

# A GOOD VALUE CHAIN GONE BAD: INDIRECT COPYRIGHT LIABILITY IN *PERFECT 10 v. VISA*

By David Haskel

## I. INTRODUCTION

Digitization and the Internet have radically complicated the challenges of copyright enforcement. In the digital age, anyone can make and distribute copies instantaneously anywhere in the world at very little cost. National borders are less relevant online, making it more difficult to enforce copyright against foreign infringers. Faced with the double threat of infringement by their own consumers and by foreign websites, content owners have sought to hold liable those who facilitate infringement. Credit card companies that provide payment services to foreign websites are a particularly attractive target. Beginning in 2000, Perfect 10, a pornographic website, sued a range of defendants, including credit card companies, for indirect copyright infringement. In *Perfect 10, Inc. v. Visa International Service Ass'n*,<sup>1</sup> the Ninth Circuit held the credit card companies were neither contributorily nor vicariously liable, as the link between payment services and direct infringement was too attenuated.

This Note argues that when enforcement against foreign websites is not a realistic option, the problem is best solved by imposing a limited form of liability sufficient to dissuade the provision of credit card services. Part II provides the background to the *Visa* case and the law of secondary copyright liability. Part III reports the decision and Judge Alex Kozinski's vigorous dissent. Part IV analyzes the optimal stage in the chain of infringement for enforcing copyright, and concludes that holding credit card companies liable is an appropriate solution so long as the law protects them from monetary damages.

## II. CASE AND LEGAL BACKGROUND

This Part introduces the context and legal background to Perfect 10's suit against the credit card companies. Section II.A describes the infringement problems faced by Perfect 10 and the suits it brought in re-

---

© 2008 David Haskel. The author hereby permits the reproduction of this Note subject to the Creative Commons Attribution No Derivatives 3.0 License, the full terms of which can be accessed at <http://creativecommons.org/licenses/by-nd/3.0/legalcode>, and provided that the following notice be preserved: "Originally published in the Berkeley Technology Law Journal 23:1 (2008)."

1. 494 F.3d 788 (9th Cir. 2007).

sponse. Section II.B explains the two forms of secondary liability, vicarious and contributory, and how they have been applied in the digital age. Section II.C shows how the Digital Millennium Copyright Act (DMCA) protects online service providers from secondary liability.

#### A. Perfect 10's Piracy Challenges and Legal Strategy

Perfect 10 publishes a print magazine and hosts a website featuring nude photographs of “the world’s most beautiful natural models.”<sup>2</sup> Websites based in the United States and abroad sold Perfect 10’s photographs without authorization.<sup>3</sup> Facing financial ruin, Perfect 10 embarked on a multi-pronged legal strategy in the hope of reducing piracy and drawing users to its own offerings. In addition to suing a stolen-content website for direct infringement,<sup>4</sup> Perfect 10 sued four sets of defendants for secondary liability: 1) a search engine for reproducing thumbnails of the pirated images,<sup>5</sup> 2) a web service provider for hosting a pirate site,<sup>6</sup> 3) a company for providing age-verification and subscription services,<sup>7</sup> and 4) financial institutions for processing subscription fees.<sup>8</sup>

This multi-faceted attack recognizes that an infringing act does not occur in isolation, many different activities make it possible. It is useful to view the collection of facilitating activities as a “value chain.”<sup>9</sup> Different types of infringement, from textbook photocopying to movie bootlegging, are made possible by different sets of technologies and different actors. These value chains can be divided into a number of distinct stages: technology enablement, copy creation, distribution, publicity, monetization, and consumption.<sup>10</sup> Figure 1 illustrates the value chain of a stolen content website.

---

2. *Id.* at 793.

3. *Id.*

4. *See* Perfect 10, Inc. v. Talisman Commc’ns Inc., No. 99-10450, 2000 U.S. Dist. LEXIS 4564 (C.D. Cal. Mar. 27, 2000).

5. *See* Perfect 10, Inc. v. Amazon.com, Inc., 487 F.3d 701 (9th Cir. 2007).

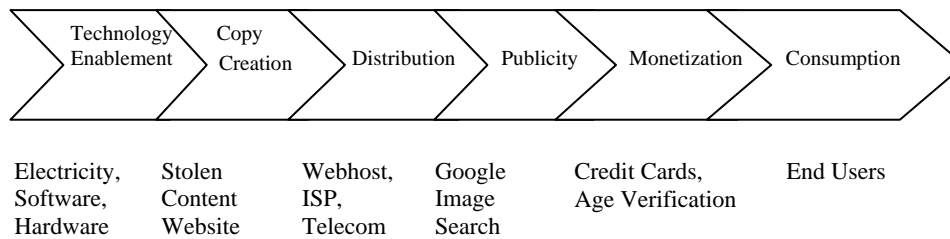
6. *See* Perfect 10, Inc. v. CCBill LLC, 481 F.3d 751 (9th Cir. 2007), *amended and superseded*, 488 F.3d 1102 (9th Cir. 2007).

7. *See* Perfect 10, Inc. v. Cybernet Ventures, Inc., 213 F. Supp. 2d 1146 (C.D. Cal. 2002).

8. *See* CCBill, 488 F.3d 1102; *See also* Visa, 494 F.3d at 793.

9. *See* Richard Gilbert & Michael Katz, *When Good Value Chains Go Bad: The Economics of Indirect Liability for Copyright Infringement*, 52 HASTINGS L.J. 961, 961 (2001).

10. *See id.* at 968-69.

**Figure 1: Value Chain of a Stolen-Content Website**

Perfect 10 sought to limit direct infringement by suing defendants at a number of stages in the value chain. First, in *Perfect 10 v. Talisman Communications Inc.*, Perfect 10 sued a stolen-content website for direct infringement.<sup>11</sup> Because the defendant, operator of supersex.com, failed to respond to Perfect 10's allegations that it had infringed six of its photographs, the court entered default judgment for \$312,810.<sup>12</sup>

Second, Perfect 10 sued Google for providing an image search engine, which copied and displayed smaller versions of images from stolen-content websites, and Amazon.com for providing access to Google Image Search.<sup>13</sup> The Ninth Circuit held that "Google could be held contributorily liable if it had knowledge that infringing Perfect 10 images were available using its search engine, could take simple measures to prevent further damage to Perfect 10's copyrighted works, and failed to take such steps," and remanded for the district court to decide these questions.<sup>14</sup> In defense, Google sought the protections of a DMCA safe harbor, an issue also to be considered on remand.<sup>15</sup>

Third, Perfect 10 sought to prevent two related companies, CWIE and CCBill, from providing web hosting and payment services to stolen-content websites.<sup>16</sup> The same Ninth Circuit panel that decided *Visa* largely affirmed the lower court's holding that the defendants might qualify for a

11. *See Perfect 10, Inc. v. Talisman Commc'ns Inc.*, No. 99-10450, 2000 U.S. Dist. LEXIS 4564, \*1 (C.D. Cal. Mar. 27, 2000).

12. *See id.* at \*1, \*4, \*6.

13. *See Perfect 10, Inc. v. Amazon.com, Inc.*, 487 F.3d 701, 712 (9th Cir. 2007); *See also Meng Ding*, Note, *Perfect 10 v. Amazon.com: A Step Toward Copyright's Tort Law Roots*, 23 BERKELEY TECH. L.J. 373 (2008).

14. *Amazon.com*, 487 F.3d at 729.

15. *See Amazon.com*, 487 F.3d at 732.

16. *See Perfect 10, Inc. v. CCBill LLC*, 488 F.3d 1102, 1108 (9th Cir. 2007); *See also Brandon Brown*, Note, *Fortifying the Safe Harbors: Reevaluating the DMCA in a Web 2.0 World*, 23 BERKELEY TECH. L.J. 437 (2008).

DMCA safe harbor, and remanded to determine whether they satisfied all the requirements.<sup>17</sup>

Fourth, Perfect 10 sued Cybernet Ventures for the subscription support its Adult Check service provided to stolen-content websites.<sup>18</sup> Adult Check served two main functions to pornographic websites: it allowed access to all the Adult Check sites for a single monthly fee (making it unnecessary for users to pay for individual subscriptions to each site), and it verified that users were of legal age.<sup>19</sup> The district court issued a preliminary injunction, holding that there was a strong likelihood Cybernet would be found contributorily and vicariously liable.<sup>20</sup> While it was unclear to the court whether Cybernet was a service provider under the DMCA, the court determined that it did not meet certain requirements even if it did qualify.<sup>21</sup>

Finally, Perfect 10 sued Visa, MasterCard, Cardservice International, and Humboldt Bank for contributory and vicarious infringement for processing credit card payments to stolen-content websites.<sup>22</sup> This case, *Perfect 10, Inc. v. Visa International Service Ass'n*, is the focus of this Note.

## **B. Indirect Copyright Liability**

Almost all acts of copyright infringement involve tools, services, or venues provided by another party, or benefit someone other than the principal actor. Secondary, or indirect,<sup>23</sup> liability holds third parties to account for their relationship with the direct infringers. The driving economic rationale is to place the responsibility on the party who can stop infringement at the least cost.<sup>24</sup> Secondary liability is not unique to copyright law. The Supreme Court has noted that “vicarious liability is imposed in virtually all areas of the law, and the concept of contributory infringement is merely a species of the broader problem of identifying the circumstances

---

17. *See id.* at 1120.

18. *Perfect 10, Inc. v. Cybernet Ventures, Inc.*, 213 F. Supp. 2d 1146 (C.D. Cal. 2002).

19. *See id.* at 1157-58.

20. *See id.* at 1164.

21. *See id.*

22. *Perfect 10 v. Visa Int'l Serv. Ass'n*, 494 F.3d 788, 792 (9th Cir. 2007).

23. Secondary and indirect liability are largely synonymous, as courts have yet to hold fourth parties, those only related to secondary infringers, liable for tertiary liability. *See Benjamin Glatstein, Comment, Tertiary Copyright Liability*, 71 U. CHI. L. REV. 1605 (2004).

24. *See, e.g., WILLIAM LANDES & RICHARD POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW* 119 (2003).

in which it is just to hold one individual accountable for the actions of another.”<sup>25</sup>

Indirect copyright liability is an outgrowth of tort law, adapted by courts to the concerns of copyright, particularly the challenges of enforcement.<sup>26</sup> Over the course of more than a century, secondary copyright liability evolved into two distinct species: contributory and vicarious.<sup>27</sup> As a general rule, elaborated in Sections II.B.1 and II.B.2, “benefit and control are the signposts of vicarious liability,” while “knowledge and participation [are] the touchstones of contributory infringement.”<sup>28</sup> Vicarious liability and contributory infringement are discrete doctrines with different elements, though courts often conflate the two.<sup>29</sup>

### 1. Vicarious liability

The landmark case of vicarious liability under the Copyright Act of 1909, decided in the Second Circuit, formulated the test as follows:

When the right and ability to supervise coalesce with an obvious and direct financial interest in the exploitation of copyrighted material—even in the absence of actual knowledge that the copyright monopoly is being impaired—the purposes of copyright law may be best effectuated by the imposition of liability upon the beneficiary of that exploitation.<sup>30</sup>

This three-part test for vicarious liability first requires an act of direct infringement.<sup>31</sup> Second, the defendant must have the right to supervise or guard against the infringing conduct.<sup>32</sup> Courts differ over whether an unexercised right suffices or whether the defendant must actually have exercised that right.<sup>33</sup> Third, the defendant must have a financial interest in the

25. *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417, 435 (1984).

26. See Peter S. Menell & David Nimmer, *Unwinding Sony*, 95 CAL. L. REV. 941, 994 (2007).

27. Some commentators have argued that the Supreme Court in *MGM v. Grokster*, 545 U.S. 913 (2005), created a new “inducement” theory of secondary liability, distinct from vicarious and contributory liability. See, e.g., WILLIAM PATRY, PATRY ON COPYRIGHT § 21:41 (2007). Others argue that inducement had long been a branch of contributory liability. See, e.g., Menell & Nimmer, *supra* note 26, at 1002.

28. *Demetriades v. Kaufmann*, 690 F. Supp. 289, 293 (S.D.N.Y. 1988).

29. See PATRY, *supra* note 27, § 21:41.

30. *Shapiro, Bernstein & Co. v. H.L. Green Co.*, 316 F.2d 304, 307 (2d Cir. 1963) (internal citations omitted).

31. See PATRY, *supra* note 27, § 21:66.

32. See *id.*

33. See *id.* § 21:67.

infringement, though courts differ on the degree of directness between the infringing act and the monetary benefit.<sup>34</sup>

Vicarious liability grew out of the tort doctrine of *respondet superior*, which holds the principal liable for the wrongful acts of the agent.<sup>35</sup> Two lines of vicarious liability decisions developed under the 1909 Act: the dance-hall line and the landlord-tenant line.<sup>36</sup> In *Herbert v. Shanley Co.*, the Supreme Court held a restaurant operator vicariously liable for hiring musicians who played infringing music for customers.<sup>37</sup> Courts applied this decision to a variety of establishments that profited from infringing performances, including movie theaters,<sup>38</sup> horseracing tracks,<sup>39</sup> and dance halls.<sup>40</sup>

These dance-hall cases are distinguishable from landlord-tenant situations. In general, a landlord is not responsible for the illegal activities of tenants, as he does not have an inherent right to supervise or any direct financial benefit beyond rent.<sup>41</sup> Nevertheless, a line of cases developed where landlords were held vicariously liable as they were deemed to exercise sufficient control and had a direct financial interest in the infringement. In *Shapiro, Bernstein & Co. v. H.L. Green Co.*, the court held a storeowner vicariously liable for providing space to a concessionaire and sharing in their sales of bootleg records.<sup>42</sup> Thus, a landlord could not escape indirect copyright liability by ignoring infringing activity, but was required to supervise the activities of lessees.

## 2. Contributory liability

The most common formulation of the contributory liability rule is: "one who, with knowledge of the infringing activity, induces, causes or materially contributes to the infringing conduct of another, may be held

---

34. *See id.* § 21:68.

35. *See id.* § 21:63.

36. *See id.*

37. *Herbert v. Shanley Co.*, 242 U.S. 591 (1917).

38. *M. Witmark & Sons v. Pastime Amusement Co.*, 298 F. 470 (E.D.S.C. 1924), *aff'd*, 2 F.2d 1020 (4th Cir. 1924); *Harms v. Cohen*, 279 F. 276 (E.D. Pa. 1922).

39. *Famous Music Corp. v. Bay State Harness Horse Racing & Breeding Ass'n*, 554 F.2d 1213 (1st Cir. 1977); *Broad. Music, Inc. v. Rockingham Venture, Inc.*, 909 F. Supp. 38 (D.N.H. 1995).

40. *See, e.g.*, *Irving Berlin, Inc., v. Daigle*, 26 F.2d 149 (E.D. La. 1928), *rev'd* 31 F.2d 832 (5th Cir. 1929); *Dreamland Ball Room v. Shapiro, Bernstein & Co.*, 36 F.2d 354 (7th Cir. 1929); *Buck v. Russo*, 25 F. Supp. 317 (D. Mass. 1938).

41. *See, e.g.*, *Deutsch v. Arnold*, 98 F.2d 686, 688 (2d Cir. 1938) (holding landlord and leasing agent not liable for leasing a booth on Coney Island to an operator who infringed copyright).

42. 316 F.2d 304, 308 (2d Cir. 1963).

liable as a ‘contributory infringer.’<sup>43</sup> There are three requirements for contributory infringement. First, as with vicarious liability, there must be an act of direct infringement.<sup>44</sup> Second, the defendant must know of the direct infringement, though courts differ over whether actual or constructive knowledge suffices.<sup>45</sup>

The third, and most nuanced, prong examines the relationship between the defendant’s conduct and the direct infringement. While courts have formulated various tests, the most common version is that a defendant is liable if he “induces, causes or materially contributes to the infringing conduct.”<sup>46</sup> Other courts hold defendants liable merely for providing the means for infringement.<sup>47</sup> Some courts, as well as a leading treatise,<sup>48</sup> divide this prong in two: 1) personal conduct that assists the infringement, and 2) provision of the means to facilitate the infringement.<sup>49</sup>

The doctrine of contributory liability was first applied in *Harper v. Shoppell*, where the defendant, not owning the copyright, sold a plate of an image to a publisher who used it to reproduce the image in its newspapers.<sup>50</sup> The court held the defendant liable for providing the plate, concluding that “knowing at the time . . . that it would be used by the purchaser for printing . . . [the defendant] is to be regarded as having sanctioned the appropriation of the plaintiffs’ copyrighted matter, and occupies the position of a party acting in concert with the purchaser who printed and published it, and is responsible with him as a joint tort-feasor.”<sup>51</sup> Thus, the provider of a device used to infringe a copyright can be held contributorily liable.

---

43. *Gershwin Publ’g Corp. v. Columbia Artists Mgmt., Inc.*, 443 F.2d 1159, 1162 (2d Cir. 1971) (internal citations omitted). Although most well known for this formulation of contributory liability, *Gershwin* was in fact a case of vicarious liability. *Id.* at 1163.

44. *See, e.g., DSC Commc’n, Inc. v. Pulse Commc’n, Inc.*, 170 F.3d 1354, 1359 (Fed. Cir. 1999) (dismissing contributory infringement claim after direct infringement claim dismissed).

45. *See* PATRY, *supra* note 27, § 21:47

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

47. *See, e.g., Fonovisa, Inc. v. Cherry Auction, Inc.*, 76 F.3d 259, 264 (9th Cir. 1996); *Design Craft Fabric Corp. v. K-Mart Corp.*, 1999 WL 1256258 (N.D. Ill. Dec. 21, 1999).

48. 3 MELVILLE NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 12.04[A][3] (2007).

49. *See, e.g., Matthew Bender & Co. v. West Pub. Co.*, 158 F.3d 693, 706 (2d Cir. 1998), *cert. denied*, 526 U.S. 1154 (1999); *see also* *Cherry Auction*, 76 F.3d at 264.

50. 28 F. 613 (C.C.S.D.N.Y. 1886).

51. *Id.* at 615 (internal citations omitted).

*Harper v. Shoppell* was followed by *Kalem Co. v. Harper Bros.*, the most famous of the early contributory infringement cases.<sup>52</sup> The defendant produced a film based on the plaintiff's novel "Ben Hur."<sup>53</sup> Because copyright law at the time protected only the right to dramatize, the plaintiffs could only sue those who publicly performed the work. The defendant did not perform the work himself, but instead sold it to distributors, who then performed it in their theatres.<sup>54</sup> In ruling for the copyright owner, Justice Holmes declared "[i]f the defendant did not contribute to the infringement, it is impossible to do so except by taking part in the final act. It is liable on principles recognized in every part of the law."<sup>55</sup> While it held liable the provider of material that helped others to infringe, the Court foreshadowed the potential dangers and limitations of this doctrine: "[i]n some cases where an ordinary article of commerce is sold, *nice questions* may arise as to the point at which the seller becomes an accomplice in a subsequent illegal use by the buyer."<sup>56</sup> These "nice questions," whether the provider of equipment or services having legitimate purposes is contributorily liable when others use them to infringe, are a central issue of copyright enforcement in the digital age.

### 3. *Indirect liability in the digital age*

As content shifts from traditional to digital formats, indirect liability has become increasingly important. In the digital age, end-users have the tools to make and distribute perfect digital copies at essentially zero marginal cost, radically altering the dynamics of copyright enforcement. At the same time, these technologies have a range of non-infringing uses. The Supreme Court confronted this revolution in *Sony v. Universal Studios*, where the movie industry alleged that Sony's Betamax recording equipment contributed to infringement when consumers taped television broadcasts of copyrighted works.<sup>57</sup> The Court held that providing equipment that is used to infringe is not contributory infringement so long as the equipment has substantial non-infringing uses.<sup>58</sup> This rule provides an important safe harbor for a wide range of technologies that have both infringing and non-infringing uses, such as video cameras, MP3 players, and photocopying machines.

---

52. *Kalem Co. v. Harper Bros.*, 222 U.S. 55 (1911).

53. *Id.* at 60.

54. *Id.*

55. *Id.* at 62-63.

56. *Id.* at 62 (emphasis supplied) (internal citations omitted).

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

58. *Id.* at 442.



After *Sony*, the Ninth Circuit considered a case brought by a music-recording owner against an operator of a swap meet where infringing works were sold.<sup>59</sup> In *Fonovisa v. Cherry Auction*, the Ninth Circuit held that the operator's provision of the "site and facilities" of the infringement—including physical space, utilities, parking, advertising, plumbing, and customers—was sufficient to establish contributory liability.<sup>60</sup> The swap meet operator was also held vicariously liable because it had a direct financial interest in the infringement and "the right to terminate vendors for any reason whatsoever and through that right had the ability to control the activities of vendors on the premises."<sup>61</sup> This holding represents a significant weakening of the standard for direct financial interest, as the defendant did not receive a percentage of the infringer's revenue, but "reap[ed] substantial financial benefits from admission fees, concession stand sales and parking fees, all of which flow[ed] directly from customers who want to buy the counterfeit recordings."<sup>62</sup> This "draw theory" is a far more liberal approach to the direct financial benefit requirement, making it easier for plaintiffs to prove vicarious liability.

The Ninth Circuit then considered the first indirect liability case against a peer-to-peer file sharing service, in which it held Napster contributorily and vicariously liable for the massive infringement that took place over its network.<sup>63</sup> The Napster system consisted of a software "client" program that users installed on their computers to upload and download files directly to and from other users.<sup>64</sup> Napster's servers did not store any files itself, but maintained an index of the files on users' computers. When a user searched for a file, Napster consulted its index to determine the users offering to upload the file, and connected the users to each other.<sup>65</sup> After the district court granted a preliminary injunction, Napster argued on appeal that it could not pre-screen the works transmitted across its system and that it did not actually know of specific acts of infringement.<sup>66</sup> The Ninth Circuit rejected these arguments, and affirmed the lower court's conclusions that Napster had actual and constructive knowledge and provided the "site and facilities" of infringement.<sup>67</sup> The court noted that "[w]ithout the support services defendant provides, Napster us-

---

59. *Fonovisa, Inc. v. Cherry Auction, Inc.*, 76 F.3d 259, 261 (9th Cir. 1996).

60. *See id.* at 264.

61. *Id.* at 262.

62. *Id.* at 263.

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

64. *See id.* at 1011-12.

65. *See id.*

66. *See id.* at 1020.

67. *Id.* at 1022.

ers could not find and download the music they want with the ease of which defendant boasts.”<sup>68</sup> Even though Napster had substantial non-infringing uses, the *Sony* safe harbor did not apply because Napster had actual, specific knowledge of direct infringement, whereas Sony only had constructive knowledge.<sup>69</sup> The Ninth Circuit also affirmed the district court’s finding of vicarious liability.<sup>70</sup> The court ruled that Napster’s revenue depended on increases in users drawn to the infringing material, and that it could have blocked infringers’ access to the network.<sup>71</sup>

In *MGM Studios, Inc. v. Grokster, Ltd.*, the Supreme Court confronted the next generation of peer-to-peer technologies designed to be different enough from Napster to escape liability.<sup>72</sup> Whereas Napster maintained a list of users’ files, without which the system could not operate,<sup>73</sup> Grokster did not use a centralized list. Instead, Grokster maintained a directory through a distributed system by sending search requests to other users, rather than storing all the information on Grokster own servers. Therefore, if Grokster were shut down, the system and infringement could continue. Grokster hoped that since it could not stop the infringement itself, it could convince the courts that it did not have the right and ability to supervise, nor materially contributed to the infringing downloads.<sup>74</sup> Nevertheless, the Supreme Court found Grokster liable, holding 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, going beyond mere distribution with knowledge of third-party action, is liable . . . regardless of the device’s lawful uses.”<sup>75</sup> This inducement theory creates an exception to the *Sony* safe harbor, as it holds a distributor of a staple article of commerce liable if it is promoted as a device that helps to infringe.<sup>76</sup>

These decisions provide the backdrop to the recent Perfect 10 cases. In *Amazon.com*, the Ninth Circuit held Google and Amazon.com could be held contributorily liable for assisting the reproduction, display, and distribution of Perfect 10’s images by third-party websites.<sup>77</sup> Google Image Search allows the user to search for keywords associated with an image,

---

68. *Id.*

69. *See id.* at 1020.

70. *Id.* at 1024.

71. *Id.* at 1023-24.

72. 545 U.S. 913 (2005).

73. Napster, 239 F.3d at 1011.

74. *Id.* at 928.

75. *Id.* at 914.

76. *See Grokster*, 545 U.S. at 915.

77. Perfect 10 v. Amazon.com, 487 F.3d 701 (9th Cir. 2007).

returning a page of miniaturized “thumbnail” images, which the user can click to link to the originating website.<sup>78</sup> The court relied in part on *Napster*, where they had found contributory liability for facilitating access to infringing material.<sup>79</sup> The Ninth Circuit remanded to the lower court with the instruction that “Google could be held contributorily liable if it had knowledge that infringing Perfect 10 images were available using its search engine, could take simple measures to prevent further damage . . . and failed to take such steps.”<sup>80</sup>

### C. DMCA Safe Harbors

The DMCA safe harbors protect online service providers from secondary liability, and were raised as a defense in several of the Perfect 10 suits. At common law, online service providers, such as webhosts, search engines, and internet service providers, incur the risk of direct and indirect liability for infringement by their users.<sup>81</sup> In response to this legal uncertainty, the internet industry successfully lobbied Congress for clarification,<sup>82</sup> resulting in the Online Copyright Infringement Liability Limitation Act (OCILLA) of 1998.<sup>83</sup> Codified as § 512 of the DMCA, the OCILLA protects qualifying service providers from monetary and most forms of injunctive relief, while leaving the law of secondary liability unchanged. It has been described as a shield, not a sword, as it permits a defendant to avoid damages rather than allowing a plaintiff to establish liability for failure to qualify for a safe harbor.<sup>84</sup>

For the purposes of this Note, a general overview of the safe harbors suffices to understand the law and policy behind indirect copyright liability.<sup>85</sup> The four DMCA safe harbors protect different types of activities, each with varying requirements and effects. The first safe harbor, § 512(a), applies to services that automatically, transiently, and transparently store and forward digital online communication.<sup>86</sup> A qualifying service provider that implements a policy to terminate repeat infringers and does not inter-

---

78. *Id.* at 711.

79. *See id.* at 728.

80. *Id.* at 729.

81. See JAY DRATLER, *CYBERLAW: INTELLECTUAL PROPERTY IN THE DIGITAL MILLENNIUM* §§ 5A.02 & A.03 (2006).

82. *See id.* § 6.01[2].

83. 17 U.S.C. § 512 (2000).

84. DRATLER, *supra* note 81, § 5A.01.

85. For a more complete explanation *see id.*; *see also* Diane Barker, Note, *Defining The Contours of the Digital Millennium Copyright Act*, 20 BERKELEY TECH. L.J. 47 (2005).

86. 17 U.S.C. § 512(a) (2000); *see* Dratler, *supra* note 81, § 6.03.

fere with standard technical measures will only be forced to terminate a subscriber's account or block access to an infringing site.<sup>87</sup>

The three remaining safe harbors—for caching, posting, and linking—are similar in important respects.<sup>88</sup> In addition to the repeat-infringer policy and standard technical measures of the § 512(a) harbor,<sup>89</sup> the service provider must implement a notice and takedown system. If a copyright owner notifies the service provider of infringing material on their site, they must remove it and notify the alleged infringer.<sup>90</sup> The alleged infringer can then send back a counter notice, which the service provider forwards to the copyright owner, who then has fourteen days to bring an infringement suit or else the work is re-posted.<sup>91</sup> These safe harbors limit the relief to orders blocking access to particular material, requiring termination of a subscriber's access, or other forms of “least burdensome” relief in the discretion of the court.<sup>92</sup>

In the Perfect 10 suits, several defendants raised safe harbor defenses. Figure 2 summarizes the findings regarding safe harbors in these cases, introduced in Section II.A.

---

87. 17 U.S.C. § 512(a) (2000).

88. 17 U.S.C. §§ 512(b)-(d) (2000).

89. 17 U.S.C. § 512(i) (2000).

90. 17 U.S.C. § 512(g) (2000).

91. 17 U.S.C. § 512(g) (2000).

92. 17 U.S.C. § 512(j) (2000).

**Figure 2: DMCA Safe Harbors in Perfect 10 Suits**

Activity	Actor	Qualified “Service Provider”	Safe Harbor
Stolen-Content Website	Talisman Comm’ns	No	Not a service provider, ineligible for safe harbors.
Credit Card Services	CCBill	Yes	Might qualify as service provider under 512(a), remanded for further findings. <sup>93</sup>
Credit Card Services	Visa	No	Not a service provider, ineligible for safe harbors. <sup>94</sup>
Age Verification	Cybernet	Perhaps	“Close question” whether it would qualify as a service provider under 512(c) or (d). But even if it did, the other requirements were not met. <sup>95</sup>
Webhosting	CWIE (co-defendant of CCBill)	Yes	Might qualify as service provider under 512(c), remanded for further findings. <sup>96</sup>
Image Search	Google (co-defendant in Amazon.com)	Yes	Might qualify as service provider under 512(d), remanded for further findings. <sup>97</sup>

The availability of these safe harbors affects the analysis, undertaken in Part IV, of whether enforcing copyright against credit card companies is appropriate.

### III. *PERFECT 10 v. VISA*: REPORT OF CASE

In a 2-1 decision, the Ninth Circuit affirmed the district court’s dismissal of Perfect 10’s suit against the credit card companies for failure to state a claim, ruling that the relationship between infringement and processing credit card transactions was too tenuous to impose secondary liability. In a forceful dissent, Judge Alex Kozinski argued for finding contributory and vicarious liability, and accused the majority of “straining to ab-

93. See *Perfect 10, Inc. v. CCBill LLC*, 488 F.3d 1102, 1115-16 (9th Cir. 2007).

94. *Perfect 10 v. Visa Int’l Serv. Ass’n*, 494 F.3d 788, 795 n.4 (9th Cir. 2007).

95. See *Perfect 10, Inc. v. Cybernet Ventures, Inc.*, 213 F. Supp. 2d 1146, 1175 (C.D. Cal. 2002)

96. See *CCBill*, 488 F.3d at 1117.

97. See *Perfect 10 v. Amazon.com*, 487 F.3d 701, 732 (9th Cir. 2007).

solve defendants of liability, [thereby leaving] our law in disarray.”<sup>98</sup> This Part discusses the facts of *Visa* and the proceedings at the district court (Section III.A), the majority’s opinion (Section III.B), and Judge Kozinski’s dissent (Section III.C).

### A. Facts and Procedural History

In January 2004, Perfect 10 sued Visa, MasterCard, Cardservice International, and Humboldt Bank for their roles in processing credit and debit card payments for websites selling infringing photographs.<sup>99</sup> Perfect 10 sent the defendants notices identifying infringing websites and informing them that consumers were using credit cards to purchase infringing images, for which the defendants earned a commission fee.<sup>100</sup> The defendants did not respond to these notices. In order to join the Visa and MasterCard networks, member banks must agree to terminate merchants who engage in illegal activity, presumably including copyright infringement.<sup>101</sup> Perfect 10 sued for indirect copyright and trademark infringement, as well as violations of the right of publicity, unfair competition, and false advertising under state law.<sup>102</sup> The district court dismissed the case with prejudice for failure to state a claim for which relief could be granted.<sup>103</sup> Reviewing *de novo*, the Ninth Circuit denied Perfect 10’s appeal, its petitions for rehearing, and rehearing *en banc*.

### B. The Majority Opinion

Judge Milan Smith, joined by Judge Stephen Reinhardt, held the defendants were not contributorily or vicariously liable.

#### 1. Contributory copyright infringement

The majority’s formulation of the basic test for contributory infringement finds the defendant liable “when he (1) has knowledge of another’s infringement and (2) either (a) materially contributes to or (b) induces that infringement.”<sup>104</sup> Since the court found the facts insufficient to establish material contribution or inducement, it did not decide the knowledge requirement.<sup>105</sup> As the stolen-content websites were distributing exact copies of the original works and Perfect 10 had sent them notices, Perfect 10

---

98. *Visa*, 494 F.3d at 811 (Kozinski, J., dissenting).

99. *Id.* at 793.

100. *Id.*

101. *Id.* at 804.

102. *Id.* at 793.

103. *Perfect 10, Inc. v. Visa Int’l Serv. Ass’n*, 73 U.S.P.Q. 2D 1736, \*2 (N.D. Cal. 2004).

104. *Perfect 10, Inc. v. Visa Int’l Serv. Ass’n*, 494 F.3d 788, 795 (9th Cir. 2007).

105. *Id.*

likely could have established that the websites knew of the infringement. As for material contribution, the court formulated two categorical requirements: the conduct must have a “direct connection” to the infringement and it must be a “but-for cause” of the infringement.<sup>106</sup> According to the court, credit card services fell outside these lines.

First, the court distinguished credit card processing from cases where the defendant was directly connected to the infringement. Prior courts had found that providing the site and facilities of infringement,<sup>107</sup> passing infringing material through a network,<sup>108</sup> and offering tools to locate infringing material<sup>109</sup> were all sufficiently directly tied to the actual infringement. Conversely, processing credit card payments fell short of material contribution because it did not aid duplicating or distributing the infringing works. The court stressed that the defendants did not “create, operate, advertise, or otherwise promote” the stolen-content websites, they “merely provide[d] a method of payment, not a ‘site’ or ‘facility’ of infringement.”<sup>110</sup> To hold otherwise would also impose liability on “a number of peripherally-involved third parties, such as computer display companies, storage device companies . . . and even utility companies that provide electricity to the Internet.”<sup>111</sup> The court noted that processing credit cards makes infringement more profitable, which tends to increase the incentive to infringe, which tends to increased infringement.<sup>112</sup> Whereas providing the site, network, or location services directly increases infringement.<sup>113</sup> The court held that this “additional step in the causal chain” insulated the credit card companies from liability.<sup>114</sup>

Second, in addition to an insufficient nexus to the direct infringement, the court decided that processing credit card transactions was not a material contribution because it was not a “but-for cause” of the direct infringement.<sup>115</sup> Under this test, the defendant is not liable if there are substitutes for the accused conduct: “[i]f users couldn’t pay for images with credit cards, infringement could continue on a large scale because other

---

106. *See id.* at 796.

107. *Fonovisa, Inc. v. Cherry Auction, Inc.*, 76 F.3d 259 (9th Cir. 1996).

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

109. *Perfect 10, Inc. v. Amazon.com*, 487 F.3d 701 (9th Cir. 2007); *MGM Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005); *Napster*, 239 F.3d 1004.

110. *Visa*, 494 F.3d at 799-800.

111. *Id.* at 800.

112. *See id.* at 797.

113. *See id.*

114. *Id.*

115. *Id.*

viable funding mechanisms are available.”<sup>116</sup> The court noted that websites could switch to revenue from advertising or develop their own payment mechanism if credit cards were unavailable.<sup>117</sup>

Finally, the court rejected Perfect 10’s inducement theory, as they had failed to allege any of the specific acts intended to encourage or induce infringement required by *Grokster*.<sup>118</sup>

## 2. *Vicarious copyright infringement*

The court held that Perfect 10 failed to state a claim for vicarious copyright infringement because the credit card companies did not have the right and ability to supervise the infringing conduct.<sup>119</sup> The court therefore did not decide whether the defendants had a direct financial interest in the infringement.<sup>120</sup> This would likely have been straightforward to establish as the credit card companies retained a percentage of each infringing transaction.<sup>121</sup> The court required a showing of a *direct* right and ability to stop infringement. Perfect 10 alleged that in order to join the payment networks, merchants and member banks had to agree to rules requiring the termination of merchants engaged in certain illegal activity.<sup>122</sup> The court acknowledged that insofar as some stolen-content websites might stop infringing if credit card companies threatened to terminate them, the defendants had some measure of control.<sup>123</sup> But the court noted, “the mere ability to withdraw a financial ‘carrot’ does not create the ‘stick’ of ‘right and ability to control’ that vicarious infringement requires.”<sup>124</sup> Indirect economic or financial pressure, rather than an affirmative exercise of contractual rights to stop the infringement, is insufficient to find vicarious liability.<sup>125</sup>

### C. Judge Kozinski’s Dissent

Judge Kozinski rejected the majority’s categorical tests as “neither required nor permitted” by case law, and would have held the defendants liable based on their service’s importance to the stolen-content websites.<sup>126</sup>

---

116. *Id.*

117. *Id.*

118. *Id.* at 800-02.

119. *Id.* at 805.

120. *Id.* at 806

121. *See id.*

122. *Id.* at 802.

123. *Id.* at 804.

124. *Id.* at 803.

125. *Id.* at 805.

126. *Id.* at 825 (Kozinski, J., dissenting).



### 1. *Contributory copyright liability*

Judge Kozinski argued that the majority's conclusion that payment services are a step removed from the actual infringement was irrelevant.<sup>127</sup> He reasoned that, "[m]ateriality turns on how significantly the activity helps infringement, not on whether it's characterized as one step or two steps removed from it."<sup>128</sup> He dismissed as a "pedantic factual distinction" the majority's requirements that material contribution have a physical or tangible nexus to the infringement, such as providing the site, facilities, location tools, or distribution network.<sup>129</sup>

According to Judge Kozinski, the majority erred twice by holding that helping an infringer get paid cannot constitute material contribution since the actual process of infringement—"reproduction, alteration, display, and distribution"<sup>130</sup>—does not include payment.<sup>131</sup> First, payment is a part of the infringing process because the stolen-content websites are alleged to infringe the right of distribution "by sale," and it is not possible to distribute by sale without receiving compensation.<sup>132</sup> Second, Google was held to have materially assisted even though locating infringing images was not part of the "reproduction, alteration, display [or] distribution."<sup>133</sup>

Furthermore, precedent did not support the majority's test of whether there were substitutes available, according to Judge Kozinski.<sup>134</sup> If the test really were whether there were "other viable . . . mechanisms . . . available," then Google should not have been held liable because, as the majority admitted, users could have found the infringing material through other search engines.<sup>135</sup> "Infringement can always be carried out by other means; if the existence of alternatives were a defense to contributory infringement then there could never be a case of contributory infringement based on material assistance."<sup>136</sup> Whether there were alternatives to credit cards for purchasing infringing material does not determine liability in Judge Kozinski's view.

Instead of these categorical rules, Judge Kozinski argued that materiality should turn on how significantly the conduct contributes to the direct

---

127. *Id.* at 812 (Kozinski, J., dissenting).

128. *Id.*

129. *Id.* at 815 (Kozinski, J., dissenting).

130. *Id.* at 796.

131. *Id.* at 814 (Kozinski, J., dissenting).

132. *Id.*

133. *Id.* at 796.

134. *Id.* at 814 (Kozinski, J., dissenting).

135. *Id.* at 813.

136. *Id.* at 814.

infringement; and credit cards are equally, if not more, important than the activities prior courts had found to be material.<sup>137</sup> In his view, payment processing is just as central to infringement as Google Image Search, since “[i]f infringing images can’t be found, there can be no infringement; but if infringing images can’t be paid for, there can be no infringement either.”<sup>138</sup> Payment services are even more material than the swap meet facilities in *Fonovisa* since “[a] pirate kicked out of a swap meet could still peddle his illicit wares through newspaper ads or by word of mouth, but you can’t do business at all on the Internet without credit cards.”<sup>139</sup> In summary, Judge Kozinski views credit cards not as a tangential service marginally affecting sales, but as the “financial lifeblood of the Stolen Content Websites.”<sup>140</sup>

## 2. *Vicarious copyright liability*

Judge Kozinski would also have held the defendants vicariously liable because the terms of the service contracts gave them the right and ability to supervise the stolen-content websites.<sup>141</sup> In his view, it does not matter that there are alternatives, the issue is whether the defendant has the ability to stop or limit the infringement.<sup>142</sup> It also should not make any difference whether the credit card companies control only the means of payment and not the mechanism of distribution, because if payments are not processed then the material is not delivered.<sup>143</sup> Furthermore, Judge Kozinski rejected the majority’s distinction between financial pressure and actual direct control, arguing that it should only matter whether the defendant has the practical ability to stop or limit the infringement, regardless of the methods at its disposal.<sup>144</sup> Since at least some stolen-content websites would have responded to the threat of losing payment services by taking down infringing material, the defendants could at least limit infringement.<sup>145</sup>

## IV. ANALYZING THE VALUE CHAIN OF INFRINGEMENT

While Judge Kozinski revealed a number of doctrinal inconsistencies in the majority’s decision, ultimately, materiality and ability and right to

---

137. *Id.*

138. *Id.* at 812 (Kozinski, J., dissenting).

139. *Id.* at 814-815.

140. *Id.* at 815.

141. *Id.* at 816.

142. *See id.*

143. *Id.* at 818.

144. *Id.*

145. *Id.*

control should not be determined by strict comparisons between precedent and the challenged conduct, but by policy.<sup>146</sup> Section IV.A reviews the objectives of secondary liability. Section IV.B introduces an economic analysis proposed by Professors Richard Gilbert and Michael Katz to assess at what stages in the value chain copyright should be enforced. Section IV.C applies this framework to show that when enforcement against direct infringers is not practical, it is optimal to hold the credit card companies liable to some degree. Section IV.D describes the ongoing efforts of credit card companies to prevent their services from being used for illegal purposes. Section IV.E addresses the potential burdens of liability by proposing a safe harbor requiring credit card companies to implement a notice and termination policy.

### A. Objectives of Secondary Liability

One of the main purposes of secondary liability is to stop infringement at the least cost to society.<sup>147</sup> Judge Posner and Professor Landes describe the rationale as “similar to the economic rationale of the tort of inducing a breach of contract. If a breach of contract (or violation of a copyright license, which is a contract) can be prevented by either A (a party to the contract or license) or B, and the cost of prevention is lower for B, it makes sense to have a legal mechanism for placing the ultimate liability on B.”<sup>148</sup> These “costs of prevention” can be classified into general categories.<sup>149</sup> First, there are enforcement costs associated with policing, litigating, and transacting a copyright. Second, enforcement leads to static efficiency losses when it hampers the creation, distribution, and use of non-infringing works. Third, enforcement reduces dynamic efficiency when it impedes the development of technologies with non-infringing uses. An optimal secondary liability rule minimizes these three type of costs.<sup>150</sup>

### B. Gilbert and Katz’s Indirect Liability Framework

Professors Gilbert and Katz propose a framework for determining the optimal stage of enforcement. As economists, they focus primarily on maximizing total welfare, rather than on distributive fairness considerations. The optimal stage is determined by balancing seven factors: 1) the ease with which enforcement authorities (both government and private

---

146. See Mitchell Zimmerman, *Third Strike for Perfect 10?*, 12 CYBERSPACE LAWYER 9, 10 (Sept. 2007).

147. LANDES & POSNER, *supra* note 24, at 119.

148. *Id.*

149. See Gilbert & Katz, *supra* note 9, at 963.

150. See *id.* at 964-65.

rights holders) can observe and police activities at various stages in the infringing value chain; 2) the existence of substitutes in the infringing value chain; 3) the total economic value of the affected non-infringing value chains; 4) the existence of substitutes in the affected non-infringing value chains; 5) the ease with which a party at a given stage can distinguish between infringing and non-infringing uses of its services; 6) the economic environment for bargaining between the rights-holders and parties at a given stage; and 7) the availability of other enforcement tools.<sup>151</sup> While it is helpful to think of *the* best stage, the optimal policy may in fact attack *several* stages simultaneously.<sup>152</sup>

### C. Application of Gilbert and Katz's Framework to Credit Card Services

This section applies these seven factors to the circumstances faced by Perfect 10, concluding that careful enforcement at the stage of credit card companies is necessary to combat foreign-stolen-content websites.

#### 1. *Ease with which enforcement authorities can observe and police activities at various stages in the infringing value chain*

This factor assesses the administrative costs of detecting and suing infringers. In Perfect 10's pornography business, enforcement at stages other than payment services is either too costly or unlikely to significantly affect foreign piracy. Detection costs increase with the number of parties engaged in an activity and decrease with the level of openness in which they operate. For example, finding a multitude of downloaders operating in the privacy of their homes costs far more than identifying the single public website from which they all download. Enforcement costs depend in large part on the ability of a plaintiff to serve process on an alleged infringer in U.S. courts or bring an action in a foreign jurisdiction.

Even if Perfect 10 had won its other indirect infringement suits, there would have been little effect on foreign-stolen-content websites. Often the most effective strategy is to stop the direct infringers, as Perfect 10 successfully did in *Talisman Communications*.<sup>153</sup> However, it is highly impractical, if not impossible, to enforce an effective remedy against stolen-content websites that are based entirely abroad. As the *Visa* case was an appeal from a dismissal for failure to state a claim, the court took as true Perfect 10's allegation that the stolen-content websites "maintain[ed] no

---

151. *See id.* at 964-65.

152. *Id.* at 969.

153. *See* Perfect 10, Inc. v. Talisman Commc'ns Inc., No. 99-10450, 2000 U.S. Dist. LEXIS 4564, \*1 (C.D. Cal. Mar. 27, 2000)

physical presence in the United States in order to evade criminal and civil liability for their illegal conduct.”<sup>154</sup> International law principles of personal jurisdiction would allow Perfect 10 to sue a foreign website, but unless the damages are substantial, the defendant is unlikely to appear and the case will result in a default judgment.<sup>155</sup> The real problem then is turning this judgment into meaningful economic relief.<sup>156</sup> Typically, a defendant’s domain name is the only asset that can be reached by U.S. courts, but they can easily register a new name and continue the illegal activity.<sup>157</sup>

In order for Perfect 10 to enforce its copyrights against foreign infringers, secondary liability must attach at some secondary stage of the infringing value chain. Enforcement at stages other than credit cards, however, would not likely curb foreign piracy. Targeting webhosts, such as CCBill,<sup>158</sup> is effective only if the host is located in the United States. Perfect 10 could eliminate the infringement either by sending a DMCA takedown notice or by suing for indirect infringement. Similarly, blocking age-verification services, like Cybernet’s Adult Check,<sup>159</sup> is only effective if the stolen-content website is based in the United States. Age-verification services limit a site’s liability under U.S. child obscenity laws, a largely irrelevant consideration for foreign pirate sites. Furthermore, Adult Check is not a crucial component for websites, as they could do without it by verifying users’ ages themselves. Cybernet’s other service, a bundled subscription to multiple websites, is similarly not indispensable. Finally, removing infringing material from Google Image Search will not significantly reduce foreign piracy, as the search engine is but one path for finding stolen-content websites (see Figure 4). This analysis suggests that none of Perfect 10’s other suits would satisfactorily control foreign piracy. This weighs in favor of enforcement against credit card companies, though the costs of enforcement must also be considered.

Copyright owners can observe and police the activities of credit card companies at relatively low administrative cost. They can readily ascertain

---

154. *Perfect 10 v. Visa Int’l Serv. Ass’n*, 494 F.3d 788, 810 (9th Cir. 2007) (Kozinski, J., dissenting) (quoting *First Am. Compl.* at 8 ¶ 26).

155. See Henry Perritt, Jr., *Will the Judgment-Proof Own Cyberspace?*, 32 INT’L LAW. 1121, 1123 (1998).

156. *Id.* at 1123.

157. For example, a Russian pirate music site, *AllofMP3.com*, was shut down, only to reopen a few weeks later under the name *MP3sparks.com*. Nate Mook, *AllofMP3 Shuts Down, Resurfaces as ‘MP3Sparks’*, BETANEWS, Jul. 3, 2007, [http://www.betanews.com/article/AllofMP3\\_Shuts\\_Down\\_Resurfaces\\_as\\_MP3Sparks/1183495726](http://www.betanews.com/article/AllofMP3_Shuts_Down_Resurfaces_as_MP3Sparks/1183495726).

158. See *Perfect 10, Inc. v. CCBill LLC*, 488 F.3d 1102, 1108 (9th Cir. 2007).

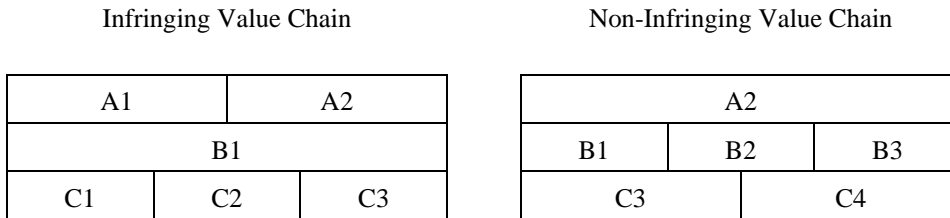
159. See *Perfect 10, Inc. v. Cybernet Ventures, Inc.*, 213 F. Supp. 2d 1146, 1157 (C.D. Cal. 2002).

whether a stolen-content website accepts credit card transactions simply by visiting the site. Unlike the multitude of foreign fly-by-night pirate sites, there are only a handful of credit card networks, which can all be easily served with process and have judgments enforced against them.

2. *Existence of substitutes in the infringing value chain*

This factor considers the benefits of enforcement at a particular stage of the value chain, specifically to what degree it would stop or limit infringement. If there are many alternative technologies at a stage, there is little value in enforcing copyright against only one of them, as infringement would continue unimpeded.<sup>160</sup> Figure 3 illustrates this situation: A, B, and C denote stages in the value chain (e.g. technology enablement, distribution), while the subscripts refer to alternative technologies (e.g. search engines, messaging boards, e-mail).<sup>161</sup>

**Figure 3: Stylized Value Chains**



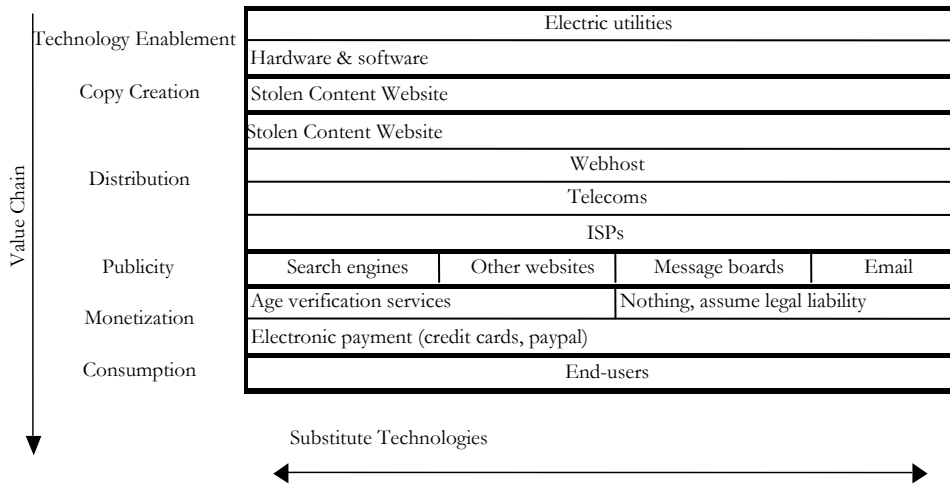
If enforcement takes place at stage A, infringement can continue unless both technologies A<sub>1</sub> and A<sub>2</sub> are blocked. Conversely, stopping B<sub>1</sub> would stop the infringement because there are no substitute technologies. The next three factors address the effects of blocking an activity on non-infringing value chains.

Figure 4 applies the stylized charts of Figure 3 to the value chain of stolen-content websites. Significantly, in the value chain of the stolen-content website, there are no effective substitutes for electronic payment services. Online payment services, such as PayPal, WebMoney, and Pay-SafeCard, are similar enough to credit cards to be considered a single “electronic payment” technology for the purposes of this analysis. Any rule that would find credit card companies secondarily liable should also apply to these other online-payment systems.

160. See Gilbert & Katz, *supra* note 9, at 971.

161. *Id.* at 988.

**Figure 4: Infringing value chain—stolen content websites**



The majority in *Visa* found otherwise, that there were alternatives to credit cards, suggesting for example that a website could rely on advertising or develop its own payment system.<sup>162</sup> But substitutability is a matter of degree, and though advertising and other payment mechanisms could replace credit cards to some extent, they are highly imperfect substitutes. To begin with, advertising is a different revenue model from subscription fees. A website supported by advertising seeks to expose as many users to as many advertisements as possible, whereas a subscription site targets a much smaller number of committed users willing to pay for access. This has implications for content, site design, marketing, and overall strategy. Likewise, there are no effective substitutes to the convenience, security, and speed of credit cards in online commerce. Few customers would risk sending a check or money order to a website, especially a foreign one, in the hope that days or weeks later the site will allow access.<sup>163</sup> Electronic payments transmit in a matter of seconds, and assure the purchasers that if the goods are not delivered, the payment will be reversed.<sup>164</sup> The speed, convenience, and security of electronic payment for online purchases is unmatched, which is why virtually all commercial websites accept them as their preferred form of payment.<sup>165</sup>

162. See *Perfect 10, Inc. v. Visa Int’l Serv. Ass’n*, 494 F.3d 788, 797 (9th Cir. 2007).

163. *Id.* at 814 (Kozinski, J., dissenting).

164. *Id.* at 817 (Kozinski, J., dissenting).

165. According to a recent market research survey, credit cards are the only form of accepted payment on 76% of commercial websites. See Helen Leggatt, *More online stores offering non-traditional payment methods*, BIZREPORT, Apr. 17, 2007, [http://www.bizreport.com/2007/04/more\\_online\\_stores\\_offering\\_nontraditional\\_payment\\_methods.html](http://www.bizreport.com/2007/04/more_online_stores_offering_nontraditional_payment_methods.html).

Since there are no effective substitutes for electronic-payment systems, enforcing copyright at this stage in the value chain would drastically limit infringement. It is important to note that electronic payment enables monetizing the infringing content relatively late in the value chain (see Figure 4). Enforcement at this stage will not prevent the copying, distributing, and publicizing of infringing material, as the majority noted, only the ability to profit from it.<sup>166</sup> Nevertheless, a profit-seeking infringer will stop infringing if they lose the ability to generate revenue. Although the lack of substitutes weighs in favor of enforcement at this stage, the effects on non-infringing value chains must also be balanced.

3. *Total economic value of the affected non-infringing value chains*

If an activity or technology is part of both infringing and non-infringing value chains, it is most efficient to enforce at the stage with the lowest total economic value in the non-infringing value chains.<sup>167</sup> Credit cards are used in a wide variety of transactions, for example purchases from legitimate content websites (Figure 5) and restaurants (Figure 6). In the words of the *Sony* Court, credit cards are not just “capable of substantial non-infringing uses,” but are “widely used for legitimate, unobjectionable purposes.”<sup>168</sup> The vast majority of credit card transactions are for entirely legal purchases. Indeed, the court could have looked to *Sony* to support its ruling that Visa was not contributorily liable.

Ideally, one could target enforcement to a stage that would not affect legitimate activities. Unfortunately, the value chains of infringing and non-infringing websites are essentially identical. This is because the only difference between the two is the source of the content: an infringing site takes the work from another, whereas the non-infringing site creates the content itself. Since every activity in the infringing value chain has substantial non-infringing uses, carefully tailoring the enforcement mechanism is necessary to minimize the costs to legitimate value chains.

---

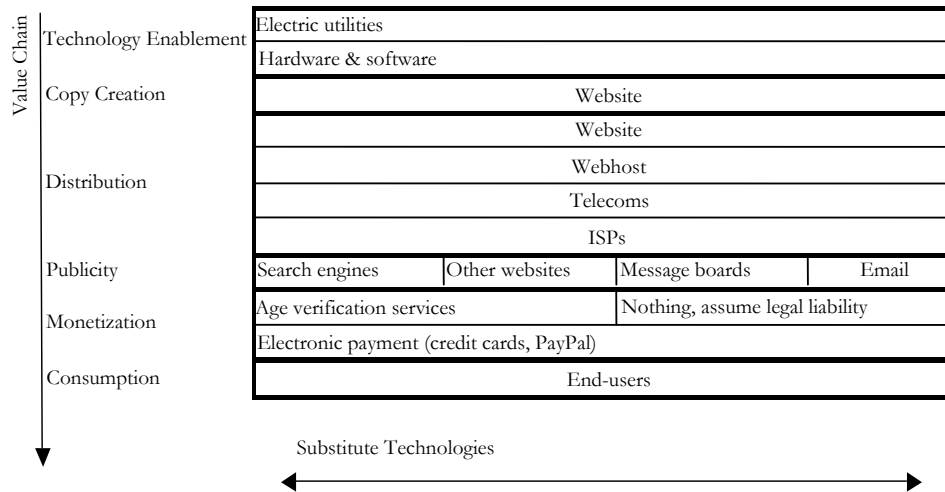
166. *Visa*, 494 F.3d at 797.

167. *See* Gilbert & Katz, *supra* note 9, at 971.

168. *Sony*, 464 U.S. at 442.



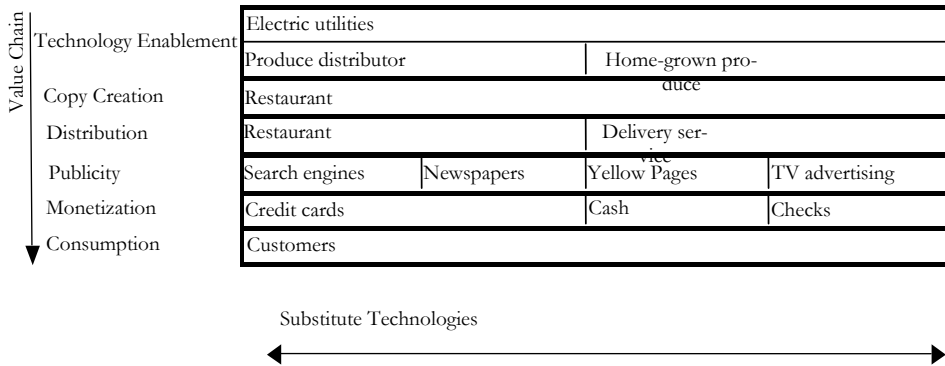
**Figure 5: Non-infringing value chain—purchases from other websites**



*4. Existence of substitutes in the affected non-infringing value chains*

As with stolen-content websites, legitimate sites lack a suitable substitute for credit cards. This factor examines the harm of targeting an activity that is part of non-infringing value chains. Costs are relatively low if there are close substitutes in the non-infringing chain. As Figure 6 illustrates, in certain value chains there are effective substitutes, for example, one can pay by cash instead of credit card at restaurants.

**Figure 6: Non-infringing value chain—purchases from a restaurant**



But in other situations, including non-infringing websites (Figure 5), there are no alternative technologies. As the value chain of stolen-content websites is identical to that of legitimate-content websites, targeting any stage of the infringing chain similarly affects non-infringing activity. For that reason, this factor does not weigh towards enforcement at one stage

over another. But because enforcement at any stage will similarly affect non-infringing activity, enforcement must be carefully tailored so as not to disproportionately harm legitimate value chains. This consideration weighs heavily in the safe harbor proposed in Section IV.E.

5. *Ease with which a party at a given stage can distinguish between infringing and non-infringing uses of its services*

On their own, credit card companies cannot easily distinguish infringing from non-infringing works. Thus, enforcement at this stage is a poor solution unless the copyright owner and alleged infringer can be compelled to help determine infringement. This factor is relevant if activities, such as credit card processing, appear in both infringing and non-infringing value chains.<sup>169</sup> In such a situation, a party will incur administrative costs in distinguishing legitimate from stolen works.<sup>170</sup> If these costs are too high, the party will likely block non-infringing works, resulting in efficiency losses.

If credit card companies were solely responsible for determining infringement, the administrative costs would be prohibitively high for two reasons. First, credit card companies never come in contact with the content of the sites they serve. Unlike a peer-to-peer network or ISP, the infringing files never pass over the credit card system.<sup>171</sup> In order to determine infringement, the credit card companies would need access to the works of their network members. Second, the credit card companies would need to know which works their members' content is alleged to infringe. A notice system whereby copyright owners police the Internet and notify the credit card companies of suspected infringement could resolve these two information asymmetries. Section IV.E discusses how a notice system could minimize the administrative and efficiency costs of assessing and blocking infringing works.

6. *Economic environment for bargaining between rights-holders and parties at a given stage in the infringing value chain*

Credit card companies and copyright holders are unlikely to negotiate an efficient settlement regarding payment services for stolen-content websites. Even if a rights holder could force a defendant to cease activities, it might choose not to and instead negotiate an agreement allowing the activity to continue.<sup>172</sup> The economic positions of the parties play an important

---

169. See Gilbert & Katz, *supra* note 9, at 972.

170. *Id.*

171. See Visa, 494 F.3d at 800.

172. See Gilbert & Katz, *supra* note 9, at 973.

role in whether they will reach an efficient bargain, which is one where neither party can be made better off without making the other worse.<sup>173</sup> Three conditions can prevent reaching such an agreement. First, the more parties to a negotiation, the higher the transaction costs and chances of bargaining breakdown.<sup>174</sup> Second, sunk costs may create holdup opportunities.<sup>175</sup> If one side has made an investment in a potentially infringing activity, which would lose its value if the parties could not reach an agreement, the other side can holdout for socially sub-optimal terms. Third, asymmetric information—when only one side has crucial information—can also lead to a breakdown in bargaining.<sup>176</sup> This factor favors enforcing copyright at a stage in the value chain where the negotiation is most efficient.

An efficient agreement between the credit card companies and copyright holders is unlikely because of the large number of parties, sunk costs, and asymmetric information. First, almost any copyright owner could conceivably have their work infringed by a website in the credit card networks. There is no collective rights society (such as the American Society of Composers, Authors and Publishers for public performance licenses) to negotiate with the credit card company on behalf of all these diverse copyright owners. Thus, the transaction costs of negotiating with each of these parties would be enormous. In any case, the copyright owners want to stop the infringement far more than a share of the credit card company's commissions. Second, given the breadth of potential infringement, it is unlikely a copyright holder would initiate negotiation before the credit card company has sunk costs into providing payment services to the website. Third, information asymmetries are significant because the credit card company is likely unaware of which works the rights holder believes to be infringing. Together, these three factors create an economic environment unfavorable to an efficient bargain.

#### 7. *Availability of other enforcement tools*

Copyright holders might have tools beyond copyright enforcement, so called “self-help” measures, to protect their works. When such tools are available, it weakens the arguments for indirect liability. Gilbert and Katz point specifically to the use of digital rights management (“DRM”).<sup>177</sup> Digital rights management employs access-control technologies to limit

---

173. *See id.*

174. *See id.* at 974.

175. *Id.*

176. *Id.*

177. *Id.* at 980.

usage of digital media or devices, and has been deployed principally in online music distribution.<sup>178</sup> Digital rights management cannot effectively protect digital images because of the so-called “analog hole” vulnerability:<sup>179</sup> once digital information is converted to a human-perceptible (analog) form, it is relatively simple to recapture it in an unrestricted digital form. For example, if Perfect 10 were to encrypt its digital images in DRM, a user could simply take a screenshot of the website and would have an identical, but unencrypted, image. This factor does not disfavor enforcing at the level of credit card companies.

#### 8. *Synthesis of the factors*

The factors proposed by Gilbert and Katz lead to the conclusion that when the direct infringers are beyond the reach of U.S. courts, it is optimal to enforce copyright at the level of the credit card companies. To reiterate, when the stolen-content website is based within the United States, the common law of secondary liability and the notice and takedown system of the DMCA provide a sufficient remedy. These tools are ineffective when dealing with foreign-stolen-content websites. As demonstrated by the analysis of Gilbert and Katz’s factors, it is appropriate to enforce copyright at the stage of the credit card companies. However, it is important to carefully tailor the enforcement mechanism so as not to unduly burden non-infringing value chains. Section IV.D argues that the credit card companies already undertake effective policies to limit illegal activity. Section IV.E proposes a solution to enforce copyright at this stage while minimizing administrative and efficiency costs.

#### **D. Credit Card Companies’ Present Efforts to Combat Illegal Activity**

In its response to Perfect 10’s petition for rehearing, Visa argued that holding them liable would have a “devastating impact”<sup>180</sup> on their activities, presumably due to the costs of monitoring and terminating infringers. Unlimited and sole responsibility for discovering and determining infringement would indeed be an undue burden. But credit card companies currently try to prevent their networks from being used for a range of illegal activity. The companies have cooperated with government agencies to

---

178. See BILL ROSENBLATT ET AL., DIGITAL RIGHTS MANAGEMENT: BUSINESS AND TECHNOLOGY 57-76 (2002).

179. See WIKIPEDIA, *Analog Hole*, [http://en.wikipedia.org/wiki/Analog\\_hole](http://en.wikipedia.org/wiki/Analog_hole) (last modified Mar. 27, 2008).

180. Brief of Defendant-Appellee at 16, *Perfect 10, Inc. v. Visa Int’l Serv. Ass’n*, 494 F.3d 788 (9th Cir. 2007)

terminate websites selling cigarettes,<sup>181</sup> gambling,<sup>182</sup> child pornography,<sup>183</sup> and in one high-profile case, a foreign-stolen-content website selling digital music.<sup>184</sup> For example, as part of its anti-child-pornography program, Visa performs due diligence to thwart such sites from joining their system, and hires a consultant to continually sweep the web to make sure none have fraudulently accessed their network.<sup>185</sup> These efforts show that the credit card companies have the right and ability to control the use of their networks for illegal activity, and have exercised that power effectively in the past. These procedures could be extended to copyright infringement, bringing them in line with their policy of not facilitating illegal activity.

The case of AllofMP3.com illustrates the challenges of enforcing copyright against foreign-stolen-content websites, and the feasibility of terminating their access to credit card services. The Russian website offered for sale an expansive catalogue of copyrighted U.S. music for a few cents each, claiming it did not violate Russian law because it paid a royalty to a Russian licensing group.<sup>186</sup> Under pressure from the recording industry, Visa and MasterCard ejected the site from their networks, explaining that its action was in line “with basic international copyright and intellectual property norms.”<sup>187</sup> According to news reports, this severely affected the Russian site’s ability to operate.<sup>188</sup>

---

181. See Press Release, Office of the Attorney Gen., State of Cal., Attorney General Lockyer Announces Joint Effort By State And Federal Law Enforcement, Credit Card Firms To Stop Illegal Online Sale Of Cigarettes (Mar. 17, 2005), available at <http://ag.ca.gov/newsalerts/release.php?id=588&year=2005&month=3>.

182. See Press Release, Office of the Attorney Gen., State of N.Y., Ten Banks End Online Gambling With Credit Cards (Feb. 11, 2003), available at [http://www.oag.state.ny.us/press/2003/feb/feb11b\\_03.html](http://www.oag.state.ny.us/press/2003/feb/feb11b_03.html).

183. See *Deleting Commercial Pornography Sites From the Internet: The U.S. Financial Industry’s Efforts to Combat This Problem: Before the Subcomm. On Oversight and Investigations of the Comm. on Energy and Commerce*, 109th Cong. 48 (2006) (statement of Arne L. Christenson, Senior Vice President, Federal Government Affairs, American Express Co.).

184. See *Credit card firms cut off AllofMP3.com*, ASSOCIATED PRESS, Oct. 9, 2006, available at <http://www.msnbc.msn.com/id/15323093>.

185. See *Deleting Commercial Pornography Sites From the Internet: The U.S. Financial Industry’s Efforts to Combat This Problem: Before the Subcomm. On Oversight and Investigations of the Comm. on Energy and Commerce*, 109th Cong. 48 (2006) (statement of Mark McCarthy, Senior Vice President, Public Policy, VISA U.S.A., Inc.).

186. *Credit card firms cut off AllofMP3.com*, *supra* note 184.

187. *Id.*

188. See Mook, *supra* note 157.

Soon thereafter, the major record labels sued AllofMP3.com, seeking an injunction and damages.<sup>189</sup> While the plaintiffs encountered difficulty in serving the defendant in Russia, the U.S. Trade Representative convinced the Russian government to shut down the site as a precondition to joining the World Trade Organization.<sup>190</sup> Only a few weeks later, the site reopened under the name MP3Sparks.com, and as of the publication of this Note, continues to offer an expansive catalogue of unauthorized downloads.<sup>191</sup> This case represents a clear acknowledgement by the credit card companies, as evidenced by their statements to the press,<sup>192</sup> of their responsibility to cease assisting copyright infringement. Rather than in response to pressure from the music industry, this enforcement tool could be made available on an equal basis to all copyright owners seeking to eradicate stolen-content websites.

### E. A Safe Harbor Proposal

Although enforcing copyright at the stage of credit card service providers is appropriate under certain circumstances, the monetary damages of secondary copyright infringement are too drastic a remedy. If credit card companies were liable for such damages, they would be overly cautious in determining who to provide services to. As explained in Section IV.C.5, credit card companies cannot easily vet whether their network members are infringing. Facing the prospect of massive liability, they would likely err on the side of denying non-infringing activities participation in their networks. The majority in *Visa* noted this problem:

[W]hat would stop a competitor of a web-site from sending bogus notices to a credit card company claiming infringement by its competitor in the hope of putting a competitor out of business, or, at least, requiring it to spend a great deal of money to clear its name? Threatened with significant potential secondary liability . . . perhaps the credit card companies would soon decline to finance purchases that are more legally risky.<sup>193</sup>

If copyright is to be enforced against credit card companies, a notice and termination system could be tailored to fit these circumstances. Con-

---

189. See Brief for Recording Industry Association of America as *Amici Curiae* in Support of Panel Rehearing or Rehearing *En Banc* at 12, *Perfect 10 v. Visa Int'l Serv. Ass'n*, 494 F.3d 788 (9th Cir. 2007) (No. 05-15170).

190. See Mook, *supra* note 157.

191. WASH. INTERNET DAILY, *AllofMP3.com Successor Back Online, Taking Credit Card Payments* (Jul. 20, 2007).

192. See Barker, *supra* note 187.

193. *Perfect 10, Inc. v. Visa Int'l Serv. Ass'n*, 494 F.3d 788, 798 n.9 (9th Cir. 2007).

gress could pass legislation creating a safe harbor limiting the liability of credit card companies for indirect copyright infringement. This safe harbor would resemble in certain respects those of the DMCA.<sup>194</sup>

As discussed in Section IV.C.5, it would unduly burden credit card companies if they had to determine infringement without the aid of the alleged infringers and copyright owners. The notice and termination system resolves this information asymmetry by removing the credit card company from this role. The notice and takedown procedures of § 512(c) and (d) do not entirely apply, because unlike the providers of posting and linking services, credit card companies do not control access to the infringing work itself, and therefore could not take it down in response to a request.

One solution would be to require the credit card companies to forward an infringement notice to an accused member along with a warning that their payment service would be terminated unless they reply with a counter notice. If a counter notice is not forthcoming, service would be terminated. If the credit card company receives a counter notice, however, the copyright owner would then have to sue the direct infringer. The credit card companies would only terminate service once the material is ruled infringing by a court of law. If the copyright owner is unable to serve process or enforce a judgment because the alleged infringer is located abroad, they could then inform the credit card company, who would then terminate the service.

This procedure would be an improvement over the current DMCA safe harbors. Some have criticized the § 512 protections for erring too easily on the side of copyright owners.<sup>195</sup> Their research indicates that material is often taken down even when the infringement claim is of dubious merit, for example because of a fair use defense.<sup>196</sup> To address these due process and fairness concerns, they have suggested delaying the takedown until after an opportunity for counter notice has been offered, and requiring the service provider to re-post the material upon receipt of a counter notice.<sup>197</sup> The proposed safe harbor implements both of these suggestions: the alleged infringer would be terminated only if they failed to respond with a counter notice, were judged to be infringing by a court, or were based abroad and out of the reach of effective enforcement.

---

194. See 17 U.S.C. § 512 (2000).

195. See Jennifer M. Urban & Laura Quilter, *Efficient Process or “Chilling Effects”?* *Takedown Notices Under Section 512 of the Digital Millennium Copyright Act*, 22 SANTA CLARA COMPUTER & HIGH TECH. L.J. 621, 667-74 (May 2006).

196. *Id.*

197. *Id.* at 688.

In effect, this system would only operate when the direct infringer is operating with impunity in a foreign jurisdiction, or was so blatantly infringing as not to respond with a counter notice. Recall from Section IV.C that enforcing copyright against the credit card companies was efficient only when one could not pursue direct infringers. This proposal would narrowly address the problem faced by Perfect 10 without overly burdening credit card companies or drastically affecting non-infringing value chains.

## V. CONCLUSION

Secondary liability is a powerful but problematic enforcement tool, allowing copyright owners to target least cost avoiders but potentially disrupting non-infringing activities. Perfect 10's trials illustrate the difficulty of protecting copyrighted works against foreign websites, and the potential role of secondary liability. When direct infringers are out of the reach of enforcement, an appropriate solution might be to block the processing of credit card payments. Caution must be exercised, however, as credit card companies are an integral part of a far larger number of non-infringing value chains. Although credit card companies would surely protest it as overly burdensome, requiring a notice and termination system forcing them to stop providing, and profiting from, payment services to foreign-stolen-content websites may be the most practical solution to a difficult problem.