

# **Changing The Game: How BitTorrent Technology Affects Existing U.S. & International Copyright Law**

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## Introduction

*“I brought down the record companies with Napster...”*

*“You didn’t bring down the record companies. They won.”*

*“In court.”*

*“Yes.”*

*“You want to buy a Tower Records, Eduardo?”*<sup>1</sup>

This conversation between the condescending Sean Parker and skeptical Eduardo Severin, portrayed by Justin Timberlake and Andrew Garfield in the movie *The Social Network*, highlights two aspects regarding the nature of copyright law that this paper will address. The first aspect is that legal systems, particularly in the United States, but also around the world, are continually challenged to incorporate technological advances into the frameworks of their copyright laws due to their inherent reactive structures. In essence, courts adapt their laws to specific forms of technology, retroactively fitting the function of newer systems into the framework of copyright law. The second aspect is the impact on the digital market of American copyright holders struggling to protect their works as a result of this lag between the creation of new technologies and the courts ability to react. Even seeming victories by plaintiffs in the court system may not have their desired effect. A good example of this is the fallout of the Ninth Circuit’s ruling against Sean Parker’s own Napster. While Tower Records, as a joint plaintiff in the lawsuit was granted a permanent injunction against the Napster peer-to-peer file sharing system,<sup>2</sup> the company would later file for bankruptcy, claiming piracy of their copyrighted

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<sup>1</sup> THE SOCIAL NETWORK (Columbia Pictures 2010).

<sup>2</sup> See *A&M Records, Inc., v. Napster, Inc.* 284 F.3d 1091 (9<sup>th</sup> Cir. 2002)

works as a major reason for their downfall.<sup>3</sup> The impact of these aspects on international copyright law is made clear with the emergence of BitTorrent file sharing technology.

Copyright law has been a part of the economy in the United States since the Constitution was written. The first copyright law was enacted by Congress in 1790.<sup>4</sup> In order to promote innovation in the arts and sciences, the U.S. Constitution grants Congress the power to grant limited monopolies to authors and inventors in the forms of copyrights and patents.<sup>5</sup> As newer works were created and influenced the economy, Congress adapted the Copyright Act in various ways, such as extending the term of monopoly from two terms of fourteen years<sup>6</sup> to the entirety of the author's life plus seventy years afterward.<sup>7</sup> Setting aside debating the merits of enacting such drastic changes to the original statute, for the purposes of this paper these types of changes are examples showing the U.S. legal system continually adapting to newer forms of works and their relative impacts on the economy.

Toward that end, the structure of this analysis will begin with a background of three seminal cases regarding the reproduction and distribution of copyrighted works, beginning with the Supreme Court's ruling on Betamax Video Tape Recorder (VTR) technology in *Sony Corp. of America v. Universal Studios* 464 U.S. 417 (1984), followed by the Ninth Circuit's analysis of the music file sharing program Napster in *A&M Records, Inc., v. Napster, Inc.*, 239 F.3d 1004 (2001), and concluding with the decentralized technology used by both Grokster and StreamCast (Grokster) in *Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005). The evolution of the court's treatment of such copying technologies will then be discussed in terms of

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<sup>3</sup> Lauren Johnson, *Tower Records Files For Bankruptcy* <http://www.cbsnews.com/stories/2004/02/09/entertainment/main599008.shtml> (last visited May 6, 2011).

<sup>4</sup> <http://www.copyright.gov/circs/circ1a.html>. (last visited May 6, 2011).

<sup>5</sup> U. S. CONST. art. I, § 8, cl. 8.

<sup>6</sup> <http://www.copyright.gov/circs/circ1a.html> (last visited May 6, 2011).

<sup>7</sup> *Id.*

how the technologies and their impact on the U.S. economy have changed over time. Following the historical discussion of the evolution of file sharing technology will be a discussion of the modern BitTorrent technology and how it fits into the scheme of copyright law within the U.S. Finally, the issue of enforcement of copyright protections from file sharing will be discussed in the context of both U.S. law as well as international law.

BitTorrent technology has both lawful and unlawful uses in both the United States and globally. Both have profound implications for U.S. copyright holders. This paper will address the technology's place in the framework of modern U.S. copyright law, as well as the problems that legal systems have with effectively balancing protecting the interests of authors of works and importance newer technologies have within the market place of the U.S. economy.

### **The Evolution of Technology & Contributory Infringement in U.S. Copyright Law**

In *Sony Corp. of America*, also known as the “Betamax case”, the Supreme Court decided the issue of whether the distribution of home video tape recorders is infringement under U.S. copyright law. The court ruled in favor of *Sony Corp. of America*, holding that the sale of video tape recorders did not constitute contributory infringement.<sup>8</sup> In its landmark decision regarding the copying of audiovisual works, the court was faced with a new technology that did not easily fit into the existing framework of traditional copyright law. By distributing technology that allowed owners to copy live broadcasts in television without express authorization, Universal Studios (and Disney, the other plaintiff) alleged that their rights had been violated.<sup>9</sup>

The court struggled to answer the question of what specific rights *Sony* violated. Under the U.S. Copyright Act, unlicensed use of a copyright is not an infringement unless the use

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<sup>8</sup> *Sony Corp. of America v. Universal Studios*, 464 U.S. 417, 456 (1984).

<sup>9</sup> *See id.* at 419

conflicts with one of the specific exclusive rights conferred by the copyright statute.<sup>10</sup> These rights include the right of reproduction, the right to create derivative works, the right of distribution, the right of performance, the right to display works publicly, and the right of public performance.<sup>11</sup> To an observer living in 2011, it might seem obvious that Sony had contributed to the infringement of the right of reproduction. But the technology was quite new at the time, and the court was reluctant to grant protection for a right that it did not feel was expressly granted by the Copyright Act.

The concept of recording live television broadcasts was something the Supreme Court had not been faced with before. Universal clearly had the right to “perform” the shows through broadcasting, as well as the right to reproduce the programs in the form of video cassettes of their own. It is not difficult to see how this technology could aid in the unauthorized distribution of video cassettes for profit. A person could record a live broadcast and then sell that recorded tape. But this is not the only use for VTRs. For example, a person might want to record a show that aired during the middle of the day, when that person was at work. The person could then watch the show when he or she got home. This concept is known as time shifting.<sup>12</sup> Another example could be when two different shows air at the same time. A person could record one show while watching the other, and subsequently watch that show in another room. The concept of using a work on a device different from the one originally intended is called space shifting.<sup>13</sup> At the time the court heard *Sony Corp. of America*, the issue of whether these uses constituted

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<sup>10</sup> *E.g.*, *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 155 (1975) (holding that radio reception of broadcasted copyrighted music did not constitute a performance of the copyrighted materials, and therefore was not infringement).

<sup>11</sup> Copyright Act 17 U.S.C.A. § 106 (West 2002).

<sup>12</sup> Robert G. Finney, *Time Shifting*, <http://www.museum.tv/eotvsection.php?entrycode=timeshifting> (last visited May 6, 2011).

<sup>13</sup> Braden Cox, *Space Shifting: A New Frontier for Innovation and Cool Stuff... Or a Black Hole of Lawsuits?* Oct. 18, 2007, <http://techliberation.com/2007/10/18/space-shifting-a-new-frontier-for-innovation-and-cool-stuff%E2%80%A6-or-a-black-hole-of-lawsuits>. (last visited May 6, 2011).

infringement had not been decided. More importantly for Sony, neither had the issue of whether a third party who created and distributed technology capable of various uses, only some of which are copyright infringement, be held liable for copyright infringement.

Faced with this barrage of questions not specifically considered by Congress, the majority was reluctant to read time and space shifting as infringement into the Copyright Act if it didn't have to. In order to fit VTRs into the framework of copyright law, the majority turned toward the concept of fair use under patent law. In support of this maneuver, the majority relied on the close relationship between Patent and Copyright Law.<sup>14</sup> The majority noted that contributory infringement was not mentioned in the Copyright Act.<sup>15</sup> While this did not eliminate contributory infringement from the field of copyright law entirely,<sup>16</sup> the facts of heard *Sony Corp. of America* were unlike previous cases involving contributory infringement under copyright law because Sony was not in “a position to control the use of copyrighted works by others and had authorized the use without permission from the copyright owner,”<sup>17</sup> because Sony's only contact with potential infringers was at the moment the VTRs were sold. In order for Universal to prevail on a claim of contributory infringement, its claim had to rest on the fact that Sony sold equipment with constructive knowledge of the fact that Sony's customers *may* use that equipment to make unauthorized copies of Universal's copyrighted works, a theory of liability found only under Patent law.<sup>18</sup>

In borrowing this theory of contributory infringement from patent law, the court found in favor of Sony through its application of “substantial noninfringing use” clause in the Patent Act.

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<sup>14</sup> *Sony Corp. of America*, 464 U.S. at 439.

<sup>15</sup> *Id.* at 435.

<sup>16</sup> See *Kalem Co. v. Harper Brothers*, 222 U.S. 55 (1911) (holding that the producer of an unauthorized film of the book *Ben Hur* was liable for his sale of the motion picture to jobbers, who in turn arranged for the commercial exhibition of the film).

<sup>17</sup> *Sony Corp. of America*, 464 U.S. at 437.

<sup>18</sup> *Id.* at 439.

Under patent law, the distribution of staple commodities of commerce which are suitable for substantial noninfringing uses is not contributory infringement.<sup>19</sup> The court converted this concept into copyright law by asking whether VTR technology is capable of substantial noninfringing use.<sup>20</sup> In order to determine this, the court looked at whether a *significant* number of the potential uses for the VTR's would be *non-infringing*.

The court neglected to look at all of the potential uses for the VTR's in its inquiry into whether a significant number of potential uses of the technology would be non-infringing. Instead, it focused on authorized and unauthorized time-shifting. It found that while Universal and Disney held sizeable amount of copyrightable material broadcasted over the public airwaves, their total share of the spectrum of television programming was less than ten percent of the total market.<sup>21</sup> The court feared that in holding Sony liable, it would have a disproportionate effect on both viewers and broadcasters of copyrighted material alike. Some works broadcast on television aren't copyrightable, such as works in the public domain. Some copyright owners consented to copying, such as religious and educational shows and live televised sports.<sup>22</sup> The court felt that authorizing an injunction against Sony at the point of sale of the technology would put the brakes on this type of authorized non-infringing use.<sup>23</sup> In fact, the court found sufficient evidence to support that authorized recording increased the market for the material by allowing consumers to access the material at times and places they otherwise would have been unable to do so.<sup>24</sup>

The court found that even unauthorized recording of copyrighted material would not necessarily constitute infringement. Some unauthorized activity would fall under fair use under

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<sup>19</sup> Patent Act 35 U.S.C.A. § 271.

<sup>20</sup> *Sony Corp. of America*, 464 U.S. at 437.

<sup>21</sup> *Id.* at 443.

<sup>22</sup> *Id.* at 445.

<sup>23</sup> *Id.*

<sup>24</sup> *Id.*

the Copyright Act.<sup>25</sup> To find fair use, §107 of the Copyright Act directs the court to consider four factors: the purpose and character of the use of the work, the nature of the copyrighted work; the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and the effect of the use upon the potential market for or value of the copyrighted work.<sup>26</sup> Taking into account these factors, the court focused on the non-commercial use of unauthorized time shifting within the home as well the fact that the nature of broadcast television involves a minimum of a one-time invitation to view a work in its entirety. Time shifting via use of VTR's merely enables a viewer to see such a work which he had been invited to witness in its entirety free of charge. With respect to VTR's effect on the market, the majority was unconvinced of the potential for nonminimal harm to their market share. Since it had already found that time shifting was non-commercial in nature, it found that in home time shifting use of VTRs was fair use.<sup>27</sup>

The Supreme Court borrowed a theory of copyright law that at the time was completely new. If the concept of substantial noninfringing use had not been ported over from patent law, there wouldn't have been any workable theory for third party infringement against Sony. Since Sony's only contact with the users was at the point of sale, it did not have the ability to exert any control over how the VTR's was used. Nevertheless, the court found that VTR's are capable of substantial noninfringing use because time shifting, the primary function of VTR's, could be both authorized and fair use even when it was unauthorized.

The issues of control of use and capability of substantial noninfringing uses of new forms of technology were revisited in *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, (9th Cir. 2001) when the federal courts were first presented with the technology of peer-to-peer file sharing (P2P). In that case, Napster was appealing the district court's preliminary injunction

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<sup>25</sup> See *Id.* at 447; 17 U.S.C.A. § 107 (West).

<sup>26</sup> *Id.*

<sup>27</sup> *Sony Corp. of America*, 464 U.S. at 455.



ceasing the operation of its computer system.<sup>28</sup> The original Napster system involved a centralized directory of digital audio files accessed through the internet.<sup>29</sup> Users of Napster could log into the system and then search for digital copies of music files. The Napster system would then search the computers of other users logged into the system, and indicate which users had the requested files.<sup>30</sup> From that point, the requesting user could connect to the computer which contained the file, and the file would be transferred in its entirety between the two users.<sup>31</sup>

There are several key differences between the Napster technology and the Betamax VTR technology. The first difference is that the file sharing process conducted by Napster users involved at least two parties to facilitate the copying of the material, whereas with the VTR technology one person could simply copy the live broadcast for later use. That person would generally be copying the work on television via an authorized broadcast, directly from the copyright holder. With Napster, at a very minimum, a person must obtain the work from the copyright holder, and then subsequently share that file with a third person. Second, the Napster system facilitated transferring at any time of day over the internet, whereas VTR technology required the recording of the work when it was being broadcast at an authorized point in time. Third, a much larger portion of the works distributed on Napster was copyrighted than Sony's VTR technology. The Ninth Circuit found that as much as eighty-seven percent of all files transferred on Napster's system were copyrighted, and at least seventy percent of all files transferred were owned or administered by the plaintiffs.<sup>32</sup> This last point is especially relevant;

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<sup>28</sup> *A & M Records, Inc. v. Napster, Inc.*, 114 F. Supp. 2d 896, 927 (N.D. Cal. 2000) (enjoining Napster, Inc. from engaging in, or facilitating others in copying, downloading, uploading, transmitting, or distributing plaintiffs' copyrighted musical compositions and sound recordings, protected by either federal or state law, without express permission of the rights owner).

<sup>29</sup> Federal Trade Commission, *P2P File-Sharing Technology: Consumer Protection and Competition Issues*, (June 2005), <http://www.ftc.gov/reports/p2p05/050623p2prpt.pdf> (last visited May 6, 2011).

<sup>30</sup> *Id.*

<sup>31</sup> *Id.*

<sup>32</sup> *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1013 (9th Cir. 2001).

because the Supreme Court in *Sony Corp. of America* found that at Universal and Disney were in control of less than ten percent of the television broadcasting market.<sup>33</sup>

Based on the large percentage of control the plaintiffs had in *Napster, Inc.*, the Ninth Circuit held that the plaintiffs clearly had copyright ownership of the files transferred on Napster.<sup>34</sup> The Ninth Circuit also held that users who voluntarily distribute their files over the Napster system violated the plaintiffs' distribution rights.<sup>35</sup> Similarly, users who download the works via the Napster system violated the plaintiffs' reproduction right.<sup>36</sup> This blanket characterization of the conduct of individual users of Napster contrasts with the conduct of individual copiers in *Sony Corp. of America*. Previously the Supreme Court had been careful to distinguish the separate uses of the VTR technology from one another, attempting to parse out the various groups of users and the broadcasts that were recorded. In *Napster, Inc.* the court did the opposite: it found that constructively all of the works distributed on Napster were copyrighted works held by the plaintiffs, and that all of uses of the works via Napster were uniform.

The Ninth Circuit then turned to the fair use defense for the individual users of Napster's system, focusing on the character and purpose of the Napster system as well as Napster's effect on the market. The purpose and character of the use was found to favor of the plaintiffs. The court focused on two aspects of this component: whether the newer work (in this case, the copied version of the digital music file) was in any way transformative, and whether the use of the second work was commercial in nature.<sup>37</sup> This question, which was not addressed in *Sony Corp. of America*, clearly favored the plaintiffs in that exact copies were being made of the original

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<sup>33</sup> *Sony Corp. of America*, 464 U.S. at 445.

<sup>34</sup> *Napster, Inc.*, 239 F.3d at 1013.

<sup>35</sup> *Id.* at 1014.

<sup>36</sup> *Id.*

<sup>37</sup> *Id.* at 1015.

works.<sup>38</sup> No transformation was taking place. But while the Supreme Court repeatedly characterized the use of VTRs to be non-commercial in nature,<sup>39</sup> the Ninth Circuit in *Napster, Inc.* held that the file sharing activity was demonstrated to be commercial by a showing that “repeated and exploitative unauthorized copies of copyrighted works were made to save the expense of purchasing authorized copies.”<sup>40</sup> This essentially meant that the Ninth Circuit held that users of Napster’s system were downloading songs specifically to circumvent buying the works on the open market. The money saved in so doing was commercial in effect. Like in *Sony Corp. of America*, the court also focused heavily on the effect that file sharing on Napster’s system had on the market. But unlike in *Sony Corp. of America*, the Ninth Circuit found that use of the Napster system had a deleterious effect on the market by reducing audio compact disc (CD) sales and raising barriers to the plaintiffs’ ability to enter into the market of downloading of music.<sup>41</sup>

Napster also argued that its system’s use for space-shifting purposes was a fair use.<sup>42</sup> The court distinguished Napster’s space-shifting from the time-shifting usage of the VTR’s by pointing out that users of VTR’s shifted the time and places they viewed programs within their own homes. In contrast, the space-shifting function of Napster effectively distributed the copyrighted works to the general public, because once a user logged into the Napster system, his or her files were available to millions of people over the internet for download.<sup>43</sup>

After dismissing the fair use claims on the part of Napster’s users, the Ninth Circuit turned to the issue of whether Napster was liable for contributory infringement. Compiling

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<sup>38</sup> *Id.*

<sup>39</sup> *Sony Corp. of America*, 464 U.S. 442-445.

<sup>40</sup> *Napster, Inc.*, 239 F.3d at 1015.

<sup>41</sup> *Id.* at 1016.

<sup>42</sup> *Id.* at 1019.

<sup>43</sup> *Id.*

standards used in earlier cases, the court determined this issue by looking at whether Napster knew or had reason to know of direct infringement.<sup>44</sup> The court held that Napster had both actual and constructive knowledge of direct infringement on its users based on the district court's factual findings.<sup>45</sup> The Ninth Circuit rejected Napster's argument that it was nevertheless protected from contributory infringement based on the Supreme Court holding in *Sony Corp. of America*. The Ninth Circuit held that it was bound by the Supreme Court's holding in *Sony Corp. of America* refusing to hold Sony liable when the technology was capable of both infringing and substantial noninfringing uses, and would not impute the requisite level of knowledge to Napster simply because of the potential infringing uses capable of Napster's system.<sup>46</sup> Nevertheless, the Ninth Circuit upheld the injunction because "the evidentiary record here supported the district court's finding that plaintiffs would likely prevail in establishing that Napster knew or had reason to know of its users' infringement of plaintiffs' copyrights."<sup>47</sup> The court ultimately concluded that a computer system operator would be held liable for contributory infringement when it learns of specific infringing material on its system and fails to purge such material from its system.<sup>48</sup> Since Napster could block access to the system by suppliers of the infringing material, and had failed to do so, the court supported the district court's finding that Napster had actual knowledge that specific infringing material is available using its system, that it, and that it failed to remove the material.<sup>49</sup>

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<sup>44</sup> *Id. See also, e.g.,* Cable/Home Commc'n Corp. v. Network Productions, Inc., 902 F.2d 829, 846 (11th Cir. 1990) (holding that actual knowledge of direct infringement is not necessary; it need only be shown is that the secondary infringer had reason to know of the direct infringement).

<sup>45</sup> *Napster, Inc.*, 239 F.3d at 1020.

<sup>46</sup> *Id.*

<sup>47</sup> *Id.* at 1021.

<sup>48</sup> *Id. See e.g.* Religious Tech. Ctr. v. Netcom On-Line Commc'n Services, Inc., 907 F. Supp. 1361, 1374 (N.D. Cal. 1995) (holding that if a computer system operator knew of infringing activity on its system after being notified by the copyright holder, then it fulfilled the knowledge requirement to be held liable for contributory infringement).

<sup>49</sup> *Napster, Inc.*, 239 F.3d at 1021.

Two key factors helped the Ninth Circuit uphold the injunction against Napster. First, the dominance of users of Napster's system infringing copyrights loomed large in the court's decision. The fact that at least seventy percent of the content being transferred was copyright infringement influenced all of the court's holdings regarding Napster's effect on the market. Second, Napster's control over the use of its system and ability to police helped the court in determining Napster could have the requisite knowledge for contributory infringement. This stemmed from the centralized nature of Napster's system; something that was not present in the next wave of P2P file sharing that came along.

In *Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.*, plaintiffs sought an injunction against two distributors of P2P software, Grokster and StreamCast (Grokster), under a theory of contributory infringement. The Ninth Circuit was presented with a P2P copyright case involving technologies with decentralized architectures. After the *Napster, Inc.* decision, the next wave of file sharing moved away from centralized systems.<sup>50</sup> Instead, users of systems like Grokster would be classified as either super-nodes or ordinary nodes. Each node is an individual's computer. Whenever a high powered computer would log in to Grokster, it would become a super-node and become an index of files, serving essentially the same function as the centralized server in Napster.<sup>51</sup> An ordinary node would connect to the super-node via Grokster and query the super-node for a particular file.<sup>52</sup> The super-node would check its index and send a list of matches to the ordinary node. From there the querying user could connect to a match and engage in direct file sharing with each other.<sup>53</sup>

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<sup>50</sup> Federal Trade Commission, *P2P File-Sharing Technology: Consumer Protection and Competition Issues*, (June 2005), <http://www.ftc.gov/reports/p2p05/050623p2prpt.pdf> (last visited May 6, 2011).

<sup>51</sup> *Id.*

<sup>52</sup> *Id.*

<sup>53</sup> *Id.*

Grokster was granted summary judgment by the District Court, which held that Grokster was not liable for copyright infringement.<sup>54</sup> The Ninth Circuit upheld the ruling, following its analysis in *Napster, Inc.* and applying its interpretation of the knowledge requirement of contributory infringement under *Sony Corp. of America*.<sup>55</sup> Applying the tests from *Sony Corp. of America* and *Napster, Inc.*, it found that since Grokster was capable of substantial noninfringing uses, and therefore MGM had the burden of showing that the Grokster had direct knowledge of specific infringing conduct, and also failed to act on that infringement.<sup>56</sup> The court held that, given the decentralized nature of Grokster's system, MGM failed to meet the direct knowledge requirement.<sup>57</sup> Moreover, a lack of centralized database prevented Grokster from being able to supervise how its software was being used.<sup>58</sup>

When the case was presented to the Supreme Court, the majority decided the case by using the inducement theory from patent law.<sup>59</sup> Under the Patent Act a person can be held liable for contributory infringement if a defendant actively induces infringement.<sup>60</sup> Echoing the logic regarding the close relationship between patent and copyright law in *Sony Corp. of America*, the court ported over the inducement theory into the realm of copyright law. The Court articulated a three part test to determine liability under the inducement theory. A defendant must first distribute a device. Then, he must do so with the object of promoting the device's use to infringe copyright. The Court held that a software distributor that promotes the use of its tool to infringe copyright can be shown "by clear expression or other affirmative steps taken to foster

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<sup>54</sup> *MGM Studios, Inc. v. Grokster, Ltd.*, 259 F. Supp. 2d 1029 (D. Cal. 2003).

<sup>55</sup> *MGM Studios, Inc. v. Grokster Ltd.*, 380 F.3d 1154 (9th Cir. 2004).

<sup>56</sup> *Id.*

<sup>57</sup> *Id.* at 1161-63.

<sup>58</sup> *Id.* at 1167.

<sup>59</sup> *Grokster, Ltd.*, 545 U.S. 913 (2005).

<sup>60</sup> Patent Act 35 U.S.C.A. § 271 (West 2002).

infringement.”<sup>61</sup> Finally, third party copyright infringement must occur as a result.<sup>62</sup> The Court distinguished this inducement theory test from the protection under *Sony Corp. of America* by pointing out that *Sony Corp. of America* dealt with the a separate issue of whether liability for contributory infringement can be found based solely on distributing a product with both lawful and unlawful uses, having no more than knowledge that some users would follow the unlawful course.<sup>63</sup> Instead, the Court in *Grokster, Ltd.* addressed whether there is contributory infringement when a defendant exhibits actual intent to encourage copyright infringement and has taken affirmative steps to facilitate that copyright infringement.

The Supreme Court next applied the inducement test to the facts in *Grokster, Ltd.* The first component of the inducement test was easily met, as Grokster clearly distributed its product. There was also evidence showing that third parties used the Grokster system to commit actual infringement, fulfilling the third component of the inducement test. Thus, the Court only addressed the second component at length, which involved deciding whether Grokster took affirmative steps to encourage its users to commit copyright infringement. The Court noted that Grokster had advertized and instructed users how to infringe copyright.<sup>64</sup> Grokster also sold advertising space which became more valuable as their software was used more often.<sup>65</sup> The Court held that either advertising an infringing use or instructing users how to engage in an infringing use is sufficient to show an affirmative intent that the product be used to infringe.<sup>66</sup> Ultimately the court concluded that Grokster’s intent to induce copyright infringement was unmistakable.<sup>67</sup>

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<sup>61</sup> *Grokster, Ltd.*, 545 U.S. 913. at 937.

<sup>62</sup> *Id.*

<sup>63</sup> *Id.* at 941.

<sup>64</sup> *Id.* at 936.

<sup>65</sup> *Id.*

<sup>66</sup> *Id.*

<sup>67</sup> *Id.* at 940.

## Analysis of the Evolution of Contributory Infringement

As new forms of distributing copyrighted works develop, the existing framework of U.S. copyright law becomes stressed. The constitutional purpose of promoting the arts and sciences is manifested in different forms as time marches forward. The concept of being able to perfectly reproduce music did not exist in 1787; nor was the ability to rapidly replicate copies of individual songs. Both concepts are bedrocks in the conceptual framework of protectable works in the modern era. How are the courts supposed to incorporate these new kinds of works into the framework of copyright law? Because of the ever expanding landscape of potential kinds of works, it is exceedingly difficult to create law that easily adapts to previously non-existent forms of expression. The courts must necessarily be reactive, continually tinkering with and adapting the framework of copyright law. As new forms of technology develop, so too must the courts develop new ways of analyzing these technologies and their uses. It is through this adaptive process that the market is influenced by the somewhat confusing differences between *Sony Corp. of America*, *Napster, Inc.*, and *Grokster, Ltd.*

The analysis in *Grokster, Ltd.* outmoded the analysis in *Napster, Inc.* This is because the technology employed by Grokster outmoded the technology employed by Napster. The centralized database at Napster's disposal was at the core of the Ninth Circuit's reasoning. Napster was effectively hit over the head with examples of its users infringing copyright holders' rights, and it failed to do anything about it.<sup>68</sup> For the Ninth Circuit, this was enough to remain consistent *Sony Corp. of America* while still adapting to the very real evidence it was presented with that the type of activity occurring in Napster was having a deleterious effect on the market. But when the P2P technology evolved so that a centralized database was no longer necessary, an obvious loophole developed. Under the existing doctrine, if a software program was incapable of

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<sup>68</sup> *Napster, Inc.*, 239 F.3d 1004.



monitoring and filtering out the unlawful uses of its program, then it was seemingly immune from liability. This was evidenced by Grokster's ability to survive unscathed at both the district court and appellate court levels.

The fallout of the ruling against Napster and its subsequent effect on the ruling against Grokster is just one of several examples of the adaptive nature of plaintiffs and defendants in these types of litigation. For example, Universal and Disney were hampered in *Sony Corp. of America* by the fact that they represented less than ten percent of the television broadcasting market.<sup>69</sup> This allowed the Supreme Court to parse out the various uses of other works within the television broadcasting market, highlighting the perfectly legal ones and juxtaposing them to the unauthorized uses of the plaintiffs. By the time the Ninth Circuit heard *Napster, Inc.*, the plaintiffs had coalesced into a force that made up a much larger percentage of the market. As a result, the Ninth Circuit dropped the issue of potential noninfringing uses of Napster's system from its analysis. The functional differences between VTR's and Napster were meaningful, however. As the court pointed out in *Sony Corp. of America*, the primary use of the VTR's was to time-shift the already authorized viewing of a broadcast to a different point in time within the home.<sup>70</sup> In addition, the effect of the VTRs on Universal's ability to exploit its works was difficult to prove. With Napster, the rapid distribution of copyrighted works served as a chilling effect on the RIAA members' ability to exploit their works. The Ninth Circuit accordingly adapted its interpretation of Sony and existing doctrine to better reflect the evolution of technology.

The Supreme Court's rule in *Grokster, Ltd.* could have easily been applied to Napster's system as well. Napster was clearly distributing its software. There was evidence to suggest

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<sup>69</sup> *Sony Corp. of America*, 464 U.S. 417.

<sup>70</sup> *Id.*

Napster intended to induce users to infringe copyrights,<sup>71</sup> and there was clearly infringement occurring as a result. But the court in *Napster, Inc.* didn't need to so, as Napster's technology fit within existing doctrine enough that the Ninth Circuit could use *Sony Corp. of America* as a framework. After *Grokster, Ltd.*, the framework is clearer: deliberate inducement of copyright infringement is sufficient to find contributory infringement.

### **What Is BitTorrent?**

While the emergence of decentralized file-sharing systems changed the fundamental framework of contributory infringement under U.S. law, essentially streamlining the elements of contributory infringement to distribution, intent to induce, and actual third party infringement, it has been the emergence of BitTorrent technology that has fundamentally changed the impact of file sharing as a way to use the internet itself. Peer-to-Peer file sharing is the most used form of the internet in the world.<sup>72</sup> Instead of sharing entire files between individual persons, bittorrents share small bits of files between multiple users.<sup>73</sup> This puts less strain on the individual computers distributing the files and allows for faster transferring of files.<sup>74</sup> Thus, larger files can be transferred than under the older systems that facilitated transfers on a single unit by single unit basis.

When a person wants to share a file, while in the BitTorrent system, he becomes a "seed" node.<sup>75</sup> That file is then broken into smaller individual parts, and the BitTorrent system distributes those files to other users of the system who want to receive them.<sup>76</sup> Once an

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<sup>71</sup> See *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d at 1029 (The court noted that Napster co-founder Sean Parker authored a document encouraging deliberate ignorance of usernames and IP addresses since users were exchanging pirated music).

<sup>72</sup> See <http://www.ipoque.com/userfiles/file/ipoque-Internet-Study-08-09.pdf> (a 2009 study of global internet usage).

<sup>73</sup> See Federal Trade Commission, *P2P File-Sharing Technology: Consumer Protection and Competition Issues*, (June 2005), <http://www.ftc.gov/reports/p2p05/050623p2prpt.pdf>. (last visited May 6, 2011).

<sup>74</sup> *Id.*

<sup>75</sup> *Id.*

<sup>76</sup> *Id.*

individual peer receivers their bit, that person immediately begins sharing those bits with other peers looking for the file.<sup>77</sup> Finally, once an individual has fully received the file, the system immediately turns that user into a seeder, and begins distributing that file in bits to other users who are attempting to receive the same file.<sup>78</sup> This means that a file is available long after the original seeder has stopped seeding.

The expansive nature of the file sharing process through the BitTorrent grows the rate of file distribution at an unprecedented rate. Because of the system's ability to transfer a file through multiple peers simultaneously, BitTorrent helped address a common problem with other versions file sharing systems. Previously, high demand for a particular file sometimes led to long waits to download the file. This was especially true for larger files that took a long time to download. It took longer for larger files to spread through the network because each user had to download the entire file before they could share it with others. But with BitTorrent, as the number users of the system increase, the faster and more widespread the file sharing occurs.<sup>79</sup> As more parts become available, the faster and easier it becomes to download the file.<sup>80</sup> Therefore, there isn't a logjam of users waiting to download an especially popular file.

Searching for files to use with the BitTorrent system is also different from other versions of P2P file sharing. The BitTorrent system does not directly search the databases of users logged into the system. Instead, third party websites are used to download .torrent text files that function as pointers to particular seed nodes.<sup>81</sup> Once downloaded, the .torrent file is opened within the

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<sup>77</sup> *Id.*

<sup>78</sup> <http://www.bittorrent.com/help/faq/concepts> (last visited May 6, 2011).

<sup>79</sup> *Id.*

<sup>80</sup> *Id.*

<sup>81</sup> [http://netforbeginners.about.com/od/peersharing/a/torrenthandbook\\_4.htm](http://netforbeginners.about.com/od/peersharing/a/torrenthandbook_4.htm) (last visited May 6, 2011).

BitTorrent software, and the software then communicates with a tracker server to find users to share with.<sup>82</sup> Once found, the seed node is identified and the file sharing process begins.<sup>83</sup>

There are numerous benefits of the BitTorrent system over other versions of file-sharing systems. First and foremost, the increased amount of parties acting in concert to share a particular file expedites the speed of transfer, creating feasible opportunities to download larger files. But there are other advantages as well. The BitTorrent system filters out corrupted and dummy files.<sup>84</sup> BitTorrent is also free of spyware, adware, and malware (various advertising systems that can harm computers).<sup>85</sup> The speed and efficiency the of BitTorrent system have allowed for rapid growth in its usage. BitTorrent is the most widely used form of P2P file sharing in the world.<sup>86</sup>

### **How BitTorrent Fits Into the Framework of U.S. Copyright Law**

The technology of BitTorrent is both similar and different from the technology used in programs such as Grokster. It is the differences, however, that affect how the courts incorporate BitTorrent into the framework of U.S. copyright law. There are notable similarities and differences to the Betamax VTR's that can inform how BitTorrent fits into this framework as well.

While BitTorrent is a decentralized file sharing system like Grokster, there are two key aspects of the functionality of BitTorrent that help to distinguish the facts that helped support the Supreme Court's ruling against Grokster. First, a user cannot find a specific file to share with another user directly through the BitTorrent system. In order to locate active seed nodes, a user of BitTorrent must search third party websites. Even though Grokster was decentralized, users

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<sup>82</sup> *Id.*

<sup>83</sup> *Id.*

<sup>84</sup> *Id.*

<sup>85</sup> <http://www.bittorrent.com/help/faq/client> (last visited May 6, 2011).

<sup>86</sup> <http://www.ipoque.com/userfiles/file/ipoque-Internet-Study-08-09.pdf> (last visited May 6, 2011).

still were able to connect to one another and search each others' databases for the files. This is important because it casts doubt as to whether a plaintiff could fulfill the element of inducement theory requiring that actual infringement occur as a result. If BitTorrent is not distributing the files being exchanged, it is not distributing a means of communicating between users, and merely distributing a technology that breaks down a file into smaller parts, it might be the case that the infringement occurs as result of the trackers and third party websites, and not the BitTorrent technology itself.

A second difference between Grokster and BitTorrent revolves around the second element of inducement theory, requiring that a defendant intentionally distribute its technology in order to facilitate infringement. In *Grokster, Ltd.*, there was clear evidence indicating active steps were taken to encourage copyright infringement through the use of its technology.<sup>87</sup> That evidence seems to be lacking in the context of BitTorrent. Because of the capacity of BitTorrent to feasibly transfer larger files, that also allows the BitTorrent system to transfer a greater variety of types of files. This diversity in file types lends BitTorrent to being used in other ways outside of copyright infringement. For example, Blizzard Entertainment, a major video game company, distributes its online game content to its customers through BitTorrent.<sup>88</sup> Amazon.com offers a web storage service that uses BitTorrent technology.<sup>89</sup> With so many noninfringing uses for BitTorrent technology, it would be difficult to show that BitTorrent actively distributes its system for the purposes of inducing copyright infringement.

The existence of these noninfringing uses might provide BitTorrent with the protections afforded VTR technology in *Sony Corp. of America*. The Supreme Court in *Sony Corp. of America* held that Sony was not liable for contributory infringement because VTR's were

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<sup>87</sup> Grokster, Ltd., 545 U.S. at 940.

<sup>88</sup> [http://www.wowpedia.org/Blizzard\\_Downloader](http://www.wowpedia.org/Blizzard_Downloader) (last visited May 6, 2011).

<sup>89</sup> <http://aws.amazon.com/s3/> (last visited May 6, 2011).

capable of substantial noninfringing uses.<sup>90</sup> The Supreme Court paid careful attention to the various kinds of uses for works, pointing out that there was a difference between the authorized recording of broadcasts and unauthorized recordings.<sup>91</sup> The noninfringing uses of the VTR technology were manifested in authorized copying of broadcasts and unauthorized fair use of the broadcasts. While the holdings of *Napster, Inc.* and *Grokster, Ltd.* indicate that a claim of fair use of unauthorized copying holds little weight, authorized use of copyrighted works is still not a violation of the Copyright Act. Such noninfringing uses were not substantial enough to outweigh the acts of infringement conducted by the users of Napster or Grokster. But the wide variety of uses for BitTorrent file sharing technology could very well rise to the level of substantial noninfringing uses articulated in *Sony Corp. of America*. Holding BitTorrent liable under a theory of contributory infringement would curtail the efforts of companies like Blizzard Entertainment and Amazon to distribute large amounts of data to their users lawfully. This could fulfill the requirement that the technology is capable of substantial noninfringing uses.

Attacking the third party servers that search for the text based .torrent files is likely the best path for prosecuting claims of copyright infringement stemming from BitTorrent. Such websites would be likely to be held liable under the inducement theory. These websites freely distribute their search engines on the internet. As discussed earlier, individual users of these websites can engage in the same types of direct infringement that occurred with Napster and Grokster. Plaintiffs would have a much easier time proving the intent to induce infringement element because the websites function in a manner that echoes the behavior of Grokster. The Supreme Court noted that Grokster had sold advertising space and allowed those advertisements

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<sup>90</sup> *Sony Corp. of America*, 464 U.S. 417.

<sup>91</sup> *Id.*

to be displayed to users of the software.<sup>92</sup> The value of the advertising space increased with the amount of users to the system. The Supreme Court felt that this was an important factor in light of the fact that a large percentage of users of Grokster directly infringed copyrights.<sup>93</sup> Some of these third party websites that search for .torrent files sell advertising space as well, such as The Pirate Bay<sup>94</sup> and Mininova.<sup>95</sup> As more users frequent these sites, it stands to reason that the value of the advertising space increases as well.

Perhaps the most effective reason to prosecute these third party websites is that they have a smaller variety of uses than the technology of BitTorrent. The functionality of the third party websites is similar to that of Grokster. Grokster allowed users to search computers for various types of media files, the majority of which were protected works that the users had not been authorized to distribute. The same can be said for the third party websites. The direct authorization from businesses to conduct file sharing does not occur with third party websites. If it can be proven that the use of the files found on the third party website is predominantly infringing, the third party website would not have the benefit of claiming the use of other, substantial noninfringing uses that BitTorrent has.

BitTorrent is a unique form of file sharing that interacts with users in a variety of ways. The legitimate noninfringing uses of BitTorrent could potentially shield it from liability under a theory of contributory infringement. At the same time, some of the other mechanisms used to find torrents, namely third party servers, could be held liable in their own right. The advantage of protecting BitTorrent from liability allows it to continue to be used in ways that do not infringe copyright law. Unlike with Napster or Grokster, however, this is not an all or nothing

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<sup>92</sup> *Id.*

<sup>93</sup> *Id.*

<sup>94</sup> See [http://en.wikipedia.org/wiki/The\\_pirate\\_bay](http://en.wikipedia.org/wiki/The_pirate_bay) (last visited May 6, 2011).

<sup>95</sup> See <http://en.wikipedia.org/wiki/Mininova> (last visited May 6, 2011).

proposition: The presence of third party websites which are more narrowly tailored to fit within the framework of contributory infringement currently used in the United States provides a path for copyright holders to protect against infringement while still allowing for the use of BitTorrent in legal ways.

### **International Enforcement of Copyright Infringement**

Enforcing U.S. Copyright against third party servers can sometimes be difficult. Many third party websites commonly used to facilitate copyright infringement are run outside of U.S. borders. For example, The Pirate Bay is a third party server run out of Sweden.<sup>96</sup> Mininova is another one headquartered in The Netherlands.<sup>97</sup> When the U.S. does not have jurisdiction over these websites, U.S. copyright holders are at the mercy of foreign courts. This is not necessarily a complete bar to relief, as some countries have strong copyright protections.<sup>98</sup> However, plaintiffs will not be able to use the carefully adapted theories of U.S. copyright law to argue their cases. Moreover, American copyright holders will not have the luxury of having a singular, uniform law to work under when seeking relief.

The emergence of BitTorrent as the primary form of file sharing has made enforcement against individual users for direct infringement increasingly difficult. This is not the result of a new strand of legal theory however. The increase in users sharing a single file puts a much greater strain on law enforcement and copyright holders to effectively monitor the activity of file sharing. Whereas both Napster and Grokster involved file sharing involved activity between persons and files on a singular basis, the technology of BitTorrent can have hundreds of users sharing hundreds of bits of a file across the world. A person in Sweden can be seeding a file

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<sup>96</sup> <http://thepiratebay.org/about> (last visited May 6, 2011).

<sup>97</sup> <http://torrentfreak.com/behind-the-scenes-at-mininova-090316/> (last visited May 6, 2011).

<sup>98</sup> See Karl Ritter, 4 Convicted in Pirate Bay File-Sharing Trial. *Available at* [http://www.usatoday.com/tech/news/2009-04-17-pirate-bay\\_N.htm](http://www.usatoday.com/tech/news/2009-04-17-pirate-bay_N.htm) (Founders of The Pirate Bay found guilty of copyright infringement under Swedish law).



transmitted to users in China, the U.K., South Africa, and Canada, all while those users themselves are transmitting their bits around the globe as well. Identifying the work being distributed is not necessarily harder. But the process of executing a successful lawsuit involves identifying the persons guilty of the infringement, apprehending those persons, seizing their computers, and putting them through a trial process. The scale of file sharing that is occurring through BitTorrent globally makes this exponentially more difficult to accomplish for a single copyright holder, even one as large as Universal Studios.

### **The Economic Impact of International P2P File Sharing**

The increasing amount of international access to copyrighted works in the U.S. directly affects American business. In much the same way that illegally downloaded music files impaired the music industry's ability to enter into the market of digitally transferred music, so too are American copyright holders' ability to enter into international markets impaired. In 2006, the Office of the United States Trade Representative estimated that American corporations lost \$250 billion every year due to intellectual property theft.<sup>99</sup> Not all of that comes from file sharing specifically, but the prevalence of the internet, combined with the free distribution of BitTorrent technology and free access to third party websites requires less of the infrastructure necessary to pirate hard copies of copyrighted works. If in China, DVDs are being sold for as little as 50 cents each,<sup>100</sup> then that creates a barrier for American copyright holders to enter into that market. This mirrors the logic used by the Ninth Circuit in *Napster, Inc.*, where the presence of low cost

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<sup>99</sup> Department of Justice. *Progress Report of the Department of Justice's Task Force on Intellectual Property*. [http://www.cybercrime.gov/2006IPTFProgressReport\(6-19-06\).pdf](http://www.cybercrime.gov/2006IPTFProgressReport(6-19-06).pdf) (last visited May 6, 2011).

<sup>100</sup> Associated Press. *China's Piracy Hurting Its Own Industries*, (July 2007). [http://www.msnbc.msn.com/id/13617619/ns/business-world\\_business/t/chinas-piracy-hurting-its-own-industries/](http://www.msnbc.msn.com/id/13617619/ns/business-world_business/t/chinas-piracy-hurting-its-own-industries/).

illegally downloaded music files impacted the sale of CDs.<sup>101</sup> In fact, if one buys an American film in China today, there is a ninety three percent chance that it is pirated.<sup>102</sup>

The relationship between American copyright owners and infringement through file sharing is particularly highlighted by infringement in China. As of 2004, China was the second biggest user of internet facilities after the United States.<sup>103</sup> But even in countries where internet usage is not as prevalent, the American copyright holders face similar challenges to protecting their works. In order to enter into foreign markets, American copyright holders must find ways to curtail the piracy occurring abroad.

### **Conclusion**

As newer forms of technology in copyrighted works have emerged during the history of the United States, the legal system has adapted to incorporate these new technologies into its framework of copyright protection. This is evidenced not only by the drastic change in term lengths from in the Copyright Act itself, but with the conflation of contributory infringement concepts from both patent and copyright law. In *Sony Corp. of America*, the courts struggled with varying uses of the VTR technology. The fact that VTR's had substantial noninfringing uses which benefited the market required the court to adapt the existing state of copyright law to reflect the new state of the U.S. economy. When the Ninth Circuit was faced with the massively game-changing effect that centralized file-sharing had on the music industry in *Napster, Inc.*, it struggled to react appropriately with the substantial noninfringing use doctrine established in *Sony Corp. of America*. Finally, even the framework of *Sony Corp. of America* could not be stretched to incorporate the decentralized file-sharing systems used by Grokster and StreamCast.

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<sup>101</sup> *Napster, Inc.*, 239 F.3d at 1016.

<sup>102</sup> Jordana Cornish, Cracks in the Great Wall: Why China's Copyright Law Has Failed to Prevent Piracy of American Movies Within Its Borders, 9 VAND. J. ENT. & TECH. L. 405, 406 (2006).

<sup>103</sup> *Id* at 410.

The court had to adapt its concept of contributory infringement once again in order to face the impact that such unauthorized file sharing had on the market, borrowing from patent law again with the inducement theory.

Theoretically, the inducement theory could have been implemented in relation to both Napster and VTR technologies. Distribution, intent to induce infringement, and actual infringement were all potential uses for VTR's. The same can be said of a centralized file sharing system. In both cases, restricting a ruling tailored specifically to the infringing uses of the technologies would have provided clarity that informed the development of newer works over time. But to punish the Supreme Court in *Sony Corp. of America* for not doing so would be unfair. It is exceedingly difficult to predict all of the new developments and kinds of works that will impact the market to the extent that VTRs, Napster, or Grokster had. It is even more unfair to expect the Supreme Court to foresee all of the relevant applications for these newer forms of technology and how restricting use of them will impact the market decades into the future.

This limited capacity of the legal system to foresee how to incorporate newer works into the framework of copyright law is axiomatic of the way legal systems work. Before a court can properly hear a case, some kind of conflict must already arise between two litigants regarding a work. In an area that explicitly champions innovation such as copyright law in the United States; the courts must necessarily restrain themselves from cutting off progress before the impact on the market can work itself out.

BitTorrent technology is a perfect example of the need for courts to balance the rights of the copyright owners and the public's access to the work. As noted above, there are meaningful uses of BitTorrent technology which have a positive benefit on the market, allowing businesses and individual authors to disseminate their works to larger audiences and more diverse groups at

an unprecedented rate. At the same time however, the scope of BitTorrent also lends itself to unprecedented levels of infringement, both domestically and abroad. As BitTorrent technology touches international court systems as well as the courts in the U.S., individual copyright holders and persons eager to use the technology will have to pay careful attention to parsing out the beneficial uses of BitTorrent from the negative ones when advocating for which aspects of BitTorrent is copyright infringement and which isn't.