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Slowing Down the Speed of Sound: A Transatlantic Race to Head Off Digital Copyright Infringement

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Slowing Down the Speed of Sound: A Transatlantic Race to Head Off Digital Copyright Infringement

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Editorial staff of the Fordham Intellectual Property, Media, and Entertainment Law Journal, as well as Drs. Susan & Conway Lackman, Professor Joel Reidenberg, and Levi McConnell
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Eleanor M. Lackman*

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INTRODUCTION

When the team of government-funded research scientists created what was to become known as the Internet in the 1980s, the world saw it as a brilliant new means of communication that could survive even a nuclear attack.\(^1\) As with the unleashing of any new technologies, however, progress was destined to create conflict with current laws. While still in its infancy, the Internet cast a dark shadow of infringement that turned the formerly stable institution of copyright upside down.

By 2001, the International Federation of the Phonographic Industry (IFPI) estimated that there were at least twenty-five million illegal music files available on the Internet.\(^2\) Record companies claim that piracy, largely through the growth of peer-to-peer services, has caused a massive decline in album shipments.\(^3\) In fact, album sales dropped two-and-a-half percent in 2001 and nine percent in 2002.\(^4\) The problem has a much wider scope outside of America, where the recording industry estimates physical piracy, typically defined as the public sale of copied CDs and tapes, already causes lost sales of two to four billion dollars each year.\(^5\) Thus, the availability of digital downloading may be the biggest threat to copyright that has ever surfaced, and the advent of new technology, without safeguards, will only make the situation worse.

In looking for a global solution, the World Intellectual Property Organization (WIPO) developed two Internet treaties in late 1996.\(^6\)

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1. But see Katie Hafner & Matthew Lyon, Where Wizards Stay Up Late: The Story Behind the Creation of the Internet (1996) (questioning the widely held notion that the Internet was originally designed to provide the military with a communication device capable of withstanding a nuclear attack).
4. See id.
To ratify these treaties, the United States and the European Union adopted anti-circumvention measures to ensure that technology does not destroy copyright. These legislative measures became known as the Digital Millennium Copyright Act (DMCA)\(^7\) in the United States and the “Copyright Directive”\(^8\) in the European Union. Despite the creation and signing of agreements on both sides of the Atlantic, this legislation may not work in practice when trying to harmonize copyright law and stop the mass downloading of copyrighted music. For example, the user-friendly and anonymous nature of the Internet and a recent decision by the Court of Appeals in Amsterdam\(^9\) challenge the agreements’ goals.

Downloading today goes far beyond the much-weakened Napster. The new programs used for downloading copyrighted works, including Kazaa, Grokster, Morpheus, and Gnutella, are thriving and pose new challenges for lawmakers, courts, and copyright holders. Specifically, many of them allow the trading of copyrighted DVD files in addition to music, and all of them do not contain a central server through which files pass.\(^10\) In addition, the evidence that many artists, including platinum-selling ones, have been using the Internet to market themselves and send music to fans suggests that the finding of positive uses for online music distribution through the new decentralized programs will be very different than it was in *Napster II*.\(^11\) Finally, while Napster was easy to stop by shutting down its central server,\(^12\) the new file-sharing programs are self-perpetuating, much like a disease; the only way to stop them would be to seize every piece of technology containing the programs.


\(^9\) See infra Part II.B.

\(^10\) See infra Part II.C.

\(^11\) A&M Records v. Napster, 239 F.3d 1004 (9th Cir. 2001) [hereinafter *Napster II*].

\(^12\) See infra Part II.C.
The purpose of this Note is to examine the international struggle of protecting copyright in the digital age and analyze legal efforts in the United States and the European Union. This Note takes the position that the United States’ and the European Union’s measures are not appropriate or effective enough to combat international use of the new decentralized peer-to-peer services for downloading copyrighted works. In addition, this Note emphasizes that the threat of digital copyright infringement is truly global and requires an international effort to build protection for authors. Such effort must ensure that the public’s interests are considered when the international community enacts legislation affecting the public’s right to make socially important uses of copyrighted works.

Part I of this Note provides a background of how copyright functions in the digital age and discusses recent international attempts to protect copyrights, including the WIPO Internet treaties. Part II examines how the United States and European Union plans for implementation of the WIPO Internet treaties conflict with current legal interpretation, the history of copyright as applied, and the changing nature of technology. Finally, Part III sets forth solutions for balancing law and policy goals when trying to draw the boundaries between infringement and fair use. Given that it is unlikely that digital infringement will ever cease entirely, lawmakers should abandon such an impossible goal and instead focus on designing copyright laws that best “promote the Progress of Science and useful Arts,” by encouraging creativity, knowledge, and advancements in digital technology.

I. HISTORY AND PRINCIPLES OF COPYRIGHT LAW

A. Infringement of the Exclusive Rights Under Copyright

The term “copyright” actually refers to a bundle of exclusive rights retained by the author or owner of the copyright. Although copyright covers a large range of exclusive rights, those that have

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13 U.S. CONST. art. I, § 8, cl. 8.

been implicated in the Internet music debate are the right of reproduction, the right of distribution, and the right of public performance. The distribution right guarantees the copyright owner the right “to distribute copies or phonorecords . . . to the public by sale or other transfer of ownership, or by rental, lease, or lending . . . .” Thus, the copyright owner has the right to prohibit others from distributing the work—a sale is not required if there is a transfer of a tangible copy to the public—until she parts with ownership. This right, however, is generally limited by the “first sale doctrine,” which allows the purchaser of the physical object embodying the copyrighted work to treat the thing as her own. For example, a person who buys a book from a store may sell it to a second-hand bookstore without permission of the author. Although under the first sale doctrine the new owner may sell the work or copy to someone else, that does not give her permission to make copies of the work. Therefore, a person who buys a CD may give it to her friend or sell it to a used CD store, but this does not give her permission to make a copy for her own collection and then give the CD to her friend. In addition, the Copyright Act and the European Union’s “Software Directive” each contain an exception to the first sale doctrine, forbidding the commercial rental, lease, or lending, or any act “in the nature of rental, lease, or lending,” of phonorecords and computer programs.

The right of reproduction allows the copyright owner to prevent all others from reproducing the work in the form of a copy or phonorecord. There is an exception to this right under both the Copyright Act and the Copyright Directive for temporary recordings, but only in the case of broadcast organizations that are

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15 See id. § 106(1), (3)–(4). The right of public performance is also known as the “right of communication to the public” in the WIPO treaties. See WCT, supra note 6.
17 See id.
18 See id. § 109.
22 See 17 U.S.C. § 106(1). A “copy” is defined as a “material object from which, either with the naked eye or other senses, or with the aid of a machine or other device, the work can be perceived, reproduced or communicated.” Id. § 101.
recording works for later transmission. The Copyright Act requires that the user destroy the permitted copy within a certain amount of time, except for archival purposes.

The right of performance or communication to the public allows the copyright owner to prevent all others from publicly performing the work. This right includes a prohibition on unauthorized broadcasting or “webcasting” without the copyright holder’s permission. In addition to composers, who already had a right of public performance under the copyright laws, owners of copyrights to sound recordings also received a public performance right in the United States under the Digital Performance Right in Sound Recordings Act (DPRA).

Infringement occurs whenever a third party exercises one of the rights that the copyright holder exclusively retains, and the infringer is liable whether there was intent or not. It has also been established in the United States that a conduit for copyright infringement may be liable for contributory and vicarious infringement, except in cases that fall under the safe harbor provision of section 512 of the DMCA. No member state in the European Union has explicitly specified the extent of any vicarious

23 See id. § 111(b)–(c); Copyright Directive, supra note 8, art. 5(1).
24 See 17 U.S.C. §§ 111(b)–(c).
25 See id. § 117(a)(2).
26 See id. § 106(4), (6).
27 See id. § 106(6). Webcasting is generally defined as the transmission of sounds over the Internet, much like how music is transmitted over the airwaves from radio stations to radio receivers. See Webcast, SearchNetworking.com, at http://searchnetworking.techtarget.com/sDefinition/0,,sid7_gci213344,00.html (last visited May 10, 2003) (“The term ‘Webcasting’ is used to describe the ability to use the Web to deliver live or delayed versions of sound or video broadcasts.”).
28 A sound recording is distinct from the song itself. Generally, if a record company hires a composer to write a song, the composer retains the right to the underlying composition, while the record label retains the rights to the recording of the song as performed by an artist under contract with the label. Compare 17 U.S.C. § 114 (granting exclusive rights in sound recordings), with id. § 115 (granting exclusive rights in nondramatic musical works).
29 See id. § 106(6).
30 See id. § 501; WCT, supra note 6.
31 See id. § 501; WCT, supra note 6.
32 See infra Parts I.A, II.A.1.
liability, although the concept is mentioned in the Copyright Directive.  

The best-known case concerning copyright infringement of digital music illustrates how courts have applied principles of copyright to infringement in the digital age. In *Napster II*, several record labels sued Napster and its affiliates for direct, contributory and vicarious copyright infringement after the company provided free software (called “MusicShare”) to the public allowing “peer-to-peer” file sharing over the Internet. The software allowed a user to make exact copies of digital music files from one computer and transfer them through Napster’s server onto the user’s own computer. To prove direct infringement, the record companies had to show that Napster violated one of the exclusive rights reserved to copyright owners. The Ninth Circuit held that Napster users, but not Napster itself, had directly infringed distribution rights, by uploading file names to the search index for others to copy, and reproduction rights, by downloading the copyrighted music files.

After the court concluded there was direct infringement by the users, the court then proceeded to the question of whether Napster was contributorily or vicariously liable. The court held that Napster itself was likely to be found liable for contributory infringement because it knew or had reason to know of direct infringement of the record labels’ copyrights. In addition, the court found that Napster “materially contribute[d] to the infringing activity” because without the software and support it provided, the users could not download the music they wanted. Finally, it held that Napster was likely to be found liable for vicarious infringement because it had “the right and ability to supervise the

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35 A&M Records v. Napster, 239 F.3d 1004 (9th Cir. 2001).
36 See *id.* at 1011.
37 See *id.*
38 See *id.* at 1013.
39 See *id.* at 1014.
40 See *id.*. Contributory and vicarious liability have separate elements from direct liability. See *supra* Part II.C.2.
41 See *id.* at 1021.
42 *Id.* at 1022.
infringing activity” and also had “a direct financial interest in such activities.” The Ninth Circuit emphasized that the financial benefit did not have to be immediate, noting that: “[f]inancial benefit exists where the availability of infringing material ‘acts as a draw for customers.’”

Although the ruling appeared very broad, the Ninth Circuit tempered it by limiting the scope of liability and placing the burden on the plaintiffs to protect their works:

[C]ontributory liability may potentially only be imposed to the extent that Napster: (1) receives reasonable knowledge of specific infringing files with copyrighted musical compositions and sound recordings; (2) knows or should know that such files are available on the Napster system; and (3) fails to act to prevent viral distribution of the works.

The court then required the record labels to “provide notice to Napster of copyrighted works and files containing such works available on the Napster system before Napster ha[d] the duty to disable access to the offending content. Napster, however, also b[ore] the burden of policing the system within the limits of the system.” In the end, the court granted the injunction against Napster.

B. International Copyright Protection Before Napster

Global copyright protection’s roots are in the 1886 Berne Convention for the Protection of Literary and Artistic Works (hereinafter “Berne Convention”). The Berne Convention set minimum standards for copyright protection and included an allowance for enforcement procedures, although national law could

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43 Id.
44 See id. at 1023.
45 Id. at 1027.
46 Id. These caveats may become loopholes for future peer-to-peer defendants. See infra Part II.C.2.
47 See Napster II, 239 F.3d at 1028.
create greater protection if a signatory state so desired. One of the major goals of the Berne Convention was to “protect, in as effective and uniform manner as possible, the rights of authors in their literary and artistic works,” regardless of the nationality of the author. The treaty, however, was not without its faults: it did not protect owners of sound recordings, nor did it create any global system of enforcement of copyright laws against infringement. Illustrative of the problem with harmonization through international treaties, the United States did not join the Berne Convention until 1988, over a century after its enactment. In addition, because enforcement is left to the signatory states, there is no remedy under the Berne Convention when a state lags in pursuing those who infringe copyrights.

Dissatisfied with the protection under the Berne Convention, the World Trade Organization (WTO), which has approximately 140 members, brought intellectual property into trade regulation during the 1986–1994 GATT Uruguay Round negotiations. The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) attempted to fill the gaps left by other treaties and apply the Berne Convention standards to the WTO states gradually from 2000 to 2006. Like the Berne Convention, however, TRIPS is not self-executing, and each state must establish its own means of enforcement.

In response to the “profound impact” the Internet was having on literary and artistic works, and because the Berne Convention

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50 See Berne Convention, supra note 48, arts. 5–6.
52 See Robinson, supra note 49, at 190.
53 See id.
55 See Robinson, supra note 49, at 197–98.
56 See TRIPS Agreement, supra note 54, art. 14(2).
had not been updated since 1971, the World Intellectual Property Organization (WIPO), which has 175 member states, sought a solution. On December 20, 1996, it adopted the WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT). The WCT and WPPT expanded previous standards for copyright to cover digital works. They both specifically address and affirm the exclusive rights of distribution, reproduction, and communication to the public of authors’, performers’, and record companies’ works, including the right to make “works available in a way that the public can access them at a time and place of [the owners’] own choosing, which is the typical paradigm of transmissions over the Internet.” The WIPO treaties also specifically require all those who ratify them to implement regulations and remedies against “the circumvention of effective technological measures that are used by authors [including performers or producers of phonograms] in connection with the exercise of their rights” under the WIPO treaties.

These WIPO Internet treaties set the background and together are the basis for the United States’ DMCA and the European Union’s Copyright Directive. For example, the United States, already having an exclusive right of communication to the public contained in a myriad of laws, focused on the anti-circumvention aspect of the treaties when creating the DMCA. The European Union, on the other hand, addressed both the digital rights and anti-circumvention in its Copyright Directive. Perhaps the

59 See WCT, supra note 6, art. 1(4); WPPT, supra note 6, art. 18.
60 Feder, supra note 57, at 268–69.
61 WCT, supra note 6, art. 11 (providing that “Contracting Parties shall provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights under this Treaty or the Berne Convention and that restrict acts, in respect of their works, which are not authorized by the authors concerned or permitted by law”). See also WPPT, supra note 6, art. 18.
62 See Feder, supra note 57, at 269.
63 See id.
United States and the European Union jumped in too quickly, however, as neither the WCT nor the WPPT will go into effect until it is ratified by thirty member states. Only about nineteen member states currently have done so.

II. CONFLICTS BETWEEN NEW LEGISLATION AND HISTORICAL INTERPRETATION

A. Implementation of the WIPO Treaties

1. The United States and the DMCA

To comply with the WIPO treaties, the United States passed the DMCA in 1998. In fact, Title I of the DMCA specifically implements the two WIPO Internet treaties. The main focus of the DMCA is split into two parts: Section 1201 prohibits the circumvention of copyright protections, and section 512 provides a safe harbor for online service and Internet service providers (ISP) who are accused of contributory or vicarious infringement when their subscribers infringe copyrights. Only the former section was required by WIPO; the latter was the result of a bargain made with ISPs to ensure that the measure would pass more easily in Congress.

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64 See id. at 268.
65 See id.
68 Id. § 1201.
69 Id. § 512.
70 See RealNetworks, Inc. v. Streambox, Inc., No. 99-CV-2070, 2000 U.S. Dist. LEXIS 1889, at *17–*18 (W.D. Wash. Jan. 18, 2000) (“The DMCA prohibits the manufacture, import, offer to the public, or trafficking in any technology, product, service, device, component, or part thereof that: (1) is primarily designed or produced for the purpose of circumventing a technological measure that effectively ‘controls access to’ a copyrighted work or ‘protects a right of a copyright owner;’ (2) has only limited commercially significant purpose or use other than to [circumvent] such technological protection measures; or (3) is marketed for use in circumventing such technological protection measures”).
Section 1201, while initially thought of as an anti-infringement statute, is actually separate from the Copyright Act’s definition of copyright infringement. It instead focuses on methods created to circumvent technological protections on copyrighted works. In *RealNetworks, Inc. v. Streambox, Inc.*, the defendant was charged with infringement and violation of the DMCA’s section 1201 because it manufactured programs that would bypass the plaintiff’s protection measures and access the files on the plaintiff’s server, allowing the user to make unauthorized copies of digital music files and convert those files into various formats. Without Streambox’s software, users could not bypass the protected files and get music on such a grand scale. The court held that two of the programs, the “Streambox VCR” and the “Ferret” violated the DMCA, but the “Ripper” did not. The court found that the Streambox VCR was designed primarily to circumvent RealNetworks’ access control and copy protection measures, and that the Ferret created a derivative work by modifying the plaintiff’s program. Thus, they both directly infringed the copyright.

within the DMCA: service providers would receive liability protections in exchange for assisting copyright owners in identifying and dealing with infringers who misuse the service providers’ systems. At the same time, copyright owners would forgo pursuing service providers for the copyright infringement of their users, in exchange for the assistance in identifying and acting against those infringers.

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72 See *RealNetworks*, 2000 U.S. Dist. LEXIS 1889, at *17.
75 See id. at *19.
76 *Id.* at *3. The “Streambox VCR” would imitate RealNetworks’s “secret handshake” so RealNetworks’s program would think the user of the Streambox VCR was authorized to download and copy files. *See id.* at *11–*13. This worked much like a cable television box that would unscramble signals for which the user had not paid. *See id.* The “Ripper” allowed a user to convert a file from one format to another. *See id.* The “Ferret,” when installed as a “plug-in” to a user’s computer, altered the visual appearance and operation of RealNetworks’s interface. *See id.*
77 See id. at *21.
78 See id. at *31.
79 See id.
Conversely, the court dismissed the claim on the Ripper because the format that the Ripper converted was not a preventative “technological measure,” and the Ripper had “legitimate and commercially significant uses.” This illustrates a form of exclusivity between violations of the DMCA and copyright infringement. Because the Ripper was not an anti-circumvention measure and thus did not violate the DMCA, it went through a fair use analysis similar to the one in *Sony Corp. v. Universal City Studios, Inc.* This analysis was used to determine whether the creators of the program were liable for contributory or vicarious infringement, as in *Napster II*. Since RealNetworks defines steps for the analysis of mixed infringement/anti-circumvention claims, it could be instrumental in predicting how courts will examine such claims in the future.

Before the issues on copyright infringement were addressed in the *Napster II* case, Napster first tried to invoke the DMCA’s safe harbor provision under section 512 to avoid monetary damages and injunctive relief in *Napster I*. Napster argued that it should be considered an ISP under Section 512(a), and enjoy limited liability for copyright infringement resulting from the transmission of files through its network. The court evaluated the five conditions to be satisfied for such a finding:

1. the transmission of the material was initiated by or at the direction of a person other than the service provider;
2. the transmission, routing, provision of connections, or storage is carried out through an automatic technical process without selection of the material by the service provider;
3. the service provider does not select the recipients of the material except as an automatic response to the request of another person;
4. no copy of the material made by the service provider in the course of such intermediate or transient storage is maintained on the

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80 Id. at *28, *30.
81 464 U.S. 417 (1984); see also infra Part II.C.
82 239 F.3d 1004, 1004 (9th Cir. 2001).
84 See id.
system or network in a manner ordinarily accessible to such anticipated recipients for a longer period than is reasonably necessary for the transmission, routing, or provision of connections; and (5) the material is transmitted through the system or network without modification of its content.\textsuperscript{85}

After analyzing the elements, the court found that Napster was not a “service provider” as defined by section 512(a) because it did not “transmit, route, or provide connections for allegedly infringing material through its system.”\textsuperscript{86} Most importantly, Napster did not implement a policy of termination for subscribers who were repeat infringers under section 512(i).\textsuperscript{87} The court explained that Napster had to satisfy this subsection to enjoy any protection under section 512, but found that it did not comply, despite its ability to terminate such users. Napster, therefore, could not invoke the safe harbor provisions at all.\textsuperscript{88}

This would seem a strong victory for the record industry, if only to completely eliminate accused infringers’ use of the argument that their status as ISPs exempts them from section 512. While everyone was watching Napster, however, dozens of clones sprouted up—ones with better, harder-to-trace systems that had no central server to attack.\textsuperscript{89} Most programs in use now are built on “distributed networks,” through which computers search other computers’ files, without having to use a central index.\textsuperscript{90} Because these networks are distributed, and not centralized, it is nearly impossible either to shut them down or find the alleged infringers to sue.\textsuperscript{91} If found and brought to court, the creators of the networks would undoubtedly distinguish themselves from \textit{Napster I}, arguing that once the software is distributed, its usage can no longer be controlled and the infringers cannot be removed from the

\begin{itemize}
  \item \textsuperscript{85} \textit{Id.} at *9–*10.
  \item \textsuperscript{86} \textit{Id.} at *25.
  \item \textsuperscript{87} \textit{See id.} at *29–*30.
  \item \textsuperscript{88} \textit{See id.}
  \item \textsuperscript{89} \textit{See} Charles C. Mann, \textit{The Year the Music Dies}, \textit{Wired}, Feb. 2003, at 92.
  \item \textsuperscript{90} \textit{See} Douglas Wolk, \textit{Rough Trade}, \textit{Village Voice}, Mar. 26, 2002, at 36. These decentralized programs include Kazaa, Limewire, Gnutella, Morpheus, and Grokster. \textit{Id.}
  \item \textsuperscript{91} \textit{See id.}
\end{itemize}
They could then try to define themselves as ISPs under section 512 and “do their best” to help the record industry stop infringement, even though the services’ “best” may amount to doing nothing. Although this argument could be successful on technical grounds, peer-to-peer services are unlikely to pass the first hurdle that Napster failed: the requirement for the service to “transmit, route, or provide connections for allegedly infringing material through its system.” The courts reviewing future cases involving other programs would likely never get to the secondary issue of user termination.

Despite the new programs’ lack of control, the DMCA test under section 1201, as illustrated in RealNetworks, will probably not bend an inch for the creators of any programs found to circumvent copyright security measures. Nevertheless, RealNetworks is distinguishable from the case where a program allows sharing of compressed music files. Whereas RealNetworks had set up security measures against unauthorized access or copying, it can be argued that record companies have failed to set up security measures of their own. Therefore, a file-sharing program such as Kazaa, which is one of the peer-to-peer programs built on a distributed network, cannot be found to be circumventing any “technological measure” and would thus not be liable under section 1201 of the DMCA. This finding would bring the program back under the similar test formulated by the RealNetworks court for the Ripper to assess the program’s capability for substantial noninfringing uses. As will be

93 Napster I, 2000 U.S. Dist. LEXIS 6243, at *29–*30; see also infra Part II.C.2 (providing a more in-depth discussion of peer-to-peer program creators’ inability to monitor infringement).
94 Id. at *29–*30.
95 See id.
96 See supra note 90 and accompanying text.
98 See id.
discussed in Part II.C., however, courts in general have not followed the “substantial noninfringing use” test for file-swapping programs, as the sheer volume of copyright infringements on the Internet has caused some courts to focus more on making the problem go away at the expense of the public’s fair use rights.

2. The European Union’s Response

In June of 2001, the European Parliament and the Council passed the Copyright Directive on the “harmonization of certain aspects of copyright and related rights in the information society.” Like the DMCA, the Copyright Directive was intended to enable the European Union and its member states to ratify the WCT and WPPT. The Copyright Directive was also intended to bring Europe’s copyright laws up to speed with technological advances, including Internet file swapping. The member states had until December 22, 2002, to ratify and implement the new law. Only a handful of states, however, have begun the process and only Greece has actually enacted legislation that follows the Copyright Directive. The states that intend to ratify the law are still proceeding in their efforts under pressure from the European Union.

On the occasion of its enactment, Frits Bolkestein, Internal Market Commissioner of the European Parliament, emphasized the Copyright Directive’s importance, stating that “[n]ot only is this Directive the most important measure ever to be adopted by Europe in the copyright field but it brings European copyright rules into the digital age.” The Copyright Directive attempts to prohibit the swapping of copyrighted files and harmonize

99 Copyright Directive, supra note 8.
100 See id.
101 See id.
104 See id.
reproduction, distribution, and public communications rights. In contrast to the DMCA, which does not need to list the exceptions for copyright infringement liability because these exceptions are well-established by statute and case law, the Copyright Directive sets forth a list of exceptions that are exhaustive—a member state may apply any or all of the exceptions, but no others (except in cases of analog use). For example, the Copyright Directive specifically notes exemptions from liability for making temporary copies and for certain nonprofit organizations.

Moreover, unlike the DMCA, the Copyright Directive does not provide broad insulation from liability for ISPs. At least one case in the European Union, LICRA v. Yahoo!, held that ISPs may be found liable for hosting certain illegal content or activities. This ruling sharply contrasts section 512 of the DMCA and was not enforced in the United States due to First Amendment concerns. A similar verdict in Germany clashes on all points with section 512 of the DMCA. In a suit filed in 1997 against America Online (AOL), a German court ruled that AOL was liable for permitting its subscribers to trade copyrighted files online.

Despite these few minor differences, the Copyright Directive is very similar to the DMCA. Like the DMCA’s section 1201, anti-circumvention measures under article 6 of the Copyright Directive remain within the control of copyright holders. Only those with copyrights may allow their works to be reproduced, distributed, and communicated to the public. In line with the U.S. first sale doctrine, the Copyright Directive states that the copyright holder’s

106 See id.
107 See infra Part II.B (regarding the fair use doctrine and its applications in the United States).
108 See infra Part II.B.
113 See id.
114 See Copyright Directive, supra note 8, art. 6.
115 See id.
distribution right is exhausted within the European Union once the holder markets the work in the European Union (but that does not mean that the holder has exhausted the right outside the European Union).\(^{116}\) The EU Software Directive, like 17 U.S.C. § 109 in the United States, makes an exception to first sale for digital distribution, advising that every distribution online should be authorized where the copyright so provides.\(^{117}\) If a similar first sale exception were applied to book sales, one would have to call up the author and ask permission to sell the book to a used bookstore. Remedies under the Software Directive are severe and include the possibility of injunction, monetary damages, and seizure of material and equipment, whether or not the person or entity has actually infringed a copyright.\(^{118}\)

Thus, using a similar approach to that of the United States, the EU Copyright Directive aims to update copyright protection in the wake of new peer-to-peer sharing and protect against the manufacture, distribution, and sale of any technological measures used to circumvent any restrictions placed by the copyright holder.\(^{119}\) In comparing it to the United States’ approach, the Copyright Directive can be best analogized to the DMCA, in which a copyright holder must have some technological measure in place before the creator or user of a circumvention program can be held liable under article 6.\(^{120}\) In cases not involving anti-circumvention devices, courts in the European Union, possibly in the interest of international harmonization, will likely rely on analysis similar to \textit{Napster II}. In other words, instead of stretching the Copyright Directive to fit non-anti-circumvention devices, the EU courts may use similar reasoning to U.S. courts to find liability over the new peer-to-peer services.

\(^{116}\) \textit{See id.}
\(^{117}\) \textit{See Software Directive, supra note 20, recitals 28–29.}
\(^{118}\) \textit{See Software Directive, supra note 20, art. 8.}
\(^{120}\) \textit{Copyright Directive, supra note 8, art. 6. The Copyright Directive, however, makes no mention of notice required on behalf of copyright holders to be given to a person or entity accused of contributory or vicarious infringement. Cf. 17 U.S.C. § 512(c)(3) (2000) (outlining the DMCA’s notification provision).}
B. Fair Use: A Defense to Copyright Infringement at Home but Not Abroad

The most common defense to copyright infringement is fair use. The nature of fair use usually involves weighing policies on a case-by-case basis. In the United States, under section 107 of the Copyright Act, four public interests are identified: (1) the purpose and character of the use, including its commercial nature; (2) the nature of the copyrighted work; (3) the proportion that was “taken”; and (4) the economic impact of the “taking.”\(^\text{121}\) No single element is decisive, but the first, the purpose and character of the use, and the fourth, the economic impact of the taking, are generally the most influential.\(^\text{122}\) While much of the U.S. exemptions for fair use developed through case law, the EU Copyright Directive specifically allows fair use in teaching, scientific research, and social commentary.\(^\text{123}\) It also advises that the exceptions and limitations the member states provide “duly reflect the increased economic impact that such exceptions or limitations may have in the context of the new electronic environment.”\(^\text{124}\) The DMCA, however, provides very few exceptions for liability when a protective measure is circumvented. Unlike case law that has recognized the legitimacy of making copies for personal use and individual teaching, the DMCA permits the use of circumvention tools only for nonprofit libraries, archives, educational institutions,\(^\text{125}\) law enforcement agencies, and very limited reverse engineering research.\(^\text{126}\) It is worth noting,

\(^{123}\) See Copyright Directive, supra note 8.
\(^{124}\) Id. recital 44; see also id. art. 5 (setting forth the exceptions and limitations).
\(^{125}\) See 17 U.S.C. § 1201(d). An extra limitation is placed on this exception for these three groups: They may access the work “solely in order to make a good faith determination of whether to acquire a copy,” and only if “an identical copy of that work is not reasonably available in another form.” Id.
\(^{126}\) See id. § 1201(d)–(f). The ban on circumvention of protection applies even when a later use of the work (and the reason for circumventing the protection) would be legal under doctrines of fair use. See Jason Young, Digital Copyright Reform in Canada: Reflections on WIPO and the DMCA, Apr. 26, 2002, available at http://www.lexinformatica.org/dox/digitalcopyright.pdf. For example, a professor is
however, that for qualified parties to get the tools to circumvent the protection, some other party would likely have to be the creator, and this nonexempt creator of the circumvention measures would then be liable under the DMCA.  

The major case relied on by defendants in music downloading suits is *Sony Corp. v. Universal City Studios, Inc.* in which television companies accused the manufacturer of home video tape recorders of contributory infringement. The Supreme Court, in applying the fair use factors, held that (1) the public should not be prohibited from taping educational, religious, or other programs authorized to be taped by the copyright holders for noncommercial use; (2) there was no likelihood of harm to the market shown; and (3) the tape recorder was capable of substantial noninfringing uses, even though over eighty percent of users’ activity constituted actionable infringement. Since *Sony*, however, fair use has generally not been a successful argument in digital downloading cases, most likely due to the allegedly wide economic impact of displacing sales of music with free downloaded tracks.  

While it would appear that the European Union intended to follow the U.S. implementation of the WIPO treaties with the EU Copyright Directive, and therefore reach similar results in copyright cases as U.S. courts, a member state recently called the attempt at European and global copyright harmonization into question. On November 29, 2001, the Amsterdam District Court held that the creators of Kazaa, a peer-to-peer file-sharing program that has been downloaded more than 223 million times, were liable for copyright infringement and had to take measures to

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127 See id. It makes sense to think that libraries will look to a third party to develop the complicated software to break the protective codes on copyrighted works.

128 464 U.S. 417 (1984). The infringement that the defendants were allegedly contributing to was the home taping of copyrighted television programs and movies. See id. at 420.

129 See id. at 456.

130 See, e.g., *Napster II*, 239 F.3d 1004 (9th Cir. 2001).

terminate the infringements. On March 28, 2002, however, the Amsterdam Court of Appeal reversed the ruling. The Court of Appeal’s decision embraced fair use principles, noting that Kazaa’s computer program is not exclusively used for downloading copyrighted works. Instead of focusing on the imposition of contributory or vicarious liability on the defendants, the Court of Appeal placed the primary responsibility in the individual users’ hands, explaining that, like Sony’s production of the VCR, “[p]roviding the means for publication or reproduction of copyright protected works is not an act of publication or reproduction in its own right.” Perhaps most significantly, the Court of Appeal emphasized that it was impossible for Kazaa to monitor users’ file sharing and therefore impossible to “incorporate a blockage against the unlawful exchange of files,” even if it received notice from the copyright holders. Thus, while the *Napster* decisions have eroded the principles of *Sony* in the United States, there is at least one court in Europe trying to revive fair use and protection for new technologies as they existed under *Sony*.

The *Kazaa* decision was the first to protect a file-sharing company against copyright liability, but it is unclear whether this is an influential trend that could threaten the goal of harmonization or

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133 See id.
134 See id. The court relied on an expert report submitted by Kazaa:

Is KaZaA exclusively suited for the exchange of music files? Absolutely not. KaZaA is particularly well suited for certain types of files containing metadata and it is user-friendly. This does include MP3, a popular format for the exchange of music. However, KaZaA is also used for the exchange of Microsoft Word files. Furthermore, apart from the exchange of music, the exchange of jokes is also very popular among KaZaA users.

KaZaA is very well suited as a communication tool for communities that are autonomous, that do not want to make use of a central service but that still have to exchange files. Examples would be:

- Freelance photographers
- Real estate agents
- Citizens who want to publish things.

*Id.* ¶ 4.4 (quoting Dr. E. Huizer’s expert report).
135 *Id.* ¶ 4.9.
136 *Id.* ¶ 4.4 (quoting Dr. E. Huizer’s expert report).
a mere anomaly. 

[The Kaza decision] doesn’t bind American courts, but it could weaken the overall structure of international copyright law if other countries begin offering safe havens to companies,” said Bruce Lehman, who helped develop a substantial portion of the DMCA. The decision may also conflict with the goals of the WIPO treaties and the EU Copyright Directive, which suggests that the member states may not be implementing the laws as seriously as intended and will have a difficult time doing so. While piracy havens abound throughout the world, a haven in the Netherlands could isolate American interests in copyright from the European Union in practice, and not just in theory. Kazaa is also being sued in the United States, which is not bound by the Dutch precedent; the Netherlands decision could influence domestic courts’ analysis, however, in a bid for harmonization.

On the other hand, the Kaza ruling can be viewed not as the result of an erratic court, but as a statement that fits squarely within RealNetworks and Sony. If the Court of Appeal had followed analysis analogous to the RealNetworks court (in its application of the DMCA) and considered the Copyright Directive, it would have found that Kazaa was not an anti-circumvention measure and thus not liable under article 6 of the Copyright Directive. Just as the U.S. courts did in Sony and RealNetworks, the Dutch court applied the contributory infringement test and found other substantial legal and noninfringing uses for the Kazaa program, such as sharing personal photo albums too large to be sent by e-mail or songs that the owner has given permission to distribute. This is not to say

139 See id.
140 See id.
141 See Borland, supra note 137.
142 See Copyright Directive, supra note 8, art. 6.
143 See Kaza ¶ 4.9; Sony Corp. of Am. v. Universal City Studios, 464 U.S. 417, 446 (1984).
144 If there are millions of owners of [VCRs] who make copies of televised sports events, religious broadcasts, and educational programs such as Mister Rogers’ Neighborhood, and if the proprietors of those programs welcome the practice, the business of supplying the equipment that makes such copying feasible
that Kazaa is consistent with U.S. law, however; it is directly at odds with Napster II, which held that there would be liability if the makers of the program knew about and materially contributed to infringing activity, or if they had an interest in the infringing activity and did nothing to stop it. Under the test used in Napster II, the company that created Kazaa might be liable due to its knowledge of the program’s wide infringing capabilities and the substantial corporate investment and financial returns that the company currently enjoys. Thus, when the District Court in California rules on the case in the United States involving the suit against Kazaa, it might reach a completely different result from the Supreme Court in Sony and the Court of Appeal in the Netherlands.

C. Applying Our Legal Standards to New Technologies

Since the fall of Napster, the nature of downloading music and movies has changed. File-sharing programs no longer need a Napster-like central server and instead connect individual users directly with other users. In February 2001, Napster had twenty-six million users in thirteen different countries; in January 2003, Kazaa counted sixty million users around the world, with twenty-two million in the United States.

One of the major problems in suing a company like Kazaa is the lack of global copyright harmonization. With so many

should not be stifled simply because the equipment is used by some individuals to make unauthorized reproductions of respondents’ works.

Id. See Napster I, 239 F.3d 1004, 1020–24 (N.D. Cal. 2001).

Id. See Todd Woody, The Race to Kill Kazaa, WIRED, Feb. 2003, at 106. It is worth noting that the Sony court did not reach the issue of profit for Sony through sales of the VCR because “time-shifting for private home use must be characterized as a noncommercial, nonprofit activity.” See Sony, 464 U.S. at 449.

146 Metro-Goldwyn-Mayer Studios Inc. v. Grokster, 243 F. Supp. 2d 1073 (C.D. Cal. 2003) (finding jurisdiction over Sharman Networks, owners of the Kazaa program, and consolidating the suit against it with the suits against Grokster and Streamcast). All three programs use the FastTrack software. Id. at 1080.

147 See Mann, supra note 89.

148 See id.

standards around the world, it is difficult to get jurisdiction in the United States or any EU country that may have ratified the Copyright Directive when Kazaa can just set up shop somewhere else. In addition, peer-to-peer services like Kazaa, Morpheus, and Gnutella have no central server, which makes it difficult, if not impossible, for the companies to monitor file swapping. This legally significant difference from the structure of Napster may cause the new peer-to-peer services, even if brought under the jurisdiction of U.S. courts, to fall outside the scope of vicarious and contributory infringement liability. Even though few argued that Napster was a direct infringer, the record companies succeeded in getting an injunction against Napster under theories of contributory and vicarious liability. If copyright holders are unable to demonstrate contributory or vicarious liability, peer-to-peer services could meet the *Sony* fair use test in the same way that Kazaa did in the Netherlands.

In interpreting digital downloading cases, at least in the United States, courts have shied away from the Supreme Court’s reasoning in *Sony*. Instead of emphasizing the importance of fair use and embracing the positive uses of the new technology, they have generally ignored fair use and focused almost exclusively on the negative uses: “Courts have not allowed the defense that infringing uses may have stimulated sales in some instances. To measure harm, courts have considered whether the defendant’s use diminishes or prejudices potential sales, interferes with marketability, or fulfills the demand for the original.” Thus, when cases are decided in the United States, it is unlikely that the courts will find Kazaa to be more like the Betamax VCR than like Napster. In cases of digital downloading, therefore, it appears that the fair use test is less likely to be used as a test that balances

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150 See Woody, *supra* note 145.
152 See *Napster II*, 239 F.3d 1004, 1020 (9th Cir. 2001).
154 See id.
public interests, as in *Sony*,\textsuperscript{155} than as a basis for finding and affirming liability, as in *Napster II*\textsuperscript{156}

The continuing and rampant exchange of copyrighted files on the Internet makes it evident that record companies’ lawsuits, no matter how favorable the outcomes, have not been very effective in deterring creators or users of file-trading software.\textsuperscript{157} There are two primary reasons for this: (1) it can be difficult to get jurisdiction over the creators of non-U.S. peer-to-peer companies, and (2) once the programs are out on the Internet, it is difficult for the creators to stop the use of their programs.\textsuperscript{158} As these weaknesses in legal solutions become more problematic, record companies will attempt to fill the gaps by using other nonlegal (and possibly illegal), technical solutions to solve the problem of file-sharing among individuals.

1. Jurisdiction

Before a court can apply the standard of contributory or vicarious infringement to new peer-to-peer services that do not have a central server, the court must first determine whether such services fall under its jurisdiction. In *Metro-Goldwyn-Mayer Studios v. Grokster*, it was easy to assert jurisdiction over Grokster and Streamcast (which developed the program Morpheus) because the companies were based in the United States. However, the U.S. District Court in the Central District of California had to analyze Sharman Networks, which owns the Kazaa interface, more closely to determine whether it conducted enough business in the United States to be subject to jurisdiction there.\textsuperscript{159} Sharman, which owns the Kazaa interface, was formed in the small island nation of

\textsuperscript{155} See *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 433 (1984) (“All reproductions of the work, however, are not within the exclusive domain of the copyright owner; some are in the public domain. Any individual may reproduce a copyrighted [work] for a ‘fair use’; the copyright owner does not possess the exclusive right to such a use.”).

\textsuperscript{156} See *Napster II*, 239 F.3d at 1014–17.

\textsuperscript{157} See supra text accompanying notes 2–12.

\textsuperscript{158} See Jerome Kuptz, *Gnutella: Unstoppable by Design*, WIRED, Oct. 2000, at 236 (providing an excellent diagram of how peer-to-peer services are virtually unstoppable).

Vanuatu and does business primarily in Australia, but runs its servers in Denmark and keeps its software in Estonia. The California court found specific personal jurisdiction: “Sharman engages in a significant quantum of commercial contact with California residents constituting a but for cause of Plaintiffs’ claims. Jurisdiction is therefore presumptively reasonable.” The court’s personal jurisdiction analysis will likely be influential in lawsuits against other non-U.S. peer-to-peer services. Over the past few years, courts have evaluated how traditional notions of jurisdiction apply to Internet-based businesses. Such cases may provide guidance as to whether (1) a peer-to-peer provider has sufficient “minimum contacts” with the United States, (2) the claim asserted against the provider arises out of those contacts, and (3) the exercise of jurisdiction is reasonable.

In Zippo Manufacturing Co. v. Zippo Dot Com, Inc., a district court considered whether an online news service infringed a company’s trademark. The most significant connection between the online service and the forum state arose from its subscription service; approximately two percent of its 14,000 subscribers were from the state. In addition, the online service had entered into seven agreements with ISPs in the state to allow subscribers to access the news service. The court reasoned that

the likelihood that personal jurisdiction can be constitutionally exercised is directly proportionate to the nature and quality of commercial activity that an entity conducts over the Internet. . . . If the defendant enters into contracts with residents of a foreign jurisdiction that involve the knowing and repeated transmission of computer files over the Internet, personal jurisdiction is proper. . . . A passive Web site that does little more than make

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160 See id. at 1080.
161 Id. at 1088.
163 See id. at 1119.
164 See id. at 1121.
165 See id.
information available to those who are interested in it is not grounds for the exercise [of] personal jurisdiction.  

In unclear cases that occupy the middle ground, “the exercise of jurisdiction is determined by examining the level of interactivity and commercial nature of the exchange of information that occurs on the Web site.”

While the court held that the online service purposely availed itself of doing business in the state based on its online transactions and contracts with ISPs within the forum, a peer-to-peer service company could argue that the choice of whether to provide its services to residents of the United States is not within its control. Once a person downloads a program that does not require a central server to transmit search requests or files, anyone around the world can download a copy of the program from that user. This would distinguish a peer-to-peer service company from the defendant in Zippo, where the court noted that “Dot Com repeatedly and consciously chose” to make contact with the forum state. Based on the recommendations of the Zippo court, however, it might be foreseeable that the program could cause commercial harm to companies in the United States. Thus, services like Kazaa or Grokster may have difficulty escaping U.S. jurisdiction no matter where they try to hide.

Other cases would also support a finding of personal jurisdiction over peer-to-peer providers based on their effects in the United States, possibly conferring jurisdiction over a peer-to-peer defendant wherever the effects are felt. In Panavision International, L.P. v. Toeppen, the court found personal jurisdiction over the defendant partially because the defendant had registered the “Panavision” domain name “with the knowledge that the names belonged to plaintiff and with the intent to interfere with

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166 Id. at 1124.
167 Id.
168 See id. at 1125–26.
169 Id. at 1127.
170 See id. at 1126–27.
While companies like Sharman may argue that they do not intend to interfere with record companies’ business, their success, whether monetary or not, has come largely in part from their programs’ ability to find and download copyrighted works. Thus, although only one recent case at the trial court level is directly on point for peer-to-peer services, record companies continue to claim that the wild popularity of the programs among millions of American users causes them harm. Other courts, therefore, may find this harm sufficient in most peer-to-peer situations to assert the requisite personal jurisdiction to bring the programs’ creators and distributors into a U.S. court.

2. Supervision and Contributory/Vicarious Liability

After finding jurisdiction, courts will turn to the *Napster II* test to determine whether the services are liable for contributory or vicarious infringement. The imposition of liability for contributory infringement in *Napster II* rested on the finding that Napster knew or had reason to know of its users’ direct infringement. Under *Sony*, Napster may have been absolved from the knowledge standard where the program was “capable of both infringing and ‘substantial noninfringing uses.’”

The Ninth Circuit found that Napster *did* have potentially valuable uses and would not itself impute the requisite level of knowledge for contributory liability to Napster. Based solely on the findings of the limited record below, however, the Ninth Circuit found no error and upheld the trial court’s finding of

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171 Panavision Int’l, L.P. v. Toeppen, 938 F. Supp. 616, 621 (C.D. Cal. 1996). *Panavision* was decided in the same court that is considering *Metro-Goldwyn-Mayer Studios*.

172 Kazaa’s financial success, attained despite spending virtually nothing on its content, will make its battle extremely difficult. It earned millions in 2002 from U.S. advertisers such as Netflix and DirecTV. See Woody, *supra* note 145, at 106.


174 See *Panavision*, 938 F. Supp. at 621.

175 See *Napster II*, 239 F.3d 1004, 1020–24 (9th Cir. 2001).

176 See id. at 1021.

177 Id. at 1020 (citation omitted).

178 See id. at 1021.
knowledge.\textsuperscript{179} The Ninth Circuit’s reasoning is very important when considering the new peer-to-peer services’ liability, as it has already recognized that these services are “capable of commercially significant noninfringing uses.”\textsuperscript{180} When a trial court reviews a similar case in the future, it may be obligated to use the Ninth Circuit’s finding in its analysis, potentially allowing new peer-to-peer services in the post-\textit{Napster} world to hide from liability under the \textsl{Sony} umbrella.

The Ninth Circuit found that \textit{Napster}’s failure to remove infringing works after having received specific notice from copyright holders satisfied the knowledge requirement for contributory liability.\textsuperscript{181} Applying the rationale from \textit{Religious Technology Center v. Netcom On-Line Communication Services},\textsuperscript{182} the Ninth Circuit agreed that “if a computer system operator learns of specific infringing material and fails to purge such material from the system, the operator knows of and contributes to direct infringement.”\textsuperscript{183} The court also noted, however, that,

...absent any specific information which identifies infringing activity, a computer system operator cannot be liable for contributory infringement merely because the structure of the system allows for the exchange of copyrighted material. To enjoin simply because a computer network allows for infringing use would, in our opinion, violate \textsl{Sony} and potentially restrict activity unrelated to infringing use.\textsuperscript{184}

The court concluded that the record from the trial court supported a finding of actual knowledge of specific infringing material on its system.\textsuperscript{185} The court, thus, found that \textit{Napster} was contributorily liable because \textit{Napster} was aware of the infringing material and possessed the capability to block access, but failed to do so.\textsuperscript{186}

\textsuperscript{179} See id. at 1021–22. The record below did not consider potential uses of the program.
\textsuperscript{180} See id. at 1021.
\textsuperscript{181} Id. at 1021.
\textsuperscript{182} See id. at 1022.
\textsuperscript{183} 907 F. Supp. 1361 (N.D. Cal. 1995).
\textsuperscript{184} \textit{Napster II}, 239 F.3d at 1021.
\textsuperscript{185} Id. (citation omitted).
\textsuperscript{186} See id. at 1022.
The Ninth Circuit’s analysis of contributory liability provides guidance for peer-to-peer services that are capable of blocking access and removing infringing material, but the new breed of distributed networks cannot follow suit. If a finding of contributory liability depends solely on notice of infringing material,\textsuperscript{187} then programs like Kazaa and Gnutella would be liable. If such liability rests on the ability to block and remove infringing material,\textsuperscript{188} however, the distributed network services would escape liability. Unfortunately, the \textit{Napster II} decision provides little guidance on what precisely triggers contributory liability; it is, therefore, difficult to predict how a court would rule on a case involving a distributed network.

Vicarious liability applies when the defendant “has the right and ability to supervise the infringing activity and also has a direct financial interest in such activities.”\textsuperscript{189} The Ninth Circuit in \textit{Napster II} held that financial benefit is present “where the availability of infringing material acts as a ‘draw’ for customers.”\textsuperscript{190} Although Napster had virtually no outside income at the time, its future income would have presumably been dependent on the number of users that its free service would attract.\textsuperscript{191} Kazaa is a perfect example of this; its large user base has allowed it to accrue actual and substantial revenue from advertisers.\textsuperscript{192}

Despite a finding of financial benefit, the post-Napster peer-to-peer services might escape vicarious liability on the prong of supervision. The Ninth Circuit’s standard for such liability rested on the principle that “[t]he ability to block infringers’ access to a particular environment for any reason whatsoever is evidence of the right and ability to supervise.”\textsuperscript{193} While the court held that Napster was able to police its system by finding infringing material on its search indexes and terminating users’ access to the

\textsuperscript{187} See \textit{id.} at 1020–22.
\textsuperscript{188} See \textit{id.}
\textsuperscript{189} \textit{Id.} at 1022 (quotations omitted).
\textsuperscript{190} \textit{Id.}
\textsuperscript{191} See \textit{id.}
\textsuperscript{192} See \textit{supra} note 172 and accompanying text.
\textsuperscript{193} \textit{Napster II}, 239 F.3d at 1023.
system, the new peer-to-peer services are differently situated. Due to their distributed networks and no server through which requests must pass, it is unlikely that they would be able to find the infringing works or terminate users’ use of the program. In a case involving a new peer-to-peer system, therefore, courts would likely determine that there is insufficient supervision to hold the company vicariously liable.

Each program may give rise to different facts. For example, it is very likely that the record industry will not sue Gnutella, not only because of the potential legal challenges, but particularly because one of the five major record companies is responsible for its creation. The other possibility is to sue the users of the program, but they are extremely difficult to track, and the costs of litigation would likely exceed the award that would be recovered from the average user. Finally, unlike Kazaa, Gnutella obtains no financial benefit from users’ distribution and usage of the program, and this lack of present or future financial benefit could absolve Gnutella from vicarious liability.

3. Copyright Holders’ Out-of-Court Tactics

While the courts and legislatures ruminate over what to do about the problems posed by the new peer-to-peer services that have no central server to shut down, copyright holders have sought solutions other than suing the services. For example, in early 2001, Belgian police raided the residences of Internet users for violations of copyright law, after a music industry organization claimed it was able to track users’ heavy downloading of

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194 See id. at 1024.
195 See Mann, supra note 89 and accompanying text.
196 See Wolk, supra note 90 and accompanying text.
197 Justin Frankel and Tom Pepper of Nullsoft, a subsidiary of America Online [AOL], developed the Gnutella program in a form that could defeat the attempts of network administrators to block it; many administrators had successfully blocked Napster from their networks. See Giovanna Fessenden, Peer-to-Peer Technology: Analysis of Contributory Infringement and Fair Use, 42 J.L. & TECH. 391 (2002). Two days after Gnutella was released on the Internet in June 2000, AOL, recognizing that the program could damage its newly-purchased record label, Time Warner Music Group, ended the project and stopped access to the program. See id.
198 See id.
199 See id.; see also Napster II, 239 F.3d at 1023.
copyrighted files.\textsuperscript{200} Tactics on this side of the Atlantic have been even more intense. Some of the major record companies have hired technology firms to spy on networks to identify large-scale infringers, “spoof”\textsuperscript{201} MP3s,\textsuperscript{202} or use interdiction.\textsuperscript{203} Legislation to legalize interdiction and other similar forms of attack is currently before Congress.\textsuperscript{204}

Record companies themselves have developed some attempts at solving the problem. One method that may prove to be successful is watermarking, which allows tracking of song copies around the world.\textsuperscript{205} Other solutions have not had so much luck: copy protection on CDs turned out to be expensive and possibly unconstitutional, while causing many users’ computers to crash.\textsuperscript{206} Another scheme, Sony’s Key2Audio copy protection, could be easily eliminated by using a felt-tip pen, and hackers could easily figure out how to crack the protection software codes.\textsuperscript{207}

Copy protection also created opposition in other nations. In Australia, after hearing about Universal’s plan to release copy-protected CDs, the Australian Competition and Consumer Commission told manufacturers to put labels on CDs to warn consumers that the protected CDs might not play in CD-ROM drives.\textsuperscript{208} In Europe, Sony released millions of its copy-protected

\textsuperscript{201} “Spoofing” involves creating media files that are disguised as popular songs. When someone downloads the spoofed file, he or she finds that it is some other track, often a repetitious—and annoying—loop of part of the song’s chorus.
\textsuperscript{202} “MP3 (MPEG-1 Audio Layer-3) is a standard technology and format for compression a sound sequence into a very small file (about one-twelfth the size of the original file) while preserving the original level of sound quality when it is played.” MP3, Whatis.com, at http://whatis.techtarget.com/definition/0,,sid9_gci212600,00.html (last updated July 27, 2001).
\textsuperscript{203} Use interdiction involves flooding a user with a large harbor of copyrighted material and sending that user so many requests that other users cannot get their requests through. See Jeff Howe, Under Cover, WIRED, Feb. 2003, at 97.
\textsuperscript{204} See id.
\textsuperscript{205} See Jeff Howe, Dirty Dozen, WIRED, Feb. 2003, at 98. Watermarking entails “[d]igitally stamping each track on an advance CD so you can hunt down and punish whoever uploads it to the world.” Id.
\textsuperscript{206} See id.
\textsuperscript{207} See id.
\textsuperscript{208} See Bergen, supra note 149, at 274.
CDs with the warning that the CD should not be played in either PC or Macintosh CD drives because the Key2Audio protection software would cause the computers to crash.\textsuperscript{209} In April 2002, Warner Music Japan began testing protection on CDs that would also contain warnings, but this kind would prevent the copying of songs onto users’ computers.\textsuperscript{210}

Despite these obstacles, where countries follow a strict DMCA-like law, copyright holders have been encouraged to develop technological measures. This is because under a DMCA-like regime, the plaintiff only needs to demonstrate that a person who makes a copy used a tool to circumvent the protection to prove infringement. The defense of fair use is thus not available. In countries that favor fair use, however, these technological measures might run counter to long-established laws that permit owners of a work to make a copy for their own personal use.

Finally, in addition to suing creators of file-sharing programs, the record industry has begun to consider suing individuals that offer large quantities of songs on their hard drives.\textsuperscript{211} The companies have been a little cautious about using this approach, however, because of the potential backlash from consumers.\textsuperscript{212} In addition, companies like AOL Time Warner had been hesitant to take this route because it could mean suing AOL Internet users, which in turn would mean forcing the ISP to track down and reveal the name of the users.\textsuperscript{213}

A recent case, however, cleared some hurdles for those pursuing individual cyber infringers of copyrights. In \textit{In re Verizon Internet Services, Inc.},\textsuperscript{214} the Recording Industry Association of America (RIAA)\textsuperscript{215} sought to enforce a subpoena served on Verizon, an ISP, to learn the identity of a Verizon user

\textsuperscript{209} See id.
\textsuperscript{210} See id. at 275.
\textsuperscript{212} See id. at B3
\textsuperscript{213} See id.
\textsuperscript{215} The RIAA represents most, but not all, owners of copyrights in sound recordings. See Richard D. Rose, \textit{Connecting the Dots}, 42 J.L. & Tech. 313 (2002).
who downloaded over 600 songs in a single day.\textsuperscript{216} The court held that “the subpoena power in 17 U.S.C. § 512(h) applies to all Internet service providers within the scope of the DMCA, not just to those service providers storing information on a system or network at the direction of the user.”\textsuperscript{217} Therefore, compliance with section 512(h) is a prerequisite for an ISP to receive section 512’s insulation from liability for contributory or vicarious copyright infringement.\textsuperscript{218} This requirement applies whether or not “infringed material is stored or controlled on the [ISP’s] system or network.”\textsuperscript{219} The court was particularly concerned about the loophole it would create if all ISPs were not included under the subpoena power.\textsuperscript{220} ISPs are very concerned that “bots,” a program that can search the Internet for infringement, will flood ISPs with countless automatically-generated subpoenas.\textsuperscript{221} Although bots did not exist when the DMCA was passed in 1998, the court deferred to Congress to solve the bot problem.\textsuperscript{222} It will be difficult for the bot to figure out whether the detected use is considered fair use or not, and with the ability of “ghosting,” or disguising an Internet protocol address as a different one, “[t]he chance for error is very high, and the risk to privacy is very high as

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\textsuperscript{216} Verizon, 240 F. Supp. 2d at 26.
\textsuperscript{217} Id. Section 512(h) provides:
\textbf{Request.} A copyright owner or a person authorized to act on the owner’s behalf may request the clerk of any United States district court to issue a subpoena to a service provider for identification of an alleged infringer in accordance with this subsection.

\ldots

Actions of service provider receiving subpoena. Upon receipt of the issued subpoena \ldots the service provider shall expeditiously disclose to the copyright owner or person authorized by the copyright owner the information required by the subpoena, notwithstanding any other provision of law and regardless of whether the service provider responds to the notification.

\textsuperscript{218} See Verizon, 240 F. Supp. 2d at 26
\textsuperscript{219} Id. at 29.
\textsuperscript{220} See id. at 35 (finding that “under Verizon’s reading of the [DMCA], a significant amount of potential copyright infringement would be shielded from the subpoena authority of the DMCA”).
\textsuperscript{221} See id. at 38.
\textsuperscript{222} See id. at 39.
\end{flushleft}
well.” 223 With the possibility of accusations that are not reviewed by a legal body, the error can lead to revelations of private information, even when the person whose information is turned over to the RIAA turns out to be innocent of the charges. 224 Thus, the ire the music industry is already facing from “waging war” against file-sharers may spread to ISPs in the United States and any other countries that follow a similar legal interpretation. 225

III. BALANCING LAW AND POLICY TO CREATE PROPER SOLUTIONS

A. Rethinking Copyright

Some argue that like Betamax, the Internet will fail to eliminate the creativity that copyright was designed to foster. Although many courts have not allowed the argument that infringing use may actually increase sales, 226 it may be worthwhile if courts instead consider whether they are basing their opinions on an outdated doctrine. The new forms of artistic and literary distribution that now exist via the Internet have exposed the true beneficiaries of copyright law and raised questions as to whether copyright is workable or even desirable in the digital age.

The typical argument that the record industry has been using is that if artists cannot get paid, there will be no good music out there, despite that the industry has demonstrated for years “that

224 See id.
225 See id.

Today, the larger the audience for the original telecast, the higher the price plaintiffs [the copyright owners] can demand from broadcasters from rerun rights. There is no survey within the knowledge of this court to show that the rerun audience is comprised of persons who have not seen the program. In any event, if ratings can reflect Betamax recording, original audiences may increase and, given market practices, this should aid plaintiffs rather than harm them.

Id.
when musicians are not fairly paid, they continue to play, write songs, perform at concerts, and cut records." In addition, relatively few artists have spoken out against digital downloading; some have even encouraged it. Rock singer Courtney Love has repeatedly expressed her frustration with the industry, saying that she will "allow millions of people to get [her] music for nothing if they want and hopefully they’ll be kind enough to leave a tip if they like it." The sentiment among artists today is reminiscent of that of the successful band The Grateful Dead, who encouraged fans to tape its live performances. The few artists that have spoken out against downloading include pop star Britney Spears, who is ironically a singer of, at best, questionable creativity.

Indeed, it might be time to ask whether we need copyright at all if "Science and useful Arts" are already, and have always been, progressing. Before the Statute of Anne, the world’s first modern copyright law, was passed in 1710, "Sophocles, Dante, da Vinci, Botticelli, Michaelangelo, Shakespeare, Newton, Cervantes, [and] Bach . . . all found reasons to get out of bed in the morning without expecting to own the works they created." Today, mp3.com contains music from thousands of artists who make it available on the site for free; scholarly articles, short stories, and poetry are ubiquitous on the web; and hundreds of grandmothers have learned to use the Internet so they can post recipes online. For all these people who have been a part of the progression of literature and the arts, strict copyright control is in the back of their minds, far behind the human urge to create.

It may also be time to consider the positive economic effects of new technology that can develop when copyright law is not enforced on strict terms. Even though virtually everyone owns a

227 Litman, supra note 71, at 168.
228 See Mathews & Orwall, supra note 207.
231 See Howe, supra note 205.
233 Statute of Anne, 1710, 8 Ann., c. 19 (Eng.).
234 See Barlow, supra note 230.
VCR, revenues from movies are higher than ever, and the film industry has become dependent on videotape sales and rentals for half of its income.\textsuperscript{236} From 1998 to 2000, the first two years that MP3s were available on the Internet, CD sales rose by twenty percent.\textsuperscript{237} In addition, concert ticket sales earned a record $2.1 billion in economically-depressed 2002, which was also the fourth straight year that concert receipts hit record totals.\textsuperscript{238} The marketing abilities of the Internet may have caused more people with less disposable income to shell out money for these acts, just like the bootlegged tapes of Grateful Dead shows did in the late 1960s.\textsuperscript{239}

Instead of viewing CDs as the main product, the new post-copyright world may use music as promotional material to sell concert tickets, t-shirts, special-edition movies and print material, as well as the occasional CD. Also, just like with waiters, even if there is no legal obligation to tip an artist, fans who download music might leave some money on the table because “it’s the right thing to do.”\textsuperscript{240} The tip might not be $16.98 per album, but without the costs of packaging and distribution, the artists that only create because they get paid might end up keeping a greater share of the money for themselves than they would have if a CD had sold in a store anyway.\textsuperscript{241} The group that would lose the most in a post-copyright world would be the record and distribution executives, who, through the RIAA, were recently found to be

\textsuperscript{236} See Barlow, \textit{supra} note 230.
\textsuperscript{237} See id.
\textsuperscript{239} See Barlow, \textit{supra} note 230 (noting that “the tapes [became] a marketing virus that would spawn enough Deadheads to fill any stadium in America”).
\textsuperscript{240} \textit{Id.} at 252.
\textsuperscript{241} One group that has spoken out more vehemently against free digital downloading than most is Metallica, a band that in a 1996 lawsuit against its record label, Elektra Entertainment, gave itself the party name “We’re Only in It for the Music.” See \textit{We’re Only in It for the Music v. Elektra Entertainment}, No. 9644007 (Cal. Super. Ct. 1996). In the battle involving Napster, Metallica changed its priorities; the band sued not only Napster, but also several universities that provided Internet access to students. See John Borland, \textit{Napster, Universities Sued by Metallica}, News.com, at http://news.com.com/2100-1023-239263.html (Apr. 13, 2000).
responsible for overcharging consumers by $500 million. Thus, it is doubtful that the music industry would get any sympathy from lawmakers that it does not buy, and it is questionable whether the music industry would survive in a post-copyright world. The death of the industry would not necessarily equate to the death of creativity, however, and a new, more efficient industry may even rise out of the ashes until the next technological bombshell comes around.

B. Striking a Balance in the Copyright Bargain

It is highly unlikely that the world will make such a paradigm shift that copyright will be eliminated in its entirety. The DMCA, EU Directives, and Napster holdings, however, are ineffective, inapplicable to the current state of technology, and virtually obsolete. In addition, the current method of litigation has turned copyright holders into kids at a carnival who seem to believe they can win at this game of whack-a-mole. Therefore, a new approach must be found, with the ultimate solution containing legal, business, and technological elements; no one element will be able to solve the problem.

New and shifting differences in legal standards can create confusion among both copyright holders and users, especially when the overwhelming majority of the public does not understand the subtle nuances that can exist in copyright legislation. This could lead to difficult and extensive legal problems now that copyright holders can identify and sue the direct infringers who are using peer-to-peer services. We have already seen ample

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243 The industry does pay, however; the RIAA contributed $124,000 to both parties in 2002. See Howe, supra note 205.
244 See Bergen, supra note 149, at 272.
245 See Julia Hanna, Peer-to-Peer: Has the Music Stopped?, Harv. Bus. Sch. Working Knowledge, at http://hbsworkingknowledge.hbs.edu/pubitem.jhtml (Feb. 11, 2003) (“‘Legal action should not be the only tool in the game.’ ‘There are always loopholes, and legal actions take a long time to work their way through the courts.’” (quoting Tsivi Gal, CIO of Warner Music Group)).
evidence that the public does not believe it is doing something morally or legally wrong when it downloads copyrighted works.  

Those versed in copyright terminology call downloading a file for personal use “fair use,” while others believe that so long as they are not selling the works they are sharing online, they are not criminals.  

Under the No Electronic Theft Act (hereinafter “NET Act”), however, a person who infringes copyrights in excess of $1,000 in retail value within a 180-day period is a criminal and may be imprisoned for up to ten years.  

Even if the government and the entertainment industries begin to enforce the NET Act against the public, the amount of people downloading enough material to meet $1,000 will be very small.  

In addition, the violators will be difficult to identify without strong involvement from ISPs, and the entertainment companies might enrage the public to the point that the public boycotts products from companies that enforce the NET Act.  

In the history of copyright, several goals for copyright have come up in legislatures and courts.  These goals include balancing copyright against the advancement of technology and protection of the public’s rights to access the works, protect their privacy, and express themselves freely.  

In the digital age, however, U.S. and EU legislatures and courts have ignored these historically important and fundamental goals.  

In regard to technological advancement, what lawmakers should do is rewrite the rules so that new parties have a chance to invest in and develop the new media and technologies.  

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247 See Landen, supra note 200, at 714.
248 Id.
250 See Fessenden, supra note 197.
251 See id.
254 See supra Part II.C (describing how Napster I and Verizon have given less importance to fair use and privacy in favor of controlling infringement).
255 See Litman, supra note 71, at 173.

History tells us that [entrepreneurs] do invest without paying attention to conventional wisdom...  Apparently, many entrepreneurs conclude that if something is valuable, a way will be found to charge for it, so they concentrate
While the DMCA prevents any circumvention of copyright protection, it would be advantageous to the progress of technology to allow reverse engineers, analysts, critics, and even derivative users to make fair use of many works available online. Value has been created in the past even when the underlying product is offered for free. For example, broadcasters realized that they could earn money through advertising, while AOL achieved market dominance by giving away software. Also, “industry observers agree that at least half of all of the copies of software out there are unauthorized, yet the software market is booming . . .” These facts suggest that the DMCA and the Copyright Directive may stifle scientific and technological creativity that society has historically tried to nurture.

When writing the new rules, one must consider not only the technology industries, but the group that has been left out of the bargaining process the most—the public. Congress described copyright’s purpose as “[t]o promote the Progress of Science and useful Arts,” and it is therefore logical to conclude that “the public is entitled to expect access to the works that copyright inspires . . . For much of this country’s history, public dissemination was, except in very limited circumstances, a condition of copyright protection.” This intent can be seen everywhere from the existence and protection of fair use in the copyright law to the expenditure of millions of dollars every year in the maintenance and operation of museums across the country.

Indeed, when the Supreme Court handed down the Sony decision, it ensured that its ruling would strongly emphasize the public interest. Past and present lawsuits involving Internet

on getting market share first, and worry about profits—and the rules for making them—later.

Id.  
256 See Scully, supra note 151, at 322.  
257 See Litman, supra note 71, at 174.  
258 Id.  
259 U.S. CONST. art. I, § 8, cl. 8.  
260 Litman, supra note 71, at 175.  
261 See id. at 176.  
downloading have failed to give the public interest such importance, and current negotiations within the industry have left out the public entirely.\textsuperscript{263} As the Supreme Court has emphasized, however, “this task involves a difficult balance between the interests of authors and inventors in the control and exploitation of their writings and discoveries on the one hand, and society’s competing interest in the free flow of ideas, information, and commerce on the other hand.”\textsuperscript{264} When it comes to forming laws to fit the digital age, courts and legislatures must keep this balance in the forefront before making hasty changes to the copyright laws that could eliminate the public’s fair use rights.

In 1790, Congress limited copyright owners’ rights to the printing, publishing, and sale of copyrighted works, with the owner having no right to restrict public performances, adaptations,

The monopoly privileges that Congress may authorize are neither unlimited nor primarily designed to provide a special benefit. Rather, the limited grant is a means by which an important public purpose may be achieved. It is intended to motivate the creative activity of authors and inventors by the provision of a special reward, and to allow the public access to the products of their genius after the limited period of exclusive control has expired.

“The copyright law... makes reward to the owner a secondary consideration.” . “The sole interest of the United States and the primary object in conferring the monopoly lie in the general benefits derived by the public from the labors of authors.”

\textit{Id.} (quoting United States v. Paramount Pictures, Inc., 334 U.S. 131, 158 (1948) (quoting Fox Film Corp. v. Doyal, 286 U.S. 123, 127 (1932))).

\textsuperscript{263} For example, the RIAA and the Business Software Alliance agreed that if the technology leaders oppose Congress’s efforts to broaden consumer rights, the RIAA will oppose any legislation that requires developers of technological devices to build in controls that block users’ ability to copy files. \textit{See} Mike Darrah, \textit{Entertainment & Technology Leaders Agree on Compromise?}, Winamp.com, at http://www.winamp.com/news.jhtml?articleid=9800http://www.winamp.com/news.jhtml (Jan. 15, 2003).

\textsuperscript{264} \textit{Sony}, 464 U.S. at 429. The Supreme Court has actually suggested that the public comes first:

Creative work is to be encouraged and rewarded, but private motivation must ultimately serve the cause of promoting broad public availability of literature, music, and the other arts. The immediate effect of our copyright law is to secure a fair return for an “author’s” creative labor. But the ultimate aim is, by this incentive, to stimulate artistic creativity for the general public good. “The sole interest of the United States and the primary object in conferring the monopoly,” this Court has said, “lie in the general benefits derived by the public from the labors of authors.”

\textit{Id.} at 431–32 (quoting Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 156 (1975)).
translations, or displays of the work.\textsuperscript{265} Over time, however, Congress added more rights to the bundle and “did not incorporate specific exemptions for the general population in most of these enactments because nobody showed up to ask for them.”\textsuperscript{266} Despite the broadening of rights, it was not until the enactment of the DMCA that Congress gave copyright owners control over the public’s ability to “[l]ook[,] at, listen[,] to, learn[,] from or us[e] copyrighted works.”\textsuperscript{267} The difficulty lies in distinguishing copies that are a form of piracy from incidental copies made while listening to, viewing, or improving works on digital media.\textsuperscript{268} In both cases, copies are made, but both creators and the public lose out when the DMCA and Copyright Directive ban incidental copies in an effort to stop piracy.\textsuperscript{269}

In addition to considering the historically important copyright goals, one should also examine the public’s perspectives, beliefs, and expectations about how copyright works when copyright law is revised to fit the new digital age. For example, instead of focusing on the number of “copies” made, the law could make a distinction between “commercial” and “noncommercial” uses. While this is a very different way of looking at copyright overall, the commercial/noncommercial distinction already appears in statutes and case law regarding fair use and vicarious liability.\textsuperscript{270} If a copyright owner can argue that another person’s use of the work would violate the owner’s right to exploit the work to the extent that a lawsuit could be brought against the user, then such a use could be considered a violation of copyright law, while a person’s sharing of a file over the Internet with a friend would not be.\textsuperscript{271} While this test is quite blurry, delineating boundaries between fair and unfair use has never been easy or clear. “The task is not to be simplified with bright-line rules, for [17 U.S.C. § 107],

\textsuperscript{265} See Litman, supra note 71, at 175–76.
\textsuperscript{266} Id. at 176.
\textsuperscript{267} Id. (emphasis omitted).
\textsuperscript{268} See id. at 178.
\textsuperscript{269} See id.
\textsuperscript{270} See supra Part II.B., C.
like the doctrine it recognizes, calls for case-by-case analysis.”272 If we allow judges and jurors to work with the test, and programmers to design new products that would fit the test, however, the lines may become much brighter, more predictable, and more in line with the true goals of copyright law. Furthermore, returning the focus to the value of noninfringing uses would increase the dissemination of works to the public and promote technology for advancing the progress of science and the arts.

In addition, a new legal solution might promote more appropriate technological solutions that would not run afoul of constitutional protections.273 For example, a company called Altnet has developed a system in which users pay a small fee to reliably download music of better quality than that which exists on most peer-to-peer systems.274 Such a system would combine the convenience of peer-to-peer services and the quality of authentic CDs with a middle-of-the-road price—a combination that could solve the problem of getting the public to pay authors for copyrighted material while ensuring that the public right to access the material is not destroyed.275 Until technology can distinguish between actionable infringement and fair use online, and between copyrighted material and works in the public domain on the Internet, lawmakers and courts should err on the side of protecting the public if they want to uphold the fundamental goals of copyright.276

C. Harmonizing the New Laws

Perhaps one of the most important legal lessons that has come out of all this legislation and litigation is that we are not very close to global harmonization of copyright standards. Once the parties

274 See Hanna, supra note 244.
275 See id.
276 See supra note 262 and accompanying text.
involved in reforming copyright law finally decide what the law should be, however, it is of utmost importance to ensure that the law is enforced across the board. This emphasis on harmonization is nothing new; one of the primary goals of the 1886 Berne Convention was to harmonize copyright law.\textsuperscript{277} TRIPS and the WIPO treaties also aimed to harmonize copyright law.\textsuperscript{278} This historical emphasis on the harmonization of copyright law should be a fundamental basis for implementing new laws on a global scale.

If laws on digital infringement for current and future peer-to-peer services are to be truly harmonized, they must set forth a workable and more predictable standard for analyzing the claims that are brought into the courts, both in the United States and in the European Union. If participating governments want laws and verdicts harmonized, legislatures and courts will have to square \textit{Sony} and \textit{RealNetworks} with \textit{Napster II} to create a harmonious test for vicarious and contributory infringement. In addition, owners of copyrights in sound recordings would be wise to create some form of technological security measure to affix to the recordings. Such measures would assure the owners a better chance at succeeding in a suit under section 1201 of the DMCA or article 6 of the Copyright Directive.

Practical reasons for harmonizing copyright law also exist. For example, if the Kazaa and Sony decisions are not resolved with \textit{Napster II}, creators and the public will likely take the safest paths in publication and use to protect themselves from infringement and liability respectively. A company such as AOL may uniformly restrict its users’ access, even though it is insulated from liability in the United States, based on the German court’s ruling that AOL was liable for allowing people to share copyrighted material on its service.\textsuperscript{279} It would be unwise as a matter of policy to let the edge

\textsuperscript{277} See Berne Convention, \textit{supra} note 48. One of Berne’s goals was to “protect, in as effective and uniform manner as possible, the rights of authors in their literary and artistic works.” \textit{Id.} (emphasis added).

\textsuperscript{278} See TRIPS Agreement, \textit{supra} note 54; WCT, \textit{supra} note 6, pmbl.; WPPT, \textit{supra} note 6, pmbl.

\textsuperscript{279} See Jacobus, \textit{supra} note 113.
of this chilling effect replace the boundaries that countries have developed through the legislatures and the courts.

Alternatively, true global harmonization, to the extent it can be accomplished, can help to crack down on certain parties involved in infringement, particularly those with whom copyright holders are the most concerned. For example, international harmonization may allow a country like the United States to fine a programmer acting outside the United States, even though it is impractical to arrest every user of a program once the program is out on the Internet.\footnote{See King, supra note 5.} Also, ISPs who are concerned about losing customers in the wake of the Verizon decision will rest easier if most ISPs around the world follow the same rules.\footnote{See In re Verizon Internet Servs., Inc., 240 F. Supp. 2d 24 (D.D.C. 2003); Michelle Delio, \textit{DMCA: Dow What It Wants to Do}, Wired News, at http://www.wired.com/news/politics/0,1283,57011,00.html (Dec. 31, 2002) (describing how a user of an American ISP, when his service was severed after the ISP received a complaint that the user was violating the DMCA by posting a parody site, has begun to consider contracting his new service from European ISPs that have not yet implemented the Copyright Directive).} Those copyright holders who wish to collect damages would have a much easier time if more countries enforced a uniform legal standard, and more courts would be able to obtain jurisdiction over more parties.\footnote{See King, supra note 5.} Finally, harmonized laws will be easier for the public to learn, understand, and use.

If one state breaks an international agreement, however, that divergence threatens the purposes behind harmonization of the copyright laws, as well as the copyright laws’ legitimacy. For example, after the Amsterdam \textit{Kazaa} ruling, a programmer who designs a new kind of file-sharing software can do his work from the Netherlands, or from any other country that is not part of an international copyright agreement. Even if that programmer were subject to another court’s jurisdiction, the remedies would be difficult to enforce in the programmer’s home country. Therefore, because there is no evidence that harmonization treaties will bind every nation to a single copyright law and assure that the law will be enforced, the question arises as to whether the measures that the United States and European Union have taken are effective and
sufficient to protect those who hold the rights to digital sound recordings. Thus far, the rampant piracy on the Internet suggests that the current measures are ineffective and insufficient.

Revisions of current digital copyright law cannot come too soon. The United States faces a threat to the measures already imposed under the DMCA; courts have been hearing arguments that the DMCA violates due process, fair use, and First Amendment protections; and new bills have been introduced in the House of Representatives that try to address the over-inclusiveness of the DMCA. If the DMCA is rewritten, the European Union, in the interest of harmonization, would probably have to follow suit by revising the Copyright Directive. Otherwise, U.S. citizens could be sued in another country for a use that is considered fair in the United States, thus potentially dismantling WIPO’s ideals in encouraging member states to agree to its treaties in the first place.

CONCLUSION

Napster II set a precedent not only for the United States, but for the European Union as well, because the Copyright Directive is very similar to the DMCA. Napster II thus provided a valuable interpretation of both the DMCA and the Copyright Directive, if the latter is even enacted in the member states. Legal solutions concerning the Internet, however, become obsolete before the courts’ opinions even reach the clerk’s office. All of the laws, treaties, and agreements, while perhaps effective in theory, are based on national borders and international treaties and can thus never cover the proliferation of violations that exist in the global and transnational reality of the Internet. There will always be at least one country that will neither accept nor enforce whatever

283 For example, Rep. Rick Boucher (D-VA) and Rep. John Doolittle (R-CA) reintroduced the Digital Media Consumers’ Rights Act. See Digital Media Consumers’ Rights Act, H.R. 107, 108th Cong. (2003). The bill eliminates liability for creating or using anti-circumvention technologies if the subsequent use of the obtained copyrighted work is either not infringement or has substantial noninfringing uses. See id. Liability would also be eliminated when anti-circumvention involves scientific research. See id.

284 See Bergen, supra note 149, at 270.

285 See Scully, supra note 151, at 320.
legal solutions most of the world deems proper.\textsuperscript{286} Therefore, communities of file-sharing will probably always exist, although there are disagreements as to how large and numerous they will be.

Despite this fact, time may prove that downloading may not be such a rampant problem at all; the effects of peer-to-peer services should be fully evaluated before technological development and the public’s rights are legislated into oblivion. While “effect on the market”\textsuperscript{287} has been an oft-stated reason for shutting down services that allow users to download copyrighted material from the Internet, recent research suggests that the cited effects might be weapons in defendants’ hands. For example, a Forrester Research study found that “piracy is not responsible for the 15 percent drop in music sales in the past two years” and “labels can restore industry growth by making it easier for people to find, copy, and pay for music on their own terms. By 2007, digital music revenues will reach more than $2 billion.”\textsuperscript{288} The \textit{New York Times} reported that “people who use file-sharing networks to obtain music at no charge over the Internet are more likely to have increased their spending on music than are average online music fans.”\textsuperscript{289} These studies show strong financial and public benefits are to be gained from the very thing that the DMCA and Copyright Directive are trying to stamp out.

Perhaps the most likely scenario is that while the courts, legislatures, and copyright holders are trying to find a solution, the market will work it out. When music industry profits declined twenty years ago, record labels launched a “home taping is killing music” campaign.\textsuperscript{290} In 1942, after the introduction of phonograph records, the American Federation of Musicians claimed that musicians who performed for the records were “playing for their own funerals.”\textsuperscript{291} Somehow, however, the music industry evolved

\textsuperscript{286} See id.
\textsuperscript{290} See Wolk, \textit{supra} note 90.
\textsuperscript{291} Id.
instead of falling apart; some executives today even believe that file-sharing is good for business, as it gets their product “advertised.” The best and most likely outcome of the whole Internet copyright debacle is that the entertainment industry will adapt to efficiently give the public what it wants and is willing to pay for—fresher material, sharper quality, better packaging, and a desire to own a physical collection of creative works.

292 Id.