

# Copyright, Prevention, and Rational Governance: File-Sharing and Napster

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## INTRODUCTION

File-sharing entails software-enabled services that provide to web users the ability to find and download files from other computer hard drives by typing an appropriate title, word, or phrase. For example, a student interested in the Civil War can find and download material from other user hard drives by entering the phrase “Abraham Lincoln”. In addition to digital documents, software, and photographs, file-sharing can enable the unauthorized transfer and copying of copyrighted music, books, and movie files. The unauthorized reproduction of any copyrighted material can displace original sales and licensing opportunities and therefore presents concerns for copyright owners.

File-sharing entails two alternative topologies. Providers such as Napster, Macster, and Aimster<sup>1</sup> enabled users to route file requests through a server directory that located file donors who voluntarily provide access to material on their hard drives. While these services provide only music transfer capability, more general capabilities involving movies, software, photos, and documents are possible. Napster, the focus of our discussion below, may have registered more than 60 million users to date.<sup>2</sup>

Considerably less user-friendly, web services such as Gnutella, Freenet, Jungle Monkey, and iMesh enabled users to download material directly from other hard drives without routing requests through a directory server.<sup>3</sup> As another open source variant, Music City, Kazaa, and Grokster (now in litigation with the Motion Picture Association of America and National Music Publishers Association) distributed from web sites software that enabled the same process, though in a more user-friendly fashion.<sup>4</sup>

Napster entered into an historic lawsuit with the record industry at the end of 1999. On behalf of the eighteen label affiliates of the five major record companies that

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1. Aimster operates only between users in an America Online instant messaging group. Aimster is now the focus of litigation with the Recording Industry Association of America.

2. Peter H. Lewis, *Napster Rocks the Web*, N.Y. TIMES, June 20, 2000 at <http://nytimes.com/library/tech/00/06/circuits/articles/29pete.html>.

3. Most famously, Gnutella was invented by two programmers at America Online who had also invented the Winamp program for playing MP3 files. After drawing immediate cries of alarm, the company dropped the service two days later. The software was “out of the bag” by then and fell into the open source community.

5. See Jim Hu, *Kazaa picks up the speed with update*, CNET NEWS.COM (Feb. 11, 2002) <http://news.com.com/2100-1023-834342.html>

distribute eighty-five percent of sound recordings in the U.S. (i.e., Sony Music, Universal Music, Warner Music Group, EMI, and BMG), the Recording Industry Association of America (RIAA) initiated a damages suit against Napster in December 1999. Plaintiffs were joined a month later by Jerry Lieber and Mike Stoller from the music publishing industry. The suit claimed that Napster violated common law provisions against contributory and vicarious copyright infringement. District Court Judge Marilyn Hall Patel issued an injunction on July 26, 2000<sup>5</sup> which the Ninth U.S. Circuit Court of Appeals affirmed in part, reversed in part, and remanded with instructions on February 12, 2001.<sup>6</sup> On remand, the District Court issued a revised preliminary injunction that enjoined Napster from copying, downloading, uploading, transmitting, or distributing copyrighted sound recordings.<sup>7</sup>

This paper views the Napster case in the paradigm of law and economics. Legal decision-making is viewed as a choice among four alternative procedures for resolving property damage and defendant liability. First, a court can choose a winner by evaluating the legal consistency of each position based on a statutory or common law precedent. This outcome would subsume subcases where Napster would be either enjoined from authorized distribution or granted “fair use” protection from any liability whatsoever. Second, a court can establish a property right for one party, believing in a Coasian sense that affected players will resolve outstanding allocational inefficiencies through multilateral negotiation.<sup>8</sup> Third, a court may forego an injunction or a “fair use” but can permit a use that is contingent upon a general liability payment for actual or estimated damages.<sup>9</sup> Fourth, a court can impose specific safeguards upon the contending parties that would require unilateral or joint prevention based on the relative costs to each party.<sup>10</sup>

I shall argue that the District Court’s initial injunction opinion is of the first category, while the Circuit Court’s remand tends to be of the last. The importance of the modification as it affects policy-making in jurisprudence related to digital technology should not be underestimated. The Internet is an open-ended game where relevant information is slowly revealed in the play. In instances such as this, incrementalist tactics based on limited knowledge and narrow policy goals are practical ways of making key decisions, with modifications made possible as more knowledge becomes available.<sup>11</sup>

## THE NATURE OF COPYRIGHT

This section discusses legal issues regarding copyright, infringement, and fair use in American jurisprudence.

### INFRINGEMENT

The stated constitutional purpose for patents and copyrights is “to promote the progress

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5. A&M Records, Inc. v. Napster, Inc., 114 F.Supp.2d (N.D. Cal. 2000).

6. A&M Records, Inc. v. Napster, Inc. 239 F.3d 1004 (9th Cir. 2001).

7. A&M Records, Inc. v. Napster, Inc., No. C 99-05183, 2001 U.S. Dist. LEXIS 2169 (N.D. Cal. March 5, 2001).

8. R.H. Coase, *The Problem of Social Costs*, 3 J.L. & ECON. 1 (1960).

9. Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972).

10. G. CALABRESI, *THE COSTS OF ACCIDENTS: A LEGAL AND ECONOMIC ANALYSIS*, ch. 8 (1970).

11. C.E. LINDBLOM, *THE POLICY-MAKING PROCESS* (1993).

of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries”.<sup>12</sup> In enacting the Copyright Act of 1909, the House of Representatives concurred that copyright protection exists not “primarily for the benefit of the author, but primarily for the benefit of the public.”<sup>13</sup> The Supreme Court affirmed that the broad exercise of copyright in the U.S. must then be weighted in an “equitable rule of reason” that balances contending positions of user and producer.<sup>14</sup>

Copyright is now federally protected by the Copyright Act of 1976, which became fully effective on January 1, 1978.<sup>15</sup> Per Section 106, music copyright primarily implicates four distinct rights. The owner of the words and music in the musical composition, generally its publisher, has the right to license mechanical reproduction/distribution and public performance of the underlying words and music. The owner of the sound recording, generally the record label, has the corresponding right to authorize reproductions in actual recordings and, for certain digital audio transmissions, performances.<sup>16</sup> Unauthorized reproduction or performance of copyrighted music generally represents direct infringement and is punishable under penalties established in the Copyright Act.<sup>17</sup>

Though not specified explicitly in the Copyright Act, a party can be held liable at common law for contributory and/or vicarious infringement even if she has not directly reproduced or performed the work. A contributory infringer is “one who, with knowledge of the infringing activity, induces, causes, or materially contributes to the infringing conduct of another.”<sup>18</sup> Liability can also be incurred if the defendant had reason to know or was willfully blind to any form of infringing activity.<sup>19</sup> However, such knowledge or reason is insufficient for liability if the defendant—due to fair use, lack of copyright notices, or the copyright holder’s failure to provide documentation—cannot capably verify a claim of infringement.<sup>20</sup> Even without knowledge,<sup>21</sup> a party may be guilty of vicarious infringement if he “has the right and ability to supervise the infringing activity and also has a direct financial interest in such activities.”<sup>22</sup> Whether or not a company has foreknowledge or is immediately profiting from the infringement is not dispositive of the presence of a direct financial interest.<sup>23</sup> However, some degree of

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12. U.S. CONST., art. I, § 8, cl. 8.

13. H.R. Rep. No. 60-2222, at 7 *reprinted in* 6 Legislative History of the 1909 Copyright Act, at S1, S7 (1976).

14. *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 454 (1984).

15. H.R. Rep. No. 94-1476, *reprinted in* 1976 U.S. Code Cong. and Admin. News 5659, 5680.

16. The Digital Performance Rights in Sound Recordings Act of 1995 added a performance right in sound recordings used in digital audio transmissions, such as digital subscription services, Internet delivery, and satellite digital audio radio.

17. *See* 17 U.S.C. §501 (2001).

18. *Gershwin Publ’g Corp. v. Columbia Artists Mgmt., Inc.*, 443 F.2d 1159, 1162 (2d Cir. 1971); *Fonovisa, Inc. v. Cherry Auction, Inc.*, 76 F.3d 259, 264 (9th Cir. 1996).

19. *Cable/Home Communication Corp. v. Network Productions, Inc.*, 902 F.2d 829, 846 (11th Cir. 1990); *Sega Enters. v. MAPHIA*, 948 F. Supp. 923, 933 (N.D. Cal. 1996).

20. *Religious Tech. Ctr. v. Netcom On-Line Communication Servs.*, 907 F. Supp. 1361, 1374 (N.D. Cal. 1995); *see also* *Schuchart & Assocs., Prof’l Eng’rs., Inc. v. Solo Serve Corp.*, 220 U.S.P.Q. 170 (W.D. Tex. 1983); *Gethers v. Blatty*, 283 F. Supp. 303 (C.D. Cal. 1968).

21. *Shapiro, Bernstein & Co. v. H.L.Green Co.*, 316 F.2d 304, 307 (2d Cir. 1963). *See also* earlier “dance hall” cases: *Buck v. Jewell-LaSalle Realty Co.*, 283 U.S. 191 (1931); *Dreamland Ball Room, Inc. v. Shapiro, Bernstein & Co.*, 36 F.2d 354 (7th Cir. 1929); *M. Witmark & Sons v. Tremont Soc. & Athletic Club*, 188 F. Supp. 787 (D. Mass. 1960); *Remick Music Corp. v. Interstate Hotel Co.*, 58 F. Supp. 523 (D. Neb. 1944), *aff’d*, 157 F.2d 744 (8th Cir. 1946).

22. *Gershwin*, 443 F.2d at 1162.

23. *Major Bob Music v. Stubbs*, 851 F. Supp. 475 (S.D. Ga. 1994); *Walden Music, Inc. v. C.H.W., Inc.*, 1996 WL 254654, at \*5 (D. Kan. Apr. 19, 1996); *Broadcast Music, Inc. v. Hobi, Inc.* 1993 WL 404152, at \*3 (M.D. La. Jun. 24, 1993).

control or supervision over the infringing parties is essential.<sup>24</sup>

Charges of contributory and vicarious infringement have often arisen in cases involving music reproductions or performances. Due to subsequent acts of direct infringement, courts ruled against a store selling blank tapes for use with an on-the-premises “Make-A-Tape” machine,<sup>25</sup> a retail copy service operating a cassette copying machine to reproduce sound recordings,<sup>26</sup> an operator of a swap meet that rented space to bootleggers,<sup>27</sup> a trade show operator that used music to cultivate interest and attendance,<sup>28</sup> a bar owner who permitted unauthorized public performances of songs,<sup>29</sup> and a seller of blank audiotapes and taping equipment to known counterfeiters.<sup>30</sup> Courts have not allowed the defense that infringing uses may have stimulated sales in some instances.<sup>31</sup> To measure harm, courts have considered whether the defendant’s use diminishes or prejudices potential sales,<sup>32</sup> interferes with marketability,<sup>33</sup> or fulfills the demand for the original.<sup>34</sup>

Section 107 codified a preexisting judicial doctrine regarding fair use, which is a “privilege in other than the owner of the copyright to use the copyrighted material in a reasonable manner without his consent, notwithstanding the monopoly granted to the owner by the copyright.”<sup>35</sup> Codified factors to be considered in determining whether the use of a work is “fair” include the purpose and character of the use (duplicative vs. transformative; commercial vs. nonprofit), the nature of the original work (factual vs. creative), the amount and substantiality of the use (partial vs. complete copy), and the effect of the use upon the potential market or value of the work. The Supreme Court had characterized the market effect as “undoubtedly the single most important element of fair use,”<sup>36</sup> but one subsequent Supreme Court decision explored the four together and not in isolation.<sup>37</sup>

## INJUNCTIONS AND FAIR USE

We now consider four manners in which a court might have resolved the matter. First, the court could award an injunction to the label or a “fair use” right to Napster based on its reading of statutory or common law. Second, the court could award a property right to one party, trusting the affected parties to negotiate any efficient transfer that may be possible. Third, the court might devise a liability rule by which Napster must compensate copyright owners for economic damages. Fourth, the court can impose upon both sides specific behavioral rules that protect against infringement.

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24. *Demetriades v. Kaufmann*, 690 F. Supp. 289, 292 (S.D.N.Y. 1988).

25. *Elektra Records Co. v. Gem Elec. Distribs., Inc.*, 360 F. Supp. 821 (E.D.N.Y. 1973).

26. *RCA Records v. All-Fast Sys., Inc.*, 594 F. Supp. 335 (S.D.N.Y. 1984).

27. *Fonovisa*, 76 F.3d at 259.

28. *Polygram Int’l Pub’g, Inc. v. Nevada/TIG, Inc.*, 855 F. Supp. 1314 (D. Mass. 1994).

29. *Major Bob Music v. Stubbs*, 851 F. Supp. 475 (S.D. Ga. 1994).

30. *A&M Records, Inc. v. General Audio Video Cassettes, Inc.*, 948 F. Supp. 1449 (C.D. Cal 1996).

31. *DC Comics, Inc. v. Reel Fantasy, Inc.*, 696 F.2d 24, 28 (2d Cir. 1982); *Ringgold v. Black Entmt TV, Inc.*, 126 F.3d 70, 81 n.16 (2d Cir. 1997).

32. *Meeropol v. Nizer*, 560 F.2d 1061, 1070 (2d Cir. 1977); *Marvin Worth Prods. V. Superior Films Corp.*, 319 F. Supp. 1269, 1274 (S.D.N.Y. 1970).

33. *Elsmere Music, Inc. v. NBC.*, 482 F. Supp. 741, 747 (S.D.N.Y. 1980).

34. *Wainwright Secs., Inc. v. Wall St. Transcript Corp.* 558 F.2d 91, 96 (2d Cir. 1977), *cert. denied*, 434 U.S. 1014 (1978); *Berlin v. E.C. Publ’ns.*, 329 F.2d 541, 545 (2d Cir. 1964).

35. *Rosemont Enters. Inc. v. Random House, Inc.*, 366 F.2d 303, 306 (2d. Cir. 1966) (quoting *Ball, Copyright and Literary Property* 260 (1944)), *cert. denied*, 385 U.S. 1009 (1967).

36. *Harper & Row Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 566 (1985).

37. *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 576 (1994).

## INJUNCTION

The U.S. District Court apparently followed the first approach in its granting plaintiffs a preliminary injunction that enjoined Napster from “copying, downloading, uploading, transmitting, or distributing plaintiff’s copyrighted compositions and recordings without express permission”.<sup>38</sup>

This injunction applies to all such works that plaintiffs own; it is not limited to those [identified by plaintiffs] . . . [b]ecause defendant has contributed to illegal copying on a scale that is without precedent, it bears the burden of developing a means to comply with the injunction. Defendant must ensure that no work owned by plaintiffs which neither defendant nor Napster users have permission to use or distribute is uploaded or downloaded on Napster.<sup>39</sup>

Labels were obliged only “to cooperate with defendant in identifying the works to which they own copyrights.”<sup>40</sup> Judge Patel’s ruling could be conceived as a pro forma reading of the Copyright Act and common law rulings regarding contributory and vicarious infringement. A critic also argues that the judge’s statement is a “classic prior restraint” in violation of the First Amendment; with internet transmissions viewed as speech, “it puts on the speaker the burden of proving that [the] speech is permissible rather than requiring those who object to the speech to prove that it is not.”<sup>41</sup>

A key component of the judge’s decision, invoking the “fair use” market test of Section 107, is whether Napster’s service is economically harmful to plaintiffs. Napster proponents contended that file-sharing may have actually stimulated the sales of CDs (concerts, etc.) by enabling prospective customers to sample individual tracks, exchange information, and develop a base of users and network infrastructure.<sup>42</sup> However, these contentions are not dispositive of the market harm issue. Besides examining for direct sales displacement, the market harm test must consider how the activity affects the market for derivative works, defined as those markets “that creators of original works would in general develop or license others to develop.”<sup>43</sup> Courts have explicitly recognized the relevance of a related licensing market in determining a copyright violation,<sup>44</sup> and have rejected the suggestion that a positive impact on sales negates the copyright holder’s entitlement to licensing fees or derivative rights.<sup>45</sup> Judges should also consider whether “unrestricted and widespread conduct of the sort engaged in would result in a substantially adverse impact on the potential market for the original.”<sup>46</sup>

These rulings appear unobjectionable from an economic perspective, as potential licensing of derivative works and prospective harms from widespread conduct would affect production incentives for the future production of intellectual property and present

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38. A & M Records, Inc. v. Napster, Inc., 114 F. Supp. 2d 896, 927, 2000 U.S. Dist. LEXIS 11862 at \*\* 90-91 (N.D. Cal. 2000).

39. *Id.* at \*\* 90-91.

40. *Id.* at \*\*91.

41. Guylyn Cummins, *Cyberwars: The Fate of Napster and the First Amendment Continues in Interspace*, Gray Cary Ware & Freidenrich, LLP, Articles of Interest, available at [http://www.gcwf.com/articles/interest/interest\\_39.html](http://www.gcwf.com/articles/interest/interest_39.html) (last visited August 20, 2001).

42. R.E. Hall, Expert Report; P. S. Fader, Expert Report, at <http://www.napster.com/pressroom/legal.html> (last visited November 9, 2000).

43. See *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 592 (1994).

44. *American Geophysical Union v. Texaco, Inc.*, 60 F.3d 913, 929-31 (2d Cir. 1004), *cert. dismissed*, 516 U.S. 1005 (1995); *Princeton Univ. Press v. Michigan Document Servs., Inc.*, 99 F.3d 1381, 1388 (6<sup>th</sup> Cir. 1996) (*en banc*), *cert. denied*, 520 U.S. 1156 (1997).

45. *DC Comics, Inc. v. Reel Fantasy, Inc.*, 696 F.2d 24, 28 (2d Cir. 1982); *Ringgold v. Black Entmt TV*, 126 F.3d 70, 81 n.16 (2d Cir. 1997); *UMG Recordings, Inc. v. MP3.Com, Inc.*, 92 F. Supp. 2d 349, 352 (S.D.N.Y. 2000).

46. *Campbell*, 510 U.S. at 590.

compounding dangers of future transaction costs. The potentially harmful effects upon future licensing appears to have been the focus of proprietary expert testimony submitted on behalf of the plaintiffs by Prof. David Teece of the University of California (Berkeley) and LECG, LLC (formerly Law and Economics Consulting Group). Record labels have since announced joint ventures—where individual tracks from different producers can be streamed or downloaded for monthly subscription rates – that could be seriously affected by unlicensed peer-to-peer services that make some of the same music available free of charge. Warner Music Group, EMI Recorded Music, and BMG Entertainment launched in December, 2001 a joint venture (MusicNet) for selling music downloads and subscriptions of label tracks to online retail distributors using Real Networks technology.<sup>47</sup> Sony Music Entertainment, Vivendi Universal Music Group, EMI Recorded Music, and eight independent labels followed two weeks later with the launch of a competing service, Pressplay.<sup>48</sup>

A companion piece to this article reviews in greater detail the issue of market harm and a number of other defenses involving sampling, space-shifting, the Audio Home Recording Act, and the Sony defense, where the arguments of Napster and its amici were found lacking.<sup>49</sup> To my mind, Napster’s best conceivable defense against liability is the “safe harbor exemption” of the Digital Millennium Copyright Act of 1998, which added Section 512 to Title 17 of the U.S. Code.<sup>50</sup> Per 17 U.S.C. 512, a service provider shall not be liable for infringement for “referring or linking users to an online location containing infringing material . . . by using information location tools, including a directory, index, reference, pointer, or hypertext link” under any of three circumstances:

1. The service provider has no actual knowledge that the material is infringing,<sup>51</sup> or
  2. Is not aware of facts or circumstances from which infringing activity is apparent,<sup>52</sup>
- or
3. Upon obtaining such knowledge or awareness, acts to remove, or disable, access to the material.<sup>53</sup>

Judge Patel incorrectly interpreted the statute as follows:

This subsection expressly excludes from protection any defendant who has “actual knowledge that the material or activity is infringing” 512(d)(1)(A) or “is aware of facts or circumstances from which infringing activity is apparent.” 512(d)(1)(B). (emphasis mine)

This reading is logically incorrect. To be logically consistent with the wording of Section 512(d), Judge Patel should have said:

This subsection expressly excludes from protection any defendant who has “actual knowledge that the material or activity is infringing” and “is aware of facts or circumstances from which infringing activity is apparent” and “upon obtaining such knowledge or awareness, fails to remove, or disable, access to the material.”

If we read the third condition, 512(d)(1)(C), Napster may have met notices of

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48. See Evan Hansen & Jim Hu, *RealNetworks plugs in MusicNet*, CNET NEWS.COM (Dec. 4, 2001), at <http://news.com.com/2100-1023-266549.html>.

49. See Jim Hu, *Pressplay comes to life after long wait*, CNET NEWS.COM (Dec. 19, 2001), at <http://news.com.com/2100-1023-277176.html>.

49. Michael A. Einhorn, *RIAA v. Napster: Sympathy for which ‘Devil’?*, 32 WEST L.A. L. REV. (forthcoming 2002).

50. 17 U.S.C. 512 (2001).

51. 17 U.S.C. 512d(1)(A) (2001).

52. 17 U.S.C. 512(d)(1)(B) (2001).

53. 17 U.S.C. 512(d)(1)(C) (2001).

copyright infringement by disabling users for whom it has received notice. Napster contended that its mode of blocking was more effective than blocking by IP address, user name, or smart or credit card ID.<sup>54</sup> The service also placed a code in the registry of the infringing computer to prevent access to its directories under any account name<sup>55</sup> and informed users of its termination policy.<sup>56</sup>

While Napster disconnected over 700,000 customers, these users represented a bit more than one percent of its subscriber base.<sup>57</sup> Napster attorneys did not contest Plaintiff evidence that showed that 87 percent of file downloads nonetheless were unauthorized.<sup>58</sup> Rather, defendants claimed that Napster could not discern copyrighted material because neither CD music nor MP3 files contain notices and because plaintiffs refused to identify copyrighted works.<sup>59</sup> In an effective statement to the Circuit Court, defense counsel wrote “without attempting to determine the actual practicability of any potential modification of the Napster system, the [District] Court ordered that Napster simply had to ‘figure out a way’ to prevent any and all alleged infringing uses.”<sup>60</sup>

The Circuit Court found in its remand of the initial injunction<sup>61</sup> that Judge Patel failed to consider the underlying technology for protecting copyrighted works and left many questions unanswered. Can tracks on future CDs be protected in other manners? Is copyright status encoded on hard drive files? If not, how can Napster determine which files are copyrighted? Must Napster make the listing itself, or are copyright owners reasonably obliged to provide any information? What is Napster’s responsibility for works that labels cannot identify? Should transfer be proscribed for those files bearing the exact names of copyrighted work, or all additional copyrighted files bearing mnemonics or encoded names? How can Napster determine whether a file was protected or not? If Napster cannot practically distinguish protected and unprotected work, is the Court prepared to shut down file-sharing altogether? Could uncontrollable open source software emerge in a post-Napster world that would render the injunction entirely meaningless?

In summary, information about new technology and the efficacy of prevention appeared too incomplete to justify the sweeping injunction that the District Court originally ordered.<sup>62</sup> If other economic methods of prevention are not explicitly considered, an injunction might close off the market at a time when more information could reasonably have been expected. It might render a technology capable of legal and

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54. See J.D.Tygar, Expert Report, *A&M Records, Inc. v Napster, Inc.*, July 26, 2000, 51-5; see also Ariel Berschadsky, *RIAA v. Napster: A Window Onto the Future of Copyright Law in the Internet Age*, 18 J. MARSHALL J. COMPUTER & INFO. L. 101, 128 (2000).

55. See Tygar, *supra* note 54, at 50.

56. 17 U.S.C. 512(i) (2001).

57. See Lewis, *supra* note 2.

58. Appellee’s Brief at 5, *Napster, Inc. v. A&M Records, Inc.*, 239 F.3d 1004 (9<sup>th</sup> Cir. 2000) (No. 00-16401 and 00-16403).

59. Opposition of Defendant Napster, Inc. to Plaintiff’s Motion for Preliminary Injunction at 16-21, *A&M Records, Inc. v Napster, Inc.*, *A&M Records, Inc. v. Napster, Inc.*, 114 F. Supp. 2d 869 (N.D. Cal. 2000) (No. 99-5283); Appellant Napster Inc’s Emergency Motion for Stay Pursuant to Rule 27-3 and Motion to Expedite Appeal at 8, 13-4, 51-2, *Napster, Inc. v. A&M Records Inc.*, 239 F.3d 1004 (9<sup>th</sup> Cir.) (No. 00-16401 and 00-16403); Appellant Napster, Inc.’s Opening Brief at 12, *Napster, Inc. v. A&M Records Inc.*, 239 F.3d 1004 (9<sup>th</sup> Cir.) (No. 00-16401 and 00-16403).

60. Appellant Napster Inc’s Emergency Motion for Stay Pursuant to Rule 27-3 and Motion to Expedite Appeal at 15, *Napster, Inc. v. A&M Records Inc.*, 239 F.3d 1004 (9<sup>th</sup> Cir. 2000) (Appeal No. 00-16401)

61. *A&M Records, Inc. v. Napster, Inc.*, 114 F.Supp.2d (N.D. Cal. 2000).

62. Merrill makes the point that injunctions based on the law of trespass are best employed when transactions costs are low and negotiation to more efficient solutions can be expected. Plaintiffs are compelled under the law of nuisance to demonstrate proactively market harm. Thomas W. Merrill, *Trespass, Nuisance, and the Cost of Determining Property Rights*, 14 J. LEGAL STUD. 13 (1985).

beneficial services inoperable in its entirety.

## COASE THEOREMS

A court that applies the strong Coase Theorem will award a property right to one party with a secure belief that negotiation would eventually resolve an inefficient assignment.<sup>63</sup> The efficient application of the Coase Theorem to the Napster court would have depended on three conditions generally needed for economic efficiency— no excluded “third parties” affected by the outcome, no market power in the pricing of label records, and no transaction costs in negotiations between the contending parties. The application of the strong Coase theorem in cyberlitigation is frequently limited due to the widely distributed base of third-party beneficiaries who are excluded from the negotiation. Indeed, the general transactional difficulties posed by third-party exclusion are a considerable justification for the fair use doctrine. Wendy.

As a weaker variation of the Coase Theorem, courts might invoke the liability rules of Calabresi and Melamed to permit use with compensation for harmed parties.<sup>64</sup> With liability rules, copyright violations would be considered nuisances that impose harms upon content producers (such as pollution and personal injury). Copyright infringers can efficiently internalize damages if dollar awards reflect true usage costs. If affixed correctly per unit of damage, market signals would limit all forms of contributing activity where efficient, and would therefore be generally deterrent.<sup>65</sup> However, damage payments should be based on estimates of actual harm and would be neither punitive nor confiscatory to any greater degree.

A number of economists have tended to prefer general deterrence to specific safeguards (see below) that enjoin or penalize particular actions, possibly ignoring others.<sup>66</sup> However, the information that would have been needed to establish an efficient price solution in the Napster case would have been prohibitive to obtain. With no legitimate file-sharing service in operation, there was no reasonable benchmark for determining a market-based license fee for the Napster service. Moreover, even if a fair estimate of the number of downloads were possible, there was no one-to-one relationship between downloads and lost label profits. That is, some Napster users may have sampled or transferred music that they would not otherwise not have bought, while others may actually have bought CDs heard first through Napster. Still other Napster users might have displaced sales of tracks or future digital music subscriptions (which to the moment are future products with unknown prices). Over time, the user base and penetration of CD burners and home networks might change dramatically, and the parameters of displacement might change considerably. The difficulties of making assessments will compound further yet, as other music services come into existence, and labels deploy

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63. From the Coase Theorem, the presence of absence of an injunction is irrelevant to the final outcome if the contending parties may negotiate a mutually agreeable result without transactions cost. For if the injunction were instituted for the inefficient position, the loser could induce the winner to lift the injunction by appropriate compensation that would improve social welfare and leave both parties better off. No such deal could displace an efficient position.

64. See Calabresi & Melamed, *supra* note 10, at 1106-10.

65. See CALABRESI, *supra* note 11, at ch. 5.

66. See Steven Shavell, *Strict Liability Versus Negligence*, 9 J. LEGAL STUD. 1, 25 (1980); STEVEN SHAVELL, *THE ECONOMIC ANALYSIS OF ACCIDENT LAW* 8 (1987); Richard A. Epstein, *The Temporal Dimension in Tort Law*, 53 U. CHI. L. REV. 1175, 1190 (1986).

digital rights management and other protection strategies in order to protect content.<sup>67</sup>

## SPECIFIC DETERRENCE

We finally examine specific acts of prevention that would limit the harm resulting from infringing behaviors. Conceivably, the court can affix liability upon that provider who can most efficiently deter damage. “It would be possible for the legal system to improve the allocation of resources by placing liability on that party who in the usual situation could be expected to avoid the costly interaction most cheaply.”<sup>68</sup> Once an initial position is established, the parties can presumably negotiate to a higher level of deterrence, if efficient.

The mandating of efficient restraints apparently found its way in 1997 to the Supreme Court, which examined statutory provisions of the Communications Decency Act of 1996 that prohibited commercial services from transmitting adult video communications via the Internet.<sup>69</sup> The Court ruled that users could more efficiently prevent exposure and disallowed the provisions. The Court efficiently reassigned the responsibility of policing for adult transmissions to the party capable of providing the prevention technology at the lowest cost.

However, there is no economic reason why courts should limit liability solely to the “low cost” provider.<sup>70</sup> A multilateral resolution would be particularly compelling if self-help methods could complement one another or resolve different aspects of the same problem.<sup>71</sup> Courts may then generally think of themselves as enabling complementary practices of self-help that present a cooperative solution to Prisoner’s Dilemma games.<sup>72</sup> Indeed, failure to impose symmetric restrictions invites the moral hazard of underprotection, which can encourage more wasteful litigation as a means of resolving future conflicts.<sup>73</sup>

In remanding the District Court’s preliminary injunction with detailed instructions, the Circuit Court seems to have adopted specific deterrence by ordering the labels to provide the names of copyrighted songs that were to be blocked.<sup>74</sup> On remand, Napster was

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67. Digital rights management strategies will include protective envelopes that communicate with home bases, hardware devices that meter usage, one-time downloadable executables, server-based executables, digital certificates that signify permission status, clearinghouses with licensing authority, and advanced watermarks bearing the name of the copyright holder(s) and original buyer. See Eric Schlachter, *The Intellectual Property Renaissance in Cyberspace: Why Copyright Law Could be Unimportant on the Internet*, 12 BERKELEY TECH. L.J. 15, 38-44 (1997).

68. Harold Demsetz, *When Does the Rule of Liability Matter?*, 1 J. LEGAL STUD. 13, 27-28 (1972). For application to torts, see CALABRESI, *supra* note 11, at 136-40; Guido Calabresi & John T. Hirschoff, *Toward a Test for Strict Liability in Torts*, 81 YALE L. J. 1055, 1060 (1972); WILLIAM E. LANDES & RICHARD A. POSNER, *ECONOMIC STRUCTURE OF TORT LAW*, ch. 1 (1987).

69. *Reno v. ACLU*, 521 U.S. 844 (1997).

70. See Demsetz, *supra* note 70; Calabresi & Hirschoff, *supra* note 70, see also Stephen G. Gilles, *Negligence, Strict Liability, and the Cheapest Cost-Avoider*, 78 VA. L. REV. 1291 (1992).

71. Bilateral care rules applied to property disputes were suggested first by Michelle J. White & Donald Wittman, *Long Run versus Short Run Remedies for Spatial Externalities: Liability Rules, Pollution Rules, and Zoning*, in *ESSAYS ON THE LAW AND ECONOMICS OF LOCAL GOVERNMENTS* 33 (Daniel L. Rubinfeld ed., 1979).

72. On the other hand, if a specialized labor solution is mandated where the resources of only one player are to be mobilized, courts may reasonably prescribe compensations that could make both parties better off. See ROBERT C. ELLICKSON, *ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES* 162 (1991).

73. Steven Shavell, *The Fundamental Divergence between the Private and the Social Motive to Use the Legal System*, 26 J. LEGAL STUD. 575 (1997).

74. *A&M Records, Inc. v. Napster, Inc.*, 239 F. 3d 1004, 1027 (9th Cir. 2001).

preliminarily enjoined from copying, downloading, uploading, transmitting, or distributing copyrighted sound recordings.<sup>75</sup> However, the plaintiffs were obliged to provide notice of the title of the work, the name of the featured artist, the name of one or more files on the Napster system containing the work, and a certification of ownership.<sup>76</sup>

In March, 2001, the RIAA filed a brief that contended that Napster's filtering system was ineffective.<sup>77</sup> The plaintiff group claimed that every song in an original notice of 675,000 copyrighted works had remained available subsequently in the Napster system.<sup>78</sup> Name-based filters were porous because certain files were misspelled or identified by idiosyncratic user mnemonics (such as pig Latin), purportedly with the assistance of Napster-provided bulletin boards that transmitted information about strategic coding.<sup>79</sup> The District Court subsequently ordered Napster to strengthen its protection.<sup>80</sup>

To improve monitoring, Napster purchased from Gracenote access to a vast database of song titles with common misspellings, and designed its own automated filter to look for likely misspellings.<sup>81</sup> Napster also licensed from Relatable audio recognition software that can take from any song a "digital fingerprint" bearing 34 distinct audio characteristics;<sup>82</sup> fingerprinted sounds can be compared to file data now available from Loudeye Technologies to check for owner permission. Napster also has worked with Bertelsmann's Digital World Services to add protection layers to music files to prevent songs from being burned to CDs or transferred to portable devices.<sup>83</sup> A final option, not yet implemented, is the calculation of an MD5 checksum, which is a unique file-specific 128 bit string based on the characteristics of the underlying contents of an MP3 file that can be used as an alternative checking signal.<sup>84</sup> This additional protection was not enough

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75. *A&M Records, Inc. v. Napster, Inc.*, No. C 99-5183-MHP, 2001 U.S. Dist. LEXIS 2186, at \*3 (N.D. Cal. Mar. 5, 2001).

76. *Id.* at \*3-4.

77. Plaintiffs' Report on Napster's Non-Compliance with Modified Preliminary Injunctions, *A&M Records, Inc. v. Napster, Inc.*, No. C 99-5183-MHP, 2001 U.S. Dist. LEXIS 2186 (N.D. Cal. Mar. 5, 2001), available at [http://news.findlaw.com/legalnews/documents/archive\\_n.html](http://news.findlaw.com/legalnews/documents/archive_n.html).

78. *Id.* at 1.

79. *Id.* at 11-12.

80. John Borland, *Judge: Napster Filtering Efforts 'Disgraceful'*, CNET NEWS.COM, (Apr. 10, 2001), at <http://news.cnet.com/news/0-1005-200-5567384.html>.

81. "The Gracenote technology inserts into the beginning of an MP3 file that was ripped with a Gracenote-enabled encoder a Track Unique Identifier (TUID). The TUID is a unique identifier that may be used to identify music tracks. Further, applications exist, and in the future could be put into the Napster client software, that would retroactively insert a TUID into MP3 files that had been ripped with a Gracenote-enabled ripper that had not previously inserted a TUID. Using this TUID, Napster could filter files based on their content rather than their name." Plaintiffs' Report on Napster's Non-Compliance with Modified Preliminary Injunctions at 14-5, *A&M Records, Inc. v. Napster, Inc.*, No. C 99-5183-MHP, 2001 U.S. Dist. LEXIS 2186 (N.D. Cal. Mar. 5, 2001), available at [http://news.findlaw.com/legalnews/documents/archive\\_n.html](http://news.findlaw.com/legalnews/documents/archive_n.html).

82. "A recording can be analyzed for traces of unique digital characteristics, usually through the use of a proprietary or patented algorithm. As a result, a 'fingerprint' of these characteristics is derived. This 'fingerprint' can be used to identify specific recordings, regardless of the name placed on the file by the Napster user, the source of the recording or technical difficulties such as frequency or sampling rate." *Id.* at 14.

83. *Napster, Bertelsmann's Digital World Services Working on Secure Service*, DIGITAL MEDIA WIRE (February 16, 2001), at [http://www.digitalmediawire.com/archives\\_021601.html](http://www.digitalmediawire.com/archives_021601.html).

84. "Every MP3 file has a mathematically-generated and unique fingerprint or 'checksum.' Any requesting user who is unable to download a particular MP3 file may use the client software to send the file's checksum and full intended size to the Napster servers and attempt to locate a match for download." *A&M Records, Inc. v. Napster, Inc.*, 114 F. Supp. 2d 896, 907 (N.D. Cal. 2000) (citations omitted); "Napster still takes the checksum . . . of each MP3 file made available every time a user logs on to the Napster system. . . . All copies of a particular MP3 music file (i.e., all subsequent copies of a file originally ripped by a single user) will have the same checksum." Plaintiffs' Report on Napster's Non-Compliance with Modified Preliminary Injunctions at 13, *A&M Records, Inc. v. Napster, Inc.*, No. C 99-5183-MHP, 2001 U.S. Dist. LEXIS 2186 (N.D. Cal. Mar. 5, 2001), available at [http://news.findlaw.com/legalnews/documents/archive\\_n.html](http://news.findlaw.com/legalnews/documents/archive_n.html).

to maintain adequate security; after the District Court held that Napster's purported filter success rate of 99.4 percent was insufficient,<sup>85</sup> Napster implemented a technical shutdown that the operators now assure is temporary.<sup>86</sup>

There are three possible matters worth watching in the future. First, while file availability on the Napster system has fallen drastically and the number of Napster users appears to have plummeted to negligible levels,<sup>87</sup> Napster spinoffs (e.g., Bearshare.com, Audiogalaxy, iMesh, LimeWare, Kazaa, MusicCity, Morpheus) have attracted former Napster users who are yet determined to maintain peer-to-peer file-sharing.<sup>88</sup> Most importantly, Kazaa, Music City, and Morpheus (now in litigation) distribute from their respective web sites Fast Track software that enables open-source file-sharing without centralized directories.<sup>89</sup>

Second, record labels may use digital data shields from Midbar and SunnComm to stop direct "ripping" of CDs to unprotected MP3 files on hard drives, a source of growth of music files for all file-sharing services.<sup>90</sup> Third, carrying a \$100 million investment from Bertelsmann, a relaunched Napster will soon allow users to exchange a specified amount of secure songs for a monthly subscription fee. The new service will evidently compete with MusicNet and Pressplay, as well as the unlicensed file-sharing services discussed immediately above.

## CONCLUSION

A few concluding thoughts are in order. As a practical matter, a system in which facts gradually unfold, new institutions emerge, and provider technologies come to complement one another cannot evolve if courts simply impose statutory fines or implement broad restrictions that run new companies out of business. Nor will efficiency or equity be served if content is appropriated without regard to the consequences to copyright owners who have produced and distributed the work. A compelling case then exists for policy-making that is purposefully incremental and experimental—restricting considerations, limiting information, forsaking measurement, and attempting to learn-by-doing.

In this respect, the best practical strategy that a court could have followed in resolving the Napster matter was to institute a balanced system of safeguards that involve the design of "electronic fences" that obligate each side to act cooperatively to attain a more efficient outcome. With more options made possible by new digital technologies, the present prevention strategies might not be the only tactics for resolving an issue. Rather, any chosen tactic—even if limited in scope—would allow more information to be drawn into the process, thereby enabling in the end a more reasonable, if not more efficient,

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85. Judge Patel stated: "The standard is to get it down to zero, do you understand that?" Evan Hansen & Lisa M. Bowman, *Court: Napster filters must be foolproof*, CNET NEWS.COM (July 12, 2001), at <http://news.cnet.com/news/0-1005-200-6549898.html>.

86. Associated Press, *New Napster Online by End of 2001*, CNET NEWS.COM (August 22, 2001), at <http://news.cnet.com/news/0-1005-200-6946163.html>

87. Hansen & Bowman, *supra* note 87.

88. See John Borland & Gwendolyn Mariano, *Looking for the next Napster*, CNET NEWS.COM (July 5, 2001), at <http://news.cnet.com/news/0-1005-202-6455436-0.html>.

92. See *supra* note 4 and surrounding text.

93. See Gwendolyn Mariano, *Protected CDs slip into stores*, CNET NEWS.COM (February 11, 2002), at <http://news.com.com/2100-1023-835841.html>.

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adaptation of technology to market needs.

One is nonetheless admittedly left with a feeling that the Court's decision can lead to a Pyrrhic victory for both economic jurisprudence and the cause of copyright protection. Napster clones can indeed proliferate, enabled by open-source software that has no centrally accountable organization.<sup>91</sup> If open-source software cannot be controlled, record labels with no choice but to live with the availability of free copies for previous CDs, while protecting all new releases with disc protection, promoting new CDs with embedded software features, and making their joint venture subscription services more appealing. The resulting outcome may indeed prove that the RIAA's efforts, evidently motivated by a sense of legal principle, were unable to prevent the spread of viral technologies on the Internet. This would entirely confound the economic support by efficiency-based court interventions and prove, in the end, that the Internet is indeed a strongly distributed computing network that may empower its individual users, for right or wrong.

## ABOUT THE AUTHOR

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In the [technology](#) sector, Dr. Einhorn worked at Bell Laboratories and the U.S. Department of Justice (Antitrust Division) and consulted to General Electric, AT&T, Argonne Labs, Telcordia, Pacific Gas and Electric, and the Federal Energy Regulatory Commission. He has advised parties and supported litigation in matters involving [patent damages](#) and related valuations in semiconductors, medical technologies, search engines, e-commerce, wireless systems, and proprietary and open source [software](#).

Litigation support involving media economics and [copyright damages](#) has involved [music](#), movies, television, advertising, branding, apparel, architecture, fine arts, video games, and photography. Matters have involved Universal Music, BMG, Sony Music Holdings, Disney Music, NBCUniversal, Paramount Pictures, DreamWorks, Burnett Productions, Rascal Flatts, P. Diddy, Nelly Furtado, Usher, 50 Cent, Madonna, and U2.

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94. Supra note 91-2 and surrounding text.

Matters involving trademark damages have included the Kardashians/BOLDFACE Licensing, Oprah Winfrey/Harpo Productions, Madonna/Material Girl, CompUSA, Steve Madden Shoes, Kohl's Department Stores, *The New York Observer*, and Avon Cosmetics. Matters in publicity right damages have involved Zooey Deschanel, Arnold Schwarzenegger, Rosa Parks, Diane Keaton, Michelle Pfeiffer, Yogi Berra, Melina Kanakaredes, Woody Allen, and Sandra Bullock.

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