the USA and elsewhere began to develop consumer rights. The best known of these were codified as "fair use" in the 1976 US law as section 107. In recent years, new technologies have made copyright holders fearful that consumer rights would encourage theft and undermine the economic value of their work. This paper looks at the technological basis of that fear and some of the proposed solutions.

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## Introduction

Early copyright laws said little about the rights of consumers. In general, the law in each country gave an exclusive, short-term right to make copies of the work as a whole. The periods were so short, and the copying technology so slow, that non-commercial copying mattered little. In the nineteenth century case law in the USA and elsewhere began to develop consumer rights. The best known of these were codified as "fair use" in the 1976 US law as section 107. In recent years, new technologies have made copyright holders fearful that consumer rights would encourage theft and undermine the economic value of their work. This paper looks at the technological basis of that fear and some of the proposed solutions.

## Pre-digital copying technology

Copying technology is only one of three factors that affect intellectual property rights. The other two are:

- (1) having a market for the intellectual work; and
- (2) having a cost-effective distribution mechanism.

In pre-modern times all three remained below a threshold that affected a rights holder's economic well being either positively or negatively. In other words, copying was slow, markets miniscule, and distribution systems inefficient.

The right to make copies mattered little economically until roughly the eighteenth century, when increased literacy and personal income made a significant difference in the size of the market for books. Samuel Johnson (1709-1784) was the first person said to be able to live from the income of his writing alone. At that time the productive capacity of the printing press had not changed substantially since Gutenberg. Eventually the motorized presses and wood-pulp paper of the nineteenth century expanded production to meet the increasing demand, but the distribution mechanism did not change. It required complex social organization with warehousing, transport, and stores for sales. For text-based materials, private copying by consumers remained a pen and ink operation until photocopying became broadly available in the 1970s.

Photocopying was not the only reason for the US Congress to rewrite the 1909 Copyright law, though concern about that particular copying technology appears repeatedly in the debates. Inexpensive cameras had put the power of copying paintings into the hands of museum visitors, and various consumer audio recording devices,



including wire-recorders and magnetic tape, gave consumers the ability to keep and share broadcast sound. No significant market for the output of these consumer recording devices existed before the 1970s, since the quality was poor, and no more sophisticated distribution mechanism other than consumers making occasional extra copies for friends or relatives. Even photocopying remained largely a private, labor-intensive, economically unremunerative activity until high-quality dry processes and copy-shops came into being, and by that point, consumers had acquired explicit legal rights over intellectual property owned by others.

## Consumer rights

In the US consumer rights began in nineteenth century case law with a dispute over the use of George Washington's letters[1]. The 1976 US Copyright law codified these case-law rulings into the "fair use" statute, which set up four factors to consider when determining whether a use was non-infringing:

(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 (17 USC 107, n.d.).

In recent practice, the fourth factor has been the most important. One of the most influential consumer rights cases in the USA upheld the use of video recording for private copying and time-shifting of television broadcasts. The language of the decision refers specifically to the fourth factor:

In an opinion by Stevens, J., expressing the views of Burger, Ch. J., and Brennan, White, and O'Connor, J.J., it was held that the sale of home video tape recorders to the general public did not constitute contributory infringement of copyrights on television programs since there was a significant likelihood that substantial numbers of copyright holders who license their works for broadcast on free television would not object to having their broadcasts time-shifted by private viewers and the plaintiff copyright holders did not demonstrate that time-shifting would cause any likelihood of non-minimal harm to the potential market for, or the value of, their copyrighted works[2].

Any use that reduces the rights holder's income is unlikely to be considered fair, and in recent cases (e.g. [3]) the courts even approved broad latitude on the third test (amount and substantiality) under certain circumstances where the value remained unaffected.

Some form of "fair use" or "fair dealing" or other form of consumer exemption, especially for educational purposes, now exists in the copyright codes of all countries that use the British common law system. In Canada, for example, the statutes offer the following fair dealing exemptions:

- Fair dealing for the purpose of research or private study does not infringe copyright . . .
- Fair dealing for the purpose of criticism or review does not infringe copyright . . .
- Fair dealing for the purpose of news reporting does not infringe copyright . . .
- No action referred to in section 29.4, 29.5, 30.2 or 30.21 may be carried out with motive of gain. . . (Canada, 2003).

The Canadian law is noticeably more specific, and thus more limited, than the US law about which kinds of uses are fair. Even so, "research or private study" could apply to almost any person and circumstance. The Canadian explicitly prohibits gain from someone else's intellectual property, which mirrors the US requirement not to affect the value of a work for its legal owners. The net result is that consumers in both countries have substantial protection for purely private copying that does not seek to make a profit or to undercut the rights holder's profit.

Continental European laws allow more circumscribed exemptions for specific purposes such as education.

## Digital copying technology

Today, many contemporary rights holders view the basic technology of the Internet as their enemy: "After copyrighted music and movies move to the Internet, it's almost impossible to stop the material from being used over and over again, despite copyright laws" (Keefe, 2002). The Internet protocol was in fact built with the intention of file sharing as part of Cold War efforts to sustain communication in the event of a nuclear attack. Its file-sharing ability is the result of substantial government investment in research and infrastructure, and more recently a substantial private-sector investment because of the Internet's commercial potential.

Any impoverished student with access to a cheap scanner and some Web space can now copy a work and make it available for millions of other Internet users to download and print. None of this technology is easily controlled or reversed. Scanners have become an integral part of business operations for tasks like record storage and information transmission. A scanner cannot determine whether a particular sheet of paper contains copyright-protected words, and even

human operators with good intentions have trouble making a reliable decision. The same is true for sound and video recording. Analog sources provide no unambiguous clues about possible infringement, and as long as any digital work, whether paper or sound or video, can be printed or played in analog form, it is liable to copying.

A single digital copy suffices for worldwide distribution. Network technology (wires, workstations, protocols, operating systems, and browsers) has become a substitute for the whole complex social organization for text production and distribution (compositors, press operators, distributors, booksellers). Systems like KaZaA offer distribution mechanisms that are free of download fees, but are far from free in terms of the number of computers and number of person-hours that have to be donated to make large-scale file-sharing work. The social organization necessary to make this kind of distribution method possible is as new and unforeseen as the technology itself. In the past, serious copyright infringement was possible only with significant amounts of capital investment. These economic barriers have nearly vanished.

For consumers, this means that the line between copying for private use and copying that can be distributed worldwide has grown dangerously permeable. A consumer using digital tools and exercising only legitimate copying rights can fall easily, even inadvertently, into copyright infringement by putting the wrong digital file into a Web-accessible folder.

### Copyright enforcement

Copyright enforcement is a purely private matter within civil law. No government agency has a responsibility to check for potential copyright infringements. Some rights holders' organizations have taken on an active vigilante role in looking for obvious infringements, and taking legal action against them. In September 2003, for example, the Recording Industry Association of America filed 261 lawsuits alleging copyright violation (Foster, 2003).

These efforts plus those by universities to increase copyright awareness among students and faculty may have reduced the number of illegal downloads. A survey by the Pew Internet & American Life Project and comScore Media Metrix found that, in the period 18 November to 14 December 2003, only 14 percent of respondents reported downloading songs to their computers compared to 29 percent in both May 2003 and February 2001 (Associated Press, 2004).

This reduction could be a fluke, but it could also represent a real change in behavior. It has not deflected the recording industry's efforts to track down infringers and to take legal action against them, but it could moderate lawmakers' eagerness to change the copyright laws to enhance legal protection. It could also make some technological measures less attractive.

### Legal solutions

One of the most controversial legal changes was the US Digital Millennium Copyright Act of 1998 that made it a criminal offence to violate sections 1201 or 1202 of the copyright law "for purposes of commercial advantage or private financial gain" (US Copyright Office, 1998). The language of the law is both plain and forceful: "No person shall circumvent a technological measure that effectively controls access to a work protected under this title" (17 USC 1201, n.d.).

Actual arrests have taken place. For example, Dmitry Sklyarov was arrested in July 2001 for creating a program which "allegedly is primarily used to circumvent limitations placed on e-books by publishers and distributors (such as technological restrictions that prevent copying)" (Isenberg, 2001). This showed serious intention to enforce the anti-circumvention provisions vigorously.

In fact, the law has been invoked rarely. Sklyarov's arrest generated a great deal of unfavorable media attention, and did more to galvanize opinion against the law than for it. Rights holders have long wanted some form of reliable copy protection on digital files. Back in the 1980s Lotus 123 made copy protection a standard feature of the 5.25 in. floppy diskettes that held their executables. The idea was to prevent theft. Ultimately they gave it up because it was so very unpopular. Legal status for technological protections may do more harm than good to the cause of intellectual property rights protection.

### Copy-protection solutions

A number of copy-protection technologies have been proposed, and most would either restrict consumer rights drastically or eliminate them altogether. One familiar form of protection is the divergence in video display standards. North America used NTSC, northern Europe PAL, southern Europe SECAM. This system has survived in part because it coexists reasonably with

the consumer rights granted within countries, and mainly restricts the sale of copies across borders.

Systems that interact with operating systems and only allow files to be open and displayed if the digital rights management permissions are in order seem attractive to rights holders with products for which a strong and immediate market exists. Proposed versions of this kind of software would need to have a sophisticated fair use algorithm that allowed reasonable browsing for scholarly, educational, or critical use in order not to conflict with consumer rights and consumer expectations. These protection measures make browsing impossible.

The most practical and consumer-rights-friendly protections take the form of watermarking. Watermarks can be completely non-invasive in the sense that they remain invisible or inaudible, and they allow a rights holder to prove ownership, without preventing any form of fair use. Watermarks do not prevent copyright infringement. In that sense, they are very unlike other protection measures. Instead they function within the existing legal and social system by allowing a rights owner to take a case to court and prove an infringement.

Watermarks are, however, relatively little used. At this point rights owners are less concerned about where the digital copies come from than preventing illegal copies from entering the market. And digital watermarks can generally be defeated by passing them through an analog copy. That extra step is extra work and generally means some loss of quality, which may not matter to the audience for popular music or popular videos.

## Social and economic issues

While rights holders' groups argue strongly for additional protections for their intellectual property, there can be social and economic consequences to excessive protection. One example comes from early aircraft manufacture, where the Wright brothers' patents locked out other US players:

Reliable aircraft were put on the market first by the French and then by the Germans and British before the Americans, paralyzed by the patent litigation initiated by the Wrights, could pool their resources (Shattuck, 2003).

Litigation over popular music is not likely to have the same economic consequences, but legislation that does not distinguish between intellectual property that is purely for entertainment and that which promotes scholarship and research could.

Source code for computer programs has copyright protection, for example, and programmers routinely borrow ideas or even portions of code much as scholars quote the work of others. That kind of borrowing is what made possible the development and maintenance of Linux, which has become a major operating system for servers.

Sharing research that comes from Federally funded grants is another area where excess protection has negative effects. A bill that was recently introduced before Congress could change that:

"Common sense dictates we provide the most cutting-edge research to all who may benefit from it – especially when they've already paid for it with their tax dollars," the sponsor, Rep. Martin Olav Sabo, of Minnesota, said (Brainard, 2003).

This would in effect expand consumer rights by opening up access to certain kinds of intellectual property, much as US Federal documents are exempt from copyright protection within the USA.

## Conclusion

Widespread access to digital reformatting tools and Internet access has changed the balance between publisher and consumer, especially for mass-market works involving strong consumer demand and millions in revenue. Some technological measures to prevent unlicensed access would also undercut the consumer rights built into the copyright legislation of most countries. No obvious or unambiguous solutions are available, but some pitfalls have grown clearer. Whatever legislation is passed, and whatever technological protections are used, the management of intellectual property cannot eliminate reasonable exercise of consumer rights without risking widespread popular resistance and potential economic harm, especially if protections are applied to all forms of intellectual property regardless of purpose.

## Notes

- 1 *Folsom v. Marsh*, US Circuit Court (1841), available at: [www.faculty.piercelaw.edu/redfield/library/Pdf/case-folsom.marsh.pdf](http://www.faculty.piercelaw.edu/redfield/library/Pdf/case-folsom.marsh.pdf) (accessed 28 January 2004).
- 2 *Sony Corporation of America et al. v. Universal City Studios, Inc.* et al., US Supreme Court (1984), available at: <http://cyber.law.harvard.edu/metaschool/finder/integrity/Links/Cases/sony.html> (accessed 28 January 2004).
- 3 *Kelly v. Arriba*, US District Court (2002), available at: <http://legal.web.aol.com/decisions/dlip/kelly.html> (accessed 28 January 2004).

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