I. INTRODUCTION

Piracy of music on the Internet is an evolving area of the law. Improvements in technology are making it increasingly easy to download music, such as MP3 files, with a simple click of the mouse. It is estimated that, in the past year, more than 750 million tracks were downloaded illegally, and that every year the music industry in America loses $300 million due to piracy. Furthermore, the number of illegal downloads is expected to increase in the next twelve months. As the market for music over the Internet continues to grow, the downloading of music is likely to displace current revenue producing devices, such as CDs.
Before the Digital Millennium Copyright Act of 1998 (DMCA), there were gaping holes in the legislation that gave recording artists a right to collect royalties for music distributed over the Internet. Its implementation has helped the American Society of Composers, Authors, and Publishers (ASCAP) and Broadcast Music, Inc. (BMI) to develop experimental licensing agreements with web sites, but a consistent standard has not been set. It is therefore imperative for the music industry to develop consistent, reliable methods by which to compensate artists for the distribution of music through the new medium.

One reason for the lack of a consistent standard is that there are several Internet services involved in the downloading of music. For example, a user wishing to download a particular song must access a web page that contains a copy of it. The owner of the web page, having acquired the sound recording posted on its site from a third party, must subscribe to an Internet service provider (ISP) in order to distribute the music over the Internet. Furthermore, before the sound recording reaches the user, it is likely to pass through not just one, but a series of ISP networks.

The law has been unclear as to which of these Internet entities may incur liability for the infringement of copyrighted music, or under what circumstances musical works on the Internet require licensing. The DMCA, a compromise between copyright owners and online industry representatives limits the liability of ISPs for the first time. Intended as a model for other countries to follow, the DMCA provides important technological protection that the music industry should implement in


its efforts to capitalize on the distribution of music over the Internet.\textsuperscript{5}

II. \textbf{Performing Artists Need to Be Compensated For Music Distributed Over the Internet.}

To understand the need for legislation governing distribution of music over the Internet, consider the treatment of the song "Bridge Over Troubled Water" under federal copyright law.\textsuperscript{6} Paul Simon wrote both the melody and the lyrics of this song. Therefore he is entitled to exclusive ownership of the underlying copyright.\textsuperscript{7} However, since both he and Art Garfunkel performed the song, they both have rights in the "sound recording."\textsuperscript{8} If "Bridge Over Troubled Water" were to be played on the radio, unless a specific arrangement had been agreed upon, only Simon would receive royalties, since he owns the underlying copyright.\textsuperscript{9} However, both Simon and Garfunkel would receive royalties from a sale of a CD of the music because both own the sound recording rights.

The reasoning behind this is that when a radio station broadcasts a song, it encourages listeners to purchase copies of that song.\textsuperscript{10} A radio station is not required to purchase a performance license for a sound recording because the station is, in effect, providing free advertising for the performing artists.\textsuperscript{11} Performing artists, such as Garfunkel, benefit


\textsuperscript{7} See id.

\textsuperscript{8} See id.

\textsuperscript{9} See id.


\textsuperscript{11} See Trotter Hardy, \textit{The Internet and the Law: Copyright and "New-Use"
from airplay of the song through additional album sales, in the form of CDs, tapes, and records. Traditionally, owners of sound recording rights have had to rely on revenue from the sale of albums for compensation. However, delivery of music over the Internet has begun to displace these sales, leaving owners of sound recording rights with the need to be compensated for music distributed through the new medium.

Like a radio broadcast, the Internet provides advertisement for performing artists, but unlike radio, it also delivers a copy of the music to the listener. Since it is less likely that a person possessing a downloaded copy of the music will also purchase an album, a performing artist, such as Garfunkel, is likely to remain uncompensated for a work delivered over the Internet. In order to promote the continued creativity of performing artists, these artists should be compensated for works distributed through the Internet. ASCAP and BMI have consistently been strong advocates of this position.12

III. LEGISLATION GRANTS MUSICIANS A PERFORMANCE RIGHT TO AID IN COMPENSATION.

Rights in sound recordings placed on the Internet were first granted to musicians in the Digital Performance Right in Sound Recordings Act of 1995 (DPRSRA).13 The DPRSRA was the first act to specifically address the implications of digital transmissions of music.14 It increased protection for owners of sound recording copyrights in order to compensate for a shift in the distribution of

14 See supra note 2 at 1365.
music from physical recordings to digital recordings. Specifically, the DPRSRA extended the rights of recording artists to include "digital phonorecord deliveries" over the Internet.

Unfortunately, the DPRSRA failed to recognize certain transmissions such as digital audio broadcasts and independent bulletin board services that do not charge a fee for access. It also imposed limitations on the circumstances under which a copyright owner could enforce his rights. For example, the DPRSRA required a "specifically identifiable reproduction" of the music in order for rights to be invoked. Although finding web pages posting illegal copies of music for download is relatively easy, tracing specific transfers and reproductions of music from a web page to an individual user is difficult, if not impossible. Thus, many transmissions of music were exempt from liability under the DPRSRA.

The DMCA modifies the requirements in the DPRSRA and helps to fill in the gaps that it left. Under the DMCA, artists now own a "performance right" in certain sound recordings transmitted over the Internet. Furthermore, ASCAP and BMI have, to date, successfully argued that every transmission of a sound recording, other than private e-mailings, constitutes a public performance protected under the DMCA and the DPRSRA.

Music can be transmitted over the Internet either through webcasting or in individual sound files. Webcasting (also known as audio streaming or broadcasting), is the continuous broadcasting of music over the Internet by an ISP. Webcasting is analogous to radio

---

15 See id.
16 See supra note 6 at 226.
20 See id.
broadcasting in that music is broadcast over the Internet for immediate listening. However, unlike radio, it is possible to make digital recordings of these broadcasts that are of the same quality as an original.

Individual computer files are compressed recordings of music that take up only a small amount of memory on a computer. Popular formats for these recordings are MP3, a2b, RealAudio, and Liquid Audio files. These files contain sound recordings that can be listened to repeatedly, much like CDs or tapes.

Traditionally, only performances made available to a public audience are subject to copyright law. ASCAP has argued that the public audience for a sound recording placed on the Internet does not need to be located in one place, or even one time. Since music on the Internet can be downloaded at the convenience of the listener through interactive retrieval services, music need not be broadcast to several listeners at a given time in order to constitute a performance. It is enough that a substantial number of listeners will, over time, access the recording.

IV. ISPs ARE LARGELY INVOLVED IN THE TRANSMISSION OF SOUND RECORDINGS.

A technical definition of the Internet is that it is the set of all interconnected ISP networks - the collection of several thousand local, regional, and global computer networks interconnected. The interrelationship of these networks has made it difficult for the music industry to patrol the Internet for infringement of sound recordings. For the first time, the DMCA defines the role of ISPs.

---

22 See id. at 408.
23 See 17 U.S.C. § 106(4) defining public performance: to perform or display the "copyrighted work publicly" means: (a) to perform or display it at a place open to the public or where a substantial number of persons are gathered, (b) to transmit or otherwise communicate a performance or display of the work to a place specified by clause (a) above or to the public, by means of any device or process.
24 See id.
Under the DMCA, an ISP is defined as a service that provides access to the Internet for its subscribers. ISPs may also provide e-mail, chat room, and web page hosting services. An ISP may allow direct access to a sound recording residing on its own computers, direct access to a sound recording located on a web site on the ISP's network, or provide links that point to a sound recording residing on the network of another ISP. Copies of a sound recording may reside in the cached memory of any ISP network through which the recording travels before delivery to a user.

In its controversial "White Paper" in 1995, the Presidential National Intellectual Property Information Task Force set forth a number of reasons for holding ISPs, as opposed to web sites, liable for the infringement of copyrights. Namely, ISPs may be in the best position to know of and stop the infringing activities of their clients. ISPs have a business relationship with the infringing parties, web site owners, through which they have the right and ability to control the infringing actions, and at the same time stand to receive a direct financial interest from the relationship. The willful ignorance of copyright infringement by an ISP contributes to the piracy of music by providing the means of distribution.

ISPs make money from the distribution of music over the Internet. Web sites that store downloadable music attract more online users. More online users means that more and more people are paying ISPs for access to the Internet. ISPs can also collect more money from

27 See id.
advertisements placed on their sites as premiums increase with popularity. Therefore ISPs make larger profits due to a greater demand for their services. These profits should not come at the expense of recording artists.

One of the biggest problems in enforcing sound recording copyrights on the Internet is locating the infringing parties. There are millions of web sites. Many are posted under aliases or web names. Tracing information transfers from these sites to end-users is difficult, if not impossible. Holding ISPs responsible provides a centralized target for reaching the infringing parties and may be the only practical way to locate infringing parties.

V. ISP LIABILITY IS LIMITED UNDER THE DMCA.

In consideration of online service providers, however, the DMCA does not open up ISPs to unlimited liability for the infringement of sound recordings and does not require them to police their sites. The DMCA provides for strict liability for infringement of copyrights, but provides four categories that limit the circumstances under which infringement occurs. These categories, specified as "safe harbors," are: 1) "Conduit Functions," 2) "System Caching," 3) "User Storage," and 4) "Information Location Tools."

The "Conduit Function" provision limits an ISPs liability for routing sound recordings from one point to another. This safe harbor resolves the discrepancy in case law between Religious Technology Center v. Netcom and Playboy v. Frena. The court in Netcom dismissed the possibility of direct or vicarious liability for an ISP that provided Internet access for a web site that illegally distributed music.

---

31 See Trotter Hardy, supra note 11, at 672.
over the Internet. It held that an ISP is guilty of only the lesser transgression of contributory infringement. This contradicted the court in *Frena*, which found direct infringement for a bulletin board service that, without knowledge of the infringement, provided Internet access for a subscriber who illegally posted copyrighted photographs from Playboy onto the Internet. Under the DMCA, a transmission that occurs automatically, without any selection of material by the ISP, will not subject an ISP to liability. This codifies the decision in *Netcom* and makes it harder to hold an ISP liable for distributing illegal sound recordings over the Internet.\(^{35}\)

"System Caching" allows an ISP to make a temporary copy of a sound recording in order to provide quicker access for its users.\(^{36}\) Courts have not yet addressed the copyright implications of permitting an ISP to temporarily fix a copy of a sound recording on its computer system. ISP's argue that fixation is necessary in order to speed up usage. However, the court in *Mai Systems Corp. v. Peak Computer* held that a work fixed in a tangible means of expression is one that is sufficiently permanent or stable to permit it to be perceived, reproduced or otherwise communicated for a period of more than transitory duration.\(^{37}\) Using this definition, cached sound recordings might have been prohibited under the Copyright Act of 1976.\(^{38}\) However, under the DMCA, an ISP must limit access to the sound recording to only those people who satisfy the conditions imposed by the individual who posted it.\(^{39}\) If the conditions are broad, then this may allow persons other than the intended recipient to access the sound recording.

"User Storage" provides the least protection for sound recordings, and may be the most far reaching in terms of the ISP functions to


\(^{37}\) See *Mai Systems Corp. v. Peak Computer Inc.*, 991 F.2d 511, 518 (9th Cir. 1993).


\(^{39}\) See id. at § 512 (b)(2)(D).
which it applies.\textsuperscript{40} It insulates an ISP from liability for storing a copy of an infringing sound recording on its system at the direction of a third party. This reinforces the contributory liability standard suggested in\textit{Netcom}. Under this safe harbor an ISP could store an illegal copy of a sound recording on its network and allow the average user to access it. The only requirements for limited liability are that the ISP must not have actual knowledge or reason to know that the sound recording is infringing, and may not receive a direct financial benefit from having the infringing material reside on its system.

Finally, the "Information Location Tools" provision limits an ISPs liability for providing hyperlinks, online directories, and search engines that link a user to unauthorized copies of sound recordings.\textsuperscript{41} The extent of protection for sound recordings under this section is unclear. For example, Lycos, a popular web site operator and search engine, claims that it is immune from copyright liability under the DMCA.\textsuperscript{42} Lycos argues that it is immune because it does not physically store the sound recordings on its servers, but merely provides a link to the location of such files to its users. Napster, another search engine, makes similar assertions.\textsuperscript{43} Although the RIAA has filed suit against Napster, it is still undecided whether search engines, like those developed by Lycos or Napster, qualify for limited liability under this provision of the DMCA.

VI. THE BLACK BOX PROVISION MAY PROVIDE A SOLUTION FOR THE PROTECTION OF SOUND RECORDINGS.

In general, an ISP needs to fulfill two requirements in order to qualify for limited liability under a safe harbor provision. First, an ISP must adopt, reasonably implement and inform its subscribers of its termination policy for repeat infringers.\textsuperscript{44} Second, the ISP must accommodate and not interfere in any manor with "standard technical

\textsuperscript{40} See id. at § 512(c).
\textsuperscript{41} See id. at § 512(d).
\textsuperscript{44} See 17 U.S.C. § 512(i)(1)(A).
measures" designed to protect or identify copyrighted works. The second requirement, also known as a "black box" provision, may provide important protection for sound recordings by prohibiting the circumvention of technological methods, such as encryption or watermarking, that control access to a copyrighted work.

Encryption is like an electronic lock. It can prevent persons that do not have the correct key, or password, from listening to a sound recording. The downside to the encryption of sound recordings is that once the correct password has been found it can be passed on along with the recording, rendering the encryption useless.

Watermarks, on the other hand, are inaudible additions to music that inform devices that play music of the authenticity of a recording. Watermarks can be used by search engines to determine which sound recordings are original and which are illegal copies. They can also provide a trail by which owners of sound recordings can trace the distribution of unauthorized copies throughout the Internet. Furthermore, watermarks cannot be removed from a sound recording without a conspicuous degradation in the quality of the recording.

Watermarking and other technological advances are available and can provide new, secure methods for the downloading of music. This technology can give the music industry increased control over copies of music. For example, listeners may be permitted to make a copy of downloaded music only for their own use, or perhaps to give to a friend. Technology can also make a recording available only for a limited time period. It is conceivable that an industry standard could be set such that portable players would only play recordings that contain legitimate watermarks. AT&T, the originators of a2b, and

45 See id. at § 512(i)(1)(B).
47 See id. at 569.
48 See supra note 21 at 871.
49 See id.
50 See RIAA, FAQ About DMAT and SDMI (visited March 29, 2000) <www.riaa.com/tech/tech_pr.htm>. The Secure Digital Music Initiative (SDMI), a forum of more than 160 companies and organizations representing a broad spectrum of information technology and consumer electronics businesses, is attempting to
Liquid Audio have experimented with secure digital downloading techniques that incorporate technology that would make this possible.51

VII. EXPERIMENTAL LICENSES DO NOT INCORPORATE TECHNICAL MEASURES.

In accordance with the DMCA, ASCAP and BMI are developing experimental blanket licenses for web site owners.52 The licensing plans charge rates that depend on the extent to which web site contains sound recordings. For instance, under BMI, a site that contains only music may wish to be charged a flat fee of 1.75% of gross revenues for the entire site. However, a web site that provides music and books may choose to separate these areas of the web site for licensing purposes. The license would then cost 2.75% of the revenues earned solely by the music area. Since black box measures have not yet been fully incorporated into the protection of music, these licenses provide the advantage that ASCAP and BMI do not need to keep track of individual transmissions of sound recordings over the Internet. However, they still have the difficult if not impossible task of locating and shutting down web sites that have not purchased licenses.

VIII. CONCLUSION

The DMCA severely limits the liability of ISPs for their participation in the transmission of sound recordings over the Internet. This may have far-reaching implications since the DMCA is intended to provide a model for other countries to follow.53 The best protection provided for music under the DMCA may come from the black box provision that prevents an ISP from interfering with technical measures implement an industry wide watermarking standard for devices that play music. New music to be distributed will contain watermarks. Compliant devices will be able to play these files, in addition to the existing MP3 files.

51 See id.
53 See Krochmal, supra note 5.
designed to protect or identify copyrighted works.\textsuperscript{54} Implementation of technical measures could make it substantially easier to identify and track illegal copies of music.
