

6-10-2015

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Recommended Citation

Shannon McGovern, *Aereo, In-line Linking, and a New Approach to Copyright Infringement for Emerging Technologies*, 64 Cath. U. L. Rev. 777 (2015).

Available at: <https://scholarship.law.edu/lawreview/vol64/iss3/11>

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Cover Page Footnote

J.D. Candidate, May 2016, The Catholic University of America, Columbus School of Law; B.A., 2013, Washington and Lee University. The author would like to sincerely thank Professor Megan La Belle for her expertise and guidance on this topic and her colleagues on the Catholic University Law Review for their contributions to this Note. Lastly, the author wishes to thank her family for their unwavering love and support during the writing process and throughout law school.

AEREO, IN-LINE LINKING, AND A NEW APPROACH TO COPYRIGHT INFRINGEMENT FOR EMERGING TECHNOLOGIES

Shannon McGovern⁺

*“Google’s mission is to organize the world’s information and make it universally accessible and useful.”*¹

Google receives approximately two million queries every second and produces results to each search in a fraction of a second.² In 2007 and 2010, Google faced allegations of copyright infringement brought by Perfect 10, Inc.³—an online business that sold photographs of nude models to its subscribers.⁴ In *Perfect 10 v. Amazon, Inc.*,⁵ Perfect 10 took issue with Google’s practice of producing thumbnail images, via the Google Image search service, of Perfect 10’s copyrighted content.⁶ Moreover, the thumbnail images linked to full-size versions of the images that appeared within a Google Web page under Google’s logo.⁷ The images, in fact, were not located on Google’s Web page or even on Google’s server.⁸ Rather, Google’s Web page simply linked to the copyrighted image residing on Perfect 10’s server, which generally was only accessible to paying subscribers.⁹ On the surface, a user’s interaction with Google’s Image service looks and feels illicit—Google was displaying the images without Perfect 10’s permission and portraying full-quality versions as

⁺ J.D. Candidate, May 2016, The Catholic University of America, Columbus School of Law; B.A., 2013, Washington and Lee University. The author would like to sincerely thank Professor Megan La Belle for her expertise and guidance on this topic and her colleagues on the *Catholic University Law Review* for their contributions to this Note. Lastly, the author wishes to thank her family for their unwavering love and support during the writing process and throughout law school.

1. GOOGLE, <https://www.google.com/intl/en/about/> (last visited Apr. 4, 2015). In 1998, Larry Page and Sergey Brin, whom met at Stanford University, founded Google. *Company*, GOOGLE, <https://www.google.com/intl/en/about/company> (last visited Apr. 4, 2015).

2. Jillian D’Onfro & Dylan Love, *11 Crazy-Interesting Facts About Google*, BUS. INSIDER (Aug. 12, 2014, 9:41 PM), <http://www.businessinsider.com/crazy-interesting-facts-about-google-2014-8?op=1>.

3. *Perfect 10, Inc. v. Amazon.com, Inc.*, 508 F.3d 1146, 1154 (9th Cir. 2007); *Perfect 10, Inc. v. Google, Inc.*, No. CV 04-9484, 2010 WL 9479060, at *1 (C.D. Cal. July 30, 2010) *aff’d*, 653 F.3d 976 (9th Cir. 2011).

4. *Amazon.com*, 508 F.3d at 1154.

5. 508 F.3d 1146, 1154 (9th Cir. 2007).

6. *See id.* at 1155–56, 57.

7. *Id.* at 1156.

8. *Id.* at 1160.

9. *See id.* at 1157.

if the images were a part of its own Web page.¹⁰ Nevertheless, the United States Court of Appeals for the Ninth Circuit held that this behavior—referred to as “in-line linking”—did not directly infringe upon Perfect 10’s exclusive right to copy and display its photographs.¹¹

As it turned out, Google did not infringe upon Perfect 10’s copyright because Google, having never saved the photos to its own servers, did not expressly “copy” the images for the purposes of the Copyright Act.¹² Does this technological distinction matter? Clearly, the Ninth Circuit believed it did.¹³ However, the Supreme Court’s recent decision in *American Broadcasting Cos. v. Aereo Inc.*¹⁴ suggests that alleged copyright infringers like Google may no longer be able to avoid liability based on the perceived technological loopholes evident in *Perfect 10*.

Aereo involved a different type of technology than *Perfect 10*, namely a “service that allows [its subscribers] to watch television programs over the Internet at about the same time as the programs are broadcast over the air” via “thousands of dime-sized antennas housed in a central warehouse.”¹⁵ The Court held “that Aereo ‘perform[s]’ petitioners’ copyrighted works ‘publicly,’” as defined by the Copyright Act, and therefore violates the cable companies’ copyright.¹⁶ This decision was partially founded in the Court’s determination that when their “commercial objectives[s]” are essentially the same, technological differences between Aereo and the cable companies becomes irrelevant.¹⁷ The majority deliberately moved away from a technology-based infringement analysis, noting that the subscribers to Aereo’s service were indifferent to such distinctions and, at the end of the day, were able to view infringing videos from their personal computers.¹⁸

This Note argues that, in an ever-changing technological landscape, strictly adhering to the language and definitions of the Copyright Act in cases involving emerging technologies may contravene the purpose and intent of copyright law. It further argues that *Aereo*’s commercial interest rationale paves the way for a new approach to technologically complex copyright cases. Part I of this Note begins with an overview of copyright law, followed by a brief history of the Internet and the World Wide Web, and provides an explanation of how Web pages are created and how they interact and communicate with other Web pages. Part I concludes with an overview of case law from the U.S. Courts of Appeals for the Ninth and Seventh Circuits dealing with in-line linking and copyright

10. *Id.* at 1160–61.

11. *Id.* at 1159–60 (upholding the District Court’s decision).

12. *Id.* at 1160–61.

13. *See id.*

14. 134 S. Ct. 2498 (2014).

15. *Id.* at 2503.

16. *Id.* at 2511 (alteration in original) (internal quotations omitted).

17. *Id.* at 2508.

18. *See id.* at 2507–08.

infringement, revealing a tendency of courts to use technological distinctions to find that in-line linking is not an infringing use of copyrighted content on the Internet. Part II analyzes the recent Supreme Court decision in *Aereo*, with emphasis on the majority's "commercial interest" discussion. Finally, Part III of this Note will show how the rationale in *Aereo* seamlessly translates to in-line linking of Web content, and Part IV concludes that an application of the "commercial interest" analysis could change the outcome of future copyright infringement cases involving in-line linking of creative content.

I. THE AMORPHOUS LANDSCAPE OF TECHNOLOGY AND COPYRIGHT LAW

A. *A Legal Tradition: The Basics of Copyright Doctrine*

Article I, section 8, clause 8 of the United States Constitution grants Congress the power "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."¹⁹ Accordingly, Congress enacted the Copyright Act to incentivize creativity and the sharing of knowledge.²⁰ The Copyright Act gives authors of creative original works²¹ five "exclusive rights" to reproduce, distribute, prepare derivative works, publicly perform,²² and publicly display the original work.²³ An original work is "created" once it is "fixed" in some tangible form,²⁴ such that it may be "perceived, reproduced, or otherwise communicated for a period of more than transitory duration."²⁵ An intrusion on any one of the author's five exclusive rights is infringement.²⁶

A person who infringes on another's copyright need not have intended to do so; rather, he need only have in fact copied the original work.²⁷ The Act defines "copies" of original works as "material objects . . . in which a work is fixed . . . and from which the work can be perceived, reproduced, or otherwise communicated."²⁸ On the other hand, a "derivative work" is not an exact copy

19. U.S. CONST. art. I, § 8, cl. 8.

20. See *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 156 (1975).

21. The bar measuring creativity of a work is "extremely low" and allows most creative works to qualify for copyright protections as long as they "possess[] at least some minimal degree of creativity." See *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345 (1991).

22. 17 U.S.C. § 101 (2012). The Copyright Act states that "perform" means to "render" a work "either directly or by means of any device or process," or to show an audiovisual work's "images in any sequence or to make the sounds accompanying it audible." *Id.* To perform "publicly" refers to doing so anywhere that is "open to the public" or where "a substantial number of persons outside of a normal circle of a family and its social acquaintances is gathered." *Id.*

23. 17 U.S.C. § 106 (2012).

24. *Id.*

25. *Id.*

26. *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 433 (1984).

27. *Carter v. Haw. Transp. Co.*, 201 F. Supp. 301, 302 (D. Haw. 1961).

28. 17 U.S.C. § 101 (2012).

of an original work, but rather a copy consisting of “editorial revisions, annotations, elaborations, or other modifications which, as a whole, represent an original work of authorship.”²⁹ A good example of a derivative work is a motion picture that is based on a copyrighted book.

A party proves infringement by showing, first, that he owns the copyright to the work in question and, second, that the defendant has copied the work in violation of the copyright.³⁰ In practice, a plaintiff proves copying by showing that the defendant’s work bears “substantial similarity” to the original and that the defendant had access to the original.³¹ The determination of “substantial similarity” between an original and alleged copy is ascertained by the “‘ordinary observer’ test,” that is, “whether an average lay observer would recognize the alleged copy as having been appropriated from the copyrighted work.”³² If the defendant has indeed copied the plaintiff’s work, the investigation’s next step is to decide whether the copying was an impermissible appropriation.³³ Again, the test to determine whether the copy “reach[es] the point of ‘unlawful appropriation,’ or the copying of the protected expression itself,” and thus infringement, is a question for the lay observer.³⁴

When third parties are involved in infringing activities, particularly in an Internet setting, parties who have not directly infringed on an author’s copyright may nonetheless be liable as indirect infringers.³⁵ An indirect, or contributory infringer is one who has control over a third party’s use of copyrighted materials and fails to regulate direct infringement by the third parties.³⁶ To prove contributory infringement, a claimant must show that the contributory infringer “‘kn[ew] or ha[d] reason to know’ of direct infringement,” and somehow “‘encourage[d] or assist[ed]” the infringement.”³⁷ Similarly, entities in a position

29. *Id.*

30. *Ferguson v. NBC*, 584 F.2d 111, 113 (5th Cir. 1978).

31. *See Novelty Textile Mills, Inc. v. Joan Fabrics Corp.*, 558 F.2d 1090, 1092 (2d Cir. 1977) (citing *Arnstein v. Porter*, 154 F.2d 464, 468 (2d Cir. 1946); *Whitney v. Ross Jungnickel, Inc.*, 179 F. Supp. 751, 753 (S.D.N.Y. 1960) (“[I]t is virtually impossible to adduce direct proof of copying Evidence of copying must necessarily be circumstantial and is ordinarily based on proof of access and similarity.”)).

32. *Ideal Toy Corp. v. Fab-Lu Ltd.*, 360 F.2d 1021, 1022–23 (2d Cir. 1966) (citing *Comptone Co. v. Rayex Corp.*, 251 F.2d 487, 488 (2d Cir. 1958)).

33. *See Arnstein*, 154 F.2d at 468 (noting the distinction of illegal copying).

34. *See Sid & Marty Krofft Television Prods., Inc. v. McDonald’s Corp.*, 562 F.2d 1157, 1164–65 (9th Cir. 1977) *superseded by statute on other grounds*, 17 U.S.C. § 504(b), *as recognized in Segal v. Rogue Pictures*, 544 F. App’x 769, 770 (9th Cir. 2013).

35. *See Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913, 928, 941 (2005) (defining contributory and vicarious liability).

36. *See Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 439 (1984) (determining Sony not liable for contributory infringement despite the fact that Sony manufactured a VCR recorder and knew it could be used to record copyrighted movies and programs without Universal’s permission).

37. *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1019–20 (9th Cir. 2001).

to both supervise a third party's infringement and to directly profit from the infringement will, absent any viable defense, be held vicariously liable for the impermissible use of the work.³⁸

The Copyright Act provides for various affirmative defenses to infringement, including the fair use doctrine.³⁹ The fair use defense is designed to “balance First Amendment concerns with the protections otherwise afforded authors by the Copyright Act.”⁴⁰ Section 107 states that unauthorized use of copyrighted material for “criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research” may constitute fair use.⁴¹ In deciding whether a defendant's infringing use is fair, courts must balance four factors: “(1) the purpose and character of the use . . . ; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work.”⁴² In other words, the fair use defense is always assessed on a case-by-case basis.

B. Contemporary Developments and Universal Connectivity

Since its inception, the Internet has, by its very nature, represented connectivity and innovation.⁴³ Communications via the Internet consisted of

38. *Id.* at 1022. The Digital Millennium Copyright Act generally exempts Internet service providers from contributory or vicarious liability. See 17 U.S.C. § 512(a), (c) (2012); see, e.g., *Napster*, 239 F.3d at 1025 (discussing the Digital Millennium Copyright Act).

39. See 17 U.S.C. § 107 (2012).

40. *Latimer v. Roaring Toyz, Inc.*, 601 F.3d 1224, 1238 (11th Cir. 2010).

41. 17 U.S.C. § 107. Courts have made clear that even a use that falls within one of the enumerated categories in Section 107 is not automatically fair use. See Douglas L. Rogers, *Increasing Access to Knowledge Through Fair Use—Analyzing The Google Litigation to Unleash Developing Countries*, 10 TUL. J. TECH. & INTELL. PROP. 1, 24 n.93 (2007). Courts utilize the four-factor test when determining fair use. See *Harper & Row Publishers, Inc. v. Nation Enter.*, 471 U.S. 539, 560–61 (1985) (applying the four fair-use factors “identified by Congress as especially relevant in determining whether the use was fair”).

42. 17 U.S.C. § 107.

43. See RON WHITE, HOW COMPUTERS WORK 309–11 (Todd Brakke et al. eds., 9th ed. 2010). The Internet was the product of a government project initiated by President Eisenhower in 1958 called the Advanced Research Projects Agency (ARPA). *Id.* at 309; see also *ARPA-DARPA: The Name Chronicles*, DARPA, http://www.darpa.mil/About/History/ARPA-DARPA_The_Name_Chronicles.aspx (last visited Apr. 4, 2015). The Internet began with the first computer network, ARPANET (Advanced Projects Research Agency Network), consisting of four universities collaborating on research into the development of a worldwide Web system. *Imagining the Internet: A History and Forecast*, ELON U. SCH. COMM., <http://www.elon.edu/e-web/predictions/about.xhtml> (last visited Apr. 4, 2015). ARPA's initial focus, American space travel, was eventually turned over to NASA and ARPA became a sponsor for university research projects. WHITE, *supra*, at 309. ARPA researchers developed ARPAnet, a network connecting computers at discrete university locations, to facilitate communications and information sharing among the researchers. *Id.* at 310. Thus, the Internet was born, and in 1991 the National Science Foundation opened the Internet to the public. See *id.* at 311.

text only until Tim Berners-Lee invented the World Wide Web in 1989⁴⁴ and the Internet expanded into a multi-media platform that supports graphics, sound, and video.⁴⁵ Since 1991, the Internet has stretched worldwide, creating a “network with more than 100 million users that are linked for the exchange of data, news, conversation, and commerce.”⁴⁶

Berners-Lee designed the World Wide Web as a “universal” platform for information sharing such that users can “link to absolutely any piece of information.”⁴⁷ Berners-Lee has said “universality is essential to the Web: it loses [sic] its power if there are certain types of things to which you can’t link.”⁴⁸

Today, there are so many people using the Internet that researchers can only estimate as to the exact number.⁴⁹ Within the Web framework there are

44. *Tim Berners-Lee*, W3, <http://www.w3.org/People/Berners-Lee/> (last visited Apr. 4, 2015). Tim Berners-Lee is an English computer scientist and is the Director of the World Wide Web Consortium, “a Web standards organization founded in 1994 which develops interoperable technologies (specifications, guidelines, software, and tools) to lead the Web to its full potential.” *Id.*

45. WHITE, *supra* note 43, at 311.

46. *Id.* at 312; *see also* Religious Tech. Ctr. v. Netcom On-Line Commc’n Servs., Inc., 923 F. Supp. 1231, 1238 n.1 (N.D. Cal. 1995) (describing the Internet as a “network of networks” for global communications). The International Telecommunication Union predicts that “by [the] end [of] 2014, there will be almost 3 billion Internet users.” Press Release, ITU, *ITU Releases 2014 ICT Figures*, ITU (May 5, 2014), http://www.itu.int/net/pressoffice/press_releases/2014/23.aspx#VGS7EvTF8uo.

47. Tim Berners-Lee, *Realising the Full Potential of the Web*, W3 (Dec. 3, 1997), <http://www.w3.org/1998/02/Potential.html>. According to Berners-Lee, “universality” means providing access to facts and science, constructing a forum for collaboration, and sharing a medium for art and literature and opening works to discussion and subjective analysis. *Id.* In Berners-Lee’s opinion, anything and everything should be accessible. *Id.*

48. *Id.* Berners-Lee noted:

For [the Web] to work, it had to be not only easy to “browse”, but also easy to express oneself. In a world of people and information, the people and information should be in some kind of equilibrium. Anything in the Web can be quickly learned by a person and any knowledge you see as being missing from the Web can be quickly added. The Web should be a medium for the communication between people: communication through shared knowledge. For this to work, the computers, networks, operating systems and commands have to become invisible, and leave us with an intuitive interface as directly as possible to the information.

Id.

49. *Imagining the Internet*, *supra* note 43. The number of Internet users has grown exponentially from approximately forty-five million users in 1996 to a number unable to accurately be calculated. *Id.* For any task not intuitive to the average user, simple Google searches return practically infinite websites, blogs, and discussion forums that provide instructions on anything from troubleshooting tips to instructions to build a personal website. *See, e.g.*, Philip Bloom, *Uploading Videos to the Internet: Six Easy-to-Follow Steps*, PROF. PHOTOGRAPHER MAG. (Mar. 4, 2010, 11:28 AM), <http://www.ppmag.com/web-exclusives/2010/03/video-to-internet.html> (explaining how to upload a video file to the Internet in just “Six Easy-to-Follow Steps,” noting that, “[i]n general, uploading videos to websites is a fairly easy process”).

components that support the use and demand for the large amounts of data associated with any graphic or video file.⁵⁰

The Web consists of Internet servers that store and supply files to clients and can link to other servers.⁵¹ Servers can read Hyper Text Markup Language, or HTML, documents and translate them into a Web page.⁵² HTML is a series of “tags,” or keywords, designating elements contained on the Web page, such as text, images, and links.⁵³ A Web browser that resides on a personal computer,⁵⁴ such as Safari or Google Chrome, interprets the HTML tags and displays the designated content as specified by the HTML code, generating the page seen by the end user on his computer screen.⁵⁵

HTML supports the use of links, or connections, between Web pages.⁵⁶ Most users interact with hyperlinks, which might be a short phrase or icon that “conceals” a Web address to another Web page.⁵⁷ A user may click on these embedded links, or “pointer[s],” and be instantly taken from one website to another.⁵⁸ These links initiate a “source” anchor that connects to a “destination” anchor, “which may be any Web resource (e.g., an image, a video clip, a sound bite, a program, an HTML document, an element within an HTML document, etc.)”⁵⁹ Linking facilitates much of the functionality the Internet provides, including providing easy access, efficient research capabilities, and extensive resources.⁶⁰ For such a “simple” function, “the link has been one of the primary forces driving the success of the Web.”⁶¹

Links that simply take a user from one Web page to another are “direct links.”⁶² The utility and the “power of the Web stems from the ability of a link

50. WHITE, *supra* note 43, at 361. The volume of data is managed by bandwidth, or the “capacity of a channel to carry information.” *Id.* at 311. In other words, bandwidth determines how much data can be transmitted at a given time and thus, wider bandwidths facilitate faster data communication. *See id.*

51. *Id.* at 313.

52. *See infra* notes 56–61 and accompanying text (defining HTML and the dynamic between HTML code and Web pages).

53. *See* WHITE, *supra* note 43, at 370 (explaining that “HTML is a collection of codes enclosed in angle brackets — <> — that control the formatting of text in the file”).

54. *Id.* at 311.

55. *HTML Introduction*, W3SCHOOLS.COM, http://www.w3schools.com/html/html_intro.asp (last visited Apr. 4, 2015).

56. *Links*, W3, <http://www.w3.org/TR/REC-html40/struct/links.html> (last visited Apr. 4, 2015).

57. WHITE, *supra* note 43, at 368.

58. *Hypertext Linking and Copyright Issues*, AM. LIBR. ASS’N, <http://www.ala.org/advocacy/copyright/copyrightarticle/hypertextlinking> (last visited Apr. 4, 2015).

59. *Links*, *supra* note 56.

60. *Hypertext Linking and Copyright Issues*, *supra* note 58.

61. *Links*, *supra* note 56.

62. *Hypertext Linking and Copyright Issues*, *supra* note 58.

to point to any document, regardless of its status or physical location.”⁶³ A website consists of any number of Web pages including the website’s “home page,” which a visitor generally views first prior to clicking on links to navigate to other pages within the website.⁶⁴ Although it is efficient and customary to have on one’s Web page, direct linking to other websites can be a controversial practice if such a use encroaches upon the boundaries of copyright law.⁶⁵

Despite links having proven to be a driving force behind the accessibility of the Web,⁶⁶ problems have arisen with respect to certain types of linking practices. First, website owners have complained about a practice called “deep linking,” in which a hyperlink allows users to bypass a website’s home page and be taken directly to a destination Web page within the website.⁶⁷ This practice concerns website publishers who primarily place advertisements on the homepage because visitors generally access a website’s home page first.⁶⁸ When a third party posts a hyperlink to an interior page of the source website, visitors can access sought-after information without ever visiting the homepage, denying the owner of the home page’s potential ad revenue.⁶⁹ Over the past fifteen years, United States courts have considered arguments concerning the legality of deep linking, but so far no such ruling has been made.⁷⁰

The permissibility of deep linking was considered in *Ticketmaster Corp. v. Tickets.com, Inc.*,⁷¹ in which Tickets.com provided links on its website directing visitors to a particular interior page on Ticketmaster’s website, bypassing Ticketmaster’s homepage.⁷² Ticketmaster alleged copyright infringement by

63. *ACLU v. Reno*, 929 F. Supp. 824, 837 (E.D. Pa. 1996), *aff’d*, 521 U.S. 844 (1997).

64. See Brian D. Wassom, *Copyright Implications of “Unconventional Linking” on the World Wide Web: Framing, Deep Linking and Inlining*, 49 CASE W. RES. L. REV. 181, 192 (1998) (describing the home page as the “front door” to a website—noting that the home page generally explains the site’s purpose and displays links that give a user an idea of the site’s “navigational structure”).

65. See Mike Masnick, *Is Inline Linking to an Image Copyright Infringement?*, TECHDIRT (Jan. 6, 2010, 7:28 AM), <https://www.techdirt.com/articles/20100105/0109067611.shtml>; Foye Robinson, *How to Create a Direct Link*, EHOW, http://www.ehow.com/how_5340920_create-direct.html (last visited Apr. 4, 2015).

66. *Links*, *supra* note 56.

67. See Wassom, *supra* note 64, at 192–93 (providing a background on deep linking).

68. See *Ticketmaster Corp. v. Tickets.Com, Inc.*, CV 99-76542, 2000 WL 525390, at *2, *4 (C.D. Cal. Mar. 27, 2000).

69. See Wassom, *supra* note 64, at 192–93.

70. See, e.g., *Perfect 10, Inc. v. Amazon.com, Inc.*, 508 F.3d 1146, 1156 (9th Cir. 2007); *Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 816 (9th Cir. 2003); *Ticketmaster Corp.*, 2000 WL 525390, at *2, *4.

71. CV 99-76542, 2000 WL 525390, (C.D. Cal. Mar. 27, 2000).

72. *Id.* at *1. Tickets.com sold some tickets from its site, but primarily provided information to visitors about where and how they might purchase tickets along with direct links to interior pages on Ticketmaster’s website. *Id.*

Tickets.com.⁷³ The court held that deep linking is not inherently a copyright violation because no actual copying of information occurs.⁷⁴ Rather, the visitor that clicks on the link is simply transferred to the source site and “there is no deception in what is happening.”⁷⁵

Another practice that has raised serious concern is “in-line linking,” in which media from a source website is displayed on, and appears as part of, the linking website.⁷⁶ Instead of taking the user to the full destination Web page as a direct link would, an in-line link facilitates a connection between the linking website and the source website so that the user has full access to the source website’s media, without ever leaving the linking website.⁷⁷ In fact, the user generally has no idea the content does not actually reside on the linking site.⁷⁸

Not all in-line linking is devious,⁷⁹ but it undeniably has the capability to harm a source website’s commercial interests in its content, especially when the content is linked without the source’s permission.⁸⁰ Not only might the linking website use the source’s potentially creative works without credit or permission, but also the linking website may provide such unauthorized access using the bandwidth paid for by the source site while denying the source site the commercial benefits of those users.⁸¹ Outside of agreements between

73. *Id.*

74. *See id.* at *2.

75. *Id.*

76. *See Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 816 (9th Cir. 2003); Mark Sableman, *Link Law Revisited: Internet Linking Law at Five Years*, 16 BERKELEY TECH. L.J. 1273, 1297 (2001) (stating that the practice of in-line linking “[a]t the very least . . . seems sneaky,” and comparing it to painting a picture of a museum gallery, in effect, “importing” the same visual experience onto the copier’s canvas).

77. *See Sableman, supra* note 76, at 1297.

78. *Id.*

79. Zi Chu & Haining Wang, *An Investigation of Hotlinking and Its Countermeasures*, 34 COMPUTER COMM. 577, 577 (May 25, 2010), available at <http://www.cs.wm.edu/~hnw/paper/comcom11.pdf> (describing a few benefits of in-line linking). Where both the source site and the linking site have approved the in-line linking of the source site’s content or made some sort of business arrangement, the linking is “benign.” *Id.* For instance, “a site may include some ad images provided by an advertisement syndicator to make advertising revenue,” and “[i]t does not need to host any ad images by itself, but link them from the syndicator’s server.” *Id.*

80. The Web development community regards this behavior as “unethical.” *See id.* (describing Web developers who engage in unauthorized in-line linking as “lazy” and “unprofessional”); *see also* Matthew Scherb, *Free Content’s Future: Advertising, Technology, and Copyright*, 98 NW. U. L. REV. 1787, 1794 (2004) (observing the tension between content distributors’ commercial interest in drawing Internet traffic to their websites and the interactive nature of the Internet that allows consumers to “easily manipulate content to avoid the very advertisements supporting that content”).

81. Chu & Wang, *supra* note 79, at 577; *see* Brad M. Scheller, *Hey, Keep Your Links to Yourself! Legal Challenges to Thumbnails and Inline Linking on the Web and the Potential Implications of a First Impression Decision in Kelly v. Arriba Soft Corp.*, 10 VILL. SPORTS & ENT. L.J. 415, 433 (2003) (noting that the massive growth in Internet use “has created an influx of people

companies,⁸² scholars see potential for copyright issues in a technology that “permit[s] a web publisher . . . to associate itself with the content of another party and to create new adaptive web displays combining content from both sites.”⁸³

C. The “Server Test”: Courts Allow Infringing Behavior to Slip Through a Technological Loophole

Several courts have examined copyright claims stemming from in-line linking. This issue was first considered by the Ninth Circuit in *Kelly v. Arriba Soft Corp.*⁸⁴ Kelly was a professional photographer who displayed and uploaded some of his photographs to his own website, as well as to others through licensing agreements.⁸⁵ Arriba operated a search engine that produced results in

using the Web for commercial profit through advertisements and self-promotion,” and discussing how website owners and advertisers are frustrated by the “multiple linking techniques that allow users to avoid Web site advertisements and, in turn, hinder commercial exposure and a Web page owner’s ability to charge for advertising”).

82. Amazon and Google have an agreement by which Amazon sends customer search queries to Google, who actually performs the search and generates results that are in-line-linked to Amazon’s Web page. *Perfect 10, Inc. v. Amazon.com, Inc.*, 508 F.3d 1146, 1157 (9th Cir. 2007). To the Amazon customer the results appear to come directly from Amazon, as with any in-line-linked media, but Google is fully aware of the linking and gets paid for the service it provides, per the agreement. *See id.*

83. Sableman, *supra* note 76, at 1297. Similar copyright concerns are associated with the practice of “framing.” *See Linking, Framing, Meta Tags, and Caching*, HARV. L., <http://cyber.law.harvard.edu/property00/metatags/main.html> (last visited Apr. 4, 2015) (discussing how framing may “undermine the rights of Web site owners”). Framing creates “independently scrollable” structures within a Web page within which anything from a single graphic to an entire external Web page may be displayed. Sableman, *supra* note 76, at 1277. Concerns with framing were brought to bear in 1997 when a number of news publishers, including The Washington Post, sued Total News, a website that aggregates news from different sources and frames the articles on its own website. *Id.* at 1299. The Total News site today is simply an aggregation of text hyperlinks to news articles. *See* TOTAL NEWS, <http://www.totalnews.com/> (last visited Apr. 4, 2015). The plaintiffs’ concerns were, first, that Total News’s frames provided select parts of the linked Web pages rather than the entire page the user would see if directly linked to the publishers’ pages, and second, that Total News’s frames cut out the publishers’ banner advertisements while Total News’s advertisements surrounded the frames. Sableman, *supra* note 76, at 1273. The case settled on the condition that Total News refrain from selectively framing, and rather link to whole Web pages instead. *Id.* at 1300. Another framing case, *Futuredontics, Inc. v. Applied Anagramics, Inc.*, No. CV 97-6991, 1998 WL 132922 (C.D. Cal. Nov. 24, 1997), actually proceeded to trial, but the California District Court rejected the plaintiff’s arguments that defendant’s framing practices were confusing and deceptive because it was unable to identify an actual harm to plaintiff. *Id.* at *1. Neither case produced particularly helpful guidelines in assessing problems with unauthorized framing, but both certainly vindicated and exacerbated website owners’ concerns regarding the potential violations of their commercial interests.

84. 336 F.3d 811, 817 (9th Cir. 2003).

85. *Id.* at 815.

the form of thumbnail images,⁸⁶ which in-line linked to full-sized images on Kelly's website, while still displaying Arriba's logo and advertising.⁸⁷ Kelly sued, arguing that Arriba's use of full-sized and thumbnail images owned by Kelly was infringement.⁸⁸

The Ninth Circuit held that the thumbnail images were "transformative," and therefore constituted fair use of Kelly's copyrighted works.⁸⁹ The court reached this conclusion despite noting, as part of its fair use analysis, that Kelly had a legitimate interest in drawing visitors to his website—both to sell his own products and to generate advertising revenue.⁹⁰ This holding hinged on the fact that the thumbnails were much smaller and of lower quality than the full-sized originals, which the court believed lessened the probability of viewers copying the thumbnails and using them for display or resale.⁹¹ However, the Ninth Circuit ultimately punted the infringement analysis with respect to the full-sized images on remand without any recommendations on the issue.⁹²

In *Perfect 10, Inc. v. Amazon*,⁹³ the Ninth Circuit adopted the "server test" to address Google's image search engine, which utilized in-line linking.⁹⁴ Under the server test, if a "computer owner . . . stores an image as electronic information and serves that electronic information directly to the user," he infringes on the image owner's copyright because he "displays" it within the meaning of the Copyright Act.⁹⁵ Therefore, whether or not a person has

86. See *Kelly v. Arriba Soft Corp.*, 280 F.3d 934, 938 (9th Cir. 2002), *withdrawn, and rev'd in part on other grounds*, 336 F.3d 811 (9th Cir. 2003). The software underlying the search engine would search the Web for images, download full-sized copies onto Arriba's server, and "generate smaller, lower-resolution thumbnails of the images." *Id.* at 938.

87. See *id.* at 938–39.

88. *Id.* at 938.

89. *Id.* at 943–44.

90. See *id.*

91. *Id.* at 944.

92. See *Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 822 (9th Cir. 2003). The Ninth Circuit stated that the District Court improperly addressed the infringement issues with respect to the full-sized images because neither party requested summary judgment as to the full-sized images. *Id.* The fair use holding regarding Arriba's use of the thumbnail images was affirmed on appeal. *Id.* at 815.

93. 508 F.3d 1146 (9th Cir. 2007).

94. *Id.* at 1159. Google Image Search produces results to user queries in the form of small, low-resolution thumbnail images. *Id.* at 1155. Google's HTML code contains instructions that locate the image source, download the full-sized image, and display it framed within a Google Web page. *Id.* Google never saves the images, it in-line links to the images saved on the source's server. *Id.* at 1155 n.2. Perfect 10 sells photographs of nude models to customers who subscribe to its website and pay a monthly fee for access to the website. *Id.* at 1157. From May 2001 to 2005, Perfect 10 sent repeated takedown notices to Google warning of Google's infringing use of Perfect 10's images through the image search engine. *Id.* Perfect 10 filed a claim for copyright infringement against Google in 2004, seeking an injunction to prevent Google from using Perfect 10 images in its thumbnail search results and in-line linking to the full versions. *Id.*

95. *Id.* at 1159–60.

infringed on another's exclusive display rights hinges on if and where data is stored.⁹⁶ The manner of sharing the data—such as in-line linking or framing—bears no weight on the server test analysis.⁹⁷ The court decided that for copyright purposes, a digital photo is “fixed in a tangible medium of expression,” and any time the photo is stored on a server, a disk, or any storage mechanism, such action constitutes making a “copy.”⁹⁸

In carrying out the infringement analysis, the *Amazon* court continued to analyze Google's interactions⁹⁹ with Perfect 10's images in terms of the technological interactions with the photos.¹⁰⁰ The court found that although Google in-line linked to and displayed Perfect 10's copyrighted full-sized images, Google nonetheless did not infringe because it did not store those images on Google's servers and thus never made a “copy” within the meaning of the Copyright Act.¹⁰¹ The court explained that Google simply “provides HTML instructions that direct a user's browser to a website publisher's computer that stores the full-size photographic image,” and HTML code, the court said, does not constitute a “copy.”¹⁰²

In *Flava Works, Inc. v. Gunter*,¹⁰³ the Seventh Circuit examined a claim by Flava Works¹⁰⁴—a website that provides access to pornographic videos behind a “pay wall.”¹⁰⁵ Specifically, the Seventh Circuit considered whether the in-line linking of Flava's videos by the social bookmarking site myVidster¹⁰⁶ infringed

96. *Id.* at 1159.

97. *Id.*

98. *Id.* at 1160 (internal quotations omitted); *see also* MAI Sys. Corp. v. Peak Computer, Inc., 991 F.2d 511, 518 (9th Cir. 1993) (holding that saving a program to a computer's memory constituted the making of a “copy” of the program because the saved version could be “perceived, reproduced, or otherwise communicated,” and thus was “fixed” within the meaning of the Copyright Act).

99. Both *Google* and *Amazon* addressed the same activity, but *Amazon* was implicated under its agreement with *Google*. *See supra* note 82 (describing the agreement).

100. *See Amazon.com*, 508 F.3d at 1160–61 (discussing the effect of storing an image).

101. *See id.* The District Court for the Northern District of California adopted the rule established in *Amazon.com* that “in-line linking to a full-size image does not constitute direct infringement,” to justify its finding that a search engine's in-line linking to full-sized images owned by Perfect 10 did not infringe on Perfect 10's exclusive right to display the images. *Perfect 10, Inc. v. Yandex N.V.*, 962 F. Supp. 2d 1146, 1155 (N.D. Cal. 2013).

102. *See Amazon.com*, 508 F.3d at 1161. The Court reasoned that *Google* merely facilitated a user's ability to display Perfect 10's images by providing HTML instructions to the user's browser and that the browser in turn “interact[ed]” with the server that stored the images. *Id.*

103. 689 F.3d 754 (7th Cir. 2012).

104. *Flava Works, Inc.* was a company that produced and distributed pornographic videos to host websites. *See id.* at 755.

105. *Id.* at 756. Viewers pay a fee in advance before they are given access to the videos and “must agree not to copy, transmit, sell, etc. the video, although *Flava's* terms of use permit the user to download it to his computer for his ‘personal, noncommercial use’—only.” *Id.* at 756.

106. *See id.* at 756–57. myVidster provides a forum for visitors to submit the embed codes for videos. *Id.* at 756. Using the embed code, myVidster designs a page to display the video that

upon Flava's copyright under a contributory infringement theory.¹⁰⁷ The court noted the negative impact myVidster's website had on Flava's business by "encouraging its subscribers to circumvent Flava's pay wall."¹⁰⁸ However, the court was not persuaded that this facilitation amounted to infringement since the visitors of myVidster bypassing Flava's pay wall are "no more of a copyright infringer than if [they] had snuck into a movie theater and watched a copyrighted movie without buying a ticket."¹⁰⁹ Accordingly, the Seventh Circuit held that myVidster did not directly infringe on Flava's reproduction and distribution rights under the Copyright Act, nor did it induce such infringement.¹¹⁰ The court based its finding in part on a technology-based analysis similar to the Ninth Circuit's server test.¹¹¹ The court held that had myVidster still offered its "premium membership," this would have altered the court's analysis and resulted in a finding for direct infringement because the membership offered a "backup service," which the court reasoned constituted making copies of videos in violation of Flava's exclusive rights to do so.¹¹² Because myVidster discontinued the backup service and therefore no longer made "copies" of videos, myVidster was not directly infringing on Flava's exclusive rights.¹¹³

The *Flava* court encountered an issue similar to one that would present itself to the *Aereo* Court: whether a website that streams copyrighted videos online publicly performs them when the audience downloads and views the videos at discreet times and places.¹¹⁴ The court considered two interpretations of "performance":¹¹⁵ a performance could occur when a viewer uploads a video,

visitors access by clicking on a corresponding thumbnail image. *Id.* Clicking on the thumbnail opens the video page that is streaming the video from the source website's server, but appears in a myVidster window with advertising that finances the myVidster site and for all intents and purposes seems to be streaming from myVidster's site. *See id.* The code contained within the thumbnail image provides both the video's address and playback instructions. *Id.* Flava Works' customers who paid for private use of the videos and then provided the embed code to myVidster were creating unauthorized copies of Flava Works's videos and therefore infringing on Flava Works's copyright. *Id.* at 757.

107. *See id.* at 758.

108. *Id.* at 757.

109. *Id.* at 758 ("The facilitator of conduct that doesn't infringe copyright is not a contributory infringer.").

110. *Id.* at 761–62.

111. *See id.* at 760–62; *see supra* notes 95–98 and accompanying text.

112. *Flava Works*, 689 F.3d at 762–63. The court indicated that Flava might still have been entitled to injunctive relief, even though myVidster no longer offered the subscription service and thus was no longer "copying" videos. *Id.* at 762.

113. *Id.* at 762–63.

114. *Id.* at 761. The Seventh Circuit suggests it would be helpful in this case if Congress established a more precise definition of public performance under the Copyright Act, which could be indicative of the Copyright Act's weakening efficacy in deciding copyright issues in a rapidly evolving technological landscape. *Id.*; *see infra* note 193 and accompanying text.

115. *Flava Works*, 689 F.3d at 760–61.

thus making himself “capable of viewing it” and placing greater responsibility on the third-party viewer; or a performance could occur when a viewer actually plays the video, thus placing greater liability on the hosting party.¹¹⁶ The court seemed hesitant to proscribe a definition that would make myVidster liable because technically, myVidster never interacted with the image data.¹¹⁷ Ultimately, the court found that myVidster did not encourage such infringement simply by hosting its website.¹¹⁸

II. *Aereo*: VIRTUALLY ABANDONING TECH-BASED INFRINGEMENT ANALYSIS

The Seventh and Ninth Circuits have steadfastly adhered to traditional infringement analysis, continually interpreting the language of the Copyright Act by the definitions set out in 1976.¹¹⁹ At that time, the public had not even heard of the Internet, and technologies such as tablets, smartphones, and wireless networks were certainly not fixtures in our daily lives.¹²⁰

In the recent *Aereo*¹²¹ decision, the Supreme Court grappled with yet another new technology involving the Internet.¹²² The *Aereo* opinion notably diverts from the traditional copyright analysis used in the linking opinions by the Seventh and Ninth Circuits and instead looks at the purpose of the Copyright Act as the legal system is forced to deal with new and developing technologies,¹²³ explicitly acknowledging the vastly changed and uncharted technological landscape of the twenty-first century.¹²⁴ The Court dispensed with a high-level, technical evaluation of *Aereo*'s video streaming technology in

116. *Id.*

117. *See id.* at 761. The Seventh Circuit grasped for a comparable fact pattern to provide a definition for public performance, looking to *Fonovisa, Inc. v. Cherry Auction, Inc.*, 76 F.3d 259 (9th Cir. 1996). *Fonovisa* was a vicarious infringement case that determined the pirating of music by the plaintiff who later sold recordings of said music in bulk that were then performed by the purchasers, an interaction called a “swap meet,” was a performance. *See Flava*, 689 F.3d at 761. Finding the factual comparison to *Fonovisa* too attenuated, the *Flava* Court then examined *In re Aimster Copyright Litigation*, 334 F.3d 643 (7th Cir. 2003), another Seventh Circuit case finding infringement where Aimster software encouraged individuals to share copyrighted music over the Internet in an “online equivalent of a swap meet.” *Flava*, 689 F.3d at 762. The *Flava* Court ultimately held that because *Flava* was “not encouraging swapping” it did not “encourage[] infringement.” *Id.*

118. *See Flava Works*, 689 F.3d at 762.

119. *See id.* at 757–61; *Perfect 10, Inc. v. Amazon.com, Inc.*, 508 F.3d 1146, 1160–61 (9th Cir. 2007).

120. *See Imagining the Internet*, *supra* note 43 (discussing the substantial changes the Internet has facilitated since the 1990s).

121. *American Broad. Cos. v. Aereo, Inc.*, 134 S. Ct. 2498 (2014).

122. *See id.* at 2503.

123. *See id.* at 2504–06 (discussing the history of the amendments to the Copyright Act in response to Court decisions and technological changes).

124. *Id.* at 2511 (“We cannot now answer more precisely how the Transmit Clause or other provisions of the Copyright Act will apply to technologies not before us.”).

favor of an assessment of the party's relationship with its commercial clients.¹²⁵ The Court noted that, regardless of what might be going on between computers and networks behind the scenes, Aereo's service functioned much like the community antenna television systems that the Copyright Act targeted with its 1976 changes.¹²⁶ In making this distinction, the Court shifted the focus from the technology facilitating infringing activities to the harm to the copyright owner.¹²⁷

A. *The Technology Bringing Cable to a Computer Near You*

Aereo's online service platform made available live broadcast television programming—without a license from the copyright holders—with only a few seconds delay behind the live broadcast to its subscribers.¹²⁸ The question before the Supreme Court was whether Aereo infringed on American Broadcasting Companies's (ABC) exclusive right to publicly perform its programs under the Transmit Clause of the Copyright Act¹²⁹ by offering a “technologically complex” subscription service that streamed ABC's programs to individual user's computers almost simultaneously with ABC's airing.¹³⁰

The *Aereo* opinion commenced in a similar fashion to that of the Seventh and Ninth Circuit opinions described above, unfolding the specific technology by which Aereo captured ABC's broadcasts, and then streamed the broadcasts to subscribers over the Internet.¹³¹ The Court took note of the three entities in play: ABC's “over-the-air” broadcasts, Aereo's technology housed in a warehouse, and the subscriber at home on his personal computer.¹³² A subscriber, having

125. *See id.* at 2506–08.

126. *Id.* at 2511.

127. *Id.* at 2506–07.

128. *Id.* at 2503. Subscribers pay Aereo a monthly fee for access to content to which Aereo “neither owns the copyright . . . nor holds a license from the copyright owners to perform those works publicly.” *Id.*

129. The Transmit Clause grants a copyright owner the exclusive right to publicly “transmit or otherwise communicate a performance” by any technological means “whether the members of the public capable of receiving the performance or display receive it in the same place or in separate places and at the same time or at different times.” 17 U.S.C. § 101 (2012).

130. *Aereo*, 134 S. Ct. at 2502–03. Thus, the Court placed great importance on the complexity of Aereo's technology as a determinative factor in whether Aereo was publicly performing ABC's copyrighted programs.

131. *Compare id.* (“Aereo's system is made up of servers, transcoders, and thousands of dime-sized antennas housed in a central warehouse.”), with *Flava Works, Inc. v. Gunter*, 689 F.3d 754, 756 (7th Cir. 2012) (describing “the embed code contain[ed] [in a] video's web address plus instructions for how to display the video” to allow the myVidster platform to “create[] a Web page that makes the video appear to be on myVidster's site”) and *Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 815 (9th Cir. 2003) (“To provide this service, Arriba developed a computer program that ‘crawls’ the Web looking for images to index. This crawler downloads full-sized copies of the images onto Arriba's server.”).

132. *Aereo*, 134 S. Ct. at 2503.

paid for a subscription, selected a show from a list of local programming on Aereo's website.¹³³ Aereo's server automatically responded to the subscriber's selection by selecting one of thousands of small antennae stored in its warehouse, which captured ABC's broadcast signal and converted it into data that can be streamed over the Internet to the subscriber's computer.¹³⁴ This data was then saved in a "subscriber-specific folder on Aereo's hard drive," and the subscriber could download the program right then or save it to watch later.¹³⁵

In addition to this tripartite analysis, the *Aereo* Court paid special attention to exactly where the data for a program, or rather where each copy of a given program, resides at every step of the process each time a subscriber selects a program.¹³⁶ Aereo, in its own argument, "emphasize[d]" that its technology designated personal copies of programs for each subscriber, even if more than one subscriber selected the same program.¹³⁷

B. *Fitting Streaming into a Pre-Internet Framework*

The main question before the Supreme Court in *Aereo* was whether Aereo simply acted as an equipment provider or whether, via its technology, Aereo publicly performed ABC's television programs within the meaning of the Transmit Clause of the Copyright Act.¹³⁸ The Transmit Clause defines a copyright holder's exclusive right to publicly perform a work as the right

to transmit or otherwise communicate a performance or display of the work . . . to the public, by means of any device or process, whether the members of the public capable of receiving the performance or display receive it in the same place or in separate places and at the same time or at different times.¹³⁹

The Transmit Clause represents Congress's solution to the Supreme Court's holdings in *Fortnightly Corp. v. United Artists Television, Inc.*¹⁴⁰ and

133. *Id.*

134. *Id.*

135. *Id.* A subscriber can stream a video from any wireless-enabled device—such as his personal computer, table, smartphone, etc.—and by extension can stream a video from virtually any location from which he has access to an Internet connection. *See id.*

136. *Id.* The Court even cites to A Dictionary of Computing for a definition of "streaming" in its discussion of how long it takes Aereo to deliver a full program to a subscriber and noting the almost-instant gratification for users who can view programs mere seconds after ABC broadcasts them. *Id.*

137. *Id.*

138. *See id.* at 2504.

139. 17 U.S.C. § 101 (2012).

140. 392 U.S. 390, 392–93, 402 (1968) (noting that the defendant's system, which utilized a system of antennae to transmit cable broadcasts to subscribing customers and had a license from plaintiff movie copyright holder to broadcast the movies, did not "perform" the movies within the meaning of the Copyright Act).

Teleprompter Corp. v. Columbia Broadcasting System Inc.,¹⁴¹ which both centered on the question of whether CATV providers¹⁴² publicly performed copyrighted cable programs by simply distributing the modified signals to the public.¹⁴³ The Transmit Clause dispenses with line drawing that distinguishes broadcaster functions from viewer functions and provides that, on either end, both parties perform.¹⁴⁴ The *Aereo* Court explained that by enacting the Transmit Clause, Congress “[brought] the activities of cable systems within the scope of the Copyright Act.”¹⁴⁵

Therefore, recognizing “that Aereo is not simply an equipment provider,” the Court categorized Aereo’s technology as “substantially similar to those of the CATV companies that Congress amended the Act to reach,” thus placing Aereo’s technology under the scrutiny of the Transmit Clause.¹⁴⁶

1. *Aereo Performs by Streaming*

In deciding whether Aereo “performs” ABC’s programs within the meaning of the Transmit Clause, the Court ultimately ignored the technological nuances between CATV systems and Aereo’s technology as a basis for deciding who or what “performs” ABC’s programs.¹⁴⁷ Instead, the Court considered the precise

141. 415 U.S. 394, 396–97, 407–409 (1974) (determining that the defendant’s antenna system, which transmitted copyrighted broadcast programs to separate television stations, did not “perform” under the Copyright Act).

142. CATV providers used systems consisting of antennae and cables to strengthen copyrighted broadcast signals, providing better quality versions of television programs to viewers in their homes. *See Aereo*, 134 S. Ct. at 2504.

143. *See id.* at 2505. The Court in each case applied a bright-line rule that distinguishes “broadcasters” from “viewers”—ultimately finding that the “reception and rechanneling” by CATV of cable broadcasts was akin to a viewer changing the channel on his television set. *Teleprompter*, 415 U.S. at 408–09. Thus, a CATV provider performed “essentially a viewer function,” did not perform the programs publicly, and therefore its use did not infringe. *Id.*

144. *See Aereo*, 134 S. Ct. at 2505–06 (citing H.R. REP. NO. 94-1476, 86–87 (1976)).

145. *Id.* at 2506.

146. *Id.* The majority dismissed the dissent’s contention that Aereo is not like a CATV provider because the cable systems transmit “constantly,” whereas Aereo’s technology “remains inert” until a subscriber makes a request. *Id.* at 2507.

147. *See id.* The majority again dismissed the dissent’s assertions that technological differences between Aereo’s system and CATV systems bring *Aereo* outside the realm of the Transmit Clause. *See id.* The dissent’s argument bears resemblance to the distinctions between broadcasters and viewers in *Fortnightly* and *Teleprompter* that were ultimately rejected by Congress when it drafted the Transmit Clause. *See id.* at 2513 (Scalia, J., dissenting) (comparing interactions between Aereo’s system and its subscribers to a photocopy machine and a customer in which “the customer chooses the content” and the “photocopier does nothing except in response to the customer’s commands”); *Teleprompter Corp. v. Columbia Broad. Sys., Inc.*, 415 U.S. 394, 412 (1974) (“When a broadcaster transmits a program . . . he has no control over the segment of the population which may view the program The use of CATV does not significantly alter this situation.”); *Fortnightly Corp. v. United Artists Television, Inc.*, 392 U.S. 390, 400 (1968) (noting

technology utilized to be non-determinative with respect to the Transmit Clause because the operating platform's functionality, "invisible to subscriber and broadcaster alike," in reality, "means nothing to the broadcaster" and most certainly "means nothing to the subscriber."¹⁴⁸ Rather, the Court reasoned that the general service Aereo offered to its subscribers was essentially the same as that of a "traditional cable system."¹⁴⁹ Accordingly, Aereo "performs" just as a cable provider would under the Transmit Act.¹⁵⁰

2. *Public Performances from Private Homes*

Having decided that Aereo "performs" within the meaning of the Copyright Act, the Supreme Court then addressed whether that performance was made "publicly."¹⁵¹ Aereo claimed that the "performance" occurred independently from ABC's transmission and after Aereo had converted a signal into streaming-compatible data.¹⁵² The performance, Aereo argued, occurred when the audio and visual components of a program streamed to a subscriber's screen.¹⁵³ Further, because these performances were individualized and could only be viewed by a single subscriber, any such performances were private.¹⁵⁴

Justice Breyer, writing for the majority, rejected the technological distinctions supporting Aereo's argument regarding the "behind-the-scenes" channels by which Aereo produced video programming to its subscribers because such distinctions, the Court believed, had no bearing on Aereo's "commercial objectives" or the "viewing experience" of its subscribers.¹⁵⁵ Such distinctions, Justice Breyer suggested, distracted the infringement analysis from the behavior Congress meant to regulate under the Copyright Act:

Why would a subscriber who wishes to watch a television show care much whether images and sounds are delivered to his screen via a large multisubscriber antenna or one small dedicated antenna, whether they arrive instantaneously or after a few seconds' delay, or whether they are transmitted directly or after a personal copy is made? And why, if Aereo is right, could not modern CATV systems simply continue the same commercial and consumer-oriented activities, free of copyright restrictions, provided they substitute such new technologies for old? Congress would as much have intended to

"[b]roadcasters select the programs to be viewed; CATV systems simply carry, without editing, whatever programs they receive").

148. *Id.* at 2507 (majority opinion).

149. *Id.*

150. *Id.*

151. *Id.* at 2507–08.

152. *Id.*

153. *Id.* at 2508.

154. *Id.*

155. *Id.*

protect a copyright holder from the unlicensed activities of Aereo as from those of cable companies.¹⁵⁶

In addition, Justice Breyer remained unpersuaded by Aereo's argument that its subscribers watched "personal cop[ies] of the selected program[s]," at isolated locations, on personal computers, viewable by no one else, would transport Aereo's business model outside the scope of the Transmit Clause.¹⁵⁷ However, the Court rejected this argument on the grounds that this rationale was contrary to the legislative intent behind the Transmit Clause.¹⁵⁸ The Court understood the Transmit Clause to permit "an entity [to] transmit a performance through one or several transmissions, where the performance [was] of the same work."¹⁵⁹ The Court, however, drew a distinction noting, "the Act d[id] not explicitly define 'the public,'" but rather specified when an entity publicly performs.¹⁶⁰

According to the Court, the Copyright Act "thereby suggests that 'the public' consists of a large group of people outside of a family and friends,"¹⁶¹ meaning Aereo, by "transmit[ing] to large numbers of paying subscribers who lack any prior relationship to the works does so perform."¹⁶² The language of the Transmit Clause,¹⁶³ the Court believed, distinctly refuted Aereo's contentions that its transmissions, or performances, could not be considered public because the videos were viewed at isolated locations and at isolated times.¹⁶⁴ Accordingly, the Court held that Aereo's online streaming of ABC's broadcasts was, in fact, a public performance.¹⁶⁵ Aereo, therefore, infringed on ABC's exclusive right to publicly perform its broadcasts.¹⁶⁶

156. *Id.* at 2508–09.

157. *See id.* at 2508.

158. *Id.* at 2509.

159. *Id.*

160. *Id.* at 2509–10. A performance is made "publicly" when performed at "any place where a substantial number of persons outside of a normal circle of a family and its social acquaintances is gathered." 17 U.S.C. § 101 (2012).

161. *Aereo*, 134 S. Ct. at 2510.

162. *Id.*

163. 17 U.S.C. § 101 (stating that a performance is considered public "whether the members of the public . . . receive it in the same place or in separate places and at the same time or at different times").

164. *Aereo*, 134 S. Ct. at 2510.

165. *Id.*

166. *Id.* at 2511. The Court noted that the dissent would have the majority clarify and narrow its ruling. *Id.* at 2507. The dissent suggested that the majority's opinion has stretched the Transmit Clause too far and encompasses a technology that "looks like cable TV," and, in doing so, have possibly "invent[ed]" a "two-tier version of the Copyright Act, one part of which applies to 'cable companies and their equivalents' while the other governs everyone else." *Id.* at 2516 (Scalia, J., dissenting).

3. *Narrowly Tailoring the Aereo Decision*

Although the *Aereo* decision determining that an entity that “engages in activities like Aereo’s” violates the Copyright Act seems broad, the Court explicitly refrained from expanding its analysis to other emerging technologies.¹⁶⁷ The Court expressly declined to predict or advise future courts as to how the Copyright Act should apply to “novel issues” where “Congress has not plainly marked [the] course.”¹⁶⁸ Yet, the Court’s focus on Aereo’s commercial incentives, the user interaction on the subscriber’s end, and its explicit decision not to base its decision on technological incongruences appears to inherently lend itself to application in questions involving such “novel issues,” such as in-line linking.¹⁶⁹

III. A BRAVE NEW WORLD: *AEREO* OFFERS AN ALTERNATIVE COPYRIGHT ANALYSIS FOR EMERGING TECHNOLOGIES

The *Aereo* dissent objected to the majority’s decision believing the ruling overbroad, arguing the majority deliberately left open how its ruling would impact the application of copyright law to other technologies.¹⁷⁰ However, the broadness of the majority’s analysis may render the *Aereo* opinion the touchstone for analyzing copyright infringement as it applies to new and developing technologies, despite the majority’s hesitance to extend its rationale to those cases.¹⁷¹ The Court’s focus on the commercial objectives of the parties, rather than the differences in technologies, may be exactly what courts need to adequately keep pace with technologies evolving faster than the law.¹⁷²

Under traditional copyright analysis, the Court does not weigh the economic costs of an unauthorized use of a copyrighted work until it has already determined that infringement has occurred and considered the fair use test.¹⁷³

167. *Id.* at 2504 (majority opinion). The Court neither intended nor believed that the *Aereo* decision would “discourage or . . . control the emergence or use of different kinds of technologies.” *Id.* at 2510.

168. *Id.* at 2511.

169. *See id.* at 2510–11 (discussing application of the Transmit Clause).

170. *See supra* note 167–168 and accompanying text.

171. *See supra* note 167–168 and accompanying text.

172. For example, the commercial interest approach could simplify the analysis for courts confronted with infringement cases that involve in-line linking or framing. The commercial interest approach refocuses the analysis away from the technological intricacies to the rights at stake and the harm being done when those rights are violated. *See generally* Geraldine Szott Moohr, *The Crime of Copyright Infringement: An Inquiry Based on Morality, Harm, and Criminal Theory*, 83 B.U. L. REV. 731, 753–57 (2003) (discussing the harm inflicted on copyright holders by unauthorized use of the holders’ works, how to measure such harm, and how to punish infringers).

173. *See, e.g.,* *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 574 (1994) (finding use of a copyrighted song infringement “but for” the court’s finding of fair use).

Even then, the negative impact on the owner's market is not necessarily determinative if outweighed by other fair use factors that favor the defendant.¹⁷⁴

A major issue with the Web as a business platform for publishers and artists is the difficulty in getting consumers to pay for content and media when so much is already available for free.¹⁷⁵ Therefore, it may be injudicious for courts to delay weighing the economic costs until after it has made a finding of illicit use of media. Otherwise, the commercial risk for content owners may be a deterrent in making their creative works available to the public via the Web when their chance for legal recourse is low.¹⁷⁶ In a practical sense, from the perspective of the third-party user or subscriber, Aereo's transmission of cable programming from its website is not so different from the website owner who has in-line-linked an image or video onto his or her website.¹⁷⁷ In either case, the user's interaction with the content is the same: he or she visits a website and, without the permission of the copyright holder, gains access to the content.¹⁷⁸ In the end, the user has located and enjoyed what he or she was looking for and is highly unlikely to seek out the true source or owner of the content.¹⁷⁹

174. See *Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 818 (9th Cir. 2003) (noting that “[t]he Supreme Court has rejected the proposition that a commercial use of the copyrighted material ends the inquiry under” the first prong of the fair use analysis).

175. See F. Gregory Lastowka, *Free Access and the Future of Copyright*, 27 RUTGERS COMPUTER & TECH. L.J. 293, 315–17 (2001) (describing the Web as an exponentially-growing market for an “enormous amount of useful, creative, entertaining, original, and free content,” including reference materials and major publications such as *The Washington Post* and *The New York Times*); see also Kenneth Olmstead, Amy Mitchell, & Tom Rosenstiel, *Where People Go, How They Get There and What Lures Them Away*, PEW RES. JOURNALISM PROJECT (May 9, 2011), <http://www.journalism.org/2011/05/09/navigating-news-online/> (explaining how news organizations draw audiences to their websites and the different revenue-generating platforms they use).

176. Compare Sam Sanders, *Taylor Swift, Platinum Party Of One*, NPR (Nov. 5, 2014, 3:32 AM), <http://www.npr.org/blogs/therecord/2014/11/05/361577726/taylor-swift-platinum-party-of-one> (quoting Taylor Swift in an article about her decision to remove all her music from Spotify saying, “[m]usic is art, and art is important and rare. Important, rare things are valuable. Valuable things should be paid for.”); with Lastowka, *supra* note 175, at 321 (positing that “free access content is a vital public good, and its availability would probably increase if the copyright laws were amended to reflect an interest in free access”).

177. Both Aereo and a linking source, in effect, locate and redirect source media to appear on their respective websites for user consumption. See *supra* notes 76–83 and accompanying text (explaining the dynamics of in-line linking).

178. Compare *Perfect 10, Inc. v. Amazon.com, Inc.*, 508 F.3d 1146, 1155–56 (9th Cir. 2007) (detailing how a user interacts with Google's in-line linking application), with *Am. Broad. Cos., Inc. v. Aereo, Inc.*, 134 S. Ct. 2498, 2503 (2014) (explaining how a user interacts with Aereo's interface).

179. The user would not think to look for an “original” or “true” source if the media appears to be an integrated feature of the infringing website. See *supra* notes 76–78 and associated text (explaining the characteristics of in-line-linked media).

The community of website developers and producers views in-line linking as either infringement, unethical, or at the very least, feels that some proprietary interest has been violated.¹⁸⁰ The negative attitude towards in-line linking is not necessarily unfounded. There is something inherently deceptive in the act of embedding a video or image on one's website in such a way that, in every practical sense, it appears to be originating from that website.¹⁸¹ If no credit is given to the true owner and no explanation or notice is offered as to the original source of the content, the user has no reason to believe the linking site is not the source of that content. If copyright law is aimed at protecting the exclusive right of owners and authors of creative works to display and distribute those works, then the strict application of what it means to "copy" in the digital context has fallen short.¹⁸²

Even courts have repeatedly noted that in-line linking can be deceptive when it leads the user to believe that content originates on the infringing Web page, yet this distinction does not seem to have significant bearing on the ultimate holding.¹⁸³ In fact, the *Amazon* court specifically declined to consider user "impression" believing "consumer confusion" outside the scope of the Copyright Act.¹⁸⁴ Similarly, the Seventh and Ninth Circuits have based their holdings, with respect to in-line linking, on whether non-permissive use of copyrighted digital media involved saving the content on the alleged infringer's own server.¹⁸⁵

These judicial opinions define the act of saving data on a server, disk, computer, or similar medium, as the making of a copy as defined by the Copyright Act.¹⁸⁶ On the other hand, as the majority in *Aereo* indicated, technological distinctions may not be as persuasive in circumstances where the user is not cognizant of such distinctions.¹⁸⁷ Following this line of reasoning, a

180. See generally Masnick, *supra* note 65 (questioning whether in-line linking constitutes infringement); *Linking*, CHILLING EFFECTS, <https://www.chillingeffects.org/linking/faq.cgi> (last visited Apr. 6, 2015) (discussing various contentions regarding cease and desist orders); *Linking to Other People's Images? Allowed?*, <https://wordpress.org/support/topic/linking-to-other-peoples-images-allowed> (last visited Apr. 6, 2015) (soliciting comments regarding the legality of in-line linking).

181. See Chu & Wang, *supra* note 79, at 579–80.

182. A tangible "copy" of a book, which can only be consumed by a limited audience at a given time, is different from a "copy" of a Web page, which "can be read by millions simultaneously." Lastowka, *supra* note 175, at 298. In addition, "[t]hose experiencing content on the Web refer to the experience as 'visiting,' 'surfing,' or 'viewing' a cyberspatial location," and would "not feel they have 'copied' anything." *Id.* at 298–99.

183. See *supra* Part I.C (discussing in-line linking court decisions).

184. *Perfect 10, Inc. v. Amazon.com, Inc.* 508 F.3d 1146, 1161 (9th Cir. 2007). The Court indicated that consumer confusion would be relevant under the Trademark Act. *Id.*

185. See *supra* Part I.C (addressing the basis for the Ninth and Seventh Circuits' findings for non-infringement).

186. See *supra* notes 93–98 and accompanying text (explaining the "server test").

187. See *Am. Broad. Cos., Inc. v. Aereo, Inc.*, 134 S. Ct. 2498, 2507 (2014).

“copy” may not necessarily mean the same thing for digital content as it does for content in a physical, tangible form.¹⁸⁸ Whether content has been “copied” may depend less on where the content physically resides and more on user impressions.

For the average user, what goes on “behind the screen” with each mouse click is a mere abstraction. To this user, the distinction of whether an individual’s server reserves an original copy of a copyrighted work is irrelevant considering a user may view the same image on two different websites and, in terms of his interaction with that content, has actually viewed two separate “copies.”

As previously discussed, not all in-line linking is malicious.¹⁸⁹ The determinate factor as to whether a case of in-line linking is malicious or not depends on the objectives of the linking site and the nature of his website.¹⁹⁰ These characteristics—user indifference to technological distinctions and objectives of the website developer performing the in-line linking—could suggest an appropriate move in the judicial review of in-line linking from a strict fair use analysis to a broader balancing test, applying both the fair use inquiry as well as the *Aereo* commercial interest test.¹⁹¹ *Aereo* may thus have opened the doors to a case-by-case analysis that focuses on commercial interests and the creative rights Congress intended to protect under the Copyright Act.

A. A Refocused Analysis May Better Fit Infringement in New Technological Contexts

Technology is developing faster than the law.¹⁹² It is both impossible and impractical for the courts to attempt to outfit each particular technology that changes the way Internet users store, transmit, share, manipulate, or use digital content with its own tests for infringement and fair use.¹⁹³ Congress attempted to preempt this concern with the enactment of the Transmit Clause in 1976.¹⁹⁴ However, perhaps as recognized by some on the *Aereo* Court, the language of the Transmit Clause takes on broader meaning each time it is stretched to cover

188. *See id.* at 2509 (finding it immaterial how Aereo transmits each copy).

189. *See supra* note 79 and accompanying text.

190. *See Chu & Wang, supra* note 79, at 577–78 (positing on the motivation behind malicious as well as non-malicious in-line linking).

191. *See Aereo*, 134 S. Ct. at 2508–09; *Perfect 10, Inc. v. Amazon.com, Inc.*, 508 F.3d 1146, 1176–77 (9th Cir. 2007).

192. Aurele Danoff, *The Moral Rights Act of 2007: Finding the Melody in the Music*, 1 J. BUS. ENTREPRENEURSHIP & L. 181, 182 (2007).

193. *See Jessica Litman, Copyright Legislation and Technological Change*, 68 OR. L. REV. 275, 277 (1989) (noting the futility of judicial and legislative efforts to reconcile copyright law with emerging technologies using “fact-specific language that has grown obsolete as new modes and mediums of copyrightable expression have developed”).

194. *See WNET, Thirteen v. Aereo, Inc.*, 722 F.3d 500, 505 (2d Cir. 2013) (stating Congress “broadly defined the term ‘transmit’ to ensure that all future technological advances would be covered”).

a new technology that might resemble that of a cable broadcasting company.¹⁹⁵ The *Aereo* dissent may be correct in its assessment of the broadness of the majority's opinion,¹⁹⁶ but that ambiguity may yield precedent capable of responding to future cases involving different technologies the Court has not yet confronted. It may be more prudent to shift the analysis away from investigating the technological intricacies and instead focus on the infringer's objectives in use of the copyrighted content, particularly because it is the character of the infringing use with which owners of that material primarily take issue.¹⁹⁷

Moving away from a narrow construction of the Copyright Act in the face of technologically complex facts may position these infringement cases closer to the spirit of the Copyright Act and the rights Congress intended to protect.¹⁹⁸ Interestingly, the Congressional intent in drafting the Copyright Act, "To promote the Progress of Science and useful Arts,"¹⁹⁹ is entirely consistent with Tim Berners-Lee's goals for the World Wide Web.²⁰⁰

195. See *Aereo*, 134 S. Ct. at 2517 (Scalia, J., dissenting) (arguing the majority's narrowing of the Transmit Clause implicates Cablevision's RS-DVR); *Cartoon Network LP, v. CSC Holdings, Inc.* 536 F.3d 121, 136 (2d Cir. 2008) (finding that Cablevision's RS-DVR device does not implicate even a broad reading of the Transmit Clause).

196. *Aereo*, 134 S. Ct. at 2517 (Scalia, J., dissenting). The *Aereo* majority limited its ruling to exclude technologically complex mechanisms that have yet to appear before the courts in copyright infringement claims:

It will take years, perhaps decades, to determine which automated systems now in existence are governed by the traditional volitional-conduct test and which get the *Aereo* treatment. (And automated systems now in contemplation will have to take their chances.) The Court vows that its ruling will not affect cloud-storage providers and cable-television systems, but it cannot deliver on that promise given the imprecision of its result-driven rule.

Id. (internal citations omitted).

197. See *id.* at 2510 (majority opinion) (noting the objective of *Aereo* is to transmit cable programming to "large numbers of paying subscribers who lack any prior relationship to the works," while the objective of an "entity that transmits a performance to individuals in their capacities as owners or possessors does not perform to 'the public'").

198. Technological remedies alone may not suffice to resolve these issues. See Allison Roarty, *Link Liability: The Argument for Inline Links and Frames As Infringements of the Copyright Display Right*, 68 *FORDHAM L. REV.* 1011, 1057 (1999) (concluding that there are several reasons to avoid reliance upon technical solutions). "First, technological remedies [will] soon become obsolete." *Id.* Second, even if such remedies were to exist, "copyright law should be able to protect copyrightable expression, no matter the medium." *Id.* In addition, "[c]opyright law is intended to provide authors with an incentive to create works that benefit the public" and such "[u]nwanted links lessen the value of online content." *Id.* at 1057–58. Such a "[l]ack of protection for online works sap authors' incentive [to create] and may result in fewer online works that benefit the public." *Id.* at 1058.

199. U.S. CONST. art. I, § 8, cl. 8.

200. See *supra* notes 47–48 and accompanying text (discussing Berners-Lee's vision for universality of the World Wide Web).

IV. CONCLUSION

The ability of the Internet to provide such vast resources and connectivity is what has made it a fixture in much of the population's lives. Constant innovation in computing technology has continued to open channels for communication and connectivity, yet for every innovation there is the potential for bad-faith activity and problems in many areas of law, including copyright. The *Aereo* Court's explicit application of a commercial interest rationale signaled a jurisprudential transition from probing the technological distinctions toward investigating the effects of using a particular technology in copyright infringement claims. *Aereo* may well provide a viable guidepost for courts to examine when addressing future infringement claims concerning evolving technologies. Such an inquiry could change the outcome of technology-based copyright claims, do more to protect the commercial interests of creators online, and preserve the spirit of knowledge sharing and universal access on the Internet.

