A LITTLE HELP WITH SHARING: A MANDATORY LICENSING PROPOSAL TO RESOLVE THE UNANSWERED QUESTIONS SURROUNDING PEER-TO-PEER LIABILITY FOR CONTRIBUTORY COPYRIGHT INFRINGEMENT IN THE WAKE OF GROKSTER

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I. INTRODUCTION

In June 2005, the Supreme Court held that the peer-to-peer ("P2P") networks Grokster and Streamcast\(^1\) could be held liable for contributory copyright infringement upon a showing that network administrators clearly expressed support for or took other affirmative steps to encourage infringement.\(^2\) In the Supreme Court's only prior holding on the issue of secondary liability, *Sony Corp. of America v. Universal City Studios, Inc.*, the Court established that a manufacturer could not be held liable for contributory infringement if the device was "capable of substantial noninfringing uses."\(^3\) In *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, the Court focused on the networks' culpable conduct—relying on an inducement theory—and came to a conclusion that would allow the lower

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1. In the interest of simplicity, this Note refers to both networks as "Grokster."
court to find Grokster liable on remand without resolving the current circuit split on the issue or rethinking or reinterpreting its prior holding in *Sony*. This ruling essentially overturned the Ninth Circuit’s holding that Grokster was not liable for its users’ infringement merely by virtue of the fact that the system also had substantial noninfringing uses. The *Grokster* Court instead held that the *Sony* doctrine did not foreclose the possibility that an actor could be liable for contributory infringement, even if the device is capable of substantial noninfringing uses, when there is evidence the actor encouraged and induced illegal use of the product.

Thus, while it is now clear that a P2P network that encourages infringing uses of its product can be liable for contributory copyright infringement, the extent of liability for a network that does not actively induce users to infringe copyrights where the system is capable of both infringing and noninfringing uses remains uncertain. Further, the *Grokster* decision is not instructive as to what exactly inducement entails. While the Court was adamant that Grokster’s actions amounted to inducement in the present case, it gave no explanation regarding what actions a network would have to take to be considered “intentionally inducing... infringement,” or alternatively what a network would have to do to avoid inducing infringement on a system capable of both infringing and noninfringing uses. This lack of clarity is of particular importance considering the growing popularity of these types of networks. P2P networks, in particular, are increasingly being used by universities, government agencies, corporations, libraries, and other organizations. Exchange over P2P networks is not limited to music (the digital files at issue in *Grokster*), but includes motion pictures, novels, videogames,

4. Currently, the Ninth Circuit and the Seventh Circuit maintain divergent standards for assessing contributory copyright liability. *Compare In re Aimster Copyright Litig.*, 334 F.3d 643, 649–53 (7th Cir. 2003) (finding that (1) the Ninth Circuit erred in holding that actual knowledge of infringing uses is sufficient for finding contributory negligence, (2) a balancing test is required for technology with both infringing and noninfringing uses, (3) the burden is on the provider to show its technology has substantial noninfringing uses, and (4) the provider must further show that it is too burdensome to significantly reduce the infringing uses), *with A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1019–20 (9th Cir. 2001) (finding that contributory copyright infringement exists where “one who, with knowledge of the infringing activity, induces, causes or materially contributes to the infringing conduct of another”).

5. *Grokster*, 125 S. Ct. at 2774–75, 2782 (remanding the case and stating that “reconsideration of MGM’s motion for summary judgment will be in order”).


7. *id.* at 2776, 2782. The Court instead noted that “[i]nducement has been codified in patent law.” *id.* at 2779 n.11.
television programs, and photographs.\textsuperscript{8} In addition, as digital technology rapidly advances, it will be feasible to disseminate more and more types of copyrighted and uncopyrighted works through P2P networks "with ever greater speed and efficiency."\textsuperscript{9}

Furthermore, considering the amount of money that is at stake (Grokster, for example, agreed to "pay up to $50 million in damages"\textsuperscript{10}), it is extremely important that P2P networks have some sense of their potential liability in a case where no inducement exists, and what they could and should do to avoid such liability. The Grokster opinion is not instructive on this point, and this is exactly where the two concurring opinions diverge. Justice Ginsburg's concurring opinion seems to imply that, had there been no "inducement," a network such as Grokster would still fail the Sony test.\textsuperscript{11} On the other hand, Justice Breyer's concurrence maintains that without culpable intent, a network such as Grokster should not be liable for contributory copyright infringement.\textsuperscript{12}

Prior to the Grokster case, both the Ninth Circuit and the Seventh Circuit confronted contributory copyright liability issues in A&M Records, Inc. v. Napster, Inc.\textsuperscript{13} and In re Aimster Copyright Litigation,\textsuperscript{14} respectively. Although in both cases the defendants were found liable for the infringement of their users, due to the unclear standard set forth in Sony, these two courts came to divergent conclusions in their analysis with respect to the circumstances under which contributory liability should and could be imposed. While the Ninth Circuit focused on whether the defendant had actual or constructive knowledge of the infringement and subsequently failed to act to curb the infringing activity,\textsuperscript{15} the Seventh Circuit concentrated on whether the device was actually used for noninfringing purposes.\textsuperscript{16} The Seventh Circuit interpreted Sony to further require that even where noninfringing uses exist, the network provider must demonstrate it would have been disproportionately costly to design the

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\bibitem{8} See June M. Besek, Anti-circumvention Laws and Copyright: A Report from the Kernochan Center for Law, Media and the Arts, 27 COLUM. J.L. & ARTS 385, 391 (2004).
\bibitem{9} Id.
\bibitem{10} Jeff Leeds, Grokster Calls It Quits on Sharing Music Files, N.Y. TIMES, Nov. 8, 2005, at C1.
\bibitem{11} See Grokster, 125 S. Ct. at 2783–86 (Ginsburg, J., concurring).
\bibitem{12} Id. at 2787–91 (Breyer, J., concurring).
\bibitem{13} A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004 (9th Cir. 2001).
\bibitem{14} In re Aimster Copyright Litig., 334 F.3d 643 (7th Cir. 2003).
\bibitem{15} Napster, 239 F.3d at 1020–22.
\bibitem{16} Aimster, 334 F.3d at 647–53.
\end{thebibliography}
server or monitor the network in a way that would eliminate or reduce the infringing uses in order to escape liability.\footnote{Id. at 653.}

This debate regarding issues surrounding secondary liability is one that must be resolved quickly. Clarification of the \textit{Sony} rule is necessary to encourage legitimate P2P networks by ensuring that networks are fully informed of the extent of their potential liability. Without a resolution, servers will have no way to determine their liability or know what reasonable steps should be taken to avoid such liability. The \textit{Grokster} majority avoided this question by basing its decision on an inducement theory—arguing this would enable copyright owners to protect themselves while keeping the \textit{Sony} rule intact so as not to chill innovation.\footnote{See Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd., 125 S. Ct. 2764, 2780 (2005).} The lack of guidance in the \textit{Grokster} decision, however, could itself chill innovation as it will lead P2P network providers to take economically inefficient steps to avoid liability, disallow uses on their servers even though the uses would not infringe and might further education or some other important goal, or completely abandon their networks in favor of something less risky.

This Note will argue that the best way to resolve this conflict is through a mandatory licensing scheme that puts the burden on the content industry rather than the technology provider to track the use of protected works and petition the service provider for a reasonable royalty. Conventional copyright law did not envision today’s technology, and so it is necessary to find a creative solution in order to properly balance the competing interests of copyright holders and the technology industry. Instead of analyzing copyright infringement taking place through complicated technology under the historic copyright template, any solution should instead focus on the underlying goal of copyright law—to fix a market inefficiency.\footnote{See Pierre N. Leval, \textit{Toward a Fair Use Standard}, 103 HARV. L. REV. 1105, 1107-10 (1990) (explaining that copyright is a “pragmatic measure by which society confers monopoly-exploitation benefits for a limited duration on authors and artists” in order to encourage creative measures that would not otherwise be created).} Copyrights are necessary to encourage artistic expression, but artistic expression should not be encouraged to such an extent that science, education, and other important societal innovations are compromised. Thus, from a market perspective, the best way to facilitate free market exchange is to create a mandatory license that would ensure that copyright owners are compensated fairly while also guaranteeing that network administrators are not faced with such high risks of liability that
innovation is stalled. To this end, this Note will argue that no judicial test will properly resolve all of the unresolved issues, if for no other reason than that the fast-paced nature of the technology market means the potential uses of a network change so rapidly that they will be impossible to track with any legal rule. A mandatory licensing scheme, on the other hand, will strike a fair balance between the content industry and the technology industry without forcing judges to reassess technology every time it changes.

Part II of this Note briefly discusses the history of copyright law. Part III discusses cases that address contributory liability in copyright law and the unresolved issues that stem from these cases—specifically, the circuit split between the Ninth Circuit's *Napster* decision and the Seventh Circuit's *Aimster* decision, as well as the details of the *Grokster* opinion. Subsequently, Part IV proposes a mandatory licensing scheme as a potential resolution to the current tension between the content and technology industries regarding contributory liability for infringement. It further argues that this proposal will resolve five major areas of contributory copyright law that remain unsettled in the wake of *Grokster*: (1) the relevance of a product’s future uses in determining substantial noninfringing uses, (2) the relevance of the current number of noninfringing uses, (3) the level of knowledge required in order to impute secondary liability, (4) to what extent the ability to control an infringing use is relevant, and finally, (5) what constitutes "inducement" under the *Grokster* holding. Part IV concludes with the argument that fast-paced changes in technology will inevitably render any test ineffectual at some point, and thus mandatory licensing will obviate the need to determine these issues in any concrete fashion and will strike the proper balance between copyright and technological innovation.

II. HISTORY OF COPYRIGHT LAW

A. UNDERLYING GOALS OF COPYRIGHT LAW

Article I, Section 8 of the U.S. Constitution provides: “The Congress shall have Power...to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries...”20 This section of the Constitution recognizes that if artists are not properly compensated for

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their contributions to the arts, they will have no incentive to create their works in the first place and society as a whole will be harmed. Copyright law began as a simple mechanism to incentivize artists to create by bestowing upon them the exclusive right to copy their own work.\textsuperscript{22} From an economic standpoint, copyright law merely creates a limited monopoly that allows authors and artists to charge rent on their creation without inputting any additional investment.\textsuperscript{23} Thus, copyright law is in some sense a form of mandatory licensing in that it forces the public to pay for the use of an author's product.

Congress and the judiciary have both recognized, however, that the grant of a limited monopoly to the artists is a mechanism to induce authors to create \textit{for the benefit of the public}.\textsuperscript{24}

In enacting a copyright law Congress must consider two questions: First, how much will the legislation stimulate the producer and so benefit the public, and, second, how much will the monopoly granted be detrimental to the public? The granting of such exclusive rights, under the proper terms and conditions, confers a benefit upon the public that outweighs the evils of the temporary monopoly.\textsuperscript{25}

The scope of a copyright is thus generally limited to the extent that its enforcement confers public benefit.\textsuperscript{26} Copyrights assure that creators create, but giving these rights also prevents others from benefiting from the

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  \item \textsuperscript{22} See \textit{id.}; Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 477 (1984) (explaining that the goal of copyright law is to incentivize artists to create). Under copyright law, the owner of copyright under [17 U.S.C. § 106] has the exclusive rights to do and to authorize any of the following: (1) to reproduce the copyrighted work in copies or phonorecords; (2) to prepare derivative works based upon the copyrighted work; (3) to distribute copies or phonorecords of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending; (4) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and motion pictures and other audiovisual works, to perform the copyrighted work publicly; (5) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work, to display the copyrighted work publicly; and (6) in the case of sound recordings, to perform the copyrighted work publicly by means of a digital audio transmission.


23. See RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 46–49, 72, 304–05 (5th ed. 1998) (discussing copyrights and other "time-limited" property rights, as well as the effects of monopoly pricing on innovation).


26. See U.S. CONST. art. I, § 8, cl. 8; Sony, 464 U.S. at 429; Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 156 (1975); Paramount Pictures, 334 U.S. at 158; Fox Film Corp. v. Doyal, 286 U.S. 123, 127–28 (1932).
diffusion of ideas and eliminates competition so goods are overpriced.\textsuperscript{27} Such rights also could prevent others from advancing on original creations and could lead to an inefficient allocation of resources.\textsuperscript{28} Therefore, courts typically balance the harm to the public that will occur if the copyright is enforced against the harm that will occur if it is not enforced, namely, that authors would have less incentive to produce.\textsuperscript{29}

\section*{B. TENSION BETWEEN COPYRIGHT AND TECHNOLOGY}

As the marketplace becomes more developed, the role of copyright becomes more complex. In particular, advances in technology have made it infinitely easier for people to duplicate copyrighted work.\textsuperscript{30} Traditionally, copyright law is seen as a response to a public goods problem.\textsuperscript{31} Because it costs more to create a work than to imitate the work of another’s, without some sort of required compensation for the author, creators will not have incentive to create and the public will suffer.\textsuperscript{32} In the past, this problem was considered an “incomplete one” because even though copying was always cheaper than creating, it was never costless.\textsuperscript{33} As digital technology advances, however, the cost of copying rapidly approaches zero, greatly exacerbating the public goods problem.\textsuperscript{34} And as the cost of copying nears zero, lay end users are able to copy just as easily as professional

\textsuperscript{27} ROBERT P. MERGES, PETER S. MENELL \& MARK A. LEMLEY, INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE 13 (4th ed. 2006).
\textsuperscript{28} Id.
\textsuperscript{29} See id. at 11, 13–14; infra Part III. The Judiciary Committee of the House of Representatives stated:

The enactment of copyright legislation by Congress under the terms of the Constitution is not based upon any natural right that the author has in his writings, \ldots but upon the ground that the welfare of the public will be served and progress of science and useful arts will be promoted by securing to authors for limited periods the exclusive rights to their writings. \ldots

In enacting a copyright law Congress must consider \ldots two questions: First, how much will the legislation stimulate the producer and so benefit the public; and, second, how much will the monopoly granted be detrimental to the public? The granting of such exclusive rights, under the proper terms and conditions, confers a benefit upon the public that outweighs the evils of the temporary monopoly.

\textsuperscript{30} See Mark A. Lemley \& R. Anthony Reese, Reducing Digital Copyright Infringement Without Restricting Innovation, 56 STAN. L. REV. 1345, 1375 (2004). See also MARK STEFIK, THE INTERNET EDGE 96–97 (1999) (stating that, unlike distributing paper copies of copyrighted work, an individual can copy and distribute countless digital copies at close to no cost).
\textsuperscript{31} Lemley \& Reese, supra note 30, at 1373. See MERGES ET AL., supra note 27, at 10–17.
\textsuperscript{32} Lemley \& Reese, supra note 30, at 1373. See MERGES ET AL., supra note 27, at 11–12.
\textsuperscript{33} Lemley \& Reese, supra note 30, at 1373. See MERGES ET AL., supra note 27, at 12.
\textsuperscript{34} Lemley \& Reese, supra note 30, at 1375. See MERGES ET AL., supra note 27, at 12.
counterfeiters. The public goods problem is further aggravated by the fact that copyright owners typically have few options in terms of remedies against the lay copyright infringer.

There are various factors that contribute to the inefficiency of copyright remedies in the face of this new technology. First, it is hard to find all the end users of the copying technology in order to prosecute them. Second, there are often so many violating end users that bringing suit against each and every one is impractical, if not impossible. Third, even if violating end users are found, many are insolvent. As Randal Picker observed, “[c]hasing individual consumers is time consuming and is a teaspoon solution to an ocean problem.” Additionally, the content industry should be hesitant to prosecute end users because the industry could alienate those who are also customers, as is often the case.

Copyright law must attempt to serve the public interest by giving authors control over their expressions while not affording so much control as to deny “the public access to valuable works and to the raw materials needed for further innovation.” In order to achieve this balance, throughout history copyright law has responded with a series of adjustments to new developments in technology.


41. See Lemley & Reese, *supra* note 30, at 1377.


C. POTENTIAL SOLUTIONS TO THE TENSION BETWEEN COPYRIGHT AND TECHNOLOGY

The copyright-owning industries have dealt with the disruption technology has caused to the efficacy of enforcing copyrights in various ways. To some extent, the industry members can attempt to change their business models in order to use the copyrighted works in ways that do not lend themselves as easily to violations. Additionally, they can attempt to mold the law in light of new technological advancements. Content industries have attempted to employ technological solutions such as digital watermarking, encryption, password protection, and copy protection. The problem with most of these technological protection measures, however, is that they usually can be easily and quickly overridden or disabled by those with technical knowledge.

As will be the focus of this Note, the copyright-holding industries have also turned to contributory liability in order to efficaciously enforce

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44. For example, musicians can focus on live performances as a main source of revenue as opposed to CD sales. John Tehranian, *All Rights Reserved? Reassessing Copyright and Patent Enforcement in the Digital Age*, 72 U. CIN. L. REV. 45, 73 (2003). Typically though, even if a change in the business model can provide a sufficient return on investment, it will not eliminate the need for some mechanism through which copyright holders receive compensation when their works are copied and distributed. Besek, supra note 8, at 478.

45. See Besek, supra note 8, at 392.

46. Digital watermarking basically indicates the ownership rights of a digital file. See, e.g., *COMM. ON INTELLECTUAL PROP. RIGHTS & THE EMERGING INFO. INFRASTRUCTURE, NAT’L RESEARCH COUNCIL, THE DIGITAL DILEMMA: INTELLECTUAL PROPERTY IN THE INFORMATION AGE* 155 (2000) [hereinafter DIGITAL DILEMMA]. Some research indicates that a watermark can be used to restrict the amount of copies that can be made, or to prevent recording or playback of works that have been copied without authorization. Besek, supra note 8, at 447–48. In order to be effective, however, the watermark "must be difficult to detect or remove." Id. at 448. Conversely, other research shows that the watermarks do not themselves prevent copying, but merely provide a means through which copyright holders can determine whether their works are being infringed in order to take legal action. DIGITAL DILEMMA, supra, at 167.

47. Encryption disguises information using algorithm or code "so that only certain users can remove the code and view the information in its original ... form." Besek, supra note 8, at 448. Even sophisticated encryption, however, once decrypted, "can usually be sent ... to additional users without authorization." Id. at 449. Alternatively, "if the [decryption] key at the recipient’s end can be discovered, the encrypted material can be discovered." Id. Additionally, "works published in encrypted form will almost always be available in unencrypted form as well." Paul Goldstein, *Fair Use in a Changing World*, 50 J. COPYRIGHT SOC’Y U.S. 133, 146 (2003).

48. Besek, supra note 8, at 391.

49. Id. at 392.
their copyrights. Any attempt to placate copyright holders by allowing for contributory liability, however, necessarily affects innovation. Particularly, where contributory liability law is unclear, technology developers, as well as authors of copyrighted works, will not be able to predict their legal rights, and as a consequence both will suffer. Any uncertainty surrounding liability for contributory infringement that puts technology distributors and innovators at risk certainly will chill innovation. Thus it is essential that the law establish clear standards.

III. CONTRIBUTORY LIABILITY IN COPYRIGHT LAW

Content industries have attempted to overcome the hurdles that exist to finding and prosecuting end users by going after the technology providers. The company that provides the technology that facilitates copying is usually large and easy to find, is typically solvent, and is not necessarily a customer of the content industry. Therefore, the technology provider is a much more attractive opponent in a suit alleging copyright infringement.

Granting that technological innovation can significantly alter the market for copyrighted work, courts are now faced with a situation in which they must balance the public benefit of enforcing a copyright against the public cost of chilling innovation. If technology providers are exposed to liability for the copyright infringement of their end users, this could greatly deter future innovation. Companies would not only withhold technology from the public for fear of indirect liability, but also have no incentive to spend resources to produce those technologies, and consequently the public at large will lose out. On the other hand, in many instances, if content industries could not rely on contributory liability, they would have no efficacious way to enforce their copyrights and thus less incentive to produce copyrightable works.

50. See, e.g., Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd., 125 S. Ct. 2764, 2770 (2005). It should be noted that copyright holders might “have to rethink their enforcement and litigation strategies from a global perspective.” Peter K. Yu, P2P and the Future of Private Copying, 76 U. COLO. L. REV. 653, 677 (2005). In the wake of mass litigation, many companies could attempt to go offshore, and in particular, “some foreign countries, like China, do not have a sophisticated legal system or a strong respect for the rule of law.” Id. at 677–78.
52. See Lemley & Reese, supra note 30, at 1349, 1377.
53. See id. at 1380.
Therefore, the courts must find a proper balance in order to protect copyright and technology simultaneously—or at the very least avoid protecting one at the expense of the other.54 The "fundamental difficulty," however, with forming a rule of law for contributory copyright liability "is that while courts can make decisions about direct infringement on a case-by-case basis, lawsuits based on indirect liability sweep together both socially beneficial and socially harmful uses of a program or service, either permitting both uses or condemning both."55

A. CURRENT CONTRIBUTORY LIABILITY LAW

Contributory liability exists where the defendant "with knowledge of the infringing activity, induces, causes or materially contributes to the infringing conduct of another."56 The knowledge required for secondary infringement is typically that the defendant "know or have reason to know" of the primary infringement.57 Typically, to have materially contributed to the infringing conduct, the defendant must have engaged in an activity that in some way encourages or facilitates the infringement.58

B. SONY CORP. OF AMERICA V. UNIVERSAL CITY STUDIOS, INC.

The Supreme Court was first faced with the tension between copyright law and technology in *Sony Corp. of America v. Universal City Studios, Inc.*59 In that case, owners of copyrighted television programs brought suit against Sony alleging that Betamax video tape recorders ("VTRs") were used to record copyrighted works.60 The content owners alleged Sony should be held liable for the infringement committed by VTR consumers because of its selling and marketing of the technology.61 The content

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54. Peter Yu points out that "[a]lthough heightened standards are necessary to protect copyright interests, at some point these standards will prevent U.S. technology companies from competing with their counterparts in Asia and Europe, which are not subject to similar constraints unless they intend to import the concerned technology into the U.S. market." Yu, *supra* note 50, at 684.
56. Gershwin Publ'g Corp. v. Columbia Artists Mgmt., Inc., 443 F.2d 1159, 1162 (2d Cir. 1971) (emphasis added) (internal footnote omitted).
57. Cable/Home Commc'n Corp. v. Network Prods., Inc., 902 F.2d 829, 845 & n.29 (11th Cir. 1990).
60. *Id.* at 419–20.
61. *Id.* at 420.
providers sought money damages as well as an injunction against the manufacture and marketing of VTRs.62

Despite the lack of explicit statutory authorization, the Sony Court held contributory infringement did in fact exist in copyright law due to its "historic kinship" with patent law, where contributory liability is plainly authorized.63 The Court also imported from the patent law limitation on contributory infringement the "staple article of commerce"64 doctrine: "[T]he [Patent] Act expressly provides that the sale of a 'staple article or commodity of commerce suitable for substantial noninfringing use' is not contributory infringement."65 The rationale for this limitation is that the public will be injured if it is denied access to an article of commerce that could be used for infringement but also has various legal uses.66 Thus, under Sony, in order for a seller of copying equipment to escape liability it must show that the technology in question "merely be capable of substantial noninfringing uses."67

The Court went on to determine that the VTR was indeed capable of substantial noninfringing uses—namely, "time-shifting"68—and thus found Sony was not contributorily liable for the alleged infringement of its end

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62. Id.
63. Id. at 439–40. Patent law explicitly authorizes contributory liability as follows: (a) Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States . . . during the term of the patent therefor, infringes the patent. (b) Whoever actively induces infringement of a patent shall be liable as an infringer. (c) Whoever offers to sell or sells . . . a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer. (d) No patent owner otherwise entitled to relief for infringement or contributory infringement of a patent shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of his having done one or more of the following: (1) derived revenue from acts which if performed by another without his consent would constitute contributory infringement of the patent; (2) licensed or authorized another to perform acts which if performed without his consent would constitute contributory infringement of the patent; (3) sought to enjoin his patent rights against infringement or contributory infringement . . .

64. Sony, 464 U.S. at 440–41.
65. Id. at 440 (quoting 35 U.S.C. § 271(c)).
66. Id. at 440–42.
67. Id. at 442.
68. Id. The Sony Court concluded that some uses of the VTR infringe on copyrighted material, but those uses that constitute "time-shifting" are not an infringement and are a fair use. Id. at 437, 443–47, 454–55. Justice Blackmun, in his dissent, defined time-shifting: "the user records a program in order to watch it at a later time, and then records over it, and thereby erases the program, after a single viewing.” Id. at 458 (Blackmun, J., dissenting).
users. The Court also noted the significant potential for future authorized copying.

In the end, Sony explicitly recognized the need to strike a balance between protecting copyright owners and shielding innovators from secondary liability resulting from use of their technology. Various individuals involved in the technology industry contend that the Sony rule enabled the recent "explosion of innovation." The Court’s decision, however, made many broad, overarching statements while leaving many details regarding the assessment of contributory liability ambiguous. This Note will focus on four particular unanswered questions in the wake of Sony: First, how do future or potential uses factor into the analysis? Second, what relevance does the current number of noninfringing uses play in the analysis? Third, what level of knowledge is required for secondary liability? And fourth, what role does the ability to control and filter infringement play in the analysis?

C. CONTRIBUTORY LIABILITY FEDERAL CIRCUIT SPLIT

Despite the questions left unanswered in Sony, the case remained the only Supreme Court decision in this area of law until Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd. in 2005. The circuit courts have interpreted Sony balancing in divergent ways and will continue to do so until the Supreme Court or Congress clears up the ambiguities in the law. Particularly, there is a significant divergence between the Ninth Circuit’s Napster decision on the issue and the Seventh Circuit’s Aimster holding.

69. Id. at 456 (majority opinion).
70. Id. at 444. Additionally, it should be noted that in the wake of the Sony decision, innovation in the area of Video Cassette Recorders ("VCRs") enabled VCR tapes to hold larger amounts of information. In re Aimster Copyright Litig., 334 F.3d 643, 650 (7th Cir. 2003). Feature-length films could be recorded on VCR tapes. See id. Consequently, "the movie industry’s failure to block personal video recording technology opened profitable new markets for motion pictures." Brief of the Computer & Commn’s Indus. Ass’n & Internet Archive as Amici Curiae in Support of Respondents and in Opposition to the Writ of Certiorari at *3, Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd., 125 S. Ct. 2764 (2005) (No. 04-480), 2004 WL 2569684 [hereinafter Brief of the Computer & Commn’s Indus. Ass’n]. This unforeseen use of the VCR resulted in the movie-rental industry, which has been quite lucrative for the content industry that ironically attempted to block the use of VCRs at the outset. See Aimster, 334 F.3d at 650.
71. Sony, 464 U.S. at 442.
73. Grokster, 125 S. Ct. 2764.

In 2001, the Ninth Circuit heard a contributory copyright infringement case involving the Napster system.\(^74\) Individuals could access Napster’s network servers and download Napster’s MusicShare software for free from the Napster website.\(^75\) Armed with this software and access to the network server, users were able to access and copy various files—both copyrighted and uncopyrighted—from other users’ computer hard drives.\(^76\)

The Napster system permitted individual users to allow other users to access music on their hard drives and search for music files called MP3 files\(^77\) stored on other Napster users’ hard drives.\(^78\) And finally, once a user located a music file on another user’s computer hard drive, Napster facilitated the ability of that user to “transfer exact copies of the . . . MP3 files” from the other user’s computer to his own hard drive.\(^79\) Furthermore, Napster provided its users with technical support to assist in indexing, searching, and copying MP3 files.\(^80\)

In deciding whether Napster could be held liable for the copyright infringement of its users, the court first noted that it was bound by *Sony* in determining contributory liability.\(^81\) Through its analysis, however, the Ninth Circuit elaborated on *Sony*, attempting to interpret the scope of some of the *Sony* language that the *Sony* Court did not fully detail.\(^82\)

The *Napster* court determined that the number of infringing as compared to noninfringing uses would not be dispositive, instead focusing on establishing constructive knowledge—whether Napster knew or had reason to know of the infringement by its users.\(^83\) The court unequivocally stated that a network operator that knows specific infringing material is

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75. Id.
76. Id. at 1011-12 (providing a somewhat technical and detailed explanation of how the Napster server worked).
77. The court explained: “[T]he Moving Picture Experts Group set a standard file format for the storage of audio recordings in a digital format called MPEG-3, abbreviated as ‘MP3.’ Digital MP3 files are created through a process . . . called ‘ripping,’” which allows the user to copy a CD “directly onto a computer’s hard drive by compressing the audio information on the CD into the MP3 format.” This format then “allows for rapid transmission of digital audio files . . . by electronic mail or any other file transfer protocol.” Id. at 1011.
78. Id.
79. Id.
80. Id.
81. Id. at 1020–21.
82. Id. at 1019–21.
83. Id. at 1021–22.
MANDATORY LICENSING

available on its system "knows of and contributes to direct infringement" if the operator "fails to purge" the offending material from the network. The court thereby intertwined the ability to control—which is typically a relevant factor for vicarious liability and not for contributory liability—into the analysis of contributory liability under the guise of assessing relevant knowledge. It conceded, however, that under Sony, liability for contributory infringement cannot exist where the system operator does not have the particular ability to identify and separate infringing activity from noninfringing activity. Thus, a network with no knowledge of specific infringing acts by its users that merely allows copyrighted material to be exchanged would fall under the protection of Sony.

The Ninth Circuit ultimately concluded that the clear evidence of infringement by Napster users coupled with the proof that Napster had knowledge of the infringing files and the infringing uses resulted in contributory liability. Napster had "actual knowledge [of] specific infringing material," and had the capacity to block access to that material but failed to do so. The Ninth Circuit, however, did not elaborate beyond this broad statement on what kind of blocking capability the network must have to be found liable for secondary infringement. It gave no explanation as to how a future court should go about determining whether a system has the ability to block infringing use, or how the effect on the system of installing any type of filter should be factored into the analysis.

In addition to having the requisite knowledge, the Ninth Circuit found that Napster met the other element necessary in imposing contributory liability—material contribution. The court concluded that by providing a site that enabled users to infringe so easily, Napster materially contributed to its users' infringement. Further, the court considered Napster's ability to control infringing use and its choice not to do so as providing further

84. Id. at 1021. See also Religious Tech. Ctr. v. Netcom On-Line Commc'n Servs., Inc., 907 F. Supp. 1361, 1373–74 (N.D. Cal. 1995) (finding that Netcom needed knowledge of the infringing use at the time "it provided its services" in order to be held liable for contributory copyright infringement).
85. See Fonovisa, Inc. v. Cherry Auction, Inc., 76 F.3d 259, 262 (9th Cir. 1996); Gershwin Publ'g Corp. v. Columbia Artists Mgmt., Inc., 443 F.2d 1159, 1162 (2d Cir. 1971).
86. Napster, 239 F.3d at 1021.
87. Id.
88. Id. at 1021–22.
89. Id. at 1022.
90. Id. at 1019, 1022.
91. Id.
evidence that Napster materially contributed to and was thus liable for its users' infringement.92

According to some commentators, it is “not clear that Sony . . . would have escaped secondary liability under the Ninth Circuit’s reading of the Supreme Court’s test.”93 The plaintiffs in Sony could arguably have provided notice to Sony of “specific infringing uses by particular [users],” thus falling under the Ninth Circuit’s definition of having the requisite knowledge to impute contributory liability.94 The imposition of liability in Napster, however, seemed to turn on both the defendant’s actual knowledge and its ability to prevent the infringement in question, in which case “Sony would not necessarily be liable under the Napster” rule.95 For example, even if Sony learned of a particular user’s specific infringement, it would not be able to stop that infringement once the VTR was in the consumer’s possession and out of Sony’s hands. In the end, the Ninth Circuit’s opinion based liability on notice and ability to control, thereby leaving open the issue of whether a service provider who altered their product in a way that made control impossible could escape liability.

2. Seventh Circuit: In re Aimster Copyright Litigation

The Aimster network worked in a manner similar to the Napster system in that Aimster provided software that could be downloaded free of charge while the Aimster server collected and organized information obtained from the computers of end users.96 Although the server itself did not make copies, it provided tutorials and instructions on how users could themselves swap files, thereby facilitating its users’ infringement.97 After a brief analysis of Aimster’s server, the court noted:

In principle, therefore, the purchase of a single CD could be levered into the distribution within days or even hours of millions of identical, near-perfect . . . copies of the music recorded on the CD . . . . But because copies of the songs reside on the computers of the users and not on Aimster’s own server, Aimster is not a direct infringer of the copyrights on those songs.98

92. See id. (approving of the lower court’s application of precedent).
93. See Lemley & Reese, supra note 30, at 1357.
94. Id. at 1358.
95. Id. at 1358–59.
96. In re Aimster Copyright Litig., 334 F.3d 643, 646 (7th Cir. 2003).
97. Id.
98. Id. at 646–47.
Thus, Aimster would be subject to contributory liability unless the product had substantial noninfringing uses as per the Sony rule.99

Judge Posner, writing for the Aimster court, concluded that imposition of contributory liability for copyright infringement necessarily entailed a balancing of costs and benefits of the system; that balancing, however, would be required only in cases where substantial noninfringing uses were demonstrated.100 Consequently, the court interpreted Sony as requiring that it consider whether the system was capable of a substantial number of noninfringing uses.101 The Aimster court made clear that a server could not escape liability by showing only its potential to be used in noninfringing ways but had to show some evidence that it actually was used for legal purposes.102

The Seventh Circuit indicated that potential uses for the product would be considered in analyzing whether substantial noninfringing uses exist.103 The court again emphasized, however, that just because a system could be used in noninfringing ways did not relieve it from contributory liability.104 Specifically, the court held that prospective uses must be "probable" not merely theoretical.105 Therefore, it concluded, because the system was not actually used in any noninfringing ways, the ability of the network to be used in those noninfringing ways would not absolve Aimster from liability.106

With respect to notice of a user’s infringement and knowledge of actual infringement, the Aimster court found that “willful blindness” amounts to knowledge in copyright law.107 Consequently, Aimster could not escape liability merely because the network operator had installed an encryption device “to prevent himself from learning what surely he strongly suspect[ed] to be the case: that the users of his service—maybe all

99. Id. at 647.
100. Id. at 649–50.
101. See id. at 648, 652–53. This analysis was a significant departure from the Ninth Circuit’s statement in Napster that the number of uses would not be used as a deciding factor (although the Napster court did not use this finding in its analysis). A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004, 1021 (9th Cir. 2001).
102. Aimster, 334 F.3d at 653.
103. Id. at 649–50 (explaining that potential uses are significant in conducting cost-benefit balancing). The Napster court also found that both potential and actual uses are considered in determining whether noninfringing uses are substantial. Napster, 239 F.3d at 1021.
104. Aimster, 334 F.3d at 653.
105. Id.
106. Id.
107. Id. at 650.
the users of his service—are copyright infringers." Thus, the Aimster court factored in the ability of the service provider to screen for infringing use of its system.

The Seventh Circuit further held that the ability of a service provider to prevent customers from infringing should be considered in the contributory infringement analysis. The court stated that even where a device has substantial infringing uses, in order to avoid liability, the network provider must demonstrate it would have been disproportionately costly to design the server or monitor the network in a way that would eliminate or reduce the infringing uses.

In many ways the Aimster ruling was a significant departure from the Ninth Circuit’s conclusion. The Ninth Circuit stated that the number of uses may be relevant to determine whether Napster had the requisite knowledge of infringing uses, but noted that future noninfringing uses should be considered in determining whether substantial noninfringing uses exist. The Seventh Circuit, by contrast, ruled that the product must actually be used for substantial noninfringing uses, and controlling infringing uses must be too burdensome, in order to avoid imputing constructive knowledge. The Seventh Circuit’s rule, while considering potential uses in its determination of whether noninfringing uses were substantial, would place a heavy burden on the defendant to demonstrate that substantial noninfringing uses did in fact exist and to show that it would have been disproportionately costly to eliminate or reduce the infringing uses.

Both the Napster and Aimster interpretations of the Sony rule pose large obstacles to innovation by creating an environment in which any developer of technology that is capable of both infringing and noninfringing uses has no clear guidance as to what liability might result from said technology. There is no instruction as to whether a service provider needs to design the technology to reduce infringement, or what

108. Id.
109. Id. at 648.
110. Id.
111. Id. at 648, 653.
113. Aimster, 334 F.3d at 653.
114. Id. at 652.
115. Id. at 653.
kind of evidence it will need to show to establish actual noninfringing as compared to infringing uses in order to escape contributory liability.

D. METRO-GOLDWYN-MAYER STUDIOS INC. V. GROKSTER, LTD.

The Ninth Circuit was again faced with a contributory infringement case in 2005—Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.116 This time, however, the court decided differently than it did in Napster.117 The Grokster circuit and district courts distinguished the Grokster network from the networks at issue in Napster and Aimster because, unlike those networks, Grokster is a decentralized “second generation P2P,”118 which means users share files without ever transmitting the information through a central server.119

Initially, the district court found that defendants were not obliged to police the network but had a duty only “where a defendant has the ‘right and ability’ to supervise the infringing conduct.”120 Because the Grokster server did not have control over who used its network or what was shared over it due to the lack of a central server, the lower court refused to impose liability.121

The Ninth Circuit agreed with the lower court’s conclusions.122 The court appeared to find that the lack of a central server made the network analogous to the VTR in Sony in that once the user had access to the technology the distributor had no control over its use.123 Specifically, the decentralized Grokster server seemed more like a VTR, a stand-alone product that once distributed to users was completely out of the distributor’s control, as opposed to an ongoing service like Napster that could be continually controlled.124 Thus, the court held that because the

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117. See id. at 1166–67.
120. Grokster, 259 F. Supp. 2d at 1045 (quoting A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004, 1023 (9th Cir. 2001)).
121. Id. at 1045–46.
122. Grokster, 380 F.3d at 1167.
123. See id. at 1163; Binder, supra note 118, at 14.
124. Grokster, 380 F.3d at 1163.
users exchange files directly through a central server, the *Grokster* defendants did not have the requisite knowledge or material contribution to be liable for contributory infringement. The court observed that if the defendants "'closed their doors and deactivated all computers within their control, users of their products could continue sharing files with little or no interruption.'" Furthermore, the Ninth Circuit explicitly recognized that the court must be careful when the claim at hand involves rapidly developing technology:

> The introduction of new technology is always disruptive to old markets, and particularly to those copyright owners whose works are sold through well-established distribution mechanisms. Yet, history has shown that time and market forces often provide equilibrium in balancing interests, whether the new technology be a player piano, a copier, a tape recorder, a video recorder, a personal computer, a karaoke machine, or an MP3 player. Thus, it is prudent for courts to exercise caution before restructuring liability theories for the purpose of addressing specific market abuses, despite their apparent present magnitude.

Finally, the Ninth Circuit concluded that *Grokster*’s hypothetical ability to redesign their technology so that they could have some control was irrelevant.

Subsequently, Justice Souter, writing for the Supreme Court, for all intents and purposes overturned the Ninth Circuit’s holding. The *Grokster* Court left many questions unanswered, however, by determining that it could decide the case at bar without the need to revisit *Sony*, leaving the tension between the decisions of the Ninth Circuit and the Seventh Circuit unresolved. The Court found that *Grokster* “clearly voiced the objective that recipients use [its system] to download copyrighted works,” and held that was enough for the lower court to find

125. *Id.* at 1163–64.
126. *Id.* at 1163 (quoting *Grokster*, 259 F. Supp. 2d at 1041).
127. *Id.* at 1167.
129. Metro-Goldwyn-Mayer Studios Inc. v. *Grokster*, Ltd., 125 S. Ct. 2764, 2782–83 (2005). Although the case was technically remanded for the lower court to reconsider the issue in light of the Supreme Court’s decision, the rule the opinion set forth left little room for the lower court to find in favor of *Grokster* on remand. See *id.* at 2782 (stating, “[o]n remand, reconsideration of MGM’s motion for summary judgment will be in order”).
130. *Id.* at 2778–79.
131. *Id.* at 2772.
contributory infringement upon remand, regardless of whether the network was capable of substantial noninfringing use.\textsuperscript{132} In particular, the \textit{Grokster} Court found that the defendants specifically targeted the former Napster market and, deciding the case on an “inducement theory,” held that the \textit{Sony} rule did not excuse a system from liability where the system operator clearly encouraged infringing uses of the system.\textsuperscript{133} The Court stated that because the inducement theory “premises liability on purposeful, culpable expression and conduct,” it does not “discourage innovation having a lawful [purpose].”\textsuperscript{134}

Although the \textit{Grokster} Court did not discuss the issue in detail, in deciding the case on an inducement theory it did use the fact that the defendants made no effort to control or filter the sharing of copyrighted files as evidence of its intent to induce users to infringe.\textsuperscript{135} The Court conceded, however, that if there had not been such strong evidence of intent, contributory infringement could not be found based solely on “failure to take affirmative steps to prevent infringement” where a device was in fact “capable of substantial noninfringing uses.”\textsuperscript{136}

Thus, the \textit{Grokster} Court left relatively untouched the issues of (1) the relevance of potential noninfringing uses of the device, (2) the application of the current number of noninfringing uses, (3) the requisite level of knowledge to impute contributory infringement, and (4) the consequences of not using one’s ability to control infringement. Rather, the Court added a new question—what constitutes “inducement”—to the litany of unresolved issues surrounding contributory liability for copyright infringement.

1. \textit{Grokster} Concurrence: Justice Ginsburg

While the majority opinion relied solely on an inducement theory to justify its holding without revisiting \textit{Sony}, Justice Ginsburg filed a concurring opinion in which she went a step further and argued that even if the defendants had not actively encouraged the infringement, they would still be liable under \textit{Sony} based on the mere distribution of their product.\textsuperscript{137}

Justice Ginsburg admitted that once the \textit{Sony} Court determined a noninfringing use existed—namely, time-shifting—it did not “give precise

\textsuperscript{132} \textit{id.} at 2778, 2782.
\textsuperscript{133} \textit{id.} at 2773, 2779–80.
\textsuperscript{134} \textit{id.} at 2780.
\textsuperscript{135} \textit{id.} at 2774.
\textsuperscript{136} \textit{id.} at 2781 n.12.
\textsuperscript{137} \textit{id.} at 2783 (Ginsburg, J., concurring).
content to the question of how much [actual or potential] use is commercially significant." But she believed the Ninth Circuit's interpretation of Sony would create a situation in which contributory liability would be limited to a "hardly-ever category." And in her view, this result should not be the implication of Sony.

Justice Ginsburg then distinguished Grokster from Sony, pointing to the fact that there was no fair use found in Grokster and only "anecdotal evidence of noninfringing uses." She did not find the various declarations sufficient to show that there were in fact substantial noninfringing uses, and further asserted that even if the actual number of noninfringing uses were large, it would not automatically relieve the network from liability because that could merely reflect the huge number of files being shared. She thus posited that "if, on remand, the case is not resolved on summary judgment in favor of MGM based on Grokster... actively inducing infringement, the Court of Appeals... should reconsider... its interpretation of Sony's product distribution holding."

2. Grokster Concurrence: Justice Breyer

Unlike Justice Ginsburg, Justice Breyer's concurring opinion asserts that the Grokster defendants would not be liable if it were not for the fact that they had actively encouraged infringing use of their system. Justice Breyer observed that the Sony decision attempted to "strike a balance between a copyright holder's legitimate demand for effective—not merely symbolic—protection of the statutory monopoly, and the rights of others freely to engage in substantially unrelated areas of commerce," and held that there could be no secondary liability for another's infringement unless the device was "unsuited for any commercial noninfringing use." From this Justice Breyer concludes that the Grokster defendants pass Sony's test—their device being "capable of substantial... noninfringing uses."

138. Id. at 2784 (quoting Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 442 (1984)).
139. Id. at 2784 n.1.
140. See id. at 2784 & n.1.
141. Id. at 2785.
142. Id. at 2786.
143. Id. at 2786–87.
144. Id. at 2787 (Breyer, J., concurring).
145. Id. (quoting Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 442 (1984)).
146. Id. (quoting Dawson Chem. Co. v. Rohm & Haas Co., 448 U.S. 176, 198 (1980)).
147. Id. at 2788 (citing Sony, 464 U.S. at 442).
The main point of contention between the concurring justices seems to be the application of the *Sony* "substantial noninfringing uses" test. Justice Breyer seems to suggest that the *Sony* test can be satisfied even where the number of noninfringing uses is relatively small. Justice Ginsburg, on the other hand, appears to side with the Seventh Circuit’s conclusion that the *Sony* test is not met if the vast majority of uses are infringing and that the defendant has a burden to show the product is in fact actually, not just hypothetically, used in legal ways.\(^{148}\)

Justice Breyer’s concurrence focuses specifically on the *Sony* language “capable of,” concluding that this necessarily entailed looking at potential future uses.\(^{149}\) He found that various noninfringing future uses of P2P networks did exist.\(^{150}\) Further, he asserted there likely could be future unforeseen uses, referencing the development of the video-rental industry following the *Sony* decision.\(^{151}\)

Justice Breyer ultimately felt that the *Sony* rule correctly balanced the need to protect copyright against the need to protect new technology.\(^{152}\) In his view, the *Sony* rule imposed the correct level of scrutiny before finding distributors of new technology liable in order to protect technology.\(^{153}\) He was not convinced that Justice Ginsburg’s approach would effectively protect technology because, under her rule, the defendant would have to produce considerable evidence to prove the device had noninfringing uses.\(^{154}\) This heavy burden on the defendant would undercut the protection *Sony* bestowed on new technology.\(^{155}\)

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148. Compare id. at 2785 (Ginsburg, J., concurring), with supra Part III.C.2.
149. *Grokster*, 125 S. Ct. at 2789 (Breyer, J., concurring).
150. Id. at 2789–90. Justice Breyer listed the following types of files now being exchanged as evidence that P2P networks are increasingly being used for noninfringing activities: “research information . . . ; public domain films . . . ; historical recordings and digital educational materials . . . ; digital photos . . . ; ’shareware’ and ‘freeware’ . . . ; secure licensed music and movie files . . . ; news broadcasts past and present . . . ; user-created audio and video files . . . ; and all manner of free ‘open content’ works collected by Creative Commons.” Id. at 2790 (italics omitted) (citing Brief of Amicus Curiae Distributed Computing Indus. Ass’n in Support of Respondents at *15–26, Grokster*, 125 S. Ct. 2764 (No. 04-480), 2005 WL 508118). See generally Robert P. Merges, *A New Dynamism in the Public Domain*, 71 U. CHI. L. Rev. 183, 183–203 (2004) (discussing the actions that private parties are taking to expand the public domain in an effort to counterbalance what many consider to be overreaching intellectual property rights).
151. *Grokster*, 125 S. Ct. at 2790 (Breyer, J., concurring). For more information about the development of video rentals, see supra note 70.
152. *Grokster*, 125 S. Ct. at 2791 (Breyer, J., concurring).
153. Id. at 2791–92.
154. Id. at 2792.
155. Id.
Further, Justice Breyer observed that unauthorized copying could lead to a decrease in the amount of copyrighted work produced. He stated, however, that “[t]he extent to which related production has actually and resultingly declined remains uncertain, though there is good reason to believe that the decline, if any, is not substantial.” He also pointed out that new technology may help curb infringement and that advances in technology have made it cheaper and easier for users to lawfully copy files. And in particular, Justice Breyer intimated that the Sony rule has enabled many non-music P2P networks to develop in the recent past, and thus, although a concrete rule is preferable, “a strong demonstrated need for modifying Sony... has not yet been shown.”

3. The Current Importance and Popularity of Decentralized P2Ps

Decentralized P2P networks have countless advantages over other types of networks, and it is likely there will be numerous future uses that will significantly advance technology. In particular, P2P networks afford great access to information and stability, and eliminate the technical problems that could ensue when information must be accessed through a centralized server. Furthermore, many argue that P2P sharing promotes

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156. Id. at 2794.
157. Id.
158. Id. at 2795. Specifically, Justice Breyer mentions “digital watermarking” and “digital fingerprinting,” which “encode within the file information about the author and the copyright scope and date.” Id. (citing RIAA Reveals Method to Madness, A.P., Aug. 28, 2003, available at http://www.wired.com/news/digiwood/0,1412,60222,00.html). These “fingerprints” can help to expose infringers.” In addition, users’ ability to make digital copies can be restricted through encryption. Id. (quoting RIAA Reveals Method to Madness, supra).
159. Id. at 2795–96. It should be noted, however, that Justice Breyer states that “[j]ourneys are less well suited than Congress” to create a guideline for new technologies. Id.
160. See Brief of the Computer & Commc’ns Indus. Ass’n, supra note 70, at *9–16.
161. Id. at *9–10. Most notably, communications continued on P2P networks on September 11, 2001, when all news websites and telephone systems were overwhelmed. Id. at *10. Further, NASA and libraries use P2P networks in order to provide access to extremely large data files with reduced strain on their servers. Id. at *11. P2P networks also allow greater access to public information and news. For example, the BBC provides open access to archives of its TV and audio recordings and the U.S. government provides access to “[c]ensus records, legislative history, agency rules and notices, public service films and scientific reports... on P2P networks.” Id. at *11–12. Additionally, Supreme Court oral arguments are available through the Oyez Project’s P2P network in MP3 format. Id. at *13 & n.40.
free speech, and therefore any restraint placed on the Internet necessarily implicates free speech. Television and newspaper advertisements can be prohibitively expensive, but “anyone with an Internet connection is now able to place government material, . . . political [advertisements], satire, or commentary in the public eye at very little cost.”

As Justice Souter points out in his majority *Grokster* opinion, because of the various advantages to P2P networks, their use for countless tasks has greatly increased and continues to do so—"universities, government agencies, corporations, and libraries," to name a few, use the same type of P2P network employed in *Grokster.* The lack of central computer servers eliminates "the need for costly server storage space." Additionally, users are able to retrieve files more quickly than if they had to go through a central server and there is no "risk that a glitch in the server will disable the network in its entirety."

With the recent trend of iTunes and other websites offering downloadable music for a fee, on the surface it might seem like this issue is temporarily resolved for the music industry. The greater problem, however, does not vanish just because users are temporarily willing to pay for downloads. Although customers seem generally satisfied with iTunes, there are various disadvantages to the iTunes scheme.

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Also, many P2P networks currently exist that demonstrate the countless noninfringing uses for P2P technology. For example, Stanford University's "LOCKSS" project "creates low-cost, persistent digital "caches" of authoritative versions of http-delivered content' and delivers them via a peer-to-peer network"; the OSLO Group and Utah State University's "eduCommons" provides "an open system for creating, sharing, and reusing educational content and discourse to support learning"; and Project Gutenberg's website "has made almost 10,000 works of world literature available to millions of readers around the world through peer-to-peer technology." Noninfringing Uses of Peer-to-Peer Networks: Introduction, http://www.arl.org/info/frn/copy/p2p.html (last visited Oct. 31, 2006) (providing information about these and numerous other educational projects using peer-to-peer technology).


163. Id. at *13.

164. *Grokster*, 125 S. Ct. at 2770. In response to the numerous suits the content industry filed, some universities resorted to banning the use of Napster on their servers altogether, though others, such as MIT, Princeton, and Stanford, refused to do so due to free speech, privacy, academic freedom, learning, culture, and democratic discourse. Yu, supra note 50, at 703.


166. Id.


168. Id. at 699. The specific disadvantages of the iTunes model will be discussed infra Part IV.A.5.
Although most P2P file sharing involves MP3 music downloads, there are many P2P systems that provide access to noninfringing files. As use of the Internet becomes increasingly frequent, system operators need to find a way to minimize their liability while continuing to allow users maximum freedom to search, find, and exchange information. In order to ensure system operators continue to innovate, there must be a clearly stated rule of liability to minimize risk and incentivize improvement in technology. Any uncertainty with regards to liability will necessarily chill innovation, especially for more risk-averse entities.

Considering the efficiency of P2P networks over other types of servers, and how many entities use P2P networks in order to disseminate vital information, any legal rule imposing liability on the network operators should be carefully calibrated to ensure these types of networks still can be freely used and advanced upon without risk of huge liability. Any large and successful network teaches a valuable lesson to future generations. The risk of lawsuits will have a chilling effect not only on the current networks, but also on potential advances to current networks.

Thus, at some point in the very near future, it will be necessary for the Court—or Congress—to set a definitive standard for when a network administrator can be held liable for the infringement of its users. Specifically, the Grokster decision failed to address four subissues of secondary liability for copyright infringement about which the lower courts have failed to reach agreement. First, although the Seventh Circuit and the Ninth Circuit both held that future uses should be considered, it is still unclear how and to what extent such uses fit into the analysis. Second, it is not clear how the number of noninfringing uses should affect the outcome, as also evidenced by the concurring Grokster opinions. Third, it is not clear whether constructive knowledge that users are infringing is enough to impose secondary liability or whether the network operator must have actual knowledge of specific infringing uses. Finally, there is no clear answer as to whether the network operator’s ability to control or block access to certain files should be considered. Additionally, Grokster begs the

169. See Noninfringing Uses of Peer-to-Peer Networks, supra note 161.
171. See supra Part III.C.
172. See supra Part III.C.
question of what inducement entails, although lower courts have not yet had occasion to attempt to answer this question.

IV. POTENTIAL RESOLUTION—MANDATORY LICENSING

The recent advances in technology that facilitate copying have made copyright law ineffectual to some extent. But the answer is not to force the new advances into the current doctrine—the proverbial square peg into the round hole. Rather, this complicated situation requires careful and creative solutions that do not necessarily remain within the confines of historic copyright law. Given the rapid and frequent advances in technology, any model under which courts analyze contributory liability will likely become obsolete in a short period of time. At present, there is no legal scheme that allows copyright owners to receive reasonable royalties while also allowing wide dissemination of information through the Internet. The most obvious way to allow these competing interests to coexist would be a form of mandatory licensing.

A. PROPOSED MANDATORY LICENSING SCHEME

In light of all the competing considerations, forcing copyright holders to allow exchange of their work over P2P networks in exchange for a fixed reasonable royalty seems the best answer. The copyright owner will get a payment in exchange for the network being able to continually provide access to such files free of liability. It should be noted from the start that

173. Brian Leubitz, Digital Millennium? Technological Protections for Copyright on the Internet, 11 TEX. INT’L PROP. L.J. 417, 419 (2003). See also Audio Home Recording Act, Pub. L. No. 102-563, 106 Stat. 4237, 4240–44 (1992) (codified at 17 U.S.C. §§ 1003–1007 (2000)) (implementing a royalty payment system but failing to create a mechanism through which copyright owners can obtain royalties for songs downloaded via the Internet). Many scholars have proposed resolutions to the current tension between copyright and technology. For example, Neil Netanel has proposed a levy that would be assessed on the sale of products and services “whose value is substantially enhanced by P2P file sharing.” Neil Weinstock Netanel, Impose a Noncommercial Use Levy to Allow Free Peer-to-Peer File Sharing, 17 HARV. J.L. & TECH. 1, 4 (2003). This would likely “include Internet access . . . and consumer electronic devices . . . used to copy, store, transmit, or perform downloaded files” and the levy would be used to compensate copyright owners. Id. Though this proposal does allow for copyright immunity for noncommercial copying, like many hypothetical mandatory licensing schemes, there is still a risk it enforces a cost on many who do not actually infringe. Others have proposed introducing an “intermediary” to “act as a gatekeeper.” Besek, supra note 8, at 494. This proposal raises privacy concerns and risks discouraging legitimate uses, as users who know they are being monitored might be disinclined to act even in ways that would not be infringing. Id. at 496. Further, using an intermediary would add financial costs to the system. Id.
any scheme Congress or a congressional committee ultimately implements must be flexible considering the nature of technology.\textsuperscript{174}

1. A Congressional Commission Would Determine the License

The proposed mandatory licensing scheme would be set up and periodically amended by a congressional committee. That same committee would also hear and resolve any subsequent disputes. Congress has frequently set up compulsory licensing schemes in the past and thus, this responsibility would not be a completely foreign task.\textsuperscript{175} This Note will not set forth the details of exactly who should comprise the committee, although, it would be helpful to have at least some individuals with technological backgrounds involved.

2. The Copyright Holder Has the Burden of Petitioning for the Royalty

In order to ensure the network administrator is not overburdened and users have wide and easy access to information, the burden of petitioning for royalties would fall on the content industry. Copyright holders would have to petition a system operator and demonstrate use of their copyrighted product. There would be no minimum number of uses required to be eligible for the royalty. It would not be cost effective, however, for a firm or individual whose copyrighted work is available or copied infrequently to invest time and money monitoring a network. In other words, those whose works are barely infringed will likely self-select themselves out of the process.

Further, considering the importance of technology to the U.S. market, any proposal attempting to remedy the tension between copyright and

\textsuperscript{174} See Leubitz, \textit{supra} note 173, at 433.

\textsuperscript{175} The Audio Home Recording Act of 1992 requires manufacturers and importers of digital hardware and blank digital media to pay compensatory royalties to copyright holders injured by the new technology. 17 U.S.C. §§ 1003, 1004, 1006 (2000). Title 17 (Copyrights) also grants compulsory licenses to produce and distribute "phonorecords" of "nondramatic musical works." \textit{Id.} § 115. Phonorecords are defined as "material objects in which sounds . . . are fixed by any method now known or later developed, and from which the sounds can be perceived, reproduced, or otherwise communicated." \textit{Id.} § 101. It expanded mandatory licensing to include songs. \textit{Id.} § 115. And further, because of Internet advances, compulsory licensure now includes distribution of sound recordings via digital transmission and by webcasters. \textit{Id.} § 114(d)(2). Compulsory licensing encompasses television as well. Cable companies must pay statutory royalties for the right to retransmit broadcast signals under limited conditions. \textit{Id.} § 111. Title 17 also extends mandatory licensing to include satellite retransmission of television programs. \textit{Id.} § 119. Similar compulsory licenses have been employed in Canada and many European countries, several of which impose taxes on equipment or P2P goods and services. Yu, \textit{supra} note 50, at 707.
technology should err on the side of protecting technology. As Susan Crawford observed:

Despite the recent slump, . . . activity in the consumer electronics market directly or indirectly impacts ten percent of U.S. economic activity (GDP)—producing nearly $950 billion in commerce yearly. Revenues for consumer electronics products are expected to total a record $99.5 billion in 2003, marking a 3.5 percent increase over 2002. The information technology industry (computer hardware, software, and services) was the engine of economic growth in the 1990s. While IT-producing industries represent only 7 percent of all U.S. businesses, they accounted for roughly 28 percent of overall real economic growth between 1996-2000. IT’s share of GDP rose from 3.2 percent in 1990 to 4.9 percent at the peak in 2000, and still accounts for 4.2 percent. These numbers overshadow the revenues of the movie and video industry over the same period. While it is important to ensure the proper functioning of the copyright system, it is fair to ask whether shifting encryption and design costs to the information technology industry, and constraining this industry’s ability to innovate, makes sense.\(^{176}\)

In a sense, there is no straightforward way to assess the effect of IP rights on the economy\(^ {177}\)—one can only speculate about how much less creation would ensue if copyright protection were weaker. There is no concrete evidence that intellectual property rights are necessary or whether they are just an institutional preference.\(^ {178}\)

Under the proposed licensing scheme, the content industry would, to some extent, determine the line where not enforcing a copyright will result in less incentive to innovate. In theory, that would be the point at which copyright holders would be willing to make the effort to track the use of their work and petition the service provider for the reasonable royalty provided for in the compulsory licensing scheme.

Furthermore, putting the burden on the copyright holder to petition the Internet service provider or network administrator for a royalty would be consistent with section 512 of the Digital Millennium Copyright Act (“DMCA”), which allows a copyright holder to send a “take-down notice” instructing a network to disable or remove access to the infringing

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177. See Merges et al., supra note 27, at 16–17.
178. See id. at 17–18 (posing the question whether the incentives of the copyright system are “necessary to invention and creation” and noting that a debate exists over this very question).
This provision has caused problems in that the methods the Recording Industry Association of America ("RIAA") has used to discover infringement too often resulted in false positives, causing public embarrassment. Further, a mistake under the take-down provision could lead to an unwarranted shutdown of an entire Internet connection.

The proposed mandatory licensing scheme, however, would effectively avoid any case in which the network operator believed the copyright holder’s information regarding files infringed on its network were false by having the congressional committee that determines the payment scheme also set up a contingency intermediary "tech panel," which would investigate any case in which a disagreement arose. It is unlikely this panel would be necessary in very many cases, seeing as the content industry might recant any take-back provision as soon as an individual objected and the content owner realized the mistake. And, in the case of a false positive, under the mandatory licensing scheme, at the very worst, a copyright holder would be paid unfairly—as compared to the DCMA solution, where a false positive could lead to a shutdown of an entire Internet connection.

Additionally, putting the burden on the content industry will avoid placing that considerable burden on technology providers, which would likely chill innovation significantly. Considering that the underlying goal of copyright law is to offer fair compensation as incentive for authors to

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180. Yu, supra note 50, at 661. For example, the RIAA sent a Professor Usher at Pennsylvania State University a cease-and-desist letter after locating an MP3 file named "usher," which turned out to be a recording of a song about the Swift gamma ray satellite by an a cappella group made up of Penn State astronomers and astrophysicists. Id. at 661–62.
181. See id. at 662. When the RIAA sent the letter to Professor Usher, see supra note 180, Penn State’s central computing department received it and, in the middle of final examinations, threatened to shut down the entire system if the infringing material was not removed within forty-eight hours. Yu, supra note 50, at 662. Luckily the manager of the computing department was able to convince the department not to shut down the connection when he realized the RIAA was mistaking the a cappella MP3 for an infringing file. Id.
182. See, e.g., id. For example, once the RIAA realized its mistake in the Penn State incident, see supra notes 180–81, it withdrew its cease-and-desist letter and sent an apology and a tee-shirt to Professor Usher. Yu, supra note 50, at 662. It should also be noted, however, that a falsely identified infringer lacks legal recourse where the copyright owner acted in good faith under the DMCA. Id.
183. Leubitz, supra note 173, at 440–41. Leubitz’s article sets forth a mandatory licensing proposal that puts the burden on the ISPs, and then concedes this type of regulation will significantly burden the service providers. Particularly, Leubitz recognizes his mandatory licensing scheme would hurt small companies by erecting a large entry barrier to the market. Id.
create, technology should not be burdened to reach that end. Where someone has to bear the burden of monitoring, it follows that those who benefit most from the copyright should bear that cost.

3. Calculating the Reasonable Royalty

The next hurdle is to determine what qualifies as a reasonable royalty. The ultimate goal in setting up the payment would be to make it both fair and simple. Thus, the reasonable royalty should approximate the amount of use but should also be flexible enough to ensure calculations do not overburden the network administrator or the content industry. Further, the P2P operators must be able to practically estimate the amount of royalties they will be forced to pay. Without this certainty the operators will face the same risk they currently do and the unknown state of future liability will chill innovation.

In order to create a system in which (1) the copyright owner is able to receive a reasonable royalty approximating the amount of use, and (2) the network administrator can ex ante estimate its potential liability to the content owner, the royalty schedule should be in the form of a graduated scale of fixed payments. Each range of the number of times a file is downloaded will correspond to a reasonable royalty. For example, where a copyright holder shows a work was downloaded between one and one hundred times, the compensation will be fixed at an amount that corresponds with that range. As the copyright holder moves up to the next range, by showing the work was downloaded more often, the royalty will increase accordingly. The rates will be set for a fixed period of time, reevaluated and, if altered, a preannouncement made before the period ends. This system will give the network administrators certainty as to what the rates are, and fair warning as to what they will be adjusted to for the next cycle.

In creating this graduated scale, the congressional committee should account for the fact that copyright law was not intended to make authors wealthy but intended to incentivize production. As Lawrence Lessig argues, "[t]he protection that the law allows is just enough to create an incentive to produce, and is not so much as to produce a choke on future

Therefore, the graduated scale of reasonable royalties should err on the side of technology. It should recognize that in all likelihood, most authors and artists also receive revenues from their copyrighted works through other sources and do not necessarily need large revenues from the use of their files on P2P networks. This is not to say no situations exist in which artists receive the bulk of their revenues from P2P file-sharing royalties, but in an effort to ensure that copyright holders do not get to control the distribution and use of innovative technology, as much as possible, the royalties scale should ensure paying the royalty will not chill technological innovation.

Determining a reasonable royalty is not a completely novel undertaking. In a sense, copyright law in general is a compulsory license because in granting authors a limited monopoly on their work, copyright law imposes a compulsory license on society for the use of the author’s product. More specifically, however, in 17 U.S.C. § 115(c)(2), Congress has set a royalty of “two and three-fourths cents, or one-half of one cent per minute of playing time or fraction thereof, whichever amount is larger.” Using guidance from previous licensing schemes and information about the market for copyrighted works, it should be easy to work out a reasonable rate for Internet networks.

4. Statute of Limitations

There will be a statute of limitations on the time in which a copyright owner may petition for the royalty on an infringed file. This limitation will lessen further a network owner’s risks stemming from uncertainty. It will enable the network administrator to better estimate potential liability for royalties. This might put a greater burden on the content holders in that they must constantly monitor use, but again, this furthers the ultimate goal of this proposal—to protect technology while at the same time compensating copyright holders.

5. Advantages of the Proposed Mandatory Licensing Scheme

There are a plethora of advantages to the proposed mandatory licensing scheme. To start, as with any mandatory licensing scheme, this

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186. See supra note 175 and accompanying text.
proposal allows copyright holders to reap a fair reward while at the same time “permitting the public to have unrestricted access to copyrighted works.” Furthermore, it takes the judicial system out of the business of determining contributory liability—an extremely complicated issue that has confounded the courts thus far. The complexity particularly stems from the fact that imposing indirect liability on a digital entity—specifically a P2P network—requires either permitting or condemning “both socially beneficial and socially harmful uses of a [product].”

In addition, by putting the burden on copyright holders rather than the network, it is they who must determine whether the amount of royalties to ultimately be received is worth the investment of monitoring for use. This means the licensing will be self-selecting to a certain extent, weeding out both the works used so infrequently that the copyright holder would not expend the time or money searching for infringement and those cases in which the copyright holder would voluntarily allow users to freely download the information.

Further, this proposal gives the network administrator great flexibility in determining how to pass royalty costs on to users, or alternatively, whether to take the loss without passing the price onto users at all. The network, for example, could create a set fee for use of the network, or charge a price per download, or could keep track of use and send a bill at the end of the month. The network administrator could even decide to filter infringing files from its system if it decided this would be more cost effective than paying the royalty. The network itself, however, rather than the court, would make the decision about whether to filter its network. On a related note, the network would not be compromised due to filtering that was forced upon it and caused the system to function poorly.

Some networks might find that users who download single files at a time would feel more burdened by having to pay a small amount per download rather than a set fee per month. Or, some users might value time the most, and the extra time it would take to pay for each download could discourage them from using the network. Alternatively, some users might feel inclined to use a system where they pay only for what they use, thereby preferring to pay a small amount per use than a set price that could potentially overestimate the amount the individual actually used.

188. Yu, supra note 50, at 708. For an example of a proposal following the compulsory licensing model, see Netanel, supra note 173, at 6.
189. Lemley & Reese, supra note 30, at 1349–50.
It should be noted that the proposed licensing scheme does not in and of itself crack down on or prohibit illegal file sharing. But some ways in which a network sets up a payment system in order to collect funds to compensate artists who petition for the royalty would limit illegal file sharing more than others. For example, arguably an individual who has to pay a small fee every time he or she downloads a song will be less likely to swap countless files than a user who pays a monthly fee.

In addition, the network administrator will have peace of mind knowing there is no risk of liability for huge statutory damages. This ensures that users will have wide access to information. For instance, the current (and wildly successful) iTunes model, which was launched in April 2003, is a form of mass licensing. While consumers currently seem satisfied overall with the iTunes scheme, the number of songs offered through iTunes—around 500,000—“pales when compared with the tens of millions of songs traded on other P2P networks.” And users are not able to share and access each other’s information freely as they would on a true P2P network.

A mass licensing scheme like iTunes is further complicated by the fact that one entity might not have the rights to all the content required—often one party has the sound recording copyright while another has the underlying composition copyright. Further, it is often unclear who holds the rights to out of print songs and, therefore, has the right to reissue it. And finally, consumers are faced with many problems when they “replace their computers or move music from one... system to another.” Putting the burden on copyright holders forces them to determine among themselves who owns the rights before petitioning a network for royalties.

Furthermore, the proposed mandatory licensing scheme would ensure copyright owners never again have to sue their own customers. In 2003, prior to Napster, the RIAA sued numerous individual users who

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190. Yu, supra note 50, at 698.
193. Id. at 700–01.
194. Id. at 702.
downloaded music.\textsuperscript{195} This mass assault on users, who were incidentally the customers of the content industry, created public disdain for the content industry.\textsuperscript{196} As Peter Yu perceptively noted:

[1]In its desperate attempt to protect itself against digital piracy, the recording industry has sued, or threatened to sue, virtually everybody—telecommunications service providers, consumer electronics developers, new media entrepreneurs, venture capitalists, corporate employers, universitics, lawyers, college researchers, hackers and cryptographers, and students. In doing so, the industry has lost major political allies on Capitol Hill and has become increasingly isolated, especially after it sued individual citizens en masse.\textsuperscript{197}

Moreover, these “strong-arm tactics” threaten to drive illegal copying underground.\textsuperscript{198} Arguably, on some level the contempt that mass litigation caused in consumers was unwarranted, as users did not have any right to illegally download songs. But to some extent, the way the content industry went about prosecuting numerous seemingly innocent individuals was understandably offensive.\textsuperscript{199} These lawsuits not only angered the general

\textsuperscript{196.} See Yu, supra note 50, at 664–65, 679.
\textsuperscript{197.} Yu, supra note 50, at 681–82 (internal footnotes omitted).
\textsuperscript{198.} Id. at 655. See Saul Hansell, Crackdown on Copyright Abuse May Send Music Traders into Software Underground, \textit{N.Y. Times}, Sept. 15, 2003, at C1. Some alternatives already exist: Freenet allows file-swappers to encrypt files by passing them from one computer to another without disclosing how and where users obtain the files. \textit{See generally} Adam Langley, \textit{Freenet, in Peer-to-Peer: Harnessing the Benefits of a Disruptive Technology} 123, 123 (Andy Oram ed., 2001) (discussing the concept of Freenet). In addition, Red Rover, Publius, and Free Haven also provide methods to avoid censorship. \textit{See generally} Alan Brown, \textit{Red Rover, in Peer-to-Peer, supra, at 133, 134} (discussing an anticensorship P2P system that does not require using any easily detectable cryptography or evasion); Roger Dingledine, Michael J. Freedman & David Molnar, \textit{Free Haven, in Peer-to-Peer, supra, at 159, 159, 165–66} (describing a P2P system that splits documents and then distributes them over numerous servers to avoid detection); Marc Waldman, Lorrie Faith Cranor & Avi Rubin, \textit{Publius, in Peer-to-Peer, supra, at 145, 145, 147–48} (describing a web-based publishing system that stores encrypted files on all servers but requires a key that is split by an algorithm into random strings to decrypt the files).
\textsuperscript{199.} See Yu, supra note 50, at 655, 660–67. For example, the RIAA filed suit against a seventy-one-year-old whose teenage grandchildren had apparently downloaded some music on his computer. Chris Gaither, \textit{Group Sues 261 over Music-sharing}, \textit{Boston Globe}, Sept. 9, 2003, at A1. \textit{See also} Yu, supra note 50, at 665 (providing examples of sympathetic cases that hurt the industry’s public image). In addition, a twelve-year-old who had actually paid for software was targeted. Tim Arango, Jennifer Femino & Bridget Harrison, \textit{Music-thief Kid Sings Sorry Song}, \textit{N.Y. Post}, Sept. 10, 2003, at 21. She possibly could not distinguish between the software she purchased and “other legal music subscription services.” Yu, supra note 50, at 665. The RIAA additionally filed suit against a sixty-six-year-old woman whose computer was not even equipped to run the software she was alleged to have been using. Yu, supra note 50, at 665; John Schwartz, \textit{Record Industry Warns 204 Before Suing on Swapping}, \textit{N.Y. Times}, Oct. 18, 2003, at C1.
public, but also raised eyebrows in Congress. Although the widespread disapproval did not lead the recording industry to stop its mass-litigation campaign, the record companies at least began sending notification to suspected infringers before resorting to suing them.

The proposed scheme not only allows for innovation in the technology industry, but also would likely encourage the content industry to innovate. If the content industry is responsible for monitoring its product, the industry itself is likely to come up with more advanced ways to monitor properly and accurately. Although most advancements in technological protection will likely be met by users creating innovative ways to get around or disable them, putting the burden of monitoring on the copyright holder rather than the technology provider means technology developers will not be forced to invest in encryption techniques instead of devoting resources to developing new products. If the content industry wishes to curb infringement through technological protection measures in addition to, or in lieu of, collecting a license, the task of creating more advanced encryption techniques will fall to it rather than the technology industry.

Finally, the proposed mandatory licensing scheme would encourage preemptive settlements between the network and the content industry or individual copyright holders. To illustrate, if a content-owning firm knew users of a certain system would have access to and potentially be able to infringe its copyrighted products, it would have incentive to preemptively approach the network administrator so as to avoid the time and cost of monitoring and subsequently petitioning for a license. Likewise, the network administrator would have every incentive to preemptively determine a fair amount to pay the content firm to ensure its users have access to the information and to avoid the uncertainty associated with waiting to see if a firm will petition for a royalty or to find out how much it will have to pay for the license. This type of settlement has advantages over the mass licensing iTunes model because, in the case where an agreement is not reached, users will still have access to the information and copyright holders will still ultimately be compensated when they petition the network.

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201. Id. at 666.
202. See supra notes 46–47 (explaining technological protection methods such as digital watermarking and encryption).
6. Disadvantages of the Proposed Mandatory Licensing Scheme

There are disadvantages that come along with any mandatory licensing scheme. For example, any proposal that collects a fund and subsequently distributes it among artists runs into the problem of "determin[ing] how to divide the royalty pool." And, it is not clear that compulsory licenses—especially mass licensing as opposed to licensing that depends on actual use—will "generate sufficient funds to compensate ... copyright holders," particularly considering how easy and cheap copying is and will become as technology continues to advance. Furthermore, some argue any mandatory license that is applied through a flat fee, whether the fee is to subscribe to a server or a tax on a good, will result in "low-volume users ... subsidiz[ing] copyright holders and [thus] high-volume users." And any levy will cause an artificial price increase that could potentially "drive [users] to switch to alternative ... products."

Moreover, some artists may argue that any mandatory licensing system will "not accurately reflect the market value" of their works. Additionally, any scheme that involves tracking the use of a file necessarily brings up concerns about privacy. Further, any sort of mandatory license risks creating "a culture that assumes [copyrighted files] should be licensed." One glaring downside to any mandatory licensing scheme is that it will not necessarily crack down on illegal file sharing but instead tolerates it for the greater good—to advance technology and ensure the efficiency of P2P networks is not compromised. Any mandatory licensing scheme necessarily undercuts the idea underlying copyright law that the intellectual property holders "have the exclusive right to decide whether, when, how, and to whom they want to license their creative works."

203. Yu, supra note 50, at 708.
204. Id. at 709.
206. Yu, supra note 50, at 710.
207. Id. at 708. Neil Netanel’s proposal, supra note 173, attempts to distinguish between different types of uses: "Subsequent uses, which might entail viewing or listening to a work or copying it onto [a] ... portable device, should be given greater weight than initial downloads. Metering such uses would more accurately reflect each work’s value to users." This is especially true considering "users often download works from P2P networks merely to determine whether they like the work, not because [they] know[] [they] value[] the work in advance of downloading." Netanel, supra note 173, at 53.
208. Yu, supra note 50, at 709.
209. Id. at 711.
210. Id. at 712.
Ninth Circuit was particularly concerned about this issue when discussing the possibility of imposing a compulsory license instead of enjoining Napster’s system:

[T]he wronged parties would be forced to do business with a company that profits from the wrongful use of intellectual properties. Plaintiffs would lose the power to control their intellectual property: they could not make a business decision not to license their property to Napster, and, in the event they planned to do business with Napster, compulsory royalties would take away the copyright holders’ ability to negotiate the terms of any contractual arrangement.\textsuperscript{211}

Various other proposals have been put forth to resolve the current uncertainty surrounding contributory copyright liability for P2P networks. Raymond Ku has proposed imposing a statutory levy on “subscriptions for Internet service and the sales of computer, audio, and video equipment.”\textsuperscript{212} Neil Netanel proposed a scheme that would levy any product whose value is enhanced by P2P file sharing.\textsuperscript{213} Additionally, William Fisher put forth the idea of creating a government agency that would track how often a file is used and periodically pay the copyright holder a share of tax revenue collected specifically for that purpose.\textsuperscript{214} The Electronic Frontier Foundation has also proposed an arrangement where users would make a “reasonable” regular payment in exchange for peace of mind that they will never be sued, a scheme that would allow both consumers and copyright holders to decide whether or not they want to participate.\textsuperscript{215} Finally and most radically, some even argue for the overall “abolition of copyright,” maintaining copyright law is “obsolete and irrelevant in the digital world.”\textsuperscript{216}

All of these schemes share some of the common problems of licensing schemes generally, such as, the threat of not collecting enough revenue, and taxing low volume users for the acts of high volume users. While the scheme proposed in this Note still admittedly has its downsides, many of

\textsuperscript{211} A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004, 1028–29 (9th Cir. 2001). See also Yu, \textit{supra} note 50, at 712 (discussing the court’s decision not to impose a compulsory licensing scheme).


\textsuperscript{213} See Netanel, \textit{supra} note 173, at 4.


\textsuperscript{215} Electronic Frontier Foundation, \textit{supra} note 191, at 1, 5. See also Yu, \textit{supra} note 50, at 712–14 (discussing this and similar proposals).

\textsuperscript{216} Yu, \textit{supra} note 50, at 732.
the issues that would ensue under these other proposals will be resolved to some extent.

First, because the mandatory licensing scheme will be on a sliding scale that approximates reasonable royalties, the calculation will not always be perfect. The licensing plan, however, will be formulated so that copyright holders always get something, even if they end up underpaid.

Second, network operators will have to estimate to a certain degree how much they will be liable for in mandatory royalties. On a true P2P network, end users exchange information from their personal computers and the network operators might have no idea what kind of files are on their customers' computers. Similar to the current state of the law, this risk and uncertainty could potentially lead to a disincentive to innovate. The uncertainty, however, will nowhere near approximate the current uncertainty that exists. No matter how unsure a network is about the amount of licensing fees it will ultimately be liable for, this uncertainty will not wreak havoc on incentives to the same extent that the current risk of being liable for billions of dollars for contributory infringement does.

Furthermore, even though this mandatory licensing proposal puts the burden of monitoring for infringement on the copyright holders, the network operators might still be forced to monitor to some extent so as to be able to accurately predict how much they will owe the copyright holders. And if a network administrator is not able to accurately predict the amount of licenses it will be liable for, or if the price is set too high, the server might decide on its own to filter the infringing files. But this is not the same as being legally forced to do so, and judges will not be forced to determine whether the filter is sufficient to relieve the network of liability.

In addition, because the files are on the end users' computers and not some central server, it will be very difficult to track exactly what is available on the network at any time. Presumably the information available will change frequently. This problem, however, is really just the nature of the beast. Any time a decentralized P2P is involved, it will be the case that the information is located on the computers of the end users and thus no central server can be designed to control and track what is available. Despite this, the courts seem to think monitoring P2P networks is necessary and possible because they talk about control as a factor in most contributory liability cases.217

The retrospective petition for a license means the content industry does not have to guess about future uses, or what files will be available in the future. And further, putting the burden on the content industry to monitor the use ensures the industry is not able to chill innovation by threatening the technology industry with huge contributory liability suits but can charge only a fair amount for files actually used.

B. THE PROPOSED MANDATORY LICENSING SCHEME IS CONSISTENT WITH AND PROTECTS THE IDEAS UNDERLYING FAIR USE

In a sense, the doctrine of fair use attempts to remedy a market failure. Markets can be considered alternatives to legal rules. In a properly functioning market, property will be exchanged between a willing buyer and seller when the price is set at fair market value. If some market failure exists, however, it is possible some barrier will block the willing buyer from the willing seller, making a fair-market transfer difficult or impossible—this is where legal rules are counted on to remedy market failure. Specifically there are times when a consensual transfer may be impractical or exceedingly expensive. Many thus argue that fair use should be implemented where “(1) market failure is present; (2) transfer of the use... is socially desirable; and (3)... [the] use would not cause substantial injury to the incentives of the... copyright [holder].”

To some degree, music file sharing falls under the umbrella of fair use. Particularly, the music industry is rife with market failures. The fact that the right to a specific composition might be divided between two different parties makes efficient obtainment of rights by downstream users very difficult. Furthermore, these overlapping rights could easily lead to holdout behavior, and in turn, the need for users to pay too many entities

221. Id. at 1613.
222. Id. at 1614.
223. See, e.g., id. at 1613 (discussing “threatened monopolistic control” of piano rolls as a market failure); Yu, supra note 50, at 728 (discussing how congressional changes in copyright law as a reaction to technological innovation has created market failure, and quoting Lydia Pallas Loren, Untangling the Web of Music Copyrights, 53 CASE W. RES. L. REV. 673, 678-79 (2003), for background material with respect to the main problems within the music industry).
could result in an exorbitantly high price—"too high to achieve the goal of copyright." 225

That is not to say individuals have a right to use copyrighted material on the Internet any more than they have a right to enter a movie theater to see a movie for free. One of the major problems in the Napster era was that users "bec[ame] accustomed to the notion that creative works should be provided [for] free"—a notion that is "destructive to copyright’s principles and purpose." 226 Many users that downloaded music, however, subsequently purchased a CD based on something they read or heard on the Internet. 227 Furthermore, countless artists make their works freely available despite ownership rights. 228 To the extent that some artists do, in fact, wish to share their work freely, whether out of pure altruism or to induce users to ultimately buy their music, the transfer of such files should be considered fair use.

It is also clear, however, that a large portion of the content industry objects to users having access to their music for free, as evidenced by the legal action copyright holders have taken. Thus, it is not feasible to lump all P2P file sharing into the "fair use" category. The mandatory licensing scheme proposed in this Note would enable network administrators to parse out the files copyright owners wish to constrict the use of from those to which copyright owners wish to give free access. By putting the burden on the copyright holder to monitor the sharing of its material, the copyright holder would be able to receive a reasonable royalty while the network administrator would not be burdened with constantly monitoring the network. Further, the network operator would not be forced to license files on its network in a case where the copyright holder does not object to their use.

225. Id. (quoting Loren, supra note 223, at 678–79).
227. Leubitz, supra note 173, at 418.
C. NO JUDICIAL TEST WILL ADEQUATELY ADDRESS ALL THE UNANSWERED QUESTIONS IN THE WAKE OF GROKSTER

Attitudes about the proper way to balance the competing desires of copyright holders and technology innovators are numerous and conflicting, as evidenced by the fact that more than sixty amicus briefs were submitted in the *Grokster* case.\(^{229}\) Thus, it is difficult to imagine the Court will ever be able to set forth a concrete test that would enable it to consistently protect copyright without chilling innovation. Any test that does not clearly articulate when a network administrator will be liable for contributory infringement necessarily creates uncertainty and, consequently, compromises the ability and incentive to distribute and advance on technology.

1. Mandatory Licensing Avoids Court Determination of “Future Uses”

The *Grokster*, *Napster*, and *Aimster* courts all recognized with varying depth the fact that *Sony*’s “capable of substantial noninfringing use” test should encompass both current and future uses.\(^{230}\) This recognition seems consistent with the underlying goal of *Sony*—to protect copyright to the greatest extent possible without chilling innovation.\(^{231}\) If future uses were not considered, the holder of a copyright could arguably force a new technology off the market before its full potential was realized.

This fact is evidenced by the aftermath of *Sony*, wherein innovation resulted in VCR tapes capable of recording entire movies, thereby creating a very lucrative market for video rentals.\(^{232}\) Consequently, the very technology the content industry believed was going to ruin it ended up creating an entirely new source of revenue.

It is not clear, however, how the Court should determine whether a device is, in fact, capable of a future noninfringing use. A court can only speculate as to whether a particular device will be used in a different and noninfringing way as the technology advances. Therefore, a resolution to this problem that avoids trying to speculate with respect to specific future noninfringing uses of a product, yet recognizes that future noninfringing uses are relevant, should be favored. Mandatory licensing would alleviate the need for judges to assess the likely future capabilities of technology. The innovator would pay a fixed cost in exchange for assurances that it will

never be liable for substantial damages. Finally, because the innovator is able to continue to use and distribute its technology, mandatory licenses will not chill innovation because others will have access to and be able to improve on the current product.

2. Mandatory Licensing Avoids Determination of the Relevance of the "Number of Uses"

The Court has not set a clear standard for how the actual number of noninfringing uses should factor into the analysis for secondary liability. While the Seventh Circuit compared the respective magnitudes of infringing versus noninfringing uses, the Ninth Circuit found that, once capability of noninfringing use was established, constructive knowledge is not enough to impose liability. The Ninth Circuit, however, would still impose liability where noninfringing uses were demonstrated only if actual knowledge and ability to control were shown. This issue was the main point of contention among the concurring justices in the Grokster case, and it will never be satisfactorily solved through a bright-line rule. To properly determine whether the number of noninfringing uses is sufficient, or whether the ratio of infringing to noninfringing uses satisfies the Sony test, courts would have to look at each allegedly infringing network on a case-by-case basis.

This approach would not only cause significant work for a court and severely complicate litigation, but also the lack of ability to form a bright-line rule would exacerbate the uncertainty networks face with respect to liability. Contributory copyright liability cases would become, to some extent, a battle of experts and statistics arguing over how often a network is

230. Grokster, 125 S. Ct. at 2789 (Breyer, J., concurring); In re Aimster Copyright Litig., 334 F.3d 643, 650 (7th Cir. 2003); A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004, 1020–21 (9th Cir. 2001).
232. See Grokster, 125 S. Ct. at 2790; supra note 70.
233. See Brief of Law Professors, supra note 42, at 9–10.
234. Aimster, 334 F.3d at 649.
235. See Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd., 380 F.3d 1154, 1161 (9th Cir. 2004) (finding that there was no need to count the number of noninfringing uses because it was "undisputed" that the technology was "capable of substantial noninfringing uses"), vacated, 125 S. Ct. 2764 (2005); Brief of Law Professors, supra note 42, at 8–10 (referring to the Ninth Circuit's Grokster decision that where substantial noninfringing uses are found, the decision turns on the system operator's control over use of the copyrighted material).
236. Grokster, 380 F.3d at 1161–63.
237. See supra Part III.D.I, 2.
used and for what purposes rather than focusing on what it should be about—whether the technological capability is an important public good and would be severely impaired by imposition of liability. Again, this controversy could be avoided through mandatory licensing as there would be no need for the court to get into the business of counting uses and drawing a line distinguishing where noninfringing use becomes substantial.

3. Mandatory Licensing Avoids the Need to Determine the Level of Knowledge Required to Impose Liability

Another significant issue the contributory copyright infringement cases disagree about is the level of knowledge required before the imposition of liability. As will be discussed in the next section, this inquiry seems inextricably linked with the issue of ability to control. The Ninth Circuit in Grokster indicates that liability for infringement exists only where the defendant has knowledge of the infringement at a point where he is able to stop it. The Aimster court, however, seems less concerned with knowledge, focusing most of its analysis on comparing infringing to noninfringing uses and factoring in the costs of an alternative design. The issue here, arguably, is that an entity that knows only that its product can be and potentially is being used for infringement does not have the same ability to curb its users' infringing acts as one who has actual knowledge of infringement due to its ability to detect it and the additional ability to deter or eliminate those acts.

In the former case, the technology distributor can attempt only to alter its product to reduce the likelihood of infringement, potentially through encryption or some similar method. This necessarily requires additional investment to develop such technology and would likely result in others creating technology to override the encryption device. This sort of required control would merely create an "arms race"—for every encryption technique the technology distributor came up with, there certainly exists some savvy engineer who will invent a way to override the protection. As Edward Felten observed, no encryption technique exists that a moderately skilled individual cannot break, rendering even the best

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238. Grokster, 380 F.3d at 1162; Brief of Law Professors, supra note 42, at 10–12, 14.
239. See Aimster, 334 F.3d at 653.
240. Ku, supra note 212, at 319–20 (stating that copyright holders would have to upgrade their technology constantly, which would be costly and still attract hackers, and would result in an endless arms race). Instead of devoting resources to developing new products, resources would instead be used to invest in encryption advances. Id.
encryption "a speed bump that will frustrate people who want to copy illegally." 241

Additionally, any technology that is too complicated will compromise the product. For instance, an encrypted CD might not function in the same way as a nonencrypted one—"it may not be playable on car stereos, some PCs, and old CD players." 242

In the latter case, it would seem if the network operator has actual knowledge of specific acts of infringement and files that are being infringed, it would be more reasonable and less detrimental to the system to expect that the entity would curb these acts and filter these files. This task would be less burdensome than limiting access to works in a case where there is knowledge of infringement but no way to tell who is infringing or what in particular is being infringed. There are many compelling arguments, however, that even this type of monitoring could wreak havoc on the network and consequently chill innovation. 243

Again it would appear mandatory licensing eliminates the need for debate regarding whether actual or constructive infringement should be required for contributory liability. The mandatory licensing scheme would not be concerned with the network administrator's knowledge, but instead would place the burden on the copyright holder to obtain specific knowledge of infringing acts. And armed with that knowledge, the copyright holder could petition the network for a royalty whether the network had prior knowledge of the infringement or not.

4. Mandatory Licensing Eliminates the Need for Judges to Assess a Network's Ability to Control

The first major problem with any court's insertion of the issue of control into its contributory liability analysis is that control is technically not an issue for contributory liability. 244 Control is a factor characterizedly used to determine vicarious liability. 245 The courts, however, seem to confound the standards for contributory liability and vicarious liability by importing the issue of control into the contributory

244. Brief of Law Professors, supra note 42, at 10.
245. Id. at 11.
liability analysis. The issue of control creeps in under the guise of “knowledge,” as the courts link the knowledge question with the ability to control question—that is, a network administrator who has sufficient knowledge of the infringement is expected to attempt to control the infringement or filter the infringing files. To the contrary, a server that does not have actual knowledge of the infringed files or actual knowledge of who is infringing cannot control the infringement to the same extent.

Furthermore, the Supreme Court has not given guidance as to how an ability to control and filter infringing files should factor into the contributory liability analysis. The amicus briefs in the *Grokster* case were particularly adamant in defending their respective sides of the debate as to how the ability to control should factor into the analysis. On the one hand, those arguing from an economic perspective posit that ability to control and filter is significant, thereby arguing for a tort-like negligence standard. In particular, one amicus brief argued that contributory liability should exist only where indirect liability is cheaper and more cost effective than direct liability. This cheapest cost avoider argument considers the ability to control in the context of the network being able to more cheaply curb infringement where filtering infringing files is cheaper and easier than finding all the direct infringers and suing them individually. The brief contends that the Court should remand to determine whether Grokster had the ability to deter infringement at a low cost and argue that the company should not be allowed to encourage bad acts without bearing any cost. The brief further argues “substantial noninfringing use” should be viewed in light of the next best legally permissible use. They propose that, in the case of Grokster, if its defense is that it allows people to make music recommendations, the same end could be reached if they use a different system without exchanging free copies.

246. *Id.*
247. See *id.* at 10–11.
248. For example, it is logical to assume that Sony could not be held liable because once the VTR was in the hands of the consumer, Sony lost control over how the consumer used the product to a greater extent than a server like Napster or Grokster lost control of their product to their users. *See Binder, supra* note 118, at 14.
250. *Id.* at *6–8.
251. *Id.* at *8–9, 13.
252. *Id.* at *12.
253. *Id.*
Among others, three major problems stem from this cheapest cost avoider analysis: (1) judges are forced to assess technology; (2) the fast-paced changes in technology make it difficult, if not impossible, to determine who the cheapest cost avoider is or will be in the future; and (3) it is difficult or impossible to weigh the impact on copyright incentives against the impact on technology incentives.

While the economists seem certain that alternative technology must be considered, others maintain it was wholly improper for the Aimster court to consider alternative technology designs in determining contributory liability. A large portion of the technology industry is obstinate that introducing filters would necessarily impair the system. They further argue that controls preventing access to unauthorized users will also affect the ability of lawful users to access the system. Consequently, the network might never be the cheapest cost avoider because adding filters causes a high reduction in network efficiency, thus the remedy would hobble the technology. Scholars have noted that the “P2P network design, where the work is done by the end user’s machine, is preferable to a design which forces” the network to do this work. Therefore, any design that fails to add filters within the network may actually be good engineering and no negative intent should be inferred.

Additionally, the nature of many P2P filters would require end users to install it on their computers, which is not within the control of the system operators. Furthermore, attempts by system operators to filter for infringement would likely result in a costly arms race between the filter designers and the noncompliant users, or users who find various ways to defeat the filter. For example, when the district court ordered Napster to filter copyrighted works from its network, the end users merely changed the file names and spellings in order to evade the filter. Napster was then ordered to filter the variations; this “arms race” went on until the court

256. See, e.g., Besek, supra note 8, at 479.
258. Id. at *4. This is known as the “end to end” principle—"most functions should be provided at the endpoints of a network, rather than in the network itself. Because only the endpoints know precisely what they want from the network, the network cannot provide many functions correctly and efficiently.” Id. at *7.
259. Id. at *6.
260. Id. at *14.
261. Id. at *15.
262. Id. at *17.
finally found that Napster could not effectively filter the network and ordered it to shut down.\textsuperscript{263}

In addition, the Amicus Brief of the Computer Science Professors argues that it is not as hard as the content industry maintains to find direct infringers\textsuperscript{264}—another reason indirect liability might not be the most cost effective solution. They point to the fact that IP addresses can be easily obtained and that the content industry has already "filed lawsuits against more than 8,400 alleged infringers."\textsuperscript{265}

In light of the complicated technology involved, many argue judges are not properly equipped to analyze the relevant science and make a well-informed determination about how to strike the proper balance—protecting copyright without chilling innovation.\textsuperscript{266} The fast-paced technology market also compounds the difficulty judges face in assessing technology and creates a huge barrier to determining the cheapest cost avoider.\textsuperscript{267} The cheapest cost avoider today might not be the cheapest cost avoider tomorrow due to technological advances. As Lawrence Lessig noted:

Policy makers should not make policy on the basis of technology in transition. . . .

\ldots

. . . .The question should not be how to regulate the Internet to eliminate file sharing . . . . The question instead should be how to assure that artists get paid, during this transition between twentieth-century models for doing business and twenty-first-century technologies.\textsuperscript{268}

Any policy that focuses on today's technology will always be behind.

Finally, it is virtually impossible to measure the impact of copyright law on the incentive to create or the exact impact on innovation. In both cases there are so many potential factors and hypothetical situations involved that it is no small feat to ask a judge to determine the proper

\begin{thebibliography}{99}
\item \textsuperscript{263} Id.
\item \textsuperscript{264} Id. at *5.
\item \textsuperscript{265} Id.
\item \textsuperscript{266} Brief Amici Curiae of 40 Intellectual Prop. & Tech. Law Professors Supporting Affirmance at *17–19, Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd., 419 F.3d 1005 (9th Cir. 2003) (Nos. 03-55894, 03-56236, and 03-55901), 2003 WL 22753810.
\item \textsuperscript{267} Id.
\item \textsuperscript{268} LAWRENCE LESSIG, FREE CULTURE: HOW BIG MEDIA USES TECHNOLOGY AND THE LAW TO LOCK DOWN CULTURE AND CONTROL CREATIVITY 297–99 (2004).
\end{thebibliography}
balance. Mandatory licensing, again, would ensure copyright holders some compensation, network administrators a relatively fixed cost, and much less uncertainty regarding liability. Perhaps most importantly, judges could avoid making complicated scientific determinations. There is disagreement between engineers and computer scientists about the feasibility of adding filtering devices to software and network systems. It would seem anomalous to put decisions about software design on the shoulders of judges when experts in the industry cannot even decide the correct answer. Although there are many cases where judges are forced to and capably make decisions regarding science—for example, patent disputes—it is preferable to avoid such a determination where possible.

5. Mandatory Licensing Eliminates the Need to Determine What "Inducement" Entails

Although the Grokster Court avoided interpreting Sony by resolving the case on an inducement theory, it did not expound on what inducement entails with regard to contributory liability. It found a plethora of evidence of inducement. Grokster made no attempt whatsoever to hide its desire for users to infringe copyrighted files on its system, even advertising itself as a replacement of Napster. The question remains whether a company that were to decline to add encryption features, or decentralize its server, would be considered to engage in inducement, even if there were privacy or efficiency reasons for doing so.

269 To some extent, it is impossible to determine whether copyrights are even necessary in the first place—there is no concrete evidence and one can only speculate that creators would stop producing without the promise of a copyright. See MERGES ET AL., supra note 27, at 17 (discussing Justice Breyer's contention that copyright protection is not needed for books). Specifically, David Nimmer points out that the DMCA assigned to the Copyright Office the creation of rules providing immunity for those harmed by other rules implemented under the legislation, but this required the office to evaluate the future adverse impact on technology and copyright of the DMCA. David Nimmer, Back from the Future: A Proleptic Review of the Digital Millennium Copyright Act, 16 BERKELEY TECH. L.J. 855, 870 (2001). No guidance was given, however, as to how exactly the DMCA should go about evaluating future adverse impacts. Id. See Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 65 Fed. Reg. 64556, 64559 (Oct. 27, 2000) (codified at 37 C.F.R. pt. 201). It was explicitly recognized that whether copyrighted works would be adversely affected by the DMCA was "necessarily speculative since it entails a prediction about the future." Id. at 64562–63 (quoting Hearing on Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies Before the Copyright Office, 106th Cong. 10 (2000) (statement of Peter Jaszi, Digital Future Coalition)).

271 See id. at 2779–82.
272 Id. at 2772–73, 2780–82.
273 Id. at 2772–73, 2780–81.
Again, under *Grokster* it is unclear where the line is drawn to determine what constitutes inducement. It is likely that such obvious intent will not be present in the future. Many programmers are developing systems that "make it easier to share... information anonymously" and avoid detection—many insisting the aim is to benefit society by avoiding censorship and political repression as opposed to aiding copyright infringement.274 The proposed mandatory licensing scheme would certainly allow future courts to avoid grappling with this issue by virtually eliminating the entire issue of inducement. Under the proposed scheme, every network must pay the petitioned fee for copyrighted works infringed on its system—thus, whether the system operators themselves induce the infringement through advertising or other means becomes irrelevant because the copyright owners will receive a royalty if and when users infringe their copyrights, regardless of the intent of the network operators.

V. CONCLUSION

In conclusion, the *Grokster* decision did not create any level of certainty regarding a P2P network's liability for the infringement of its users. By deciding the case based on an inducement theory, the Supreme Court avoided any discussion of what kind of liability a P2P network that does not induce its users' infringement faces. P2P networks are increasingly common and, thus, more and more frequently depended upon as a source of vital information. Therefore, the lack of guidance from the *Grokster* Court could itself chill innovation, as it creates uncertainty as to liability for network administrators, which in turn could cause either economically inefficient steps to avoid liability, wholesale abandonment of certain servers, or lack of advancement on others.

In the end, there is no perfect resolution to the difficulty created by the tension between copyright and technology, as any solution will unavoidably involve some trade-off between these competing interests. Stringent requirements that P2P networks control access to copyrighted works will necessarily affect the efficiency and functionality of the networks, thereby resulting in user dissatisfaction, as well as creating a scenario in which technology developers are discouraged from advancing on the system. On the other hand, allowing users unrestricted access to

Copyrighted files will disincentivize the very artistic creation that copyright law intends to encourage.

The proposed mandatory licensing scheme will provide fair compensation to copyright owners while giving network owners more certainty as to risk—consequently spurring innovation and avoiding irreparable damage to Internet growth. This plan will also protect fair use by forcing content owners to determine when they require or deserve compensation, rather than forcing payment for every use. Under the proposed plan, in cases where copyright owners wish to freely allow transfer of copyrighted works, they may. All the legal uses of the network will be safeguarded and at the same time copyright owners will be compensated.