COMMENTS

Peering Beyond Today's Internet File Sharing Concerns: The Future of BitTorrent Technology

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I. INTRODUCTION

Technological progression over the past twenty-five years has led brilliant and innovative minds to develop methods of communication which continually shatter the bounds of information transfer. While such advancements certainly benefit society, they also have the power to undercut the very foundations upon which certain aspects of our world rest. These foundations are protected by the delicate balance achieved

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through copyright law. Article I, Section 8, Clause 8 of the United States Constitution provides Congress the power to legislate "[t]o 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." The careful attention we afford to striking a balance between incentive to create and public dissemination is called into question more often than ever because of advancements made after enactment of our current laws. As a result, courts have struggled over the problem of forcing new technology into current copyright doctrine, constantly calling upon our legislators to resolve the issues in light of society's best interest.

II. BRIEF HISTORY OF P2P TECHNOLOGY

The increased ability to transfer large amounts of information over the Internet has evolved into "peer-to-peer" (P2P) file sharing between individual users.[1] This activity involves Internet users connecting to each others' computers over the Internet for the purpose of sharing digital computer files.[2] In some cases, the users create and distribute copies of protected works without authorization, a practice strictly prohibited by copyright law.[3]

Napster, a centralized file sharing service, provided the original online network through which users began trading music files.[4] Napster employed the client-server model, the most common method by which files are transferred over the Internet.[5] In this model, the user is the "client," the server is the Web site proprietor offering downloadable information, and a central index keeps track of the information shared between two clients (also known as "peers" and "users").[6] For example, in the Napster scenario, the client first would register his or her computer with Napster (the server) and would be granted access to the central directory of MP3 files, which would include all other online peers with files available for sharing.[7] When the client wished to download a file,

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1. Answers.com, File Sharing, http://www.answers.com/topic/filesharing (last visited Feb. 7, 2006).
2. *See id.*
3. *See* 17 U.S.C. § 106 (2000); Answers. com, *supra* note 1.
4. *See* Answers.com, *supra* note 1. The files were traded in MPEG-3 format, commonly known as MP3. *Id.*
5. *See* Brian's BitTorrent FAQ and Guide, http://dessent.net/btfaq (last visited Apr. 6, 2006).
6. *See* Jesse M. Feder, *Is Betamax Obsolete:* Sony Corp. of America v. Universal City Studios, Inc. *in the Age of Napster*, 37 CREIGHTON L. REV. 859, 863-64 (2004).
7. *See* A & M Records, Inc. v. Napster, Inc., 239 F.3d 1004, 1011-12 (9th Cir. 2001).

he or she would simply run a query in the Napster server.[8] The client would then select one or more peers from which he or she wanted to download the desired file.[9] At that point, the Napster server linked the two peers and monitored the entire file transfer between them, recording a log of the activity in the server's central directory.[10] Napster's role as the server and the central directory ultimately led to its demise, which is briefly discussed below.[11]

Since the advent of P2P sharing, computer gurus have developed more efficient methods to speed up the process. A major operational problem with the client-server model was the slow speed associated with downloading large files.[12] "[I]t takes a great deal of bandwidth and server resources to distribute" large or very popular files since communications travel through the central server.[13] Napster was unable at times to provide the required bandwidth to allow for reasonable sharing speeds. As a result, clients' requests were placed in long "queues" before they were granted access to the requested files.[14] This prompted users to disconnect and hence the network proved insufficient to meet its demands at times.[15]

A. Technical Explanation of BitTorrent Technology

The operational failure of the client-server model prompted technology experts to develop a more efficient approach to P2P sharing.[16] Their answer has been decentralization, which is the primary characteristic of BitTorrent technology.[17] As a result of the ever-increasing demand for faster data transfer, BitTorrent file sharing technology has recently gained widespread popularity among legitimate and illicit file sharers alike. Developed by Bram Cohen, a twenty-eight-year-old Seattle resident, BitTorrent was first released three years ago

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8. *See generally id.* at 1012.
9. *See id.*
10. *See id.* at 1011-12.
11. *See id.* at 1020-24.
12. *See* Brian's BitTorrent FAQ and Guide, *supra* note 5.
13. Brian's BitTorrent FAQ and Guide; How Does BitTorrent Compare to Other Forms of File Transfer?, http://btfaq.com/serve/cache/4.html (last visited Apr. 6, 2006).
14. *See generally* Brian's BitTorrent FAQ and Guide, *supra* note 5. Such a situation is comparable to customers remaining "on hold" when phoning their cable service provider's "customer service" department because of the "high volume of calls" they may be experiencing at that time. Only a limited number of phone lines are available, and only a limited number of clients may share certain files. Therefore, as customer service departments and music files grow more popular, clients stand in line longer. *Id.*
15. *See id.*
16. *See* Answers.com, *supra* note 1.
17. *See id.*

with the intent to attract music enthusiasts to share concert videos over the Internet.[18] Thousands, if not millions, of illicit traders are now attracted to it because they can quickly download digital-quality, pirated movies from online peers in relatively short time.[19] This Comment will proceed with respect to issues presented by illicit file sharing via BitTorrent technology.

With BitTorrent, individuals generally share files on a one-to-one basis.[20] First, an individual creates a "seed" file (identified by the .torrent file) using BitTorrent software.[21] A "torrent" is a small metadata file the client receives from the Web server (ending in .torrent).[22] "'Metadata' here means that the file contains information *about* the data [the client] want[s] to download, not the data itself."[23]

The "seed" file is a complete source file (i.e., the movie).[24] It includes the file's name, size, and a "tracker" server.[25] Once the seed has been planted, a client wishing to download the file must first download the BitTorrent software, which is available on many Internet sites.[26] Next, the client clicks on a torrent link posted on a Web site, which opens using the BitTorrent software recently downloaded by the client.[27] The client then communicates to the tracker, or file sharing index, that he is ready to download the file (or movie, in our case).[28]

The "tracker" plays an integral role in the file sharing activity. It generally behaves like a "matchmaker, keeping track of who's downloading the file and matching them up with others who are doing the same."[29] It also provides clients with a list of other users who have

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18. *See* Paul Boutin, *Caveat MPAA: Meet BitTorrent, the File Sharing Network That Makes Trading Movies a Breeze*, SLATE, Feb. 27, 2004, http://slate.msn.com/id/2096316. Support for this community of people stems from musicians who actively encourage them to share bootleg video recordings of their concerts. *Id.*

19. *See id.*

20. *See* Brian's BitTorrent FAQ and Guide, *supra* note 5.

21. *See* Answers.com, BitTorrent, http://www.answers.com/topic/bittorrent (last visited Apr. 6, 2006).

22. *See* Brian's BitTorrent FAQ and Guide, *supra* note 5 (comparing a torrent to a "key" which merely unlocks access to downloadable works).

23. *Id.*

24. *See id.*

25. *See generally id.*

26. *See id.* For various hosts offering downloadable BitTorrent software, see BitTorrent.com, http://www.bittorrent.com (last visited Apr. 6, 2006).

27. *See* Brian's BitTorrent FAQ and Guide, *supra* note 5.

28. *See id.*

29. Dictionary.LaborLawTalk.com, BitTorrent, http://encyclopedia.laborlawtalk.com/BitTorrent (last visited Apr. 8, 2006).

portions of the requested file and are willing to share.[30] Each client is identified by his Internet Protocol (IP) address.[31] Although the tracker keeps a log of users who have downloaded the torrent file, the tracker does not show or record actual trading between users, and its log can be purged at any time by the Web site proprietor.[32]

Now, after clicking the torrent link, the tracker (sometimes referred to as the "central server," even though it does not have the exact same characteristics of the traditional server) searches the Internet for users containing the data the client wants to download.[33] The client is directly connected to (ideally) several other peers with the requested data.[34] The peers then begin sending fractions of the complete file to each other until they all have the complete file.[35] This small community of file sharers is known as a "swarm."[36]

The attraction of BitTorrent sharing is the unique ability for the peers of a swarm to share parts of files with one another until each has the complete file.[37] It avoids the congestion characteristic of the client-server model in which a data file is transferred strictly between two individual users, thereby allowing only one source per download.[38] For example, consider a situation in which five people are seated at a table, each with twenty different pages of a 100-page book.[39] Each has expressed interest to a third party (the torrent file) who was prompted to bring the five people (the swarm) together.[40] Instead of each party waiting for transmission of the entire 100 pages from a single peer (i.e., Napster) over a congested network, the parties automatically send copies of each other's 20 pages to those in need until they all have the 100-page book.[41] Note that the sharing becomes faster as each user obtains more pages because more sources become available to each incomplete user.

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30. *See generally* Brian's BitTorrent FAQ and Guide, *supra* note 5; Webopedia Computer Dictionary, IP Address, http://www.webopedia.com/TERM/I/IP_address.html (last visited Apr. 8, 2006).

31. *See* Brian's BitTorrent FAQ and Guide, *supra* note 5.

32. *See* Michael Ingram, *Loki's Map Leads MPAA on Road to Nowhere*, SLYCK NEWS, Feb. 12, 2005, http://www.slyck.com/news.php?story=665 (noting that a log which is not regularly purged requires a tremendous amount of resources, therefore site owners usually purge them).

33. *See* Boutin, *supra* note 18.

34. *See generally id.*; Answers.com, *supra* note 1.

35. Answers.com, *supra* note 1.

36. *See id.*

37. *See* Boutin, *supra* note 18.

38. *See generally id.*

39. *See* Brian's BitTorrent FAQ and Guide, *supra* note 5; Answers.com, *supra* note 1.

40. *See* Brian's BitTorrent FAQ and Guide, *supra* note 5; Answers.com, *supra* note 1.

41. *See* Brian's BitTorrent FAQ and Guide, *supra* note 5; Answers.com, *supra* note 1.

The bandwidth problem characteristic of a traditional client-server model is consequently reduced.[42] Thus, the more popular a file is, the more sources available from which to download it and the faster one receives a complete data file.[43]

B. Recent Legal Attacks on BitTorrent

The Motion Picture Association of America (MPAA) recently initiated an onslaught of litigation to snuff out P2P file sharing.[44] It filed suits against more than 200 BitTorrent servers in December 2004,[45] no doubt alleging contributory and vicarious infringement. While many BitTorrent sites shut down in response to cease and desist letters sent out by the MPAA, one, lokitorrent.com, initially vowed to fight the industry giant.[46] The case recently settled, however, and the site operator agreed to pay the MPAA one million dollars and release its tracker log to them.[47] While BitTorrent proponents have yet to challenge media giants like the MPAA or Recording Industry Association of America (RIAA) in court, some feel the future of BitTorrent sharing will hinge on the United States Supreme Court's 2005 decision in *MGM Studios v. Grokster*.[48] From a practical perspective, however, it is unclear how copyright owners will enforce the laws against all illicit BitTorrent sharers even though the Court ruled in their favor. This is discussed *infra* Part IV.

This Comment addresses the question of where BitTorrent technology fits within current copyright law, as well as any changes required to preserve the proper balance between artist incentive and public availability. First, I will illuminate the current copyright issues faced by P2P sharing with respect to booming technology. An analysis of BitTorrent sharing based on *Grokster* will follow to determine whether there is a clear-cut answer about its future. Finally, this Comment will address rules regarding decentralized file sharing and whether copyright policy requires us to adapt those rules to the world of rapidly changing

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42. *See* Brian's BitTorrent FAQ and Guide, *supra* note 5; Answers.com, *supra* note 1.

43. *See* Brian's BitTorrent FAQ and Guide, *supra* note 5; Answers.com, *supra* note 1.

44. *See* Tony Smith, *MPAA To Serve Lawsuits on BitTorrent Servers*, THE REGISTER, Dec. 14, 2004, http://www.theregister.co.uk/2004/12/14/mpaa_vs_bittorrent.

45. *See id.*

46. *See* Ashlee Vance, *MPAA Closes Loki*, THE REGISTER, Feb. 10, 2005, http://www.theregister.co.uk/2005/02/10/loki_down_mpaa.

47. *See* Consent Judgment and Permanent Injunction, Columbia Picture Indus. v. Disney Enters. No. 3:04CV2642-N (N.D. Tex. Feb. 1, 2005); Vance, *supra* note 46.

48. *See, e.g.*, Ashlee Vance, *The Supremes Prep for P2P Battle Royal*, THE REGISTER, Dec. 10, 2004, http://www.theregister.co.uk/2004/12/10/sc_p2p_case.

technology. Proper analysis should begin with an overview of the doctrines of contributory and vicarious copyright infringement.

III. SECONDARY COPYRIGHT LIABILITY DOCTRINE

The practical considerations of P2P sharing illustrate the importance of contributory and vicarious copyright infringement to copyright holders. "Recognizing the impracticability or futility of a copyright owner's suing a multitude of individual infringers, the law allows a copyright holder to sue a contributor to the infringement instead, in effect as an aider and abettor."[49] To date, plaintiffs have brought suit based on the theories of contributory and vicarious copyright infringement.[50]

A. The Doctrines of Contributory and Vicarious Copyright Infringement

To be guilty of contributory copyright infringement, the plaintiff must show: "(1) direct infringement by a primary infringer, (2) knowledge of the infringement, and (3) material contribution to the infringement."[51] Direct infringement has been established in P2P cases but the knowledge and material contribution elements have been the subject of much debate.[52]

Liability for vicarious copyright infringement is established by showing: "(1) direct infringement by a primary party, (2) a direct financial benefit to the defendant, and (3) the right and ability to supervise the infringers."[53] This is based on the doctrine of "respondeat superior," which was founded under the theory of a principal-agent relationship.[54] Courts have had difficulty applying this doctrine in P2P infringement

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49. *In re* Aimster Copyright Litig., 334 F.3d 643, 645-46 (7th Cir. 2003) (citing Randal C. Picker, *Copyright as Entry Policy: The Case of Digital Distribution*, 47 ANTITRUST BULL. 423, 442 (2002) ("Chasing individual consumers is time consuming and is a teaspoon solution to an ocean problem.")).

50. *See, e.g.*, Metro-Goldwyn-Mayer Studios, Inc. v. Grokster Ltd., 380 F.3d 1154 (9th Cir. 2004); *Aimster*, 334 F.3d 643. These doctrines are not codified and have evolved from patent law. Justice Stevens explains the rationale underlying these doctrines in copyright law in *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417, 434-42 (1984).

51. *Grokster*, 380 F.3d at 1160.

52. *See generally Sony*, 464 U.S. 417; *Grokster*, 380 F.3d 1154; *Aimster*, 334 F.3d 643; A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004 (9th Cir. 2001). Note that the circuit courts have not attempted a rigorous dissection of direct infringement with regard to digital file copying in light of the compulsory license accompanying a purchase of nondramatical works.

53. *Grokster*, 380 F.3d at 1164.

54. *See generally id.*

cases, primarily because of the lack of a principal-agent relationship.[55] For this reason, most of the cases cited in this Comment did not address claims of vicarious infringement.

B. Direct Third-Party Infringement

The first element of both contributory and vicarious infringement is direct infringement by a third party.[56] A plaintiff must establish two elements to warrant a finding of direct infringement: "(1) ownership of a valid copyright, and (2) [unauthorized] copying of constituent elements of the work that are original," which violates at least one of the exclusive rights granted to copyright holders under 17 U.S.C. § 106.[57] Courts have consistently held that input of copyrighted data onto a computer qualifies as copying under the Copyright Act.[58]

The cases discussed in this Comment did not take issue with a finding of third-party direct infringement, and indeed, it was conceded by the defendants at times.[59] Similarly, direct infringement by a third party readily manifests itself in the case of BitTorrent technology. A seeder must first plant a torrent file before the actual work is available for sharing.[60] This involves copying the work into a data file,[61] which courts have held to be infringement. Thus, making a torrent file itself constitutes direct infringement regardless of whether it is ever shared.

As the first requirement to establish secondary copyright liability has been established for all of the cases discussed below, I will proceed to a cursory review of the major P2P file sharing rulings to date. After establishing current interpretations of the applicable doctrines, I will subsequently apply the differing rationales to BitTorrent technology and address its likely future.

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55. *See Aimster*, 334 F.3d at 654-55 (noting the application of vicarious liability in a P2P scenario is merely "academic").

56. *See Grokster*, 380 F.3d at 1160, 1164.

57. Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 361 (1991); *see also* 17 U.S.C. § 501(a) (2000).

58. NLFC, Inc. v. Devcom Mid-Am., Inc., 45 F.3d 231, 235 (7th Cir.), *cert. denied*, 515 U.S. 1104 (1995); MAI Sys. Corp. v. Peak Computer, Inc., 991 F.2d 511, 519 (9th Cir. 1993), *cert. dismissed*, 510 U.S. 1033 (1994); Vault Corp. v. Quaid Software Ltd., 847 F.2d 255, 259 (5th Cir. 1988).

59. *See* Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 438 (1984); *Grokster*, 380 F.3d at 1160; *Aimster*, 334 F.3d at 647; A & M Records, Inc. v. Napster, Inc., 239 F.3d 1004, 1013-14 (9th Cir. 2001).

60. *See* Brian's BitTorrent FAQ and Guide, *supra* note 5.

61. *See id.*

C. A & M Records v. Napster

Napster was the first MP3 file sharing network to gain nationwide popularity. It was eventually shut down in a landmark copyright infringement case brought by the music industry and supported by several well-known artists.[62] Applying the Supreme Court's ruling in *Sony Corp. of America v. Universal City Studios, Inc.*, the United States Court of Appeals for the Ninth Circuit found Napster guilty of contributory and vicarious copyright infringement and stayed the preliminary injunction granted by the district court, ordering Napster to immediately cease all infringing transactions.[63] The general basis for imposing contributory and vicarious infringement on Napster was its centralized method of operation.[64]

According to the Ninth Circuit, Napster's central directory amounted to specific knowledge of infringing activity.[65] In addition, Napster provided the "'site and facilities' for direct infringement," thereby fulfilling the "material contribution" element.[66] Under the court's rationale, it appears Napster might have escaped secondary liability if it did not have knowledge of *specific* acts of infringement or the supervisory control to prevent it.[67] It clearly stated that "absent any *specific* information which identifies infringing activity, a computer system operator cannot be liable for contributory infringement merely because the structure of the system allows for the exchange of copyrighted material."[68] Because the Ninth Circuit recognized that Napster was capable of substantial noninfringing uses,[69] the fact that it required knowledge of *specific* infringing activity effectively raised the knowledge requirement established in *Sony*.[70]

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62. *See generally Napster*, 239 F.3d 1004.
63. *See id.* at 1027-28.
64. *See id.* at 1020-24.
65. *See id.* at 1021-22.
66. *Id.* at 1022 (quoting Fonovisa, Inc. v. Cherry Auction, Inc., 76 F.3d 259, 264 (9th Cir. 1996)).
67. *See id.* at 1021 (discussing Religious Tech. Ctr. v. Netcom On-Line Commc'n Servs., Inc., 907 F. Supp. 1361, 1371 (N.D. Cal. 1995) ("[I]n an online context, evidence of actual knowledge of specific acts of infringement is required to hold a computer system operator liable for contributory copyright infringement.")); *see also* Metro-Goldwyn-Mayer Studios, Inc. v. Grokster Ltd., 380 F.3d 1154, 1163, 1165 (9th Cir. 2004).
68. *Napster*, 239 F.3d at 1021 (citing Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 436, 442-43 (1984) (emphasis added)).
69. *Id.* ("We depart from the reasoning of the district court that Napster failed to demonstrate that its system is capable of commercially significant noninfringing uses." (citation omitted)).
70. *See* Feder, *supra* note 6, at 894.

The Ninth Circuit also found Napster had the ability to supervise the infringing activity and willfully turned a "blind eye" instead of preventing it.[71] It determined that Napster financially benefited from attracting illicit traders to its service.[72] Therefore, the court found Napster liable for vicarious infringement as well.[73]

The *Napster* holding fell in the copyright infringement wake of the Supreme Court's 1984 decision in *Sony*. There, plaintiffs sued Sony for contributory copyright infringement based on its sale of video cassette recorders which could be used for infringing purposes.[74] The Supreme Court found Sony was not liable for contributory copyright infringement because Sony had only constructive knowledge of possible infringing uses of its technology, which the Court found was "capable of substantial noninfringing" uses.[75] In contrast, Napster had actual knowledge of specific infringing uses by identifiable users; consequently, the fact that its network was capable of substantial noninfringing uses was not dispositive.[76]

As discussed earlier, technology progressed beyond the bounds of the Napster operation, creating more decentralized file sharing abilities. As a result, illicit sharing has spread to the furthest reaches of the Internet. This has prompted deeper exploration into the doctrine of secondary copyright liability.

D. In re Aimster Copyright Litigation

The United States Court of Appeals for the Seventh Circuit recently found a decentralized file sharing site liable for contributory copyright infringement based on its clients' infringing activities.[77] The infringing activity at issue was the actual trading of protectable works in the form of digital files.[78]

Aimster ran a file sharing service (which operated through America Online's "instant-messaging" service) where users accessed each other through a central server.[79] It advertised its software for use only in

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71. *See Napster*, 239 F.3d at 1023-24.
72. *See id.* at 1023.
73. *See id.*
74. *See* Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 420-21 (1984).
75. *Id.* at 456.
76. *See Napster*, 239 F.3d at 1020.
77. *See In re* Aimster Copyright Litig., 334 F.3d 643, 655 (7th Cir. 2003).
78. *See id.* at 645 ("Teenagers and young adults . . . like to swap computer files containing popular music. If the music is copyrighted, such swapping, which involves making and transmitting a digital copy of the music, infringes copyright.").
79. *See id.* at 646.

copyrighted MP3 trading, which made it an easy target for the court.[80] The difference between Aimster and Napster was that the messages sent between Aimster clients were encrypted and Aimster, therefore, could not ostensibly identify infringing activity. With Napster, however, the file contents were apparent on their face.[81] The court ruled that Aimster could not escape contributory infringement by purposely turning a "blind eye" to what it invited and expected to be infringing activity.[82] Therefore, the knowledge requirement was met.[83]

In applying the *Sony* defense to Aimster, the court stated that although Aimster was *capable* of substantial noninfringing uses, the question was how *probable* those uses were.[84] To support its rationale, the court noted the Supreme Court's emphasis that *potential* noninfringing uses could defeat a claim of contributory infringement.[85] Judge Richard Posner proceeded to weigh the infringing and the noninfringing uses and determined that the evidence clearly tipped the scale toward infringing uses.[86] Thus, under the Seventh Circuit's rationale, Aimster failed to show its software was capable of substantial noninfringing uses and the *Sony* defense did not apply.[87]

E. MGM v. Grokster

The Ninth Circuit more recently found the proprietor of a file sharing Web site not liable for contributory or vicarious copyright infringement.[88] Grokster supported a decentralized file sharing site in which the plaintiffs alleged infringing activity was taking place.[89] In contrast with Aimster, Grokster presented evidence of substantial noninfringing uses of its product.[90] The defendants were held not to have *constructive* knowledge of infringing activity since the software was

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80. *See id.* at 651-52.

81. *See id.* at 650; *see Napster*, 239 F.3d at 1021.

82. *See Aimster*, 334 F.3d at 654.

83. While Judge Posner did not directly state that the material contribution was met, his recitation of the facts leaves no possibility that the trading software did not materially contribute to direct infringement because it provided the site and location for infringing activity. *See id.* at 646.

84. *See id.* at 653.

85. *See id.* at 651.

86. *See id.* at 648-49, 651-52 (interpreting *Sony*). If substantial infringing uses exist, according to Judge Posner, the defendant must show that it would be disproportionately costly for him to eliminate or substantially reduce the infringing uses. *Id.* at 653.

87. *See id.*

88. *See* Metro-Goldwyn-Mayer Studios, Inc. v. Grokster Ltd., 380 F.3d 1154, 1167 (9th Cir.), *cert. granted*, 125 S. Ct. 686 (2004).

89. *See id.* at 1158-59.

90. *See id.* at 1161-62.

capable of substantial noninfringing uses.[91] Thereafter, plaintiffs were required to show that Grokster had reasonable knowledge of *specific* infringing activity.[92] The court found that the decentralized aspect of the service isolated any such specific, reasonable knowledge from the defendants, and in addition, they were unable to stop the activity even if they had known about it.[93] The Ninth Circuit also ruled that the absence of a central file index or log residing on the defendant's computers obviated the "material contribution" allegation.[94]

The Supreme Court subsequently reversed the Ninth Circuit decision and unanimously held that "one who distributes a device with the object of promoting its use to infringe copyright, as shown by clear expression or other affirmative steps taken to foster infringement, is liable for the resulting acts of infringement by third parties."[95] The Court explained that *Sony* applied patent law's staple article of commerce doctrine. That doctrine shields the product distributor from liability where the product has substantial lawful uses as well as unlawful ones, and the distributor merely understands that the product will be misused.[96] However, the Court held that those circumstances do not eliminate liability where there is evidence of specific intent to induce infringement.[97]

The Court adopted the common law inducement rule, which imposes liability on those who affirmatively aid and abet a third party's infringement.[98] Indeed, "where evidence goes beyond a product's characteristics or the knowledge that it may be put to infringing uses, and shows statements or actions directed to promoting infringement, *Sony*'s staple-article rule will not preclude liability."[99] Thus, the Court side-stepped the issue presented by the circuit split in favor of the inducement rule.[100]

The Court preserved the *Sony* rule recognizing that liability may be imposed where the defendant sells its product with constructive

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91. *See id.* at 1162.

92. *See id.* (requiring a showing that defendant had such knowledge at the time the illicit activity took place and that it did not stop the activity).

93. *See id.* at 1163.

94. *See id.* at 1163-64.

95. Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd., 125 S. Ct. 2764, 2780 (2005).

96. *See id.* at 2777-78.

97. *See id.* at 2779.

98. *See id.* at 2780.

99. *Id.* at 2779.

100. *See id.* at 2779-80 (leaving further consideration of the *Sony* rule for another case).

knowledge of potential infringing use.[101] According to the majority, the Ninth Circuit misapplied the *Sony* knowledge requirement in an overbroad interpretation.[102] The question remains, however, as to "how much [actual or potential] use is commercially significant."[103]

While the uncertainty within *Sony* remains unresolved, this Comment seeks to apply current infringement doctrine to BitTorrent technology and not resolve the *Sony* uncertainty. It analyzes BitTorrent based on the new rule expounded in *Grokster*, as well the vague *Sony* knowledge requirement. Finally, this Comment addresses whether the rules must be adapted to apply to emerging technology.

IV. INDUCEMENT RULE APPLIED TO BITTORRENT TECHNOLOGY

A. BitTorrent Software Developers

BitTorrent software developers will most likely not be held liable for secondary liability under the inducement rule. "The inducement rule . . . premises liability on purposeful, culpable expression and conduct, and thus does nothing to compromise legitimate commerce or discourage innovation having a lawful promise."[104] According to the Court, such conduct is usually expressed through "advertisement or solicitation that broadcasts a message designed to stimulate others to commit violations."[105] Cohen originally developed BitTorrent with the intent to foster legitimate file sharing.[106] While third-party infringers now use his technology for illicit purposes, there is no evidence that he intended illicit use.[107] Moreover, any further developers of BitTorrent technology can easily avoid liability under the inducement rule by refraining from actively promoting infringing use.

B. Tracker Web Site Owner

The Web site owner, on the other hand, faces a tougher challenge with regard to the inducement rule. The *Grokster* Court failed to quantify the amount of inducement required to impute liability.[108]

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101. *See id.* (citing Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 439 (1984)).

102. *See id.* at 2778.

103. *Id.* at 2784 (Ginsburg, J., concurring) (quoting *Sony*, 464 U.S. at 464).

104. *Id.* at 2780.

105. *Id.*

106. *See* Boutin, *supra* note 18.

107. *See id.*

108. *See Grokster*, 125 S. Ct. at 2780 (recognizing only the "classic instance of inducement").

Initially, it appears that a Web site owner could avoid inducement liability by refraining from actively promoting illicit use of his Web site, such as advertisement or specific instructions relative to infringement.[109]

The inducement rule is based on the theory that a defendant cannot avoid liability where he explicitly propounds his unlawful purpose.[110] However, "[p]roving that a message was sent out . . . is . . . not [the] exclusive way of showing that active steps were taken with the purpose of bringing about infringing acts."[111] Indeed, the majority noted that inducement can be shown by "[e]vidence of 'active steps . . . taken to encourage direct infringement,' such as . . . an infringing use or . . . an affirmative intent that the product be used to infringe."[112] It can be inferred that a Web site owner who allows seeds of protected works to be planted on his Web site intends for his site to be used to infringe. Moreover, examination of the tracker log could yield evidence of infringing activity, which, according to the Court, could also support an argument for inducement.[113] Therefore, the Web site owner would be hard pressed to find a compelling argument against liability where links to downloading protected works exist on his Web site.

As stated earlier, the majority renounced the Ninth Circuit's application of the *Sony* rule and declined "to add a more quantified description of the point of balance between protection and commerce when liability rests solely on distribution that with knowledge unlawful use will occur."[114] Thus, the most current application of *Sony* remains within the Seventh Circuit.

V. SEVENTH CIRCUIT *SONY* APPLICATION

A. BitTorrent Software Developers

Courts might have difficulty finding contributory infringement for BitTorrent software developers based on the Seventh Circuit's analysis. While there is no doubt direct infringement occurs and BitTorrent software materially contributes,[115] the level of knowledge attributable to BitTorrent software developers is more comparable to that of Sony than

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109. *See id.*
110. *See id.* at 2781.
111. *Id.*
112. *Id.* at 2779 (citations and quotations omitted).
113. *See generally id.* Inducement can be evidenced by "active steps . . . taken to encourage direct infringement." *Id.* (citing Oak Indus., Inc. v. Zenith Elecs. Corp., 697 F. Supp. 988, 992 (N.D. Ill. 1988)).
114. *Id.* at 2778.
115. *See generally* Brian's BitTorrent FAQ and Guide, *supra* note 5.

Aimster.[116] Like Sony, BitTorrent software developers certainly have constructive knowledge that their product is used for infringing as well as noninfringing purposes; however, where the noninfringing uses are substantial, the software developers will not be held liable for contributory infringement under the *Sony* doctrine.[117]

There are many legitimate uses for BitTorrent software, and indeed, the software is regularly used for such purposes. For example, some Web sites offer downloads of the 2004 presidential debates.[118] Other sites offer downloads of works which users are permitted to use within certain parameters, e.g., no commercial use.[119] Thus, it seems the BitTorrent software developer is similar to Sony in that he "does not supply consumers with [copyrighted] works."[120] He merely supplies "equipment that is generally capable of copying . . . [works] that are uncopyrighted, those that are copyrighted but may be copied without objection from the copyright holder, and those that the copyright holder would prefer not to have copied."[121] The *Sony* court emphasized that technology that clearly has a very broad use should not be analogized to the situation where the use is for a particular infringing purpose.[122] Under the Seventh Circuit's rationale, the extensive noninfringing use options for BitTorrent would probably render software developers not liable for contributory infringement. In addition, the fact that Web site owners and facilitators could eliminate illicit copying, while legitimate copying would flourish through legitimate use of BitTorrent, would probably shield the software developers from secondary liability under the *Sony* test.[123]

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116. *See In re* Aimster Copyright Litig., 334 F.3d 643, 649 (7th Cir. 2003) (noting the Supreme Court did not impose secondary liability on Sony even though it knew its product was being used for infringing purposes).

117. *See* Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 442 (1984) ("[T]he sale of copying equipment, like the sale of other articles of commerce, does not constitute contributory infringement if the product is widely used for legitimate, unobjectionable purposes.").

118. *See* Torrentocracy, First Presidential Debate Torrent, http://www.torrentocracy.com/blog/archives/2004/10/first_president.shtml (last visited Apr. 12, 2006) (offering downloads of the 2004 presidential debates).

119. *See, e.g.*, Legal Torrents, http://www.legaltorrents.com (last visited Apr. 8, 2006) ("Legal Torrents is a collection of Creative Commons-licensed, legally downloadable, freely distributable creator-approved files . . . made available via BitTorrent."); Etree, http://bt.etree.org (last visited Apr. 8, 2006) ("This site is . . . for sharing the live concert recordings of trade friendly artists.").

120. *Sony*, 464 U.S. at 436.

121. *Id.*

122. *See id.* at 437 (comparing the use of Sony's VCR with that of a film where its *only* use infringed a copyrighted work).

123. *See id.* at 442 (emphasizing that a product need only have a "significant number" substantial noninfringing uses).

B. Tracker Web Site Owners

The *Aimster* rationale would also prove workable to the extent that the Web site contains infringing and noninfringing torrents. Indeed, many Web sites exist which contain legitimate data for downloading.[124] The court would simply consider the probability that the subject site would be used for legitimate purposes.[125] Since no evidence was presented to support Aimster's claim of noninfringing use, it is unclear to what extent the court would credit the Web site owner for noninfringing use when infringing use was present as well. However, the Web site owner's ability to control the use would certainly be considered in the court's analysis.

Undoubtedly the minimal burden on the Web site owner to keep an eye out for seeders who post links to illicit torrent files would weigh against the site owner.[126] The Seventh Circuit stated that a service has a duty to police its product to prevent infringing activity; however, the service's ability to prevent infringement is "not necessarily a controlling factor[,]" and "[i]f a service facilitates both infringing and noninfringing uses . . . and the detection and prevention of the infringing uses would be highly burdensome," shutting down the service would run "contrary to the clear import of the *Sony* decision."[127] It would not be difficult, however, for a Web site owner to ensure against infringing activity. He could check the site regularly and post warnings to seeders hunting for a spot to plant a link to their infringing files.

As a result of the apparent control characteristic of the Web site proprietor, the court would probably find that Web sites which promoted any infringing activity would show they are not *capable* of *substantial* noninfringing use.[128]

Consider Judge Posner's analysis of contributory copyright infringement in a criminal law context: On one hand, the court imagined the owner of a massage parlor, which was in effect a brothel in disguise.[129] On the other hand, the court considered a retailer of slinky dresses whose regular clientele included prostitutes.[130] The former clearly

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124. *See* Metro-Goldwyn-Mayer Studios, Inc. v. Grokster Ltd., 380 F.3d 1154, 1162 (9th Cir. 2004).

125. *See In re* Aimster Copyright Litig., 334 F.3d 643, 648-49, 651-51 (7th Cir. 2003).

126. *See id.* (interpreting *Sony* to hold that "the ability of a service provider to prevent its customers from infringing is a factor to be considered in determining whether the provider is a contributory infringer").

127. *Id.* at 648-49.

128. *See id.* at 651 (interpreting *Sony*).

129. *See id.*

130. *See id.*

contributed to the crime of prostitution, where the latter was simply too far removed to be deemed a contributor.[131] He was merely selling dresses that could be used for many purposes, including prostitution.[132]

Here, a copyright holder would have a compelling argument that the Web site owner was involved to the extent of the massage parlor owner. That is, the Web site would be *capable* of noninfringing use, but was in fact consciously used to infringe.[133] Thus, the owner of a Web site hosting even a small number of illicit torrents would most likely be found liable for contributory and vicarious infringement in the Seventh Circuit.

VI. LEGAL EVOLUTION: CONTEMPORARY APPLICATION OF THE SECONDARY COPYRIGHT LIABILITY DOCTRINE?

Current interpretations of *Sony* and *Grokster* seem to divert the copyright holder's attention away from BitTorrent software developers and toward torrent Web site proprietors. Even experienced intellectual property attorneys have admitted they cannot stop the technology. Executives are not looking to curb it either.[134] It appears, however, that site owners could be targeted[135] and held liable under the inducement doctrine for running sites containing links to illicit files. They could also suffer liability under the Seventh Circuit's interpretation of the *Sony* rule.[136] However, such action may be futile.

Even with the new avenue provided by the Court, efforts to eliminate infringement via Internet file sharing would probably prove unpractical. With BitTorrent developers likely out of reach for copyright owners, their only practical recourse would be to shut down Web site proprietors since they provide the central location for the torrent files, the "keys" to illicit copies.

The possibility of extremely localized unauthorized trading, however, could allow proprietors to fly under the litigation radar. Indeed, many users host Web sites with two or three torrents.[137] Moreover, the number of users hosting these small sites grows daily, which makes locating the central sites quite difficult.[138]

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131. *See id.*
132. *See id.*
133. *See id.*
134. *See* Jay Lyman, *Legitimate Use, Open Source, Keep BitTorrent out of Court*, NEWS FORGE, Mar. 8, 2005, http://trends.newsforge.com/article.pl?sid=05/03/02/1748210&from=rss.
135. *See id.*
136. *See generally Aimster*, 334 F.3d 643.
137. *See* Monkey Methods Research Group, *Monkeyin' Around: Is BitTorrent Dead?*, Jan. 10, 2005, http://monkeymethods.org/pubs/is-bittorrent-dead-centralization-analysis.htm.
138. *See id.*

One research group specializing in P2P file sharing has found that ten percent of the torrent sites they identified had over ninety percent of the torrent files they found, indicating a very centralized current trading system.[139] This same group predicts torrent sites will grow more decentralized as word gets out and more users learn the ins and outs of file sharing.[140] Many of these sites will be invisible to copyright holders since they reside in various "nooks and crannies on the web" that even a sophisticated Web crawler designed to locate them cannot uncover.[141] In addition, BitTorrent technology itself is progressing to even more decentralized methods of operation that do not utilize tracker logs.[142]

VII. CONCLUSION

History teaches us that technology will continue to advance beyond the bounds anticipated by our current laws. On one hand, it allows increased efficiency and production through expedited communication and information transfer, a service infinitely valuable to today's business world. On the other hand, it provides the individual user increased options to copy, distribute, and alter protected works more and more with each day. While concerns of administrative efficiency prevent seeking out the individual copier or trader, file sharing nonetheless continues to bury itself between the personal hard drives of single sharers, rendering detection practically impossible. However, with centralized sharing through organizations like Napster clearly in violation of the law, it appears Web site proprietors hosting large numbers of illicit torrents will be eliminated as well. As a result, P2P sharing will effectively be relegated back to the status it once was with the uses of the VCR and CD/DVD writer, in which individuals were limited in their sources, as local sites must limit their number of sources so as to remain off the recording industry's radar.

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139. *See id.*

140. *See id.*

141. *See generally id.* (discussing difficulty in locating all BitTorrent sites on the Internet).

142. *See generally id.* Such open source technology is being developed by eXeem and can be accessed at http://www.exlite.pl (last visited Apr. 10, 2006).