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**COPYRIGHT AND INTERNET MUSIC TRANSMISSIONS:
EXISTING LAW, MAJOR CONTROVERSIES, POSSIBLE SOLUTIONS***

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Accessing music over the Internet has become a significant activity for many Internet users. Internet music transmissions are likely to reshape the ways in which music is both created and delivered to consumers, although there is little agreement on which new model or models will emerge as predominant in the music industry. Possibilities include providing music in encrypted or “watermarked” formats in order to limit or detect unauthorized transmissions, making music available on a “pay per listen” or subscription basis,¹ using revenue from advertising (displayed either on a music Web site or embedded in a music file and displayed or heard when the file is played back) to support music dissemination, and giving away digital music in order to attract customers for related services and merchandise.²

Whichever new models emerge for producing and distributing music, copyright law is likely to remain important in regulating those activities. For example, making money by disseminating music in encrypted format will require being able to stop others from circulating unencrypted copies that they have produced themselves.³ Similarly, effectively charging customers a subscription or per-listen fee for listening to music will require stopping unauthorized services from providing such music to

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¹ For example, three major U.S. record labels have announced plans to sell Internet subscription access to their music. Matt Richtel, “Record Companies Explore Online Music Subscriptions”, *The New York Times*, Aug. 2, 2000, p. C5.

² For a discussion of these and other technological and business models, see THE DIGITAL DILEMMA: INTELLECTUAL PROPERTY IN THE INFORMATION AGE 76-95 (National Academy Press 2000); William Fisher, *Digital Music: Problems and Possibilities*, available at <http://www.law.harvard.edu/AcademicAffairs/coursepages/tfisher/Music.html> (visited July 31, 2000).

³ Copyright and legal protections for technological measures may work in tandem. For example, if a copyright owner makes a piece of recorded music available in an encrypted digital format, user *A* may circumvent the encryption in order to make an unencrypted copy, which could violate federal anticircumvention law, see 17 U.S.C. § 1201. Once user *A* posts the unencrypted file on her Web site, user *B* might download a copy of the file and post it to *B*'s Web site. User *B* would not have circumvented any encryption measure, but could be liable for copyright infringement.

listeners at a lower (or no) cost. Virtually all of the possible new business models are likely to rely to some extent on copyright protection, perhaps in combination with technological measures, to allow the owners of rights in a piece of music to generate revenue from disseminating that music.

Facilitating the development of legitimate dissemination of music over the Internet should be a goal for copyright law in the digital era because such dissemination promises significantly to increase public access to copyrighted music. For example, making music available for purchase and delivery online means that consumers are not limited to choosing among the items that a physical record store can stock or a mail-order catalog can list. Similarly, “Webcasting” can provide listeners with a far greater variety of music than can traditional broadcasters. Since the Web does not have the spectrum scarcity problems of broadcast radio, many more transmitters can play music for the public, giving listeners a wider selection. That selection could include much music that would not generally be accessible through radio broadcasting, since over-the-air broadcasters typically need to appeal to a wide enough audience to generate significant advertising revenues, while Webcasters may be able to target much smaller niche audiences.⁴ In addition, Internet dissemination may make possible the creation of entirely new markets for access to music. In the past, if you found a song running through your head and wanted to hear the song because you couldn’t exactly remember the lyrics, you could either buy a record of the song (usually available only as part of an album, requiring you to pay for several other recordings that you might not want) or wait until a radio station played the song (if it ever did). With the Internet, however, you might pay a small amount to hear the song once, on demand. Copyright law, which has as a fundamental goal the accessibility of creative works, should help rather than hinder dissemination of music over the Internet because of its potential for increasing the availability of music to users.⁵

Part I explains current copyright law governing music transmissions over the Internet. Congress has amended the law several times in the last decade to address challenges that new digital and digital-networked technologies pose to traditional intellectual property rights in music. As a result, the current framework of copyright law that governs Internet music dissemination is a very complex patchwork of overlapping and interacting provisions that have been shaped by a century of legislation

⁴ “In general ... the [Web] user has a huge amount of genres and stations to choose from that far exceed what is currently available on over-the-air analog radio.” Statement of Hilary Rosen, President, RIAA, Inc., House Judiciary Courts and Intellectual Property Subcommittee, June 15, 2000, <http://www.house.gov/judiciary/rose0615.htm> (visited July 10, 2000).

⁵ *See, e.g.*, Statement of Sen. Orrin G. Hatch before the Senate Judiciary Committee, July 11, 2000, *available at* http://www.senate.gov/~judiciary/7112000_ogh.htm (visited July 12, 2000) (“We must protect the rights of the creator. But we cannot, in the name of copyright, unduly burden consumers and the promising technology the Internet presents to all of us.”). For discussion of other advantages of Internet music dissemination, *see* Fisher, *supra* note 2.

and business practices, much of which developed in an era of traditional, non-networked exploitation of music.

Part II examines how applying copyright law to downloading and streaming audio, the two major types of Internet music transmissions, makes it very difficult for Internet transmitters to make such transmissions legally, even if their activities come within a copyright exemption or compulsory license. Current copyright law poses two main types of problems for those who wish to legitimately disseminate music over the Internet. First, there are transactions cost problems. Because any single piece of recorded music usually embodies two separate copyrighted works, and because transmitting that music over the Internet may involve two separate rights in each of those works, and because each right in each work may be owned by a different entity, the transactions costs involved in obtaining permission to transmit any volume of recorded music over the Internet can be significant. For example, securing reproduction licenses from two separate copyright owners to cover the temporary RAM storage of every song that is transmitted in streaming audio presents an enormous hurdle for those who transmit music, since so many different works can be transmitted in the course of just a few hours. In addition, if every Internet music transmission potentially requires permission from four separate rightsholders, the potential for “hold out” problems is significant. Second, although Congress has crafted a number of copyright exemptions and compulsory licenses in order to encourage activities that it concluded should not be under the exclusive control of copyright owners, Internet transmissions – by simultaneously implicating more than one right of the copyright owners – may make it impossible to engage in such Congressionally sanctioned activities without obtaining additional permission from a copyright owner, thus reducing the usefulness of, or entirely nullifying, the licenses and exemptions Congress granted.

Finally, Part III suggests and evaluates possible solutions to these problems that would continue to protect copyright owners’ ability to exploit their works while making legitimate Internet music transmissions more feasible for users of those works.

One final note. This paper does not address the questions (currently much debated) of whether current copyright law gives music copyright owners too much control over uses of their works or whether digital network technologies (such as, for example, peer-to-peer sharing software such as Napster, Gnutella, and Freenet) will, as a practical matter, effectively undermine whatever degree of legal control the law gives to copyright owners. Instead, the paper takes current copyright law as a given, assesses how difficult that law makes legitimate Internet exploitation of music under current conditions, and considers how we might adjust current law to facilitate such legitimate exploitation. This focus on working within and making adjustments to the existing system (rather than trying to

overhaul it entirely) may be particularly appropriate at this moment in time, since music copyright owners may have only a relatively short window of opportunity in which to establish legitimate models for Internet music dissemination before users become accustomed to obtaining unauthorized Internet music access with no remuneration to artists or copyright owners.

I. COPYRIGHT LAW RELEVANT TO INTERNET MUSIC TRANSMISSIONS

A. Musical Works and Sound Recordings: Two Separate Copyrights

Every musical recording involves two separate copyrightable works: a “musical work” and a “sound recording”.⁶ A musical work is the sequence of notes and (often) words that a songwriter or composer creates. For example, when Cole Porter sat down at a piano and wrote the lyrics and music to the song “Ev’ry Time We Say Goodbye”, he created a musical work protectible by copyright law. That work can be recorded in many ways, including, for example, in printed sheet music that a musician can use to play or sing the song. A sound recording, in contrast, is a fixation of *sounds*, including a fixation of a performance of someone playing and singing a musical work.⁷ For example, when Ella Fitzgerald and her accompanists went into a studio in the 1950s and sang and played Cole Porter’s song “Ev’ry Time We Say Goodbye”, the recording of that performance was a sound recording. Similarly, when Annie Lennox recorded the same song in the 1990s, her recorded performance was another sound recording of Porter’s musical work. Transmitting recorded musical performances over the Internet involves transmitting *both* the sound recording and the musical work embodied in the recording.⁸ That makes the copyright implications of such transmissions complex because U.S. copyright law grants different rights and limitations to musical works and sound recordings and because the copyright rights in those works are generally owned and administered by different parties.

B. The Copyright Owners Relevant Rights: Reproduction and Public Performance

1. The Reproduction Right

Copyright law grants copyright owners the right to control certain uses of their works, including, most importantly for Internet music transmissions, the exclusive rights to reproduce and to

⁶ 17 U.S.C. § 102(a)(2) and (7).

⁷ 17 U.S.C. § 101 (“sound recordings”).

⁸ Transmitting live musical performances would generally involve only the copyright in the musical work, since a live, unfixed performance is not protected by copyright, which extends only to fixed works. Unauthorized transmission of a live performance, however, may violate 17 U.S.C. § 1101(a)(2).

publicly perform copyrighted works.⁹ The right to reproduce a copyrighted work is the oldest right of the copyright owner, and the right applies to both musical works and sound recordings.¹⁰ Copyright owners of musical works and sound recordings both have the exclusive right to reproduce their works in “phonorecords”, which are “material objects in which sounds ... are fixed ... and from which the sounds can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device”.¹¹ A “phonorecord” can thus be a vinyl LP, a cassette tape, a compact disc, or a hard drive or floppy diskette containing an MP3¹² file – all are tangible objects in which sounds are fixed and from which, given the proper hardware (and, in some cases, software), those sounds can be made audible. The reproduction right generally encompasses making any phonorecord of a copyrighted work.

Any single phonorecord constitutes a phonorecord of *both* the sound recording fixed in the phonorecord *and* any musical work performed in that sound recording. For example, a compact disc of Ella Fitzgerald’s album *The Cole Porter Songbook* constitutes a phonorecord of Cole Porter’s musical work “Ev’ry Time We Say Goodbye” *and* a phonorecord of Ella Fitzgerald’s sound recording of that musical work. Someone who makes a tape of that compact disc therefore reproduces a new phonorecord (the tape) of both the musical work and the sound recording. The same is true of someone who “rips” an MP3 version of the song from a compact disc, or who downloads such a version from a Web site and stores the MP3 file on a hard drive (or other storage medium).

2. *Limitations on the Reproduction Right in Musical Works: The Compulsory Mechanical License and Digital Phonorecord Deliveries*

The “compulsory mechanical license” limits the copyright owner’s exclusive right to make phonorecords of most musical works.¹³ Once the owner allows someone to make and sell phonorecords of a musical work, anyone else can make their own phonorecords of that work by complying with certain procedural requirements and paying a fee established by the Copyright Office (currently usually 7.55 cents for each phonorecord).¹⁴ This license essentially allows the making of so-called “cover” recordings, where a performer records a song that another performer previously

⁹ While the copyright owner’s rights are “exclusive”, they are not absolute, but rather are subject to a variety of limitations, exemptions, and compulsory licenses that allow other parties, in certain circumstances and under certain conditions, to engage in activity that would otherwise be reserved to the copyright owner.

¹⁰ 17 U.S.C. § 106(1).

¹¹ 17 U.S.C. § 101 (“phonorecords”). Musical work copyright owners also have the exclusive right to reproduce their works in copies. *See id.* (“copies”).

¹² Music can be stored digitally in a variety of file formats. For convenience sake, the paper generally uses the MP3 format in its examples, but the principles apply equally to other music storage formats.

¹³ 17 U.S.C. § 115. The compulsory license extends to “nondramatic” musical works. *Id.*

recorded. So, for example, you can go into a recording studio and record your performance of, for example, the song “Yesterday” as written by John Lennon and Paul McCartney¹⁵ and sell CDs of your recording without the permission of the copyright owner of that musical work, as long as you comply with the terms of the compulsory license. In fact, though, most performers who make such cover recordings do not actually get a compulsory license from the Copyright Office; instead, they usually obtain a license from the Harry Fox Agency, which acts as licensing agent for the U.S. copyright owners (usually music publishing companies) of most musical works.¹⁶

The compulsory mechanical license grants reproduction and distribution rights only for musical works, not sound recordings. For example, the license would not allow you to record and sell CDs of the Beatles’s performance of “Yesterday” (instead of recording and selling CDs of your own performance of the song). Every CD you made would be a phonorecord of *both* the Lennon and McCartney musical work “Yesterday” *and* of the Beatles’ sound recording of “Yesterday”, but because the compulsory license confers a reproduction privilege only in the musical work, in order to make the CDs you would need permission from the copyright owner of the Beatles’ *sound recording*, who would be free to refuse permission or to charge any price it wishes.¹⁷ The compulsory mechanical license therefore primarily assists recording artists who want to make their own recordings of songs by other songwriters and record companies that want to sell such records.

In 1995, Congress amended the compulsory mechanical license to allow reproducing and distributing musical works by means of “digital phonorecord delivery” (“DPD”). A “digital phonorecord delivery” is a digital transmission of a sound recording that results in a “specifically identifiable reproduction by or for any transmission recipient of a phonorecord”.¹⁸ So, for example, if you connect to a Web site such as MP3.com or Emusic.com and you download an MP3 file of the song “Yesterday”, the Web site digitally transmits to you a sound recording of a performance of “Yesterday” and at the end of the transmission that MP3 file is stored on your hard drive – a phonorecord. The Web site has made a digital phonorecord delivery. If the site has obtained a compulsory mechanical license for the composition “Yesterday” and pays the specified royalty rate, then its transmission will not infringe the copyright in that composition. The royalty rate, currently identical to the rate for making and selling a physical CD or cassette, is set every two years by a two-

¹⁴ For the full schedule of rates, *see* 37 C.F.R. Part 255. For an album containing several copyrighted musical works, the royalty would be payable for each phonorecord of each work.

¹⁵ “Yesterday” is reportedly the most recorded song ever. Linda Stasi, “Inside New York”, *Newsday*, Sept. 24, 1992, at 13.

¹⁶ The rates and terms of the Harry Fox license are, of course, substantially dictated by the rates and terms of the compulsory license available through the Copyright Office.

¹⁷ Indeed, the compulsory mechanical license for the musical work is not available unless the licensee has authorization for reproduction from the owner of the rights in the sound recording. 17 U.S.C. § 115(a)(1).

¹⁸ 17 U.S.C. § 115(d).

step process that encourages voluntary, industry-wide negotiations to establish rates to be adopted by the Copyright Office; if those negotiations fail, any interested party can petition the Copyright Office to hold an arbitration proceeding to set the fees.¹⁹ Here again, however, the compulsory license only confers the right to make DPDs of the *musical work*, not any particular *sound recording*. If a little known band tries to drum up interest in its music by letting people download its cover version of “Yesterday” from its Web site, the band itself will likely own the copyright in the sound recording of its performance and therefore have the right to digitally deliver phonorecords of the *sound recording*, in addition to the permission that the compulsory mechanical license gives it to digitally deliver phonorecords of the Lennon and McCartney musical work. If a Web site allows users to download the Beatles’s performance of “Yesterday”, then the Web site will need the permission of the owner of the copyright in that performance.

3. *The Public Performance Right: Musical Works*

The second exclusive right relevant to Internet music transmissions is the right to publicly perform a copyrighted work. The copyright act defines “performing” a work very broadly – it means “to recite, render, play, dance, or act” the work, either directly or using a device or process.²⁰ You perform Cole Porter’s song “Ev’ry Time We Say Goodbye” if you sing the lyrics to the song, if you play the song on a piano, if you play a CD of the song on a stereo, or if you play an MP3 file of the song on a personal computer or a portable playback device. Although all of those activities perform the musical work, they infringe the copyright only if done “publicly”. A performance can be public in two ways. First, one “publicly” performs a work by performing it in a public or semi-public place, such as by singing “Ev’ry Time We Say Goodbye” in a nightclub. Second, and more important for music on the Internet, *transmitting* a performance is a public performance if the transmission is “to the public, by means of any device or process, whether the members of the public capable of receiving the performance ... receive it in the same place or in separate places and at the same time or at different times”.²¹ A radio station that broadcasts a performance of “Ev’ry Time We Say Goodbye” – either a recorded performance by Annie Lennox from a CD or a live performance by a musician in the station’s studio – publicly performs the musical work by transmitting a performance to the public. Similarly, a Web site that transmits the recording to users in streaming audio publicly performs the musical work –

¹⁹ The procedure for setting license rates for DPDs is set forth in 17 U.S.C. § 115(c)(3)(B)-(F), and the rate schedules are set forth in 37 C.F.R. Part 255.

²⁰ 17 U.S.C. § 101 (“perform”).

²¹ 17 U.S.C. § 101 (“publicly”). The Copyright Act defines “transmit” quite broadly: “To ‘transmit’ a performance ... is to communicate it by any device or process whereby ... sounds are received beyond the place from which they are sent.” *Id.* (“transmit”).

by transmitting a performance to the public, even if each listener is located alone in her own home and only one listener hears the song at any given time. Even if the Web site limits its transmissions to subscribing users who pay a monthly fee, its transmissions will be “to the public”.²²

No general compulsory license exists for the public performance right in musical works; to publicly perform such a work requires the permission of the copyright owner. Because public performances of musical works are fleeting and occur in widely dispersed locations, enforcement of the public performance right has challenged copyright owners. In response, copyright owners created collective rights societies to administer and enforce the public performance right. The principal societies in the U.S. are ASCAP (the American Society of Composers, Authors and Publishers), BMI (Broadcast Music, Inc.), and SESAC. The societies are made up of copyright owners (usually songwriters and music publishers) who grant the society the nonexclusive right to license public performances of their musical works. The societies, in turn, grant blanket licenses to entities that engage in public performances – radio and television stations, nightclubs and concert halls, restaurants and retail establishments, etc. In return for a license fee (generally calculated as percentage of the licensee’s revenue), the licensee obtains the right to perform publicly any work in the society’s repertoire, and the ASCAP, BMI, and SESAC repertoires collectively include virtually all copyrighted American music.

4. *Sound Recordings: The Digital Transmission Performance Right*

Congress granted the exclusive public performance right to copyright owners of musical works, but *not* to copyright owners of sound recordings.²³ As a result, a nightclub or radio station that plays a CD of Annie Lennox singing “Ev’ry Time We Say Goodbye” publicly performs *both* Cole Porter’s musical work and Annie Lennox’s sound recording but needs permission only from the copyright owner of Porter’s music and lyrics and not from the copyright owner of Lennox’s sound recording.

In 1995, however, Congress granted sound recording copyright owners a limited public performance right: the right to perform their sound recordings publicly “by means of a digital audio transmission”.²⁴ A Web site that streams a recording of Annie Lennox singing “Ev’ry Time We Say Goodbye” to listeners over the Internet publicly performs the sound recording by means of a digital audio transmission and that activity would be covered by the digital transmission performance right.

²² See H.R. REP. NO. 94-1476, at 65 (1976) (stating that transmission is to the public “whenever the potential recipients of the transmission represent a limited segment of the public, such as ... the subscribers of a cable television service”).

²³ 17 U.S.C. § 106(4).

²⁴ 17 U.S.C. § 106(6), *added by* Pub. L. 104-39, 109 Stat. 336 (1995). Essentially, a digital audio transmission is a transmission in any non-analog format that embodies a sound recording. 17 U.S.C. § 114(j)(5).

Congress also enacted significant limitations on the digital transmission performance right. The scope of the copyright owner's right varies with the type of digital transmission, and transmissions are basically divided into four types. First, a transmission can be one made by an "interactive service", one that either transmits on request a particular sound recording chosen by the recipient or that transmits a program specially created for the recipient. A variety of types of transmissions are interactive. The archetypal interactive service is perhaps the much-prophesied "celestial jukebox" – an on-demand service that allows a recipient (who pays a monthly subscription fee or a per-use charge) to connect to a repository of sound recordings and select a particular recording that is then immediately transmitted to the recipient's speakers. MusicBank.com and BMG recently announced an agreement whereby MusicBank will make available, by subscription, on-demand streaming access to all of the recordings in the BMG catalog. Because the subscriber will receive, on request, the transmission of a particular sound recording that she selected, MusicBank will be offering an interactive service.²⁵ Transmissions by an interactive service are fully subject to the copyright owner's digital transmission performance right, so the transmitter needs the permission of the copyright owner, and the owner is free to charge any price for such permission or to deny permission entirely – just as it would be for reproduction and distribution by means of, for example, compact discs.²⁶

Transmissions not made by an interactive service basically fall into three categories. First, there are nonsubscription broadcast transmissions.²⁷ Such transmissions are entirely exempt from a copyright owner's digital transmission performance right, so no permission from the sound recording copyright owner is necessary for such transmissions (although permission for the public performance of any *musical work* would be required for such transmissions).²⁸ Many radio stations, in addition to broadcasting over the radio airwaves, now have Web sites where they simultaneously transmit the exact same programming in streaming audio format. For example, public radio station KUT in Austin,

²⁵ Another example of an interactive service would be a Web site promoting a band by encouraging visitors to listen to the band's new recording, perhaps in order to entice the visitor into buying a CD or a concert ticket: if the visitor clicks a button on the site, the site streams to the visitor a transmission of the recording.

The boundaries of what constitutes an "interactive service" are not entirely clear. Some Web sites currently survey each user about her musical tastes, and then stream to her performances of sound recordings that the Web site's software predicts, based on her expressed preferences, that she will like. Some sites allow the user to rate the songs that she receives, and then use that rating feedback in order to fine-tune the predictions about which recordings the user will like. Such Web sites might be considered to be transmitting to each recipient "a program specially created for the recipient", and the Copyright Office is now considering initiating a rulemaking proceeding to determine how much influence a consumer can have over the transmitter's programming before the transmission becomes part of an interactive service. 65 Fed. Reg. 33266.

²⁶ In fact, 17 U.S.C. §§ 114(d)(3) and 114(h) impose some limits on the ability of sound recording copyright owners to grant exclusive licenses to interactive services and requires in certain circumstances that if those owners license the digital transmission right to affiliates that they make licenses available to similar services on no-less-favorable terms.

²⁷ These are "transmission[s] made by a terrestrial broadcast station licensed as such" by the FCC. 17 U.S.C. § 114(j)(3).

²⁸ 17 U.S.C. § 114(d)(1)(A). Certain other types of transmissions are also exempt. See 17 U.S.C. § 114(d)(1)(B), (C).

Texas has a Web site (at www.kut.org) that allows users to hear in real time the programming that KUT is broadcasting over the airwaves to central Texas. Despite this trend, a dispute currently exists over whether the exemption for “nonsubscription broadcast transmissions” includes a transmission over the Internet of an AM or FM radio station’s over-the-air programming. The Recording Industry Association of America (“RIAA”), the trade association for the major recording labels, has petitioned the Copyright Office to initiate a rulemaking to decide the issue, and the National Association of Broadcasters has filed a declaratory judgment suit seeking resolution of the dispute.²⁹

Certain noninteractive transmissions other than broadcast transmissions, while not exempt from the digital transmission performance right, are eligible for a compulsory license of the digital transmission performance right. An example would be a hypothetical Web site called WebJazz that runs a jazz “Web radio station” and streams jazz music to those who visit the site, just as a radio station would broadcast jazz music over the airwaves.³⁰ WebJazz’s programmers, not the site’s listeners, select which songs are played, so the transmissions are not interactive. To qualify for the compulsory license, however, a noninteractive transmitter like WebJazz must adhere to a long list of detailed conditions.³¹ Those conditions seek to limit the license to those transmissions thought least likely to substitute for the sale of records, largely by preventing listeners from getting advance notice of which songs are to be transmitted so that they could record them or listen to them “on demand”.³² Some conditions concern the programming that is transmitted. For example, WebJazz cannot transmit, during any three-hour period, more than three different tracks from any one CD or more than four different tracks by the same recording artist.³³ Other conditions govern the technology and interfaces used for the transmission.³⁴ If WebJazz meets all the conditions, then it can obtain a compulsory

²⁹ See 65 Fed. Reg. 14227; *National Association of Broadcasters v. Recording Industry Association of America* (S.D.N.Y. filed Mar. 27, 2000).

³⁰ Both subscription and nonsubscription transmissions are eligible for the license, so the site might support itself either by limiting access to subscribers or by transmitting advertising to its listeners. See 17 U.S.C. §§ 114(j)(9), (14). If the transmission is nonsubscription, it must, in order to qualify for the statutory license, be part of a service whose “primary purpose” is to provide audio or entertainment programming to the public and not to sell or promote particular products or services. 17 U.S.C. § 114(j)(6).

³¹ The conditions are set forth in 17 U.S.C. § 114(d)(2)(A) and (C).

³² Jane C. Ginsburg, *Copyright Legislation for the Digital Millennium*, 23 COLUM.-VLA J. OF L. & THE ARTS 137, 169 (1999) (conditions primarily endeavor to ensure that transmitting organization does not facilitate user’s substitution of transmitted performance for purchase of copy).

³³ 17 U.S.C. §§ 114(d)(2)(C)(i) and 114(j)(13). Other programming-related conditions include a ban on advance publication of program schedules or specific titles to be played, 17 U.S.C. § 114(d)(2)(C)(ii), minimum time limits for the program of which a transmission of a sound recording is a part, 17 U.S.C. § 114(d)(2)(C)(iii), a requirement to transmit recordings from lawfully made phonorecords and not from bootleg recordings, 17 U.S.C. § 114(d)(2)(C)(vii), and a bar on transmitting visual images along with the audio transmission in a way likely to confuse recipients as to the endorsement or affiliation of the recording artist or copyright owner, 17 U.S.C. § 114(d)(2)(C)(iv).

³⁴ For example, the transmitter must identify, in text displayed to the recipient during the performance, the title of the recording, the title of the record from which it comes, and the name of the recording artist. 17 U.S.C. § 114(d)(2)(C)(ix). Other conditions of this type include not causing the receiving equipment to change channel, 17 U.S.C. § 114(d)(2)(A)(ii),

license to transmit any sound recording by complying with Copyright Office procedures and paying the license fee. As with the compulsory mechanical license for DPDs, the license fee is to be determined every two years by voluntary negotiations among the parties to establish an industrywide consensus on rates that would then be adopted by the Copyright Office or, failing that, by an arbitration proceeding in the Copyright Office. No rates have yet been set for the generally available compulsory license for eligible noninteractive transmissions. As with the broadcast exemption, the compulsory license applies only to the digital transmission performance right in sound recordings, and not to the public performance right in musical works. A transmitter that qualifies for the compulsory license will therefore still need to obtain musical work performance licenses, usually from ASCAP, BMI, and SESAC.

Finally, noninteractive transmissions that are not broadcast transmissions and that do not meet the conditions for the compulsory license are fully subject to the digital transmission performance right, and someone making such transmissions must generally obtain the permission of the copyright owner to do so. For example, if WebJazz wanted to program “all Ella Fitzgerald, all the time”, it would not be able to comply with the limit of four tracks by one artist in three hours, would thus not qualify for the compulsory license, and would therefore need permission for its digital transmission of each sound recording from the copyright owner of that sound recording.

Table 1 summarizes the relevant reproduction and performance rights of copyright owners of musical works and sound recordings, and the limitations on those rights.

Table 1

	Reproduction Right	Public Performance Right
Musical Work	<ul style="list-style-type: none"> • General Exclusive Right of Copyright Owner • Compulsory Mechanical License available for Digital Phonorecord Deliveries 	<ul style="list-style-type: none"> • General Exclusive Right of Copyright Owner • Blanket License available through ASCAP, BMI, and SESAC
Sound Recording	<ul style="list-style-type: none"> • General Exclusive Right of Copyright Owner • No compulsory license available 	<ul style="list-style-type: none"> • No general exclusive right in copyright owner • Limited right to public performance by means of digital audio transmission (see Table 2)

transmitting any identifying information encoded in the sound recording by the copyright owner, 17 U.S.C. § 114(d)(2)(A)(iii), accommodating and not interfering with technical measures used by copyright owners to identify or protect their works, 17 U.S.C. § (d)(2)(C)(viii), not taking any affirmative steps to cause the making of a phonorecord by the recipient of the transmission and setting the transmission equipment to limit such recording if possible, 17 U.S.C. § 114(d)(2)(C)(vi), and cooperating to prevent the scanning of transmissions in order to select a particular recording to be transmitted, 17 U.S.C. § 114(d)(2)(C)(v).

Table 2 summarizes the basic structure of the limitations on the digital transmission performance right.

Table 2

Type of Transmission		Public Performance Right by means of Digital Audio Transmission
Noninteractive Transmission	Nonsubscription “Broadcast” Transmissions	<i>Exempt</i> from exclusive right
	<ul style="list-style-type: none"> • Compliant Subscription Transmissions • Compliant Eligible Nonsubscription Transmissions 	<i>Compulsory License</i> available
	All Other Noninteractive Transmissions	Exclusive Right of Copyright Owner
Transmission By Interactive Service		Exclusive Right of Copyright Owner

II. APPLICATION OF COPYRIGHT LAW TO STREAMING AND DOWNLOAD TRANSMISSIONS

A. Streaming Transmissions

The provisions of U.S. copyright law outlined in Part I govern the two major types of music transmissions over the Internet today: streaming and downloading musical files. A digital music file can be *streamed* to a user. Over the World Wide Web, for example, a user might connect her computer to the Web site of the Red Hot Organization (at www.redhot.org) and find a streaming audio file of Annie Lennox’s recording of “Ev’ry Time We Say Goodbye” from the album *Red, Hot + Blue*. The user can request that the Web site transmit that file to her. As the site transmits the information in the file, the user’s computer makes the recording audible through the computer’s speakers. During the transmission, the user’s computer temporarily stores or “buffers” segments of the recording before making them audible, in order to allow (usually) uninterrupted playback of the recording even if network congestion should slow the transmission. As the recording is played, however, that part of the file that is played is removed from the buffer and replaced with subsequent portions of the recording. At the end of the transmission, the user has heard the entire recording, but no copy of the recording

generally remains stored on her computer.³⁵ Thus, if the user wishes to hear the streamed recording again, she must again connect to the Red Hot Web site and request that it again transmit the file. Such streaming transmissions may fit a wide variety of Internet music business models. A user might hear streaming transmissions from the Web site of a particular musician or record label that wishes to promote particular recordings, from a Web “radio station” that transmits a variety of music as over-the-air radio stations do, or from a “music locker” service that stores particular songs selected (and possibly purchased) by the user in order to allow the user to access those songs from any Internet connected computer.

A streaming transmission over the Internet clearly constitutes a digital transmission performance of the sound recording transmitted and of any musical work embodied in that sound recording. The party that makes such a transmission will therefore infringe the public performance rights unless it has permission or is otherwise excused. For example, WebJazz might want to transmit Annie Lennox’s recording of “Ev’ry Time We Say Goodbye” in streaming audio as part of its Webcast. With respect to Annie Lennox’s *sound recording*, WebJazz will either be exempt from the digital transmission right entirely (for example, if it makes a nonsubscription broadcast transmission), be entitled to transmit the stream under the a compulsory license (for example, if the transmission is noninteractive and meets all the license conditions), or be required to obtain permission from the copyright owner (for example, if the stream is available to listeners on demand). With respect to Cole Porter’s *musical work*, the transmitter will need to obtain permission to perform that work publicly, and ASCAP, BMI, and SESAC each provide blanket licenses for such transmissions.

The major copyright question with respect to streaming audio transmissions is whether every such transmission constitutes not only a public performance of the works transmitted but *also* a reproduction of those works. The reproduction and performance rights are separate and independent. The statutory language and legislative history contemplate that a single transmission *could* involve the exercise of both reproduction and public performance rights,³⁶ and it is easy to imagine a transmission that would be both because the recipient could both hear the song received *and* store a copy of it.

But the more significant aspect of the question is whether *every* streaming audio transmission reproduces the musical work and sound recording transmitted, even if the recipient does *not* retain any

³⁵ Indeed, the commonly used Real Audio streaming software is designed to allow a transmitter to specify that the receiving user’s RealPlayer software may not record a copy of the transmitted file. *See RealNetworks, Inc. v. Streambox, Inc.*, 2000 U.S. Dist. LEXIS 1889.

³⁶ *See, e.g.*, 17 U.S.C. §§ 114(d)(4)(B) and (C) (exemptions from and licenses of the digital transmission performance right do not limit reproduction rights in musical work or sound recording). *See also* S. REP. NO. 104-128 at 27 (1995) (if digital audio transmission is also a digital phonorecord delivery, exemptions and licenses of digital transmission performance right in § 114 do not limit copyright owner’s rights of reproduction and distribution).

copy of the music at the end of the transmission, as is the case with an ordinary streaming transmission. This possibility arises largely because of the temporary storage in random-access memory (RAM) that occurs in essentially every computer.³⁷ As a streaming audio transmission is received, the digits that represent the sounds to be played back by the recipient's streaming audio software will temporarily be stored in the RAM of the recipient's computer, until they are processed by the software, played back, and then replaced in RAM by subsequently transmitted digits.³⁸ At least two federal appellate courts have held that storing a copyrightable work in RAM constitutes reproduction of the work in violation of the copyright owner's exclusive reproduction right.³⁹ Many have criticized these decisions as inconsistent with the statutory language and the legislative history of the Copyright Act. Some lower courts⁴⁰ and government officials⁴¹ have, however, adopted this view, suggesting that courts may rule that the temporary RAM storage that occurs automatically in the course of every streaming audio transmission constitutes a reproduction of the copyrighted works transmitted.

The legislative history of the compulsory DPD license indicates that at least *some* RAM storage as part of a streaming transmission will constitute the reproduction of a phonorecord. For purposes of license rates, the statute distinguishes between ordinary DPDs and "incidental" DPDs, and in explaining the distinction, the legislative history gives the following example:

[I]f a transmission system was designed to allow transmission recipients to hear sound recordings substantially at the time of transmission, *but the sound recording was transmitted in a high-speed burst of data and stored in a computer memory for prompt playback (such storage being technically the making of a phonorecord)*, and the transmission recipient could not retain the phonorecord for playback on subsequent occasions (or for any other purpose), delivering the phonorecord to the transmission recipient would be incidental to the transmission.⁴²

³⁷ In the operation of a computer, all data is processed by being stored temporarily in the random-access memory or "RAM" of the computer. *See, e.g., THE DIGITAL DILEMMA, supra n. 2*, at 28-31. Such storage is usually quite temporary both because the material stored in RAM is often quickly replaced with new material and because this type of memory is generally "volatile" so that material stored in RAM disappears when the power supply to the RAM is turned off or interrupted.

³⁸ Reproduction may also occur because the streaming software may temporarily store (or "cache") the received data on the hard drive of the recipient's computer, where it may remain until it is written over by other data. There is little doubt that such storage technically constitutes the reproduction of the stored work in a phonorecord.

³⁹ *MAI Systems Corp. v. Peak Computer, Inc.*, 991 F.2d 511 (9th Cir. 1993); *Stenograph L.L.C. v. Bossard Assocs.*, 144 F.3d 96 (D.C. Cir. 1998).

⁴⁰ *See, e.g., Tiffany Design, Inc. v. Reno-Tahoe Specialty, Inc.*, 51 U.S.P.Q.2d 1651 (D. Nev. 1999); *Intellectual Reserve, Inc. v. Utah Lighthouse Ministry*, 74 F. Supp. 2d 1290 (D. Utah 1999).

⁴¹ *See, e.g.,* INFORMATION INFRASTRUCTURE TASK FORCE, INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS (1995) (hereinafter *White Paper*); Statement of the Register of Copyrights, House Judiciary Subcommittee on Courts and Intellectual Property, June 15, 2000, available at <http://lcweb.loc.gov/copyright/docs/regstat61500.html> (visited June 29, 2000) ("Internet retransmissions require the making of temporary copies within computer systems delivering the retransmissions, which allow the audio or video programming to appear to be played in real time to the end user.").

⁴² S. REP. NO. 104-128 at 39 (emphasis supplied).

Some evidence also indicates that the drafters did not intend for *all* streaming transmissions to implicate the reproduction right. The definition of “digital phonorecord delivery” expressly exempts any “real-time, non-interactive subscription transmission of a sound recording where no reproduction of the sound recording or the musical work embodied therein is made from the inception of the transmission through to its receipt by the transmission recipient in order to make the sound recording audible”.⁴³ If, however, temporary storage in RAM constitutes a reproduction, then no streaming transmission will fall within the carveout to the definition, since a RAM “reproduction” will be made in every case by the recipient’s computer in order to make the transmission audible. The Harry Fox Agency appears to be taking the position that essentially every streaming transmission involves a reproduction for which payment must be made.⁴⁴

The practical implications of considering the RAM storage that occurs during streaming audio transmissions to be “phonorecords” are extremely significant. Every streaming audio transmission would need to be authorized not only as a public performance of both the sound recording transmitted and the musical work embodied in that sound recording, *but also* as a reproduction of each of those works.⁴⁵

With respect to the musical work involved, ASCAP, BMI, and SESAC licenses would authorize only the public performance of those works, and not any reproduction. Permission for the RAM storage involved in the streaming transmission might be available by means of the compulsory mechanical license, but that license is not particularly useful to streaming audio transmitters. First, the cost of such licenses could make streaming transmissions prohibitively expensive. The compulsory license rates must by statute distinguish between DPDs “in general” and DPDs that are “incidental”.⁴⁶ No rate has yet been set for incidental DPDs, although, the general DPD rate is 7.55 cents per musical work per transmission.⁴⁷ To take one example, the economics of a Web radio station that does not charge for its transmissions – a business model that seems to predominate at the moment – seem extremely unlikely to support license payments of over 7 cents per song each time it transmits a song to each user, on top of any payments to copyright owners for publicly performing the sound recording

⁴³ 17 U.S.C. § 115(d).

⁴⁴ See Jon O’Hara, “Look Out, Napster: Here Come the Music Publishers”, June 27, 2000, *available at* http://www.inside.com/story/Story_Cached/0,2770,6248_9,00.html (visited July 12, 2000) (quoting general counsel of National Music Publishers Association stating that NMPA suit against MyMP3.com service “gives us the opportunity to obtain a court ruling that streaming is a mechanical reproduction and distribution for which publishers and songwriters should be entitled to royalties”). See also Bob Kohn, “A Primer on the Law of Webcasting and Digital Music Delivery”, 20 ENT. L. REP., No. 4, Sep. 1998, at 4, 12.

⁴⁵ See, e.g., Statement of Michael Robertson, MP3.com, Senate Judiciary Committee, July 11, 2000, *available at* http://www.senate.gov/~judiciary/7112000_mr.htm (visited July 12, 2000) (lamenting the multiple licenses necessary to stream a single song under simultaneous rights positions).

⁴⁶ 17 U.S.C. §§ 115(c)(3)(C), (D).

and the musical work embodied therein. Imposing a substantially lower rate for incidental DPDs might make such transmissions more feasible, but the administrative costs of obtaining the necessary DPD licenses would nonetheless likely be prohibitive. Unlike the *blanket* licenses issued by ASCAP, BMI, and SESAC, the compulsory mechanical license is available on a *per work* basis. In order to obtain the license the prospective licensee must serve notice of its intention to reproduce on the copyright owner of each musical work to be reproduced.⁴⁸ Thus, a streaming transmitter that wished to use the compulsory incidental DPD license to authorize RAM storage in the course of its transmissions would have to secure a *separate* compulsory license for *each* musical work that it wishes to transmit. For an entity that transmits any volume or variety of recorded music – for example, a Web radio station or a music locker service – the administrative costs of securing such compulsory licenses would be enormous and in many cases prohibitive. Consider a subscription music service that WebJazz might offer, allowing listeners who pay \$10 per month to listen to a continuous stream of jazz music. The Web site could get blanket musical work *performance* licenses from ASCAP, BMI, and SESAC for any song it wishes to transmit, but would *also* have to obtain individual *mechanical* licenses in advance through the Harry Fox Agency (or the Copyright Office) for each and every song it transmits. The compulsory license might be helpful (assuming the incidental DPD license rate is affordable) to sites that stream a limited number of songs with sufficient advance notice to obtain the license, but at the moment that seems to describe few, if any, likely Internet music business models.⁴⁹

Considering streaming transmissions to be reproductions of the transmitted *sound recordings* because of temporary storage in RAM also presents substantial problems. This approach would render the extremely detailed provisions on exemptions from, and compulsory licensing of, the digital transmission performance right essentially irrelevant.⁵⁰ Those provisions only limit the sound recording copyright owner's performance right, not the reproduction right. A streaming transmission that is exempt or licensed under the Copyright Act would not infringe the digital transmission performance right, but the inherent RAM storage necessary to make that streaming transmission would infringe the reproduction right unless otherwise authorized. Congress determined, when enacting and

⁴⁷ 37 C.F.R. § 255.6.

⁴⁸ See 17 U.S.C. § 115(b); 37 C.F.R. § 201.18(a)(2).

⁴⁹ The compulsory license would also be of little use to a transmitter who streams live performances from concert halls or nightclubs (*see, e.g.,* digitalclubnetwork.com) unless the performers are able to notify the transmitter in advance which songs they will perform and are willing not to deviate from that selection.

⁵⁰ The impact on transmitters, such as those making interactive transmissions, whose activity is not exempted or licensed under § 114 would be much less. Those transmitters will already need to obtain a license of the sound recording performance right directly from the copyright owner, who remains free to deny the license or charge whatever price it chooses for a license. So long as the public performance and reproduction rights are not owned separately by different entities, the need to acquire both performance and reproduction rights would not seem likely to impose additional

amending the digital transmission performance right, that sound recording copyright owners should not be able to prevent certain kinds of digital music transmissions – broadcast transmissions and noninteractive Webcasts that are not likely to substitute for sales of phonorecords. Instead, Congress chose to allow such transmissions on a blanket basis without the copyright owner’s permission and with either no compensation or compensation at an externally determined rate. If every streaming transmission requires a license of the reproduction right, however, the copyright owner will be able to prevent music transmissions that would otherwise be allowed under the Congressional scheme. No general compulsory license is available for reproduction of *sound recordings*; the compulsory mechanical license extends only to *musical works*. Sound recording copyright owners could simply deny reproduction licenses for transmissions made by broadcasters or by license-eligible noninteractive Webcasters and thereby stop them from making transmissions that would otherwise be allowable digital transmission performances. Even if sound recording copyright owners were willing to grant reproduction licenses to such exempt or statutorily licensed transmitters, the need to obtain reproduction licenses would impose significant transactions costs on transmitters, since no entity currently issues blanket licenses for such reproductions. Instead, transmitters would have to obtain permission from each copyright owner.⁵¹ In addition, the cost for such reproduction licenses would be above the cost that the transmitter would have to pay for the performance license, and it is not clear that Congress intended such transmitters to have to pay sound recording owners more than the price provided in the statute in order to engage in the permitted activities. Indeed, Congress expressly provided that more permanent reproductions made by a transmitter in order to facilitate its transmissions – for example, the phonorecord made by copying a recording from a CD onto the hard drive of a Web site’s server – are either not infringing or can be made under a compulsory license,⁵² suggesting that imposing additional costs for necessary and incidental RAM storage in the course of performance transmissions is inconsistent with Congress’ intent.

Considering streaming transmissions to be reproductions would therefore have very significant implications for the ability of users to make such transmissions. It would impose transactions costs that may make most Internet streaming transmissions impossible, and it would allow copyright owners

transactions costs on these transmitters or to give copyright owners any opportunity to extract additional compensation from these transmitters.

⁵¹ For major label recordings, this would mean obtaining licenses from the major-label companies, but transmitting recordings owned by smaller labels would require obtaining permission from many independent labels. *See, e.g.*, Statement of Charles P. Moore on behalf of Digital Media Association, House Judiciary Courts and Intellectual Property Subcommittee, June 15, 2000, <http://www.house.gov/judiciary/moor0615.htm> (visited July 10, 2000) (“How would a start-up webcaster with minimal financial capital negotiate licenses with hundreds of jazz labels whose music is necessary to satisfy jazz-lovers’ eclectic tastes?”).

⁵² 17 U.S.C. §§ 112(a), (e).

to prevent activities that Congress chose to permit. Consider again the WebJazz subscription service. Even if WebJazz buys ASCAP, BMI, and SESAC licenses, and even if WebJazz conforms its transmissions to the conditions of the compulsory license of the digital transmission right (and pays the compulsory license fee), WebJazz will still have to obtain and pay for individual reproduction licenses for each musical work it transmits *and* individual reproduction licenses for each sound recording it transmits. Few Internet music business models seem likely to flourish in the face of such costs.

B. Download Transmissions

The major type of Internet music transmission other than streaming audio is *downloading* a file of recorded music. Over the World Wide Web, for example, a user might connect to the Red Hot Organization's Web site and find an MP3 file of Annie Lennox's recording of "Ev'ry Time We Say Goodbye".⁵³ The user can direct the Web site to transmit the music file to her, and the user's computer will store the received file, typically on the computer's hard drive. At the end of the transmission, the user has her own copy of the file on her computer hard drive, and she can listen to the recording embodied in that file whenever she wants, without any need to be connected to the Web site that transmitted it. With appropriate equipment, she can copy the file onto a compact disc or onto the storage device of a portable, Walkman-like player that will allow her to listen to the recording away from her computer. Download transmissions may be provided by a variety of kinds of Internet entities. A user might download a music file from the Web site of a recording artist or record label which provides downloads for promotional purposes. Or the user might download a file from a Web site specializing in downloadable music by many artists, such as Emusic.com (which has over 100,000 tracks available for download for 99 cents each),⁵⁴ MP3.com (where music files from thousands of artists can be downloaded, many for free),⁵⁵ or DownloadsDirect (which features both free and pay downloadable files). Or the user might download a music file not from a Web site but directly from the hard drive of another user's computer using file-sharing software such as Napster or Gnutella.

A user who downloads an MP3 file of Annie Lennox's recording of "Ev'ry Time We Say Goodbye" reproduces in a phonorecord – the new file on the user's hard drive – both Lennox's sound recording and Cole Porter's musical work. To make that phonorecord without infringing those copyrights will generally require permission from both copyright owners. Permission to reproduce

⁵³ In fact, the Red Hot Web site features one downloadable MP3 track per week on a rotating basis from the recordings on the various AIDS benefit albums produced by the organization.

⁵⁴ Statement of Gene Hoffman, Jr., EMusic.com, Inc., before the Senate Judiciary Committee, July 11, 2000, *available at* http://www.senate.gov/~judiciary/7112000_ghj.htm (visited July 12, 2000).

⁵⁵ Statement of Michael Robertson, *supra n. 45* (stating that more than 469,000 audio files by more than 74,000 artists are posted to MP3.com and that an average of 100 artists and 1000 audio files are added daily).

Annie Lennox's sound recording can only be obtained from the owner of the copyright in that sound recording (usually the record label that originally issued the recording). Once the sound recording copyright owner has authorized the reproduction, permission to make a phonorecord of Cole Porter's musical work by means of a digital phonorecord delivery can be obtained in the form of the compulsory mechanical license or a mechanical license from the Harry Fox Agency. Some question may exist as to exactly *who* is committing the act of reproduction.⁵⁶ Under any view, however, the party transmitting the file probably faces liability for copyright infringement, either direct or contributory, if the transmission is not authorized.⁵⁷ As a result, no matter who is seen as a technical matter to be directly making the new phonorecord on the download recipient's hard drive, the entity transmitting the file will likely need reproduction licenses.

The major copyright question with respect to download transmissions is the flip side of the question about streaming transmissions as reproductions: do download transmissions constitute not only a reproduction of the transmitted music but also a public performance by digital transmission, such that the transmitter will need permission from the owners of the public performance rights as well? Again, the statutory language contemplates that a transmission that results in a DPD – a download – *might* also be a public performance of the works delivered,⁵⁸ and makes clear that the compulsory DPD license does not grant the licensee any public performance rights.⁵⁹ The statutory framework, however, does not answer the question of whether any particular download transmission *is* a public performance.

It is easy to conceive of a download transmission that clearly would be a public performance of the works transmitted. For example, a Web site could transmit a music file to a user so that the user's computer, as it receives the transmitted information, both stores that information on the user's hard drive *and* makes the transmitted recording audible through the computer's speakers. Such a

⁵⁶ One view would see the downloading end user as the party who is making the new phonorecord. The user, after all, has instructed her computer to connect to the computer where the digital musical file is stored, to request that the file be transmitted to her computer, and to store the transmitted file as it is received. Another view might see the party that transmits the file to the end user as making the reproduction: the transmission of the data from the transmitter's computer to the receiving computer's hard drive results in the new copy of the file. A third possibility would be to see both the transmitter and the downloading user as acting jointly to reproduce the file and therefore jointly liable for any infringement involved.

⁵⁷ If the transmitter is considered to be the party making the new phonorecord, then it will be directly liable. If the end user is considered to be the party making the reproduction, then the transmitter will likely face liability for contributory infringement. Under U.S. law, someone who does not directly infringe a copyright can be liable for copyright infringement if she materially contributes to another person's infringing activity and if she does so knowing, or having reason to know, of that activity. Someone who transmits a musical file to an end user is clearly materially contributing to the end user's receipt and storage of that file, and it seems difficult to argue that someone who posts a musical file on a Web site does not have reason to know that users are likely to download the file.

⁵⁸ 17 U.S.C. § 115(d).

⁵⁹ 17 U.S.C. § 115(c)(3)(K)(i).

transmission would be both a reproduction of the sound recording and the musical work embodied in the file (by means of a digital phonorecord delivery) *and* a public performance of those works (by means of a digital audio transmission to the public). The transmitter would need permission to reproduce *and* to publicly perform both works.

Currently, however, typical download transmissions do not allow the end user to hear the song as the digital musical file is being received. Instead, the recipient's computer stores the received file, and the recipient can then, at her leisure, choose to play back the file in order to hear the recording.⁶⁰ The Clinton Administration's White Paper on intellectual property rights and computer networks, widely perceived as extremely generous to copyright owners in its interpretation of copyright law in the Internet context, took the position that such a transmission, "without the capability of simultaneous 'rendering'" of the work, "rather clearly" did not constitute a public performance.⁶¹ ASCAP and BMI have asserted, however, that *every* transmission of a musical work to the public, whether or not the transmission allows the user to hear the work in the course of the transmission, is a public performance for which permission of the copyright owner is needed (generally in the form of an ASCAP or BMI blanket license).⁶²

Neither the language of the Copyright Act, nor its legislative history, appears to resolve this question conclusively, and policy arguments exist on both sides of the matter. But answering the question of whether a download transmission constitutes a public performance may not, at the moment, be of particular urgency because the answer may make little practical difference in the business operations of most transmitters.

For performances of musical works, the practical impact turns on whether Web sites that provide download transmissions also provide streaming transmissions. For example, many download sites offer users the chance to listen to a song (or an excerpt of a song) before deciding whether to download it. If most download sites also engage in such streaming, those sites – regardless of any download transmissions – will be publicly performing musical works and will already need licenses from the relevant performing rights societies.⁶³

⁶⁰ When the user plays back the recording, she will be performing the sound recording and the musical work it embodies, but unless she plays the song in a public or semi-public place, her performance will not infringe because it is not a public performance.

⁶¹ White Paper, *supra* n. 41, at 71.

⁶² Several commentators have weighed in on this dispute as well. See, e.g., KOHN ON MUSIC LICENSING 104-110 (2d ed. & 2000 Supplement); Kent D. Stuckey, INTERNET AND ONLINE LAW § 6.08[4] (1996); David L. Hayes, *Advanced Copyright Issues on the Internet*, 7 TEX. INTELL. PROP. L. J. 1, 29-31.

⁶³ Some download sites that stream only brief excerpts from songs might not take performance licenses and instead rely on the fair use doctrine to excuse their public performances. Determining whether a use is fair under copyright law is notoriously difficult because the doctrine is so uncertain, but it seems unlikely that streaming any large-scale selection even of 30-second excerpts from songs would qualify as fair use and make a performance license unnecessary.

Availability of performance licenses should not be an issue, since the repertoires of ASCAP, BMI, and SESAC cover the vast majority of copyrighted American music, since those societies grant blanket licenses that allow performance of any work in their repertoire for the same fee, and since at least ASCAP and BMI must, under the antitrust consent decrees that govern their operations, grant licenses to any user willing to pay a reasonable license fee.⁶⁴ Applying the performance right to downloads thus raises issues not of *availability* of a performance license but of the *cost* of that license.

Because ASCAP, BMI, and SESAC grant blanket performance licenses that cover both streaming and download transmissions of all compositions in their repertoires,⁶⁵ a Web site that already needs performance licenses for its streaming transmissions will not incur any significant additional transactions costs in securing performance licenses for its download transmissions. The cost of the licenses also should not depend on whether a license is needed only for streaming transmissions or for both streaming and download transmissions. Whatever total price the licensor and the licensee are willing to agree to for the performance license can be spread over either the licensee's total transmissions (streams and downloads) or over a subset of those transmissions (streams only). For example, if all transmissions were to be considered performances and if the parties agreed on a rate of one cent per transmission, then a site that makes 1000 transmissions (both streaming and download) would incur a license fee of \$10. If, however, only streaming transmissions are required to be licensed, and if only one half of the licensee's transmissions are streams, then a price of two cents per transmission yields the same total price of \$10 for 1000 total transmissions.

Thus, with respect to musical works, whether considering downloads to be performances has any practical impact on transmitters depends on whether sites that provide downloads also engage in streaming transmissions and therefore already require performance licenses. If they do, the impact would seem to be minimal; if they do not, then the impact is potentially greater. Clearly, the larger download sites, such as EMusic.com, MP3.com, DownloadsDirect, Launch.com, CDNNow, and Virgin Jamcast *do* engage in both streaming and download transmissions.⁶⁶ At the other end of the spectrum, individual Web users who use software such as Napster or Gnutella to make musical files on their hard

⁶⁴ See *U.S. v. ASCAP*, 1950-51 Trade Cases (CCH) ¶ 62,595; *U.S. v. BMI*, 1996-1 Trade Cases (CCH) ¶ 71,378. The amount of the reasonable license fee is subject to determination by the District Court, Southern District of New York. *Id.*

⁶⁵ See, e.g., ASCAP Experimental License Agreement for Internet Sites on the World Wide Web – Release 3.0 (granting license to make “Web Site Transmissions”, defined as “all transmissions of content to Web Site Users”), available at <http://www.ascap.com/weblicense/webintro.html>; BMI Web Site Music Performance Agreement, Para. 2 (granting license for streaming and download transmissions).

⁶⁶ At least some of these sites already have performance licenses: EMusic.com is licensed by all three performing rights societies and MP3.com is licensed by at least ASCAP. “Industry Licenses”, at <http://www.emusic.com/s=20581396f3cca439b32;/about/index.html> (visited July 14, 2000); Lisa Napoli, *Music Licensor Announces Agreement With Web Site*, THE NEW YORK TIMES, June 19, 1999. See <http://artists.mp3s.com/artists/58/ascap.html> (visited July 14, 2000)

drives available to other people may well be engaged only in downloading and not streaming, so that they would not need a performance license *unless* their download transmissions constitute public performances. But those users' download transmissions are clearly not licensed even under the reproduction right, which clearly applies to download transmissions, so at least at the moment considering such download transmissions to be performances seems likely to have any practical impact on those activities.⁶⁷ In between the major music sites and the individual Napster user are a wide range of possible music Web sites, some of which may offer only download and not streaming transmissions.⁶⁸ Sites that do not stream any music would not need performance licenses unless downloads are considered transmissions, so requiring a performance license for download transmissions could impose additional costs on these sites that they otherwise would not face. Even here, however, requiring performance licenses may not have a significant impact, depending on the works transmitted.⁶⁹

Of course, the public performance question affects sound recording copyrights as well. If a download transmission is a public performance of the musical work then it is also a digital transmission performance of the sound recording. Here again, under current conditions, considering a download as a performance seems unlikely to have a significant economic impact on download Web sites. Because the download results in a reproduction of the sound recording that is transmitted, the transmitter will already need a reproduction license for the transmission. The compulsory DPD license covers only musical works, so the transmitter will have to obtain permission to transmit the sound

⁶⁷ If the activities of such transmitters are held to be noninfringing, as some have argued, their transmissions would likely violate *neither* the reproduction nor the public performance right. If their activities are held to infringe, selling reproduction licenses to individual Web users at 7.55 cents per song (the basic compulsory DPD license rate) for each download transmission (with administrative requirements to secure advance permission for each song to be transmitted) will surely not be successful – ordinary Web users seem highly unlikely to obtain and pay for such licenses. If such uses are to be licensed, significant changes in industry practices will be necessary – not just resolving the issue of whether performance licenses are needed for download transmissions.

⁶⁸ Some such sites may be personal Web pages that make one or two favorite songs available. Such sites might be deemed noninfringing as fair or de minimis use, in which case no copyright owner of any right in the song would be entitled to compensation. If such sites are deemed to be infringing, they are unlikely to be licensed at all, since the site would have to pay the 7.5-cent compulsory DPD license rate as well as whatever price the sound recording copyright owner would charge, entirely apart from any performance license that might be required. Another set of sites are those that musicians run to promote their own music.

⁶⁹ For example, if those who run such sites make available their *own* recordings of their *own* compositions, then no third-party licenses will be required whatsoever. (The same holds true if a third-party site makes such works available for the performer, since the performer will herself be able to license the reproduction and performance rights in both the sound recording and the musical work.) Transmitting recordings of other people's musical works, on the other hand, will require a mechanical DPD license at a typical cost of 7.55 cents per work per transmission, and if the site transmits recordings of those works by performers' other than the site owner, then a reproduction license for the sound recording (at whatever price the copyright owner charges) will also be necessary. A Web site that can afford to pay for the necessary reproduction licenses may well be able to pay the cost of a performance license. Requiring a performance license for download transmissions might therefore not necessarily make download transmissions by such sites so costly that they will not be made, but might instead raise the cost of the transmission to the end user, change the allocation of revenue from the transmission between the transmitter and the copyright owner, or both.

recording directly from the copyright owner of that work. So long as the reproduction and digital transmission performance rights in sound recordings are not owned by different entities (as they are for musical works), the copyright owner (with whom the download transmitter will already have to negotiate) will be able to grant the transmitter permission to make the download under both the reproduction and performance rights. Locating the relevant copyright owner and negotiating permission to perform will thus not impose additional transactions costs. Permission is likely to be equally available (or equally unavailable) whether a download is just a reproduction or is both a reproduction and a performance, since no compulsory reproduction license is available for sound recordings. And in the absence of divided ownership and any compulsory license, the price the download transmitter would pay for a reproduction *and* performance license for a download transmission should not be any greater than the price for a reproduction license alone for the same transmission. If the parties can agree on a price for the license, it will make little difference to either party whether that entire price is designated as the cost for a reproduction license or whether a portion is designated as the cost for a reproduction license and the remainder is designated as the cost for a performance license.⁷⁰ It appears that ownership of the reproduction and digital transmission performance rights is not currently divided, so that a transmitter will generally be able to obtain both rights from a single party.

In summary, then, unless a significant number of download-only sites would need performance licenses they could not afford, the question of whether a download transmission is a public performance can perhaps await resolution until it becomes clear that answering the question will make a difference. Experience has already shown that legislation in this area can be quickly overtaken by technology – the provisions granting the digital transmission performance right in sound recordings in 1995 were substantially revised in 1998, and some commentators have targeted the Internet service provider safe harbor provisions of the Digital Millennium Copyright Act for revision less than two years after their enactment.⁷¹ In the absence of a pressing practical need to settle the issue, it seems prudent to delay resolution. The speed of developments in Internet technology and business arrangements, and the difficulties of crafting copyright laws to deal in any nuanced way with future

⁷⁰ If ownership of the performance and reproduction rights is divided, then the impact on a download site could be significant. The transmitter's transactions costs would be greater, since it would have to negotiate with two separate owners. Because compulsory and blanket licenses are not currently available, the transmitter might not be able to obtain the necessary permission at all: the owner of the performance right might, for example, choose not to grant a license even where the owner of the reproduction right would be willing to do so.

⁷¹ See Shane Ham and Robert D. Atkinson, *Napster and Online Piracy: The Need to Revisit the Digital Millennium Copyright Act*, Progressive Policy Institute Policy Paper, May 1, 2000, available at http://www.ppionline.org/ppi_ci.cfm?knlgAreaID=107&subsecID=126&contentID=646 (visited July 31, 2000).

technological developments, counsel waiting until resolution is necessary and then resolving the issue as appropriate for the technological and business context that has developed.⁷²

III. POSSIBLE SOLUTIONS

The possible simultaneous application of the reproduction and public performance rights in download and streaming transmissions appears to present two types of problems. First, there are transactions costs problems. For example, securing a reproduction license to cover the temporary RAM storage of every song that is transmitted by streaming audio – from both the musical work copyright owner and the sound recording copyright owner – presents an enormous hurdle for those who transmit music, since so many different works can be transmitted in the course of just a few hours. In addition, if every Internet music transmission potentially requires permission from four separate rightsholders (musical work reproduction right, musical work performance right, sound recording reproduction right, and sound recording digital transmission performance right), the potential for “hold out” problems greatly increases. Second, extending simultaneous reproduction and performance rights threatens in some cases to reduce the usefulness of, or entirely nullify, the compulsory licenses and exemptions that Congress has expressly granted.

A. Collective Licensing

Two main types of solutions to these problems seem possible. First, copyright owners could create new collective licensing mechanisms. Such a solution could take either a radical or an incremental form. A radical change from existing practice would be for a new collective licensing agency to emerge that would have the authority to license Internet transmissions under *all* exclusive rights of the copyright owner (including both reproduction and public performance) for any type of Internet transmission. Such an agency could function much like the existing performing rights

⁷² Leaving the issue unresolved could obviously have consequences as well. If the Internet music industry develops under licenses from performing rights organizations that purport to cover downloads as performances, that might be taken as evidence of industry practice recognizing downloads as performances. However, it is not clear that a user’s agreeing to take a license should have any precedential or estoppel effect on the user later asserting that no license is necessary. *See, e.g., Campbell v. Acuff-Rose*, 510 U.S. 569 (1994). In addition, waiting may mean that if the issue ever does need to be resolved, positions on both sides may have become entrenched and make resolution more difficult. *See* PAUL GOLDSTEIN, COPYRIGHT’S HIGHWAY 134 (“[I]f you wait until the problem is mature, the industrial interests that are posed one against another may be so significant’ that it is much harder to override them, thereby ‘destroying one party commercially or financially, than it would be had you anticipated the problem years before.’”) (quoting Robert Kastenmeier, former chair of House Intellectual Property subcommittee). Some balance, however, must be struck between enacting legislative solutions to copyright problems of new technologies before such technologies have developed and are understood and waiting to enact legislation until such technologies have already become so widely adopted that the political costs of settling disputes over applying copyright law to the new technology become extremely high. We appear to be in the very earliest stages of the development of the Internet music industry, and may therefore have some time to wait before acting, if action indeed proves necessary.

societies: music copyright owners could grant the agency the nonexclusive right to authorize any Internet transmission of their works, and the agency could grant blanket and per-work licenses to all types of Internet transmitters. If the agency represented copyright owners of both musical works and sound recordings, it would essentially provide “one-stop shopping” for an Internet transmitter seeking the necessary copyright permissions; even if separate agencies developed for musical works and sound recordings, that would allow “two-stop” shopping. Licenses could be tailored and priced depending on the nature of the transmission. For example, download and interactive streaming transmissions, which seem most likely to substitute for the traditional purchase of phonorecords, could be licensed at a higher rate than noninteractive streaming transmissions, which seem more akin to radio broadcasts and thus likely to displace only the musical work copyright owner’s income from licensing public performance by traditional broadcast. This collective licensing arrangement need not displace current collective licensing organizations for musical works, which would still grant licenses for non-Internet uses and which could still grant licenses for Internet uses under the particular rights they have. Nonetheless, existing licensors will likely perceive the development of a new collective licensing agency for Internet transmissions as a threat, given the possibility that a very substantial portion of all music performances and reproductions may shift to the Internet in the not-too-distant-future.⁷³

A less radical collective licensing solution would be for existing collective licensing agencies to expand the scope of their licenses. For example, ASCAP, BMI, and SESAC might obtain from their member copyright owners not only the nonexclusive right to license public performances (as they currently do) but also the nonexclusive right to license any temporary RAM storage that is incidental to such a public performance.⁷⁴ A Web radio station like WebJazz could then obtain blanket performance licenses from ASCAP, BMI, and SESAC for its streaming transmissions and be entitled to stream those musical works regardless of whether any RAM storage of the transmitted works constitutes a reproduction. Similarly, the Harry Fox Agency might change its procedures so that its standard mechanical license not only authorizes digital phonorecord deliveries but also allows any public performance of the musical work necessary to make such deliveries, so that a download site that obtains a DPD mechanical license from the agency would not need a separate performance license from ASCAP, BMI, or SESAC for its download transmissions. This more incremental approach

⁷³ The existence of such a collective licensing agency might raise antitrust issues, although it is not clear that antitrust law would prohibit such blanket collective licensing. *See, e.g., Broadcast Music, Inc. v. CBS*, 441 U.S. 1 (1979).

⁷⁴ This might require modification of the existing antitrust consent decrees governing the activities of ASCAP and BMI.

would, however, only address the licensing of musical works, since no collective licensing mechanism currently exists for sound recordings.⁷⁵

The likelihood of new collective licensing mechanisms emerging is unclear. Copyright owners ordinarily have an economic interest in licensing any valuable use of their work where the license fee to be paid is greater than the value of any alternative use of the work that the license would preclude (multiplied by the probability of that alternative use occurring). Because collective licensing reduces transactions costs, it makes it possible for copyright owners to license more uses of their works than would occur in the absence of collective licensing, and should therefore appeal to copyright owners as a way to increase the revenues generated by their copyrights.⁷⁶ In the context of Internet music, however, economic incentives may not induce collective licensing mechanisms in the near future. On the one hand, ASCAP, BMI, and SESAC have begun granting blanket performance licenses to Internet transmitters, suggesting some willingness among copyright owners to engage in collective licensing. On the other hand, owners of the reproduction rights in musical works and, especially, owners of sound recordings have expressed substantial concerns and uncertainty over how Internet transmissions will reshape the music industry and have therefore generally been perceived as quite cautious about exploiting their works on the Internet, either themselves or through licensing arrangements.⁷⁷ Also, since four different rights are involved (and at least three of those have traditionally been administered separately), if a collective licensing mechanism does not develop for any one right, even collective licensing mechanisms for the remaining rights may not reduce transactions costs sufficiently to make Internet music transmissions workable.

B. Legislative Solutions

Collective licensing solutions address only the transactions costs problem presented by simultaneous performance and reproduction rights, but not the problem of interference with

⁷⁵ While the RIAA has been named to certain negotiating, collecting and distribution functions under the digital transmission performance compulsory licenses, *see* 37 C.F.R. § 260.3(e), 17 U.S.C. § 114(e)(1), the RIAA, appears not to have authority to negotiate on behalf of sound recording copyright owners any performance or reproduction licenses other than the compulsory licenses. *See* “You Need A Voluntary License If You Are...”, <http://www.riaa.com/Licensing-Licen-2.cfm> (visited July 14, 2000).

⁷⁶ Of course, collective licensing has potential disadvantages for copyright owners as well. For example, blanket licenses – likely to be the most efficient form of licensing for Internet music transmissions, where a vast number of works, each of which is owned in part by multiple copyright owners, are transmitted quickly to large numbers of people – pose problems of allocation of license revenues to individual copyright owners.

⁷⁷ For example, in ratemaking proceedings for the compulsory license of the digital transmission performance right enacted in 1995, sound recording copyright owners and licensees proposed widely diverging rates – users suggested 0.5% to 2% of their gross revenues while copyright owners proposed 41.5%. 63 Fed. Reg. 25394, 25395. While these proposals may in part represent strategic positioning, they nonetheless suggest that it may be difficult for owners and potential licensees to agree on a license rate, in part because uncertainty over how the music industry will develop in the digital environment, and how those developments will affect existing revenue streams, makes valuation of Internet uses problematic.

exemptions and compulsory licenses that is presented when someone who engages in a Congressionally sanctioned performance is held also to need a reproduction license or vice versa. If collective licensing solutions do not emerge, engaging in compulsorily licensed or exempt activities could become either significantly more expensive (because of the transactions costs required to negotiate individual licenses of the additional right) or, more importantly, entirely impossible (if rightsholders simply refuse to license the additional right). But even if collective licenses were available they would raise the cost of engaging in activities that Congress has already exempted or licensed. For example, if a collective license for temporary RAM storage of sound recordings in the course of digital transmission performances were to develop, such a license would impose an additional cost on transmitters who are otherwise entitled under the law to transmit sound recordings either without payment to the copyright owner or at statutorily set rates. It is not clear that Congress intended such transmitters to have to bear that additional cost in order to engage in the licensed (or exempt) conduct. The problem of potential interference with exempt or licensed activity, both in preventing the activity and in imposing additional costs, may therefore require a legislative, rather than a collective licensing, solution.

Legislative solutions, like collective licensing ones, could range from incremental to dramatic. One comprehensive legislative solution would be to clarify for *all* types of copyrightable works that temporary RAM storage does not infringe on the copyright owner's reproduction right⁷⁸ and that a transmission that creates a new reproduction of a work but does not make it perceptible to the recipient does not constitute a public performance. Another dramatic solution would be for Congress to grant a unified digital transmission right for musical works and sound recordings that is separate from, and not simultaneous with, the reproduction and public performance rights.⁷⁹ Other radical proposals can be imagined, though the possibility of their adoption seems remote.⁸⁰

⁷⁸ I have suggested this position elsewhere. See R. Anthony Reese, "The Public Display Right: The Copyright Act's Neglected Solution to the Controversy Over RAM Copies", *U. OF ILLINOIS L. REV.* __ (forthcoming 2001) (arguing that for visually-perceptible works the public display right adequately protects copyright owners and obviates the need to consider RAM storage as the making of a "copy").

⁷⁹ Internet music transmitters would then need only one license from musical work copyright owners and one from sound recording copyright owners. Copyright owners could be expected to offer to license the transmission right at different rates for different types of transmissions – higher rates for download and interactive streaming transmissions that substitute for the purchase of phonorecords and lower rates for broadcast or noninteractive streaming transmissions. Collective licensing could emerge where appropriate – particularly for streaming transmissions, where large numbers of works are likely to be involved, making individual licensing very costly – and Congress, where appropriate, could subject the unified right to exemptions and compulsory licenses, particularly if collective licensing mechanisms do not emerge in the market in a reasonable time.

⁸⁰ Another dramatic solution would be to grant copyright owners in musical works and sound recordings full exclusive rights to reproduce and to publicly perform their works without subjecting those works to any compulsory licenses or exemptions, and simply allow market forces to govern the exploitation of those rights. Given the repeated lack of success of previous attempts to eliminate the compulsory mechanical license or to grant a general public performance right in sound recordings, however, this approach has little chance of success. It is also not clear that such an approach would be

A more incremental possibility would be simply to exempt from copyright control any temporary RAM storage of a musical work or a sound recording that is “incidental” to an authorized digital audio transmission or to extend the existing compulsory licenses and exemptions to the digital transmission performance right to cover any such RAM storage necessary to make the licensed or exempt transmission.⁸¹ Under either approach, the exemption or license would extend to the RAM storage of *any* copyrighted work whose transmission is authorized, whether it be a musical work or a sound recording. A streaming audio site such as WebJazz would still need to obtain authorization for public performance of both musical works and sound recordings, but once it got those licenses it would not need any additional reproduction licenses.⁸² An unauthorized transmission, however, could still infringe both the performance and reproduction rights. This approach resembles that already taken with respect to ephemeral recordings that transmitters produce in order to make their transmissions.⁸³ The law treats such reproduction, under certain conditions, as necessary for the authorized transmission and therefore allowable without additional permission from copyright owners. Congress could treat RAM storage incidental to authorized streaming transmissions in the same way and exempt that storage from infringing. This approach corresponds to the functional reality of streaming transmissions. The goal of the transmitter and the recipient of a streaming audio transmission is to allow the recipient to hear the work, and any temporary storage in RAM is purely incidental to that

desirable. The existing scope of exclusive rights and limitations in musical works and sound recordings appears to have offered authors sufficient incentive to call forth a sufficient number and variety of such works while increasing public access to such works by, for example, allowing multiple recording artists to record any musical work and allowing free broadcasting of sound recordings.

Another radical possibility would be to exempt incidental performances and RAM storage but to impose a royalty scheme in which every distribution of certain computer equipment – such as software for downloading or streaming, or RAM memory devices – would require the payment of a small fee to the Copyright Office, which would then periodically distribute the received royalties to copyright owners to compensate them for any performance incidental to a download and any RAM storage incidental to a streaming transmission. *Cf.* 17 U.S.C. §§ 1001-1010 (imposing similar scheme on digital audio recording devices and media). Such a solution seems extraordinarily unlikely to be enacted in the current political climate. On the advantages and disadvantages of such a system, *see* Fisher, *supra* note 2.

⁸¹ Because Part II.B., *supra*, suggests that the simultaneous application of the public performance and reproduction rights to download transmissions seems unlikely to raise significant problems for download transmissions, I have focussed here on the problems presented by considering streaming transmissions to be reproductions by virtue of RAM storage. If the prediction in Part II.B. proves incorrect, a similar approach could be taken for download transmissions. Congress could exempt any incidental performance as part of a lawful digital phonorecord delivery or could extend the compulsory mechanical license to include any such incidental performance.

⁸² This approach would probably require defining the term “incidental” and could lead to interpretive questions about the term, but the Copyright Act already uses the term in various provisions. *See, e.g.*, 17 U.S.C. §§ 1001(5)(A)(i) and (C)(ii), 114(d)(1)(C)(i), 114(j)(2), 115(c)(3)(C) and (D).

⁸³ The Copyright Act allows such recordings if the transmitter is authorized to perform the work recorded, whether the authorization is by means of a license from the owner of the performance right, by a compulsory license, or by an exemption from infringement liability. 17 U.S.C. § 112(a)(1). So, for example, a radio station that wishes to transmit 10 songs, each from a different CD, can make a compilation recording of the ten songs in the order they are to be transmitted, rather than have to put each CD in a player in succession as the songs are broadcast.

listening and unlikely to be of any separate value from the performance – for which the copyright owners are already entitled to compensation.

C. Conclusions

In choosing among these possible solutions, legislation seems preferable to relying only on collective licensing, since collective licensing mechanisms may not emerge and only a legislative solution will protect the compulsory licenses and exemptions that Congress has granted. Among legislative solutions, it seems preferable to act narrowly to solve the particular problems of exploiting music on the Internet and not to attempt to resolve issues that arise in the use of other types of copyrightable works over digital networks. In addition, it seems desirable to adopt a solution that would add as little complexity as possible to this already too-complex area of law. Finally, it seems preferable to adopt legislative solutions that would not preempt private action any more than is necessary.

Amending the law to clarify for *all* types of copyrighted works that temporary RAM storage does not infringe the reproduction right and that a transmission that creates a new reproduction of a work but does not make it perceptible to the recipient does not constitute a public performance would have ramifications far beyond the realm of Internet music transmissions. RAM storage is ubiquitous not only in computer network transmissions of all types of copyrightable works but also in virtually all non-networked computer uses of such works. Similarly, the public performance right applies to other types of works, particularly motion pictures and other audiovisual works. Because of the very different – and currently quite fluid – contexts of digital exploitation of different kinds of works, wholesale changes in the definitions of reproduction and performance would require careful analysis of, and difficult predictions about, all of those contexts. These solutions may thus be overbroad for dealing with the particular problems raised by simultaneous rights in Internet music transmissions, and therefore are probably not justifiable if more targeted solutions are available.

The best solution may therefore be to extend the existing compulsory licenses and exemptions that apply to digital performance transmissions of sound recordings to cover all incidental RAM storage of any copyrighted work in the course of that transmission.⁸⁴ This would prevent the existence of simultaneous rights from impeding users from engaging in licensed or exempt transmission activity. At the same time, because the compulsory license rates for the noninteractive streaming license are set

⁸⁴ The RIAA's president has spoken approvingly of the compulsory license of the digital transmission performance right: "[W]e thought that the blanket license model made sense in this unique environment for this specific purpose. We think the process set up by Congress and currently in place is a good one." Statement of Hilary Rosen, *supra n. 4*. The RIAA might

through a process of periodic voluntary negotiation (followed by arbitration in the event that negotiations fail), the opportunity exists for the parties to ensure that the license rates reflect any value of incidental RAM storage that is not covered in the current license rates, particularly if changes in technology or business arrangements alter the value of such incidental storage in unforeseen ways.⁸⁵

Clarifying that temporary RAM storage incident to authorized streaming audio transmissions does not constitute infringing reproduction of the works transmitted would be only one step toward increasing legitimate Internet dissemination of copyrighted music. Other legal issues still require clarification, such as the scope of the digital transmission performance right exemption for “broadcast transmissions” and when a digital transmission service is “interactive” and therefore ineligible for the compulsory license; the Copyright Office currently has both matters under consideration. Internet music disseminators will continue to face practical obstacles as well. Those who want to operate under the compulsory license of the digital transmission performance right must tailor their activities to the extensive conditions under which the license is available, while those who cannot do so must overcome the transactions costs involved in obtaining permission directly from the copyright owner of each sound recording to be streamed (as well as the possible business resistance of such copyright owners). Nevertheless, the exemptions and compulsory license that Congress created for certain streaming transmissions, if freed from the uncertainty of potential liability for temporary RAM storage, create significant opportunities for streaming a greater variety of music than ever before as part of a variety of business models. This provides a significant start to realizing in legitimate business models the Internet’s promise of increased access to copyrighted music.

therefore be willing to accept extending the compulsory license to temporary RAM storage in order to make the Webcasting compulsory license serve its intended purpose.

⁸⁵ Allowing incidental RAM storage under the compulsory performance license (and exemptions) rather than simply exempting all RAM storage of any work that is incidental to an authorized transmission of a sound recording would give transmitters an incentive to meet the conditions of the compulsory license. If a Webcaster is eligible for the compulsory license for the digital performance transmission right, and if it buys the necessary ASCAP, BMI, and SESAC licenses, it would be entitled to make its transmissions with no further permissions. If, however, the transmitter does not qualify for the compulsory license – for example, because it runs an interactive service – then it will need to obtain reproduction and performance licenses directly from the sound recording copyright owner, performance licenses for the musical works it transmits from ASCAP, BMI, and SESAC, *and* a mechanical license for the temporary RAM storage of each musical work it transmits (from Harry Fox or through the Copyright Office). To the extent we are concerned about fostering activities that Congress has exempted or compulsorily licensed, it makes sense to focus on extending the compulsory license. To the extent that we are concerned that transactions costs may make desirable uses of copyrighted works too costly to occur, if no collective licensing mechanism emerges for temporary RAM storage of musical works in the course of streaming transmissions, simply exempting from infringement *any* temporary RAM storage of a work in the course of an authorized performance of the work would be preferable.