COPYRIGHT OWNERS TAKE ON THE WORLD (WIDE WEB): A PROPOSAL TO AMEND THE DMCA NOTICE AND TAKEDOWN PROCEDURES

INTRODUCTION

The worst has happened. You missed the latest episode of *The Walking Dead*, your favorite show. While ten years ago this would have demanded the skillful avoidance of spoilers until a network replayed the show, modern technological developments and the expansion of the Internet have made it possible for users to locate copyrighted content online.[1] Yet, while some Internet users enjoy such content via lawful streaming services, many seek out pirated materials without considering the impact of copyright infringement on rights holders and society.[2] Struggling to adapt to an increasingly digital environment, courts have been burdened with the task of protecting copyright owners while simultaneously safeguarding the open exchange of online information. The passing of the Digital Millennium Copyright Act, informally deemed the DMCA safe harbors, further complicated this task by limiting Internet service providers' ("ISPs") liability so long as they help remove online infringing content at the request of copyright owners.[3] Unfortunately, as a result of recent court decisions,[4] the DMCA has been interpreted in favor of ISPs,[5] making it exceptionally

1. *See generally* Lior Katz, *Viacom v. YouTube: An Erroneous Ruling Based on the Outmoded* DMCA, 31 LOY. L.A. ENT. L. REV. 101, 101 (2010/2011) (providing an example of this trend by claiming visitors of YouTube, a website that enables visitors to view, upload, or watch videos, can view videos instantaneously and from any computer that has access to the Internet).

2. *Id*. (claiming visitors of YouTube neither care nor consider whether the online videos were uploaded by their rightful owners).

3. *See id.* at 113-16.

4. *Id*. at 104-05 ("YouTube has been a prime target in the global fight against copyright infringement and has been sued by multiple entities for copyright infringement based on claims that YouTube knowingly misappropriated their intellectual property.").

5. *Id*. at 113-14 ("If an Internet service provider qualifies for any of the safe harbors enumerated in the DMCA, it becomes immunized from claims of direct and secondary infringement.").

difficult for copyright owners to halt the illicit use of their works.[6] While consumers enjoy and providers profit from the instant and free availability of online content, copyright owners suffer injury[7] as they unsuccessfully fight to control the use of their works. In the absence of an incentive to create original works of authorship, the chilling possibility exists that new works will simply not be created. To prevent this possibility from becoming a reality, this note proposes that "the progress of science and the useful arts"[8] and the protection of rights holders may once again be achieved by amending the DMCA notice and takedown procedures such that the responsibility for online infringement detection is shifted onto ISPs. Furthermore, Part I of this note will discuss the rationale behind and flawed interpretation of the DMCA through an analysis of the key case *Perfect 10, Inc. v. Amazon.com, Inc.*,[9] Part II will highlight the tremendous difficulties copyright owners face as they attempt to remove infringing content from the Internet as well as the effects of piracy on individual copyright owners and the entertainment industry, and Part III will expound upon the proposal to shift the burden of online infringement detection onto ISPs.

I. DMCA CREATION AND INTERPRETATION

A. The History Behind the DMCA

A product of Congress's prediction that the Internet would become the future of commerce and technological development, the DMCA was enacted in 1998[10] to provide an "[adequate] framework to handle the digital

6. *Id*. at 104 ("[T]he freedom to use YouTube for the purposes of sharing videos has also led to legal issues concerning copyright infringement.").

7. *Id*. at 104-05. YouTube, for example, contains an excessive amount of unauthorized copyrighted content and, as a result, facilitates infringement by allowing its users to upload unlawfully reproduced content. "Although many file-hosting websites mention in their Terms of Service that users are only allowed to upload files for which they retain all ownership rights, users often violate these terms by uploading content that does not belong to them." *Id*. Despite this infringement, YouTube does not automatically take down the illicit videos. Rather, as a result of the DMCA, it waits until it is informed of an instance of infringement.

8. U.S. CONST. art. I, § 8, cl. 8.

9. 508 F.3d 1146 (9th Cir. 2007).

10. *See* Katz, *supra* note 1, at 113 (noting the DMCA was enacted for "the purpose of bringing U.S. copyright law squarely into the digital age and facilitating the robust development and world-wide expansion of electronic commerce, communications, research, development, and education in the digital age").

transmission and availability[11] of copyrighted works on the Internet."[12] More precisely, the DMCA was initially designed to combat the unlawful reproduction and distribution of copyrighted works online[13] without undermining the efforts of ISPs,[14] discouraging copyright owners from placing their works on the Internet,[15] and halting the growth of the Internet.[16] Furthermore, Congress sought to encourage ISPs to continue investing in the expansion of the Internet[17] by shielding them from the most predictable consequence of digital network management—direct and secondary copyright infringement claims.[18]

Expressly stated, individuals may sue for secondary infringement when a party, "without direct involvement or knowledge of the actual copying," contributes to infringing acts directly carried out by another party.[19] Subsequently, ISPs are more likely to be sued for secondary infringement rather than direct infringement because they do not directly reproduce or distribute copyrighted materials online.[20] Moreover, the most common theories of secondary copyright infringement include contributory infringement and vicarious infringement.[21] Parties are liable for contributory infringement when they cause or materially contribute to infringing conduct with knowledge of the infringing activity.[22] Courts have further defined contributory infringers as those "in a position to control the use of copyrighted works by others" who "authorized the use without permission from the copyright owner."[23] Lastly, with specific attention to contributory

11. Matthew Schonauer, *Let the Babies Dance: Strengthening Fair Use and Stifling Abuse in DMCA Notice and Takedown Procedures*, 7 I/S: J.L & POL'Y FOR INFO. SOC'Y 135, 138 (2011) (explaining Congress's belief that increasing the level of protection for copyrighted works in the digital medium would enable the public to enjoy the "fruit of American creative genius").

12. *Id*. at 137.

13. *Id*. at 137-38.

14. *Id*. at 137-38 (adding that the policy behind the DMCA was the notion that, without legislative action, copyright law would "fail to protect copyrighted works in a manner that would make digital networks safe places to disseminate and exploit such works").

15. *Id*. at 138.

16. *See The Digital Millennium Copyright Act of 1998 U.S. Copyright Office Summary*, U.S. COPYRIGHT OFF. (1998), http://www.copyright.gov/legislation/dmca.pdf. [hereinafter *DMCA 1998*]. *See also* UMG Recordings, Inc. v. Shelter Capital Partners LLC, 718 F.3d 1006, 1014 (9th Cir. 2013).

17. Schonauer, *supra* note 11, at 139.

18. *Id*. at 138-39.

19. *See* Katz, *supra* note 1, at 110.

20. *Id*.

21. *Id*.

22. Gershwin Publ'g Corp. v. Columbia Artists Mgmt., Inc., 443 F.2d 1159, 1162 (2d Cir. 1971).

23. Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 437 (1984).

infringement, courts have routinely held that plaintiffs must demonstrate the defendants knew about the infringing activity and "actively participated in the infringement by inducing, allowing, or contributing to it."[24] Alternatively, parties may be liable for vicarious infringement if they have the "right and ability to supervise the infringing activity" as well as "a direct financial interest in such activities."[25] Courts have held the financial interest element is met when ISPs financially benefit from the infringing content as well as when "the availability of infringing material acts as a draw for customers."[26] With regard to the second element of vicarious infringement, courts consider many factors as evidence of the right and ability to supervise including ISPs' uninhibited ability to block infringers' access to an online environment and whether the ISPs have technology capable of determining whether certain images infringe someone's copyright.[27]

Subsequently, the DMCA protects ISPs[28] by limiting their liability for copyright infringement provided they qualify under one of the four safe harbors[29]–limitations on liability based on four categories of conduct.[30] Principally, Section 512(a), discussing transitory communications, "limits the liability of service providers in circumstances where the provider merely acts as a data conduit, transmitting digital information from one point on a network to another at someone else's request."[31] Conversely, Section 512(b) protects system caching and, expressly stated, safeguards ISPs that retain and transmit temporary copies of material made available online by Internet users.[32]

24. Katz, *supra* note 1, at 111. *See also* A & M Records, Inc. v. Napster, Inc., 114 F. Supp. 2d 896, 918 (N.D. Cal. 2000) (holding Napster, Inc. was liable for contributory infringement because the Napster executives "knew about and sought to protect the use of [their] service to transfer illegal MP3 files" and were notified of the direct infringement).

25. Perfect 10, Inc. v. Amazon.com, Inc., 508 F.3d 1146, 1173 (9th Cir. 2007).

See also Katz, *supra* note 1, at 111 (explaining actual knowledge of the infringing conduct is not an element of vicarious liability).

26. A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004, 1023 (9th Cir. 2001).

27. *Id*. *See also Perfect 10, Inc.*, 508 F.3d at 1174..

28. 17 U.S.C. § 512(k)(1)(A) (2012) ("[S]ervice provider means an entity offering the transmission, routing, or providing of connections for digital online communications, between or among points specified by a user, of material of the user's choosing, without modification to the content of the material as sent or received.").

29. 17 U.S.C. § 512.

30. *Id*.

31. *DMCA 1998*, *supra* note 16, at 10.

32. 17 U.S.C. § 512(b).

Moreover, while these first categories are significant, the third and fourth categories of conduct by ISPs are particularly noteworthy,[33] for courts' interpretation of these categories has made the removal of online infringing content tremendously arduous for copyright owners.[34] Section 512(c), for instance, applies to storage directed by users and limits the liability of service providers for infringing material on websites hosted on their systems.[35] More specifically, an ISP meets the requirements for this safe harbor if the ISP:

(1) "does not have actual knowledge that the material or an activity using the material on the system or network is infringing;"[36] "in the absence of such actual knowledge, is not aware of [red flag] facts or circumstances from which infringing activity is apparent;"[37] or "upon obtaining such knowledge or awareness, acts expeditiously to remove, or disable access to the material;"[38]
(2) "does not receive a financial benefit directly attributable to the infringing activity" where "it has the right and ability to control such activity;"[39] and
(3) "upon notification of claimed infringement . . . responds expeditiously to remove, or disable access to, the material that is claimed to be infringing or to be the subject of infringing activity."[40]

33. *See* Katz, *supra* note 1, at 114 ("Section 512(c) of the Act is the most relevant to online services such as YouTube, providing them with immunity against copyright infringement claims so long as several requirements are met.").

34. *See generally DMCA 1998*, *supra* note 16.

35. 17 U.S.C. § 512(c).

36. 17 U.S.C. § 512(c)(1)(A)(i). *See also* Katz, *supra* note 1, at 114 ("[I]n cases involving online services, service providers often obtain knowledge and awareness of ongoing infringement by notifications from the copyright owners. Nonetheless, even if service providers are found to have knowledge or awareness, they could still be shielded by the Act if they act rapidly to eliminate or disable access to the infringing material.").

37. 17 U.S.C. § 512(c)(1)(A)(ii). Courts label such facts or circumstances from which infringing activity is apparent as Red Flags. *See also The Ninth Circuit Clarifies Scope of DMCA Safe-harbor Provision*, LEXOLOGY (Apr. 18, 2013), http://www.lexology.com/library/detail.aspx?g=f2993365-4228-42de-86b4-fcc89a6339b9 [hereinafter *The Ninth Circuit Clarifies Scope*] (explaining Sections 512(c)(1)(A)(i) and 512(c)(1)(A)(ii), the "actual knowledge" and "red flags" tests, have been the focus of considerable litigation brought by content owners who allege ISPs are not entitled to DMCA safe harbor protection "because they knew or should have known that large amounts of infringing content is posted on the sites").

38. 17 U.S.C. § 512(c)(1)(A)(iii).

39. 17 U.S.C. § 512(c)(1)(B). *See also* Katz, *supra* note 1, at 115 (explaining courts disagree over the interpretation of this requirement). For example, some courts have held an ISP's ability to remove or block access to infringing materials and their capacity to remove content after it has been uploaded does not render it liable for copyright infringement). Others have found the control element satisfied because the ISP reserved the right to refuse service and terminate accountings at its discretion.

40. 17 U.S.C. § 512(c)(1)(C).

Furthermore, Section 512(c) lists specific and, as this note proposes, arguably outmoded takedown procedures that must be followed by ISPs and copyright owners to remove infringing online content.[41] Precisely, to properly notify ISPs of infringing materials, rights holders must send to an ISP's designated agent the following:

(1) Their physical or electronic signature or the signature of a person authorized to act on their behalf;"[42]
(2) Identification of the copyrighted work that is infringed, or, "if multiple copyrighted works at a single online site are covered by a single notification, a representative list of such works at that site;"[43]
(3) Identification of the infringing material and information that enables the ISP to locate the material;[44]
(4) Their contact information;[45] and
(5) "A statement that the information in the notification is accurate, and under penalty of perjury, that the complaining party is authorized to act on behalf of the owner of an exclusive right that is allegedly infringed."[46]

Similarly, section 512(d), relating to information location tools such as search engines, limits liability for the acts of referring or linking users to sites containing infringing content so long as the provider does not have the requisite level of knowledge that the material is infringing, "does not receive a financial benefit directly attributable to the infringing activity" if it "has the right and ability to control such activity," and promptly takes down or blocks access to the material.[47] Furthermore, Section 512(d) describes a slightly different takedown procedure ISPs, serving as information location tools, and copyright owners must follow to remove online infringing content.[48] For instance, the elements of notification, in comparison with Section 512(c), include the identification of a reference or link to the infringing material as well as information reasonably sufficient to help ISPs locate such reference or link.[49]

Lastly, regardless of what safe harbors are used to take down allegedly infringing materials, the supposed direct infringers, believing their content

41. 17 U.S.C. § 512(c)(3).
42. 17 U.S.C. § 512(c)(3)(A)(i).
43. 17 U.S.C. § 512(c)(3)(A)(ii).
44. 17 U.S.C. § 512(c)(3)(A)(iii).
45. 17 U.S.C. § 512(c)(3)(A)(iv).
46. 17 U.S.C. § 512(c)(3)(A)(v).
47. 17 U.S.C. § 512(d).
48. *Id*.
49. 17 U.S.C. § 512(d)(3).

was misidentified or improperly taken down, may submit a counter-notification to an ISP through which the ISP is required to make the content available online.[50] At this point the copyright owner has the option of bringing an action against the direct infringer.[51]

Subsequently, on its face, the DMCA seems to present equally challenging criteria service providers and copyright owners must meet before they can begin cooperatively removing infringing content.[52] Yet, as previously articulated, courts' recent interpretation of this provision and, particularly, the takedown procedures listed in Sections 512(c) and (d), make it apparent rights holders face greater burdens during their attempt to take down infringing content.[53] For example, rather than interpreting such procedures so that ISPs, upon receipt of the individual link or reference to a particular infringing material, are obligated to detect all instances of infringement, courts, spurred by the currently antiquated belief that ISPs lack the resources to detect all instances of infringement, have interpreted the language of Sections 512(c) and (d) in a manner that burdens copyright owners with infringement detection.[54]

B. Courts' Flawed Interpretation of the Existing Notice and Takedown Procedures Has Resulted in Abuse by ISPs

An analysis of a key case decided after the passing of the DMCA makes it evident courts' interpretation of the DMCA safe harbors in favor of ISPs is antiquated and, as a result, currently damaging to copyright owners.[55]

Furthermore, in the case *Perfect 10, Inc. v. Amazon.com, Inc.*,[56] the United States Court of Appeals for the Ninth Circuit considered the efforts of Perfect 10, Inc., the copyright owner of the works at issue, to prevent an ISP from facilitating access to infringing images.[57] With respect to the

50. 17 U.S.C. § 512(g).

51. 17 U.S.C. § 512(g)(2)(C).

52. 17 U.S.C. § 512.

53. 17 U.S.C. § 512(d).

54. 17 U.S.C. §§ 512(c)-(d).

55. *See* UMG Recordings, Inc. v. Veoh Networks, Inc., 665 F. Supp. 2d 1099 (C.D. Cal. 2009) (finding that the power of an ISP to remove content after it has been uploaded is insufficient to establish the right and ability to control the infringing activity).

56. 508 F.3d 1146, 1154 (9th Cir. 2007).

57. *See* Katz, *supra* note 1, at 101. This case may be compared with *Viacom International Inc. v. YouTube, Inc.*, a noteworthy lawsuit against YouTube in which Viacom alleged YouTube knowingly and intentionally allowed the exploitation of Viacom's intellectual property for its own financial benefit. However, on June 23, 2010, Justice Stanton granted YouTube's motion for summary judgment, holding YouTube was protected under the DMCA safe harbors. *See also* Viacom Int'l, Inc. v. YouTube, Inc., 676 F.3d 19 (2d Cir. N.Y. 2012).

particular facts of this case, Perfect 10, Inc., a marketer and seller of copyrighted images and operator of an online subscription website through which users pay to view its copyrighted images, sought a preliminary injunction to prevent Google, a search engine and ISP, from infringing Perfect 10's copyright in its images and, in addition, offering links to websites on its system that provide full-size infringing versions of Perfect 10's photographs.[58] As stated in the case, the district court preliminarily enjoined Google, an ISP, from creating and publicly displaying thumbnail versions of Perfect 10's copyrighted photographs but "did not enjoin Google from linking to third-party websites that display infringing full-size versions of Perfect 10's images."[59] Similarly, the district court also did not preliminarily enjoin Amazon.com, an ISP, from giving users access to information provided by Google.[60]

Following its review of the district court's decision, the Ninth Circuit ultimately reversed the district court's determination that Google's thumbnail versions of Perfect 10's images constitute direct infringement due to its determination Google's use fell under the fair use doctrine.[61] In addition to this particular finding that weighed against copyright owners, the most damaging legal conclusion formed in this case is the Ninth Circuit's agreement with the district court that Google "lacks the practical ability to police the third-party websites' infringing conduct" and "Google's supervisory power is limited because Google's software lacks the ability to analyze every image on the Internet, compare each image to all the other copyrighted images that exist in the world, and determine whether a certain image on the web infringes someone's copyright."[62] Additionally, the Ninth Circuit, in agreement with the district court, held that Perfect 10's suggestions regarding various measures Google could implement to block access to infringing content, were impractical, stating "without image-recognition technology, Google lacks the practical ability to police the infringing activities of third-party websites."[63]

Ultimately, despite the fact the Ninth Circuit remanded this case to the district court[64] to determine whether Google and Amazon.com met the requirements for the DMCA safe harbors[65] and regardless of Google and

58. *Id*.
59. *Id*.
60. *Id*.
61. *Id*. at 1176.
62. *Id*. at 1174.
63. *Id*.
64. *Id*. at 1176.
65. *Id*. at 1174.

Amazon.com's liability for vicarious and contributory copyright infringement,[66] the Ninth Circuit's decision regarding ISP's ability to detect infringing content demonstrates an outmoded interpretation of the DMCA.[67] This is exclusively due to the fact Google, an information tool, meets the requirements of Section 512(d) and has since developed pattern, facial, and image-recognition technology[68] that would make it better equipped than copyright owners to detect online instances of infringement.[69] Consequently, as a result of Google's modern capability of locating online infringing content, a sound reason no longer exists for why Google and other service providers equipped with content recognition technology should not take on the responsibility of infringement detection.[70]

Furthermore, apart from their failure to consider the existence of content recognition technology, the DMCA notice and takedown procedures are additionally flawed because they permit ISPs to profit from infringement.[71] Created in response to an online environment that no longer exists, the DMCA does not account for the sheer volume of infringing content on the Internet nor the fact ISPs are currently better able to locate infringing material.[72] Rather, it was based upon the principle ISPs should not have to constantly police the Internet to protect others' work.[73] While it may have been meritorious at the time the DMCA was first passed, this principle now gives ISPs an opportunity to make money from infringing material[74] because

66. *See* Katz, *supra* note 1, at 119. The court in *Viacom* also ignored YouTube's liability, "construe[ing] § 512(c)(1)(A)(ii) as meaningless." *Id.* at 120.

67. *Id*. at 119-20.

68. *See* Katz, *supra* note 1 at 123 (arguing YouTube could have easily become aware of infringement on its website through a "simple search" of its website).

69. *How Google Uses Pattern Recognition*, GOOGLE PRIVACY & TERMS, http://www.google.com/policies/technologies/pattern-recognition.

70. *See* Katz, *supra* note 1, at 130 (discussing the existence of YouTube's Content ID technology that allows copyright owners to determine what happens to potentially infringing videos detected by YouTube).

71. *See* Jeffrey N. Mausner, Presentation at Santa Clara School of Law, High Tech Law Institute, 15 Year Retrospective of the Digital Millennium Copyright Act (Mar. 15, 2013) [hereinafter *Mausner Presentation*] (asserting "Google's business model is to make money off of other people's intellectual property" by taking advantage of courts' imprudent interpretation of the DMCA) (transcript *available at* http://law.scu.edu/wp-content/uploads/hightech/Mausner%20-%20Presentation%20Transcript.pdf). A retired attorney specializing in copyright and intellectual property law, Jeffrey Mausner represented Perfect 10 Magazine in cases against Google, Microsoft, Amazon.com, and Cybernet Ventures for copyright infringement and right of publicity violations. *See also* Law Offices of Jeffrey N. Mausner, http://www.mausnerlaw.com/about_us.

72. *Mausner Presentation*, supra note 71.

73. *Id*.

74. *See* Katz, *supra* note 1, at 120 (arguing that in addition to profiting from infringement, the DMCA protects ISPs that "turn a blind eye to ongoing mass infringement, requiring that they only take action when they have direct knowledge of a specific infringement").

of their knowledge copyright owners will never be able to notify them of every instance of infringement.

With specific attention to one of the most powerful ISPs, Google, for example, facilitates and makes money from[75] infringement through several means.[76] As a search engine, Google assists users with locating infringing content, directs Internet traffic to websites that host infringing material, and earns a large profit by placing its own ads next to infringing material.[77] Moreover, Google further facilitates infringement by hosting anonymously created infringing websites and making money from ads placed on such websites.[78] While Google's practices are blatantly objectionable and directly violate the rights of copyright owners, they remain uncorrected due to courts' current interpretation of the DMCA. Simply stated, Google has been given the liberty by the courts to make the argument it is not liable for vicarious or contributory infringement because it never had specific knowledge of any infringement.[79]

II. WIDESPREAD IMPACT OF COPYRIGHT INFRINGEMENT RESULING FROM ANTIQUATED NOTICE AND TAKEDOWN PROCEDURES

A. Courts' Flawed Interpretation of the DMCA Has Resulted in Laborious Take-down Procedures and Unnecessary Hurdles for Rights Holders

1. Arduous Take-down Procedures and Preliminary Injunctions

Solely responsible for detecting online infringement, copyright holders are encumbered by the nearly futile and increasingly laborious DMCA

75. *Id*. at 101 (claiming YouTube, now a wholly owned subsidiary of Google "also enjoys having [the viewer] and millions of others visit its site because it derives substantial revenue from advertisers").

76. *See Mausner Presentation*, *supra* note 71 (stating Google facilitates and profits from infringement by "[h]elping its users to locate infringing materials through its search engine," directing web traffic to infringing websites, collecting advertising revenue from Google ads placed around infringing materials, and "allowing infringers to anonymously create infringing websites hosted by Google" provided such infringing websites display Google ads). Mausner further states, "A study of Google search results shows that Google provides in many cases, more than 100,000 times as many links to illegal websites as to legitimate ones." *Id*.

77. *Id*.

78. *Id*.

79. *Id*. ("[E]ven though Google has knowledge, or should know, that it is providing massive quantities of infringing images via Google Image Search, and infringing songs and movies via web search and YouTube, and making billions of dollars in the process, Courts have by and large not held Google liable for such conduct.").

takedown procedures.[80] Despite the fact the language of Section 512(c)(3) specifically states copyright owners need only supply a "representative list" of copyrighted works "if multiple copyrighted works are covered by a single notification,"[81] the takedown procedures in Section 512 have been interpreted such that copyright owners must notify ISPs of the precise location of every instance of infringement—the specific URL, for example, where the illicit material is found. Since a majority of individual copyright owners are less likely to be able to afford content recognition technology, this makes it virtually impossible for them to remove all infringing content from the Internet.[82] Moreover, ISPs like Google have been allowed to reinterpret the DMCA notice requirements to require the provision of textual descriptions of each instance of infringement as well as the precise link to the location of the infringement.[83] This places an additional burden on rights holders.

Furthermore, not only must copyright owners struggle to comply with the onerous DMCA take-down procedures, but their ability to bring an action against ISPs is frustrated by the existing difficulty of securing preliminary injunctions.[84] For example, copyright owners will often fail to secure preliminary injunctions against powerful ISPs as a result of their inability to show irreparable harm—one of four elements that must be met for a court to grant a preliminary injunction.[85] This is because copyright owners will likely

80. *See* Katz, *supra* note 1, at 131 ("Despite the fact that YouTube advertises its fingerprinting technology as a tool to automatically fight infringement, the burden to act ends up ultimately falling on the copyright owner. Consequently, YouTube's fingerprinting technology seems to be less of an element of the reasonably implemented repeat-infringer policy . . . and more of a novel scheme to generate profits.").

81. 17 U.S.C. § 512(c)(3)(A)(ii).

82. *See Mausner Presentation*, *supra* note 71 ("When copyright owners try to get infringing materials removed from Google's system, Google uses the DMCA to make it difficult or effectively impossible to do so. Rather than remove all instances of the infringement by using image recognition or other obvious technology that Google has, Google may remove one instance of that infringement at a specific location, but allow that same infringement to appear over and over at different locations. Google allows this because it makes a fortune from these infringements and courts' interpretation of the DMCA has allowed Google to continue to do this.").

83. *See generally* Perfect 10, Inc. v. Amazon.com, Inc., 508 F.3d 1146, 1175 (9th Cir. 2007) (supporting Google's claim that a copy of the image being infringed was not enough to describe the image being infringed and that a textual description of the infringing image was also required). *See also Mausner Presentation*, *supra* note 71 (arguing, "Google also changes its DMCA notice requirements, so that it does not have to remove infringing content."). Mausner further asserts that in *Perfect 10 v. Google, Inc.*, "Google's DMCA agent . . . claimed Perfect 10 had to describe its images using text—that a copy of the image that was sent to Google with the DMCA takedown notice wasn't good enough to describe the image that was being infringed." *Id*.

84. *Mausner Presentation*, *supra* note 71.

85. *See* FED. R. CIV. P. 65. *See also* Thomas Patterson, *Litigation: Elements of a Preliminary Injunction and Temporary Restraining Order (TRO)*, INSIDE COUNSEL (Aug. 8, 2013), http://www.insidecounsel.com/2013/08/08/litigation-elements-of-a-preliminary-injunction-an

always be able to recover monetary damages against massive ISPs such as Google. No longer able to swiftly and cost-effectively resolve their cases, copyright owners will have to proceed with the time-consuming and expensive trial process which many, particularly young artists, may not be able to afford.

2. *Lenz v. Universal Music Corp.* Places a Fair Use Burden on Rights Holders

When copyright owners thought the process of removing online infringing content could not get worse, the 2007 case of *Lenz v. Universal Music Corp.* was resolved.[86] Known informally as the "Dancing Baby" case,[87] *Lenz* is a product of the Internet's evolution and, more exactly, the Internet's facilitation of such online activities as posting candid videos of family and friends that include copyrighted works. In this case, a mother, Stephanie Lenz, posted a video of her baby dancing to the artist Prince's sound recording "Let's Go Crazy."[88] Objecting to this unauthorized use, Universal Music Corporation sent YouTube a takedown notice pursuant to the DMCA, claiming Lenz violated their copyright in "Let's Go Crazy."[89] In response to this action, Lenz sued Universal Music Corporation for misrepresentation of a DMCA claim, arguing her use of "Let's Go Crazy" constituted fair use of the copyrighted material.[90] Expressly stated, Lenz asserted Universal Music Corporation was issuing takedown notices in bad faith as they attempted to remove all Prince-related content rather than determining whether each particular instance of infringement was a non-infringing fair use.[91] Following its *de novo* review of the district court's denial of both parties' cross-motions for summary judgment, the United

(asserting there are four elements that must be met for a court to grant a preliminary injunction that include "(1) there is a likelihood of irreparable harm with no adequate remedy at law, (2) that the balance of harm favors the movant, (3) that there is a likelihood of success on the merits of the case, and (4) that the public interest favors the granting of the injunction."). Patterson further argues that, "In many jurisdictions, a likelihood of irreparable harm with no adequate remedy at law is the most important factor. A judge will consider how likely it is that the injury will come to pass; the nature of the harm; whether it is truly irreparable; and whether the harm, even if likely and irreparable, can be redressed with money damages. Even if a harm is almost certain to come to pass and will cause a great deal of irreparable harm, if that harm can be cured with money damages or some other remedy at law, a judge may very well find that a . . . preliminary injunction is not warranted." *Id*.

86. Lenz v. Universal Music Corp., 801 F.3d 1126, 1129 (9th Cir. 2015).

87. *Id*.

88. *Id*.

89. *Id*. at 1130.

90. *Id*.

91. *Id*.

States Court of Appeals for the Ninth Circuit held Universal Music Corporation must consider fair use when filing a takedown notice.[92]

As a result of this decision, even if copyright owners overcome the challenge of locating infringing content online, they are then charged with the additional task of proving the infringing content is not fair use. This task is tremendously time-consuming because in addition to providing ISPs with numerous DMCA takedown notices—the individual links to each instance of infringement that, due to the colossal and nearly imperceptible size of the internet, could comprise of thousands of notices —copyright holders are now additionally tasked with conducting fair use analyses for each notice. Consequently, the "Dancing Baby" case, a supposed victory for Internet users, makes the DMCA additionally threatening to copyright owners who now must take excessive steps to protect their work. On March 9, 2016, the Ninth Circuit made this fair use requirement even more difficult by prohibiting copyright owners from implementing computer algorithms to assist them with fair use analyses.[93] Now devoid of a tool that would better help them filter out clear fair use infringements, copyright owners must assess each infringement anew. Certainly the sheer volume of infringements to review will overwhelm many rights holders, causing them to abandon their claims and suffer the losses associated with piracy.

3. Consumers Serve as an Additional Hurdle for Rights Holders

As demonstrated by their negative reaction to the "Dancing Baby" case, consumers serve as yet another obstacle copyright owners must overcome to ensure their rights are protected. Having enjoyed their ability to access online infringing content and make infringing copies of copyrighted works, users respond harshly to rights holders whose actions could limit their online

92. *Id*. at 1133 (holding that, "because 17 U.S.C. § 107 created a type of non-infringing use, fair use is 'authorized by the law' and a copyright holder must consider the existence of fair use before sending a takedown notification under § 512(c)"). The court further added, "Copyright holders cannot shirk their duty to consider—in good faith and prior to sending a takedown notification—whether allegedly infringing material constitutes fair use, a use which the DMCA plainly contemplates as authorized by the law." *Id*. at 1138. *See also* Bill Donahue, *Universal Tells 9th Circ. Not to Rewrite DMCA Takedown Rules*, LAW360 (Nov. 17, 2015), http://www.law360.com/articles/727967/universal-tells-9th-circ-not-to-rewrite-dmca-takedown-rules (highlighting Universal Music Corporation's argument that "[t]his policy-based request is both improper and unsupported" and "[b]y advancing an interpretation of the DMCA's takedown provision that the plain language forecloses, Lenz is asking the court to amend rather than to apply the statute").

93. Ashley Cullins, *"Dancing Baby" Appeals Court Decision Stands Minus the "Fair Use" Algorithms*, HOLLYWOOD REPORTER (Mar. 17, 2016, 2:20 PM), http://www.hollywood reporter.com/thr-esq/dancing-baby-appeals-court-decision-876557?facebook_20160317.

access to infringing materials.[94] Unfamiliar with copyright law and the importance of protecting artists' rights, they criticize artists like Prince for attempting to protect his copyright in a situation they perceive as the innocent act of uploading a cute video online.[95] Unconcerned with the effects such criticism may have on copyright owners, users fail to realize their criticism forces artists to choose between the protection of their copyright and fan approval.[96] While Prince's objection to the "Dancing Baby" video may have been, in the opinion of some, unnecessary, the same is not true for all actions against consumers. Yet, out of fear of losing the support of consumers, rights holders may once again hesitate to assert their rights.

A similar example of Internet users' hostility toward copyright owners is occurring in the ongoing case *Ultra International Music Publishing, LLC v. Phan*.[97] In this case, Ultra Records, LLC ("Ultra") and Ultra International Music Publishing, LLC ("UIMP"), separate owners of copyrights and exclusive rights in numerous sound recordings and musical compositions, brought suit against leading YouTube personality, Michelle Phan seeking damages and injunctive relief for copyright infringement and, precisely, the unauthorized reproduction, distribution, adaptation, and digital public performance of their copyrighted works.[98]

More specifically, Phan is a makeup artist made famous by a series of video tutorials she began posting on YouTube.[99] With over six million subscribers to her YouTube channel, Phan "has been featured in a high profile and multi-platform advertising campaign for YouTube, which features some of YouTube's most popular personalities."[100] In addition, Phan alleged that she "monetizes her YouTube videos by collecting substantial income from YouTube derived from the advertisements that appear in association with her videos."[101] With particular emphasis on this case, Ultra and UIMP stated

94. *Id*.

95. *Id*.

96. *Id*.

97. Ultra Int'l Music Publishing, LLC v. Phan, No. 2:14cv5533 (C.D. Cal. Aug. 12, 2015) (LEXIS, Dist. File).

98. Complaint at 3, 6-7, Ultra Int'l Music Publishing, LLC v. Phan, No. 2:14cv5533 (C.D. Cal. Aug. 12, 2015).

99. *Id*. at 4.

100. *Id*.

101. *See* Katz, *supra* note 1, at 101. Again, Google purchased YouTube for $1.65 billion in Google stock a year after YouTube was founded because it foresaw YouTube's enormous success. As of June 2010, "it is estimated that approximately twenty-four hours of video is uploaded onto YouTube every minute, and the average person spends at least fifteen minutes a day on the YouTube website"—thus increasing YouTube personalities' potential for success. *Id.* As Katz explains, "[a]pparently one factor that greatly contributed to YouTube's success was the increasing popularity of online file-sharing during the last two decades." *Id*.

Phan wholly infringed upon their copyrighted musical compositions and recordings by "copy[ing] and synchroniz[ing] the Musical Compositions and/or Recordings, in whole or in part, together with certain visual footage to create audiovisual works" and making such unauthorized videos available to the public through unauthorized publication on the Internet.[102]

In response to the plaintiffs' allegations that Phan used approximately fifty of their sound recordings and musical compositions without permission in her YouTube videos,[103] Ultra and UIMP, the copyright owners, rather than Phan, the alleged infringer, have been criticized for filing the lawsuit. The recording artist Kaskade, for example, whose work is prominently cited in the plaintiffs' complaint, stated, "Copyright law is a dinosaur, ill-suited for the landscape of today's media."[104] This is both critical and astonishing, for it demonstrates recording artists, those who seek to profit from the lawful exploitation of copyrighted works, would rather safeguard the open and free exchange of information on the Internet than combat online infringement. Openly appreciative of Kaskade's support, Phan stated that her intention has always been "to promote other artists, creating a platform for their work to be showcased to an international audience."[105] Lamentably, this good-faith goal may be increasingly difficult to achieve as music publishers and record labels struggle to support their signed artists.

B. Effects of Piracy on Individual Rights Holders and the Entertainment Industry

Principally, unabated online infringement, the result of unaltered DMCA takedown procedures, renders many individual copyright owners financially incapable of creating new original works[106] and, similarly, negatively impacts below-the-line employees in the entertainment industry.[107] Stated simply, when content owners are unable to fully monetize their works, they cannot financially support themselves[108] and, as a result, must seek alternate sources

102. *Ultra Int'l Music Publishing, LLC*, No. 2:14cv5533 at 5.

103. *Id*.

104. *See* Kevin Rawlinson, *YouTube Star Michelle Phan Sued over Copyright Breach*, BBC NEWS (July 22, 2014), http:// http://www.bbc.com/news/technology-28418449.

105. *Id*.

106. *See generally* Terry Hart, *The Chilling Effect of Copyright Infringement*, COPYHYPE (Dec. 10, 2010), http://www.copyhype.com/2010/12/the-chilling-effect-of-copyright-infringement.

107. Karsten Strauss, *TV and Film Piracy: Threatening an Industry*, FORBES (Mar. 6, 2013, 12:31 PM), http://www.forbes.com/sites/karstenstrauss/2013/03/06/tv-and-film-piracy-threatening-an-industry/#1629fbe55e0e.

108. Hart, *supra* note 106.

of income.[109] As an example of this bleak phenomenon, comic artist Colleen Doran explained precisely how unrestricted online infringement affected her life in the article *The Chilling Effect of Copyright Infringement*.[110] She stated,

> I spent the last two years working on a graphic novel called *Gone to Amerikay*, written by Derek McCulloch for DC Comics/Vertigo. It will have taken me 3,000 hours to draw it and months of research. Others have contributed long hours, hard work and creativity to this process. But due to shrinking financing caused by falling sales in the division, these people are no longer employed. The minute this book is available, someone will take one copy and within 24 hours, that book will be available for free to anyone around the world who wants to read it. 3,000 hours of my life down the rabbit hole, with the frightening possibility that without a solid return on this investment, there will be no more major investments in future work.[111]

Similarly, photographer Seth Resnick made it apparent the financial stability of freelance artists is particularly threatened by online piracy. He added,

> Copyright is the very basis of my existence and the existence of every freelance photographer in the country. As a freelancer, I exist only by the value of the intellectual property I am able to create. I have to control and license that property. If I don't control the licensing I am unable to place any value on my art form of photography. Without the ability to license my intellectual property I simply can't stay in the marketplace. A photographer or any artist who can't stay in the market, can't produce work which is a very part of our American culture.[112]

Moreover, when content owners are larger entities such as corporations or companies, infringement of a single work has the power to harm more than a single individual.[113] For example, entertainment production companies and studios rely heavily on the revenue earned from the lawful distribution and licensing of copyrighted content.[114] Subsequently, when such entities begin struggling to achieve financial constancy because online infringement has impaired their ability to profit from the use of copyrighted works, they

109. *Id*. (emphasizing that "[a]ll piracy does is remove the benefit from those creating the new works" and that "everyone is making money . . . except those who own the rights.").

110. *Id*.

111. *Id*.

112. *Id*.

113. *See* Diana Lodderhose, *Movie Piracy: Threat to the Future of Films Intensifies*, THE GUARDIAN (July 17, 2014), http://www.theguardian.com/film/2014/jul/17/digital-piracy-film-online-counterfeit-dvds.

114. *Id*.

become increasingly unable to support all of their employees.[115] In many cases, this has prompted the decision to cut salaries[116] as a means of mitigating damages from piracy.[117]

Yet, even more disturbing than the fact unbridled online infringement has put people out of work[118] is the reality "copyright infringement creates a 'chilling effect' on the free expression rights of creators"[119] and the dissemination of new copyrighted works.[120] Frustrated that the rights of infringers seem better protected than their rights as lawful content owners,[121] many of the most talented and creative copyright owners have become unenthusiastic—unmotivated and unwilling to create new original works and spend their lives perfecting their craft.[122] While those opposed to amending the DMCA will argue copyright owners will continue making new works because of their passion for artistic creation, the unfortunate truth is most cannot live solely off of others' free enjoyment of their copyrighted works.[123]

Furthermore, online infringement negatively affects the entertainment industry as a whole in addition to individual rights holders.[124] As discussed in the article *Copyright Piracy and the Entertainment Industries: Is the Effect Massive or Negligible?*, the author, Stephen Carlisle, points to studies that indicate the worldwide piracy of sound recordings results in the U.S.

115. *Id*. (indicating continued online piracy puts many people out of work and "the financial impact is felt most acutely by the long list of people you see on the credits of a film" including makeup artists, costume designers, studios, and box office staff).

116. Strauss, *supra* note 107 (indicating the salaries of many below-the-line employees in the entertainment industry have been cut to make up for losses resulting from piracy).

117. *Id*. (noting an "11-employee Independent U.S. film distributor, Wolfe Video, has had its profits halved due to piracy").

118. Stephen Carlisle, *Copyright Piracy and the Entertainment Industries: Is the Effect Massive or Negligible?*, NOVA (Aug. 13, 2014), http://copyright.nova.edu/copyright-piracy-entertainment-industries/#note-587-15 (finding "there are 45% fewer working musicians than in 2002").

119. Hart, *supra* note 106.

120. *Id*. ("Ineffective enforcement against infringement or undue burdens on copyright owner's abilities to protect their rights reduces the incentive to continue to create new expression.").

121. *Id*. (discussing the dissatisfaction of Indie film producer Ellen Seidler who was angered by the notion many believe submitting takedown notices obstruct a pirate's right to free speech despite the fact rights holders are increasingly incapable of making a living).

122. Carlisle, *supra* note 118.

123. Hart, *supra* note 106 (claiming merchandising, personal appearances, and "the happy thoughts that everyone else benefits from the content you create" are not enough to profit from the time and energy spent creating the content).

124. Stan J. Liebowitz, *The Impact of Internet Piracy on Sales and Revenues of Copyright Owners*, *in* HANDBOOK ON THE DIGITAL CREATIVE ECONOMY 34, 37 (Ruth Towse & Christian Handke eds., 2013), http://www.aenorm.eu/files/nlaenorm2012/file/article_pdfs/f7t76_The%20impact%20of%20internet%20piracy%20on%20sales%20and%20revenues%20of%20copyright%20owners.pdf (finding music sales have decreased 50% to 70% since 1999 due to piracy and prerecorded movie revenues have fallen by almost 45% relative to box office receipts).

economy's loss of $12.5 billion in total annual output, the loss of 71,060 U.S. jobs, and a combined loss of $2.7 billion in workers' earnings annually.[125] Additionally, in a study conducted by Dr. Brett Danaher, Dr. Michael Smith, and Dr. Rahul Telang, the authors found that 18 of 21 studies on the negative impact of piracy on record sales resulted in findings of sizable impact, leading to the "general consensus[126] among economists who study piracy that [piracy] negatively impacts sales . . . across various forms of media including music, television, and film."[127] In a similar study conducted by Danaher, Smith, and Telang that was published in the journal of Innovation Policy and the Economy, the authors noted that out of 18 district studies on the issue of piracy and its concurrent effect on the entertainment industry, 15 found piracy has a "significant effect on the revenues of the entertainment industry."[128] This is further proven by the fact films leaked online before their official release have been found to lose 19% of their box office revenues solely because of pre-release piracy.[129] In spite of this data, advocates of the existing DMCA argue piracy has a trivial effect on the film industry because box office revenues have not been falling.[130] Yet, "[i]t is not necessary for revenues to decline when piracy is having a destructive impact on industry revenues."[131] Rather, revenues that would have been increased but for piracy, can remain constant, making it appear impervious to online infringement.[132]

In addition to the alarming effects online infringement has on individual rights holders and the entertainment industry as a whole, the influence of infringement on the quality of produced content is equally undesirable.[133] For instance, aware online piracy significantly reduces their earnings from a particular creative work,[134] entertainment companies have proven tremendously risk averse by regularly producing content with a guaranteed

125. Carlisle, *supra* note 118.

126. *See* Liebowitz, *supra* note 124 (arguing "the changes that have taken place in the music business are so dramatic that it is almost impossible to deny that the sales of prerecorded music appear to have been devastated by some powerful factor or factors" and noting record sales have dropped after a 30-year period of upward progress due to file sharing).

127. DR. BRETT DANAHER, DR. MICHAEL SMITH & DR. RAHUL TELANG, COPYRIGHT ENFORCEMENT IN THE DIGITAL AGE: EMPIRICAL ECONOMIC EVIDENCE AND CONCLUSIONS 8 (Aug. 25, 2015), http://www.wipo.int/edocs/mdocs/enforcement/en/wipo_ace_10/wipo_ace_10_20.pdf [hereinafter DANAHER].

128. *Id*.

129. *Id*.

130. *See* Liebowitz, *supra* note 124.

131. *Id*.

132. *Id*.

133. Carlisle, *supra* note 118.

134. *See* Liebowitz, *supra* note 124.

market.[135] With specific attention to the film and television industries, this trend is apparent both domestically and abroad[136] by the consistent production of prequels, sequels, and remakes—content with a certain revenue stream.[137] Furthermore, as a result of this recurrently implemented business strategy that values profits over quality of content, the independent feature film market has indirectly suffered.[138] Since independent films are entirely dependent on funding from distributors who invest in the works before they are made, many will not get produced because of distributors' concern online piracy will prevent the recoupment of their investments.[139] Regrettably, as more independent filmmakers stop working as a result of piracy,[140] society is progressively deprived of the controversial, thought-provoking, and experimental content that so often characterizes independent productions.[141]

III. PROPOSED AMENDMENT TO THE DMCA NOTICE AND TAKEDOWN PROCEDURES

A. Shifting the Task of Infringement Detection onto ISPs Through the Utilization of Content Recognition Technology

A practical solution must be implemented before copyright owners are beleaguered to the extent they lack an incentive to create new works of authorship. More specifically, to fully safeguard the progress of science and the useful arts,[142] the most effective solution balances the needs of Internet users and rights holders while shifting the duty of infringement detection onto

135. *See* Lodderhose, *supra* note 113 (arguing that the "reduction of revenue caused in part by piracy has . . . resulted in studios and production houses making less adventurous choices when it comes to films").

136. Carlisle, *supra* note 118 (noting the Chinese box office is similarly driven by a "winner-take-all market" in which blockbuster Hollywood films "dominate box office availability and take the lion's share of revenue").

137. *Id*.

138. *Id*. (asserting the film industry has become unhealthy as a result of independent filmmakers getting squeezed out of the market).

139. *See* Lodderhose, *supra* note 113 (explaining film entities cautiously distribute works because they are uncertain whether they will recoup their investments).

140. *See* Lodderhose, *supra* note 113 (asserting online infringement is incredibly "detrimental to the independent film-maker who may have spent years raising money for [their] film and may have had to remortgage their house").

141. Carlisle, *supra* note 118 (stating the absence of a viable film market for small independent films is crushing free speech because many filmmakers whose works are not considered 'box office winners' have stopped investing in their projects). Carlisle adds that the decline of the independent film market will result in the production of "safe harbors" that maximize box office receipts "before the losses of piracy start to pile up").

142. U.S. CONST. art. I, § 8, cl. 8.

ISPs. Although this would not obligate ISPs to continuously scan the Internet for infringement,[143] it would ensure that, upon the request of copyright owners, those best equipped to locate infringing material are the parties actually locating all instances of infringement. Furthermore, three viable proposals are available to combat online infringement without impeding the growth of the Internet. As previously indicated, each proposed amendment is contingent upon courts' amendment of the DMCA notice and takedown procedures, specifically those enumerated under Sections 512(c) and (d),[144] such that ISPs assume more active roles with regard to infringement detection and removal and copyright owners are not obligated to conduct fair use analyses as part of the takedown process.[145] Finally, each amendment will not unduly burden Internet users as they each preserve the counter-notification provision of Section 512(g).

1. The Pro-Copyright Approach

This first proposed amendment establishes reformed takedown procedures copyright owners and ISPs would follow to detect infringing materials. Moreover, this solution rests on the notion that courts' reinterpretation of the DMCA is both necessary and achievable despite judicial precedent[146] principally because ISPs are now technologically equipped to detect online infringement.[147] This modified takedown procedure would proceed as follows:

(1) A copyright owner, aware of a single instance of infringement, would notify an ISP of such infringement by providing copies of the copyrighted works ("reference files") being infringed;
(2) Following receipt of the aforementioned notification, the ISP, using content recognition technology, would proceed to detect all instances of infringement on its system that involve the copyrighted work at issue, not merely the infringement associated with the above-mentioned URL;[148]

143. 17 U.S.C. § 512 (m).

144. 17 U.S.C. § 512 (c). *See also* 17 U.S.C. § 512 (d).

145. *See* Cullins, *supra* note 93.

146. Perfect 10, Inc. v. Amazon.com, Inc., 508 F.3d 1146, 1174 (9th Cir. 2007) (finding that "without image-recognition technology, Google lacks the practical ability to police the infringing activities of third-party websites"—a statement that is no longer accurate.).

147. *How Google Uses Pattern Recognition*, *supra* note 69.

148. *See* Katz, *supra* note 1, at 136-37 ("The legislature should make it clear that when a service provider has the tools to search and locate infringing content, filter infringing content as it is uploaded onto its servers (e.g. by using fingerprinting technology), and has the ability to terminate user accounts, it has the right and ability to control the infringing activity.").

(3) The ISP would subsequently block access to all infringing content on its system related to the work at issue;
(4) The individuals who originally put up the infringing content and feel the content was blocked unjustly would be responsible for sending the ISP a counter-notification that explicitly articulates the reasons why they believe their use of the copyrighted content falls under the fair use doctrine; and
(5) The copyright owner would then have the option of filing suit against such individuals for direct copyright infringement.[149]

Once assessed, this amendment is slightly imperfect largely because it favors the needs of copyright owners over those of Internet users. For example, likely ignorant of the fair use doctrine's many intricacies, Internet users may not know how to defend their use of copyrighted works and, as a result, may elect to remove the allegedly infringing content rather than submit counter-notices. Moreover, if such users subsequently stop creating content that is protected by the fair use doctrine due to their unwillingness to hassle with this solution's strict counter notification process, the central goal of the reformed takedown procedures—to spur rather than discourage the creation of new original works of authorship—would be wholly counteracted. However, regardless of the possible complications associated with this solution, it provides the swiftest, most straightforward method through which rights holders can prevent Internet users from accessing illicit copies of their works and, accordingly, regain their motivation to create new original works.

2. The Balanced Approach

This alternate proposed amendment, while reasonably achievable like the first, is more supportive of Internet users. It too calls for changed notice and takedown procedures and would proceed as follows:

(1) A copyright owner, aware of a single instance of infringement, would notify an ISP of such infringement by providing copies of the copyrighted works ("reference files") being infringed;
(2) Following receipt of the aforementioned notification, the ISP, using content recognition technology, would proceed to detect all instances of infringement on its system that involve the copyrighted work at issue, not merely the infringement associated with the above-mentioned URL;

149. *See* 17 U.S.C. § 107 (2012).

(3) With the data gathered in Step 2, the ISP would block all explicit instances of infringement on its system related to the copyrighted work at issue which would include unaltered and complete reproductions of the copyrighted work;
(4) For all remaining instances of infringement which may constitute fair use, the ISP would not immediately block such content, but rather, provide the copyright owner the individual URLs associated with each instance of infringement;
(5) Now fully aware of all instances of infringement on the ISP's system, the copyright owner would have the option of conducting a fair use analysis for each instance of infringement;
(6) If the copyright owner insists a particular use of the copyrighted work is not protected by the fair use doctrine, the copyright owner would be responsible for requesting the takedown of the specific infringing material from the ISP's system but would additionally need to provide his/her fair use analysis pertaining to the infringing content;
(7) Upon receipt of the copyright owner's takedown notice, the ISP would block access to the individual instance of infringement from its system and, in place of the infringing content, would provide a link to the copyright owner's fair use analysis;
(8) If the individuals who originally put up the infringing content, after reviewing the copyright owner's fair use analysis, still feel the content was blocked unjustly, they would be responsible for sending the ISP a counter-notice that explicitly articulates the reasons why they believe their use of the copyrighted content falls under the fair use doctrine; and
(9) The copyright owner would then have the option of filing suit against such individuals for direct copyright infringement.

In opposition to the Pro-Copyright Amendment, this second amendment is equally supportive of rights holders and Internet users as it involves the blocking of complete reproductions of copyrighted works from ISPs' systems without burdening Internet users with a laborious fair use analysis. However, the fair use analysis process may be improved through the implementation of a fair use algorithm that, developed by individual ISPs, would systematically determine whether an instance of infringement is likely fair use. Despite the difficulty of developing a flawless fair use algorithm due to the complexities associated with each fair use factor and the potential need for human involvement throughout the fair use analysis process, an algorithm might, at

a minimum, simplify the analysis process for copyright owners through the provision of a preliminary fair use analysis.

3. The YouTube Approach

This third and final amendment offers the most practical changes to the DMCA's notice and takedown procedures since the ISP, YouTube, has already implemented it.[150] Enabling content holders to elect how their content is shown on a particular ISP's platform, these reformed procedures would proceed as follows:

(1) A copyright owner, aware of a single instance of infringement, would notify an ISP of such infringement by providing copies of the copyrighted works ("reference files") being infringed;
(2) Upon receipt of the reference files, the ISP, using content recognition technology, would put the files in its database and compare it against every reverence file in the database to find a match;
(3) Each time the content recognition software identifies a match, the ISP will inform the copyright owner;
(4) The copyright owner has the option of monetizing the infringing content by running ads against it, tracking the content's viewership statistics, or instructing the ISP to block or mute the infringing content;
(5) Individual users whose content is being blocked, muted, or monetized may choose to accept the copyright owner's management of the content at issue, remove or replacing the infringing material from their platforms, or enter into an agreement with the copyright owner to share in the advertising revenue specified in Step 4; and
(6) Individual users who believe their content was falsely identified have the option of disputing the copyright owner's claim of infringement.

Without question, The YouTube Approach best utilizes content technology to help copyright owners manage their rights. More importantly, in addition to supporting both rights holders and Internet users, it is additionally attractive because it offers the option for both parties in a copyright dispute to profit from infringement. This is crucial, for once able to realize the full value of their copyrighted works, the negative effects of

150. *How Content ID Works*, SUPPORT.GOOGLE (2016), https://support.google.com/youtube/answer/2797370?hl=en.

online piracy explained in Part II of this note will be greatly abated and rights holders will regain their incentive to create new original works.

Although elaborate, the aforementioned solutions offer copyright owners protections that are not presently available because of courts' past interpretation of the DMCA and the current takedown procedures. While the first two solutions require the bravery of the courts, the willingness to abandon their attachment to antiquated legal precedent, the third solution outlines a currently existing creative business solution that would make ISPs and content owners allies rather than enemies. Such solutions are realistically achievable but reliant upon the fierce commitment to change.

B. Shifting the Burden of Infringement Detection is Reasonable Due to the Existence of Content Recognition Technology

The modern development of content recognition technology[151] and current implementation of such technology by ISPs[152] accentuate the feasibility and fairness of the foregoing proposed amendments to the DMCA notice and takedown procedures.[153] Referring to the capacity of software or a particular application to identify an audio, video, or digital image content element within its proximity by sampling a segment of the content element, processing the sample, and comparing it with "a source service that identifies content by its unique characteristics such as audio or video fingerprints or

151. Jonathan Strickland, *How Content-recognition Software Works*, HOW STUFF WORKS (2016), http://computer.howstuffworks.com/content-recognition4.htm (stating "several software companies plan to offer programs that can analyze audio and video clips, compare them to a database of content and determine whether they are from sources that are protected by copyright" and that such software "provides an efficient and relatively inexpensive alternative to combing through the vast amount of content on the Internet"). *See also* Nathan Chandler, *What is Google Goggles?*, HOW STUFF WORKS (2016), http://electronics.howstuffworks.com/gadgets/other-gadgets/google-goggles.htm (discussing the ability of Google Goggles, an image recognition technology, to analyze images using mathematical algorithms, compare the images to extracted information in its database, and find possible matches).

152. Strickland, *supra* note 151 (stating, "Recently, Time Warner and Disney partnered with YouTube to test video content-recognition software developed by Google. The software is similar to existing audio content-recognition programs in that it analyzes content to create a fingerprint. Then it compares that information to fingerprints in a database to determine if there is a match."). *See also How Does Facial Recognition Technology Work?*, WE LIVE SECURITY (Aug. 24, 2015, 12:00 PM), http://www.welivesecurity.com/2015/08/24/facial-recognition-technology-work (stating, "Microsoft is now using facial-recognition software for authentication in Windows 10, Apple is reportedly looking at ways for iOS users to automatically share photos with 'tagged' friends, [and] Facebook and Google have been using facial recognition for users to tag friends and find pictures of themselves . . . .").

153. 17 U.S.C. § 512 (c)(3)(A).

watermarks,"[154] automatic content recognition fully undermines prior court findings[155] that ISPs should not participate in infringement detection because they lack the technology to police the Internet.[156]

Rather, to make the practicability of implementing content recognition software additionally apparent, certain ISPs, as previously explained, not only have content recognition software,[157] but claim such technology has been implemented for the purpose of helping copyright owners easily identify and manage infringing content.[158] For example, on its online Google support page,[159] YouTube publicly educates users about its Content ID system—an around-the-clock process, YouTube articulates, that "gives copyright holders choices about whether and how their content is shown on YouTube."[160] More specifically, rights holders take advantage of Content ID by supplying YouTube with copies of audio or video content they want YouTube to search for on its website.[161] YouTube then puts these reference files in a database composed of "millions of files from pop songs to full length movies"[162] and compares them against every reference file in its database.[163] The Content ID system subsequently identifies and informs rights holders of any audio, visual, and partial matches as well as matches with noticeably different video quality.[164] With this information, copyright owners have the option of managing the infringing content by tracking a video's viewership statistics, monetizing the infringing content by running ads against it, or instructing YouTube to mute infringing audio clips or block entire videos from being

154. *Automatic Content Recognition (ACR)*, GARTER (2016), http://www.gartner.com/it-glossary/automatic-content-recognition-acr.

155. *See* Perfect 10, Inc. v. Amazon.com, Inc., 508 F.3d 1146, 1174 (9th Cir. 2007) (holding "Google's software lacks the ability to analyze every image on the internet, compare each image to all the other copyrighted images that exist in the world (or even to that much smaller subset of images that have been submitted to Google by copyright owners such as P10), and determine whether a certain image on the web infringes someone's copyright."); *see also* UMG Recordings, Inc. v. Shelter Capital Partners LLC, 718 F.3d 1006, 1022 (9th Cir. 2013). The court's holding that copyright owners are better able to efficiently identify infringing content is no longer accurate because of the existence of content recognition technology. Furthermore, ISPs can actually identify infringing content more efficiently because companies rather than individuals are better positioned to invest in content recognition software.

156. *See Perfect 10, Inc.*, 508 F.3d at 1174 (holding "Without image-recognition technology, Google lacks the practical ability to police the infringing activities of third-party websites.").

157. *How Content ID Works*, *supra* note 150.

158. *Id*.

159. *Id*.

160. *Id*.

161. *Id*.

162. *Id*.

163. *Id*.

164. *Id*.

viewed.[165] Such options, YouTube asserts, make Content ID "a true win win that enables new forms of creativity and collaboration" because artists can allow fans to reuse their copyrighted content and fans can generate promotional opportunities for their favorite artists.[166] After this step, the individual user who uploaded the infringing material receives a Content ID claim from YouTube and has the option of accepting the copyright owner's management of the infringing content, removing or swapping copyrighted music from any non-infringing video clips, sharing revenue with the copyright owner if the user is a member of the YouTube Partner Program, or disputing the claim.[167] Ultimately, if individual users believe their videos were wrongly removed or qualify as fair use, they may ensure their videos are put back on YouTube by submitting a counter notification as specified by the DMCA.[168]

Consequently, because YouTube, acknowledging the importance of making copyright management more accessible for rights owners,[169] already adopts the reformed notice and takedown procedure discussed in Part IIIA through its active implementation of content recognition technology,[170] it is completely sensible to make ISP's detection of all instances of infringement part of the DMCA's notice and takedown procedures. This would not violate the DMCA[171] because ISPs would not be expected to constantly monitor their services. Instead, ISPs would only locate all instances of infringement on their platforms once notified by copyright owners. However, those opposed to DMCA amendments, particularly ISPs and Internet users, will argue a more laborious take-down procedure will stifle innovation, discouraging the creation and dissemination of content through diverse online channels. Yet, without any changes to the DMCA, copyright owners will be similarly discouraged and, as a result, may choose not to create more original works.[172]

165. *Id*. More specifically, rights holders may choose to mute copyrighted music such that YouTube users can still watch a particular YouTube video but cannot hear the soundtrack. Copyright owners may also instruct YouTube to block users in certain countries or worldwide from seeing infringing videos. Lastly, rights holders can block certain platforms by restricting the devices, websites, or applications on which their copyrighted content can appear.

166. *Id*.

167. *Id*. Individual users who have the rights to use the copyrighted work at issue in a Content ID claim or believe their videos were misidentified may dispute the Content ID claim. After the claim is disputed, the rights holder has 30 days to release the claim, uphold the claim, or, more importantly, choose to remove the infringing video from YouTube, resulting in the user receiving a copyright strike on their account.

168. 17 U.S.C. § 512 (g)(3).

169. *How Content ID Works*, *supra* note 150.

170. *Id*.

171. 17 U.S.C. § 512 (m)(1).

172. Hart, *supra* note 106.

So the choice is clear. Congress may opt to preserve the existing DMCA and, for the sake of supposed innovation, indirectly facilitate infringement or amend the DMCA and prompt the creation of many new works by protecting those who have not violated the law. Due to the increasing availability of content recognition technology,[173] it seems additionally likely online innovation will not be permanently halted, for ISPs will simply begin investing in content recognition technology to stay in business. As image recognition technology has become an effective marketing tool for companies,[174] ISPs have an added incentive to purchase and implement such technology.

C. Modifying the DMCA's Notice and Takedown Procedures Will Benefit Internet Users and Enable Copyright Owners to Benefit from Changes in Content Distribution

Following the amendment of the DMCA's notice and takedown procedures, copyright owners, comfortable their works will be better protected, will have an incentive to make content more readily available online. This is crucial, for making content legally obtainable online will not only reduce the consumption of infringing content,[175] but allow content owners to fully profit from contemporary changes in content distribution.[176] Due to the fact the modern digital culture is characterized by the enjoyment

173. *See* Michelle Starr, *The Surreal Dreams of Google's Image Recognition Software*, EFF (June 19, 2015), http://www.cnet.com/au/news/the-surreal-dreams-of-googles-image-recognition-software/ (discussing the ability of Google's artificial neural network to detect broad sets of objects, "search for small subtle things" including emotional facial attributes, and "find[] images where the human eye does not"). Members of Google Research's software engineering team have further indicated their image recognition technology is based on the structure of biological brains and that the technology is trained "by being shown millions of images," . . . "constantly adjust[ing] until it is able to accurately recognise, say, a schnauzer or a stove," and "filter[ing] from neuron layer to neuron layer until it reaches the final layer and delivers its response." *Id. See also Powerful Image Analysis*, CLOUD.GOOGLE (2016), https://cloud.google.com/vision (discussing the capacity of Google Cloud Vision API to "classif[y] images into thousands of categories, detect[] individual objects and faces within images, and find[] and read[] printed words contained within images.").

174. *See Powerful Image Analysis*, *supra* note 173 (explaining users of content recognition technology can "build metadata on [their] image catalog, moderate offensive content, or enable new marketing scenarios through image sentiment analysis").

175. *See* DANAHER, *supra* note 127 (explaining research has shown adding television content to Hulu.com led to a 20% decrease in piracy of that content, "implying that offering content in a convenient way (digitally) can convert a significant number of pirates to legal consumption").

176. *See generally* EY, FUTURE OF TELEVISION (2013), http://www.ey.com/Publication/vwLUAssets/EY_-_6_trends_that_will_change_the_TV_industry/$FILE/EY-6-trends-that-will-change-the-TV-industry.pdf.

of content in an omni-platform environment[177] and, in particular, file sharing,[178] copyright owners will be less hesitant to license their content to subscription and non-subscription-based streaming services because of the ease through which they can request ISPs to detect pirated content and remove it from their platforms. With less infringing material and, conversely, more authorized content online, the possibility of creating a culture absent of piracy becomes a conceivable reality.[179]

CONCLUSION

An unsettling fear exists that, if left unchecked, courts' skewed interpretation of the DMCA in favor of ISPs may radically diminish the quality and quantity of original works of authorship. Aware of the abundance of online infringing content, the ease through which consumers access pirated copies of copyrighted works, and the progressively taxing hurdles[180] rights holders must overcome to remove infringing content from the Internet, many artists have stopped creating new original content while larger content producers have chosen to produce content with a guaranteed revenue stream. For the foregoing reasons and, above all, the importance of preserving a copyright system that fully supports artists, amending the DMCA notice and takedown procedures is imperative.

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177. *Id*. at 9 (noting six emerging trends that will have the biggest impact on the future of television including "[s]torytelling will evolve to make better use of an omni-platform environment, [u]biquitous screens will demand greater content mobility, [s]ocial dynamics and synergistic experiences will drive more event-based viewing, [i]nnovation in program discovery and television controls will drive new techniques to cut the clutter, [b]ingeing will drive more innovation in measurement and personalization, and new entrants demanding unique content will drive innovation beyond the traditional studio system").

178. *See Digital Piracy Not Harming Entertainment Industries: Study*, CBC (Oct. 3, 2013, 8:06 PM), http://www.cbc.ca/news/business/digital-piracy-not-harming-entertainment-industries-study-1.1894729 [hereinafter *Digital Piracy*] (arguing digital culture centers on the file sharing of music, video games, movies and other content).

179. *Id*. (arguing that "[t]he growing use of streaming, cloud computing, so-called digital lockers that facilitate the sharing of content and sites that offer a mix of free and paid methods of getting content will . . . spur the entertainment industries to shift their focus from pursuing illegal downloading to creating more legal avenues for getting content online.").

180. *See* Katz, *supra* note 1, at 131 (arguing that the entire burden of monitoring infringements falls on the copyright owner).

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