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HOW TO BUFFER YOUR WAY OUT OF A SCRAPE: POTENTIAL ABUSE OF THE *CARTOON NETWORK V. CABLEVISION* DECISION

INTRODUCTION

As subscribers to Cablevision Systems Corporation's (Cablevision)¹ cable service² are stuck in rush hour traffic or delayed at the doctor's office, a frightening thought might suddenly occur to them: they may miss the new episode of *CSI: Crime Scene Investigation*,³ *Aqua Teen Hunger Force*,⁴ or *Lost*⁵ airing that night. Fortunately, most digital television viewers can breathe a collective sigh of relief. The rise of cable television programming distribution has brought with it new technologies that allow users to record television programming and store these shows for viewing at a later time.⁶ The use of digital playback technologies, such as Digital Video Recorder (DVR)⁷ systems and Video on Demand (VOD)⁸ services, has so pervaded

1. Cablevision Systems Corporation is a telecommunications and media company that provides various information and entertainment services. About Cablevision, <http://www.cablevision.com/about/index.jsp> (last visited Oct. 19, 2009). "Cablevision's portfolio of operations includes a full suite of advanced digital television, voice and high-speed Internet services, publishing and interactive media, world-renowned entertainment showplaces, professional sports teams, and popular national and regional programming networks." *Id.*

2. Cablevision provides programming and original content to hundreds of millions of American consumers through its "[iO] Interactive Optimum-brand" digital cable service. *Id.*

3. *CSI: Crime Scene Investigation* is a television drama produced and distributed as part of CBS Corporation's original programming. CBS.com, About CSI, <http://www.cbs.com/primetime/csi/about/> (last visited Oct. 19, 2009).

4. *Aqua Teen Hunger Force* is a popular animated program whose registered copyright is owned by The Cartoon Network. Memorandum of Law in Support of Turner's Motion for Summary Judgment at 3, *Cartoon Network L.P. v. CSC Holdings, Inc.*, 536 F.3d 121 (2d Cir. 2008), *cert. denied sub nom.* CNN, Inc. v. CSC Holdings, Inc., 129 S. Ct. 2890 (2009) (No. 06 Civ. 4092) [hereinafter Turner's Memorandum of Law].

5. *Lost* is a television mystery serial drama produced and distributed as part of American Broadcasting Companies, Inc.'s network programming. ABC.com, About Lost, <http://abc.go.com/primetime/lost/index?pn=about> (last visited Oct. 19, 2009).

6. From May 2007 to May 2008 alone, the number of viewers watching programming through the use of technology with some form of playback-viewing capabilities rose 35.7%, from an estimated 46,632,000 viewers to almost 63,265,000 viewers. THE NIELSEN COMPANY, NIELSEN'S THREE SCREEN REPORT 2, 4 (2008) [hereinafter NIELSEN'S THREE SCREEN REPORT] (stating that as of May 2008, fourteen percent of all TV tuning in primetime in households with Digital Video Recorders (DVR) was through playback of stored programming).

7. PCMag.com, Encyclopedia Definition of: DVR, http://www.pcmag.com/encyclopedia_term/0,2542,t=DVR&i=42147,00.asp (last visited Oct. 22, 2008). A *Digital Video Recorder*, "[a]lso known as a 'personal video recorder' (PVR) or 'hard disk recorder,' a DVR is a consumer device" that digitizes broadcast or cable TV onto a hard disk using MPEG-2 compression. *Id.* It allows the viewer to pause at any time and continue to play or record a program for viewing at a later date like a VCR. *Id.* The DVR can also be set to periodically record favorite shows whenever broadcast. *Id.*

8. VOD service is provided on an individual customer basis, whereby a cable operator receives licensed programming at a central facility and stores it on computer servers so that individual customers may view selected programming at any time through the use of a cable

the broadcasting industry that the viewing habits of the modern television spectator have been drastically changed.⁹ Consumers may now watch the programs they enjoy without the time constraints of real-time viewing. These services even allow viewers to pause a television show they are currently watching to go have a snack or run an errand, and then subsequently resume their program¹⁰ with the option of skipping past any television commercial advertisements they may find unappealing.¹¹ Despite the advantages these technologies provide to consumers, the Remote Storage Digital Video Recorder (RS-DVR) system¹² developed by Cablevision as a digital playback system¹³ has caused a great commotion amongst those in the media and entertainment distribution industry. The prospect of this product's broad commercial rollout has spurred a large number of content providers of movie and television programs to jointly bring a copyright suit against Cablevision.¹⁴

On August 4, 2008, the Second Circuit handed down its long-awaited decision in *Cartoon Network L.P. v. CSC Holdings, Inc.*,¹⁵ announcing that Cablevision's RS-DVR system would not infringe upon the exclusive reproduction rights held by owners of copyrighted programming.¹⁶

remote control and an on-screen menu. *Twentieth Century Fox Film Corp. v. Cablevision Sys. Corp.*, 478 F. Supp. 2d 607, 611 (S.D.N.Y. 2007), *rev'd in part, vacated in part sub nom.* *Cartoon Network L.P. v. CSC Holdings, Inc.*, 536 F.3d 121 (2d Cir. 2008), *cert. denied sub nom.* *CNN, Inc. v. CSC Holdings, Inc.*, 129 S. Ct. 2890 (2009).

9. See generally NIELSEN'S THREE SCREEN REPORT, *supra* note 6. Today, "25% and 35% of U.S. homes have DVR and [VOD] respectively. As the number of homes with the ability to time shift [their programming] increases, we should expect that people will have more choice of television programming available to them and more choice in when to watch." *Id.* at 4.

10. See *supra* text accompanying note 7.

11. See Brian Stelter, *A Ruling May Pave the Way for Broader Use of DVR*, N.Y. TIMES, Aug. 5, 2008, at C8, available at <http://www.nytimes.com/2008/08/05/business/media/05adco.html> (Craig E. Moffett, an analyst at Sanford C. Bernstein & Company, said the *Cablevision* ruling could have "seismic implications across the media landscape" which could lead to "a huge increase in the number of viewing hours per day potentially subject to ad-skipping.").

12. The RS-DVR system allows cable customers to "record [television] programming on central hard drives" without the use of stand-alone DVRs. *Cartoon Network L.P. v. CSC Holdings, Inc.*, 536 F.3d 121, 124 (2d Cir. 2008), *cert. denied sub nom.* *CNN, Inc. v. CSC Holdings, Inc.*, 129 S. Ct. 2890 (2009). Cablevision stores and maintains these hard drives at a "remote" location. *Id.* Customers may then receive playback of those programs "through their home television sets, using only a remote control and a standard cable box equipped with the RS-DVR software." *Id.*

13. *Id.* at 124.

14. *Id.*

15. *Id.*

16. *Id.* at 140.

Although the ruling is being hailed by some as a victory for both innovation¹⁷ and consumers,¹⁸ this note argues that the court misapplied prior case law¹⁹ and ignored the importance of these content-providers' exclusive rights to control the usage and distribution of their copyrighted work.²⁰ The Second Circuit employed a short-sighted analysis in categorizing data "buffers"²¹ as transitory carriers of data streams that do not produce infringing "fixed copies"²² of copyrighted works.²³ The decision will likely increase future litigation over whether copyright infringement has occurred when data is quickly overwritten²⁴ or obtained through the use of buffers.

17. Gigi Sohn, President of Public Knowledge, a Washington, D.C. based public interest advocacy organization dedicated to promoting the public interest in access to information, called the decision a "great victory for innovation." Glen Dickson, *Court Says Yes to Network DVR*, BROADCASTING & CABLE, Aug. 4, 2008, http://www.broadcastingcable.com/index.asp?layout=talkbackCommentsFull&talk_back_header_id=6547155&articleid=CA6584154.

18. David Ellen, Cablevision's Executive Vice President and General Counsel, released a statement claiming that the court's decision constituted a "significant victory for consumers." Mark Hamblett, *Circuit Backs Remote Recorder Against Programmers' Lawsuit*, N.Y.L.J., Aug. 5, 2008, <http://www.law.com/jsp/nylj/PubArticleNY.jsp?id=1202423526015>.

19. Namely, the application of *MAI Systems Corp. v. Peak Computer, Inc.*, 991 F.2d 511 (9th Cir. 1993), and its progeny; as well as the application of the line of cases following *Religious Technology Center v. Netcom On-Line Communication Services*, 907 F. Supp. 1361 (N.D. Cal. 1995).

20. 17 U.S.C. § 106 (2006) (granting exclusive rights in copyrighted works).

21. A *Buffer* is:

[A] reserved segment of memory used to hold data while it is being processed. In a program, buffers are created to hold some amount of data from each of the files that will be read or written. In a streaming media application, the program uses buffers to store an advance supply of audio or video data to compensate for momentary delays.

PCMag.com, Encyclopedia Definition of: Buffer, http://www.pcmag.com/encyclopedia_term/0,2542,t=buffer&i=39017,00.asp [hereinafter Buffer Definition] (last visited Oct. 19, 2009).

22. Under 17 U.S.C. § 101 (2006):

A work is "fixed" in a tangible medium of expression when its embodiment in a copy or phonorecord, by or under the authority of the author, is sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration. A work consisting of sounds, images, or both, that are being transmitted, is "fixed" for purposes of this title if a fixation of the work is being made simultaneously with its transmission.

Id.

23. *Cartoon Network L.P. v. CSC Holdings, Inc.*, 536 F.3d 121, 124 (2d Cir. 2008), *cert. denied sub nom. CNN, Inc. v. CSC Holdings, Inc.*, 129 S. Ct. 2890 (2009).

24. Litigators will now have the difficult task of determining at what point between 1.2 seconds and 2 minutes a reproduction arrives at a "more than transitory" state. Law on the Row, *Second Circuit Gets it Wrong in Cartoon Network v. Cablevision*, <http://musicattorney.wordpress.com/2008/08/05/second-circuit-gets-it-wrong-in-cartoon-network-v-cablevision/> [hereinafter *Second Circuit Gets it Wrong*] (Aug. 5, 2008, 15:09 CDT).

In an already complex battlefield of legal issues, the court's holding²⁵ places an even heavier burden on determining where the line between direct and contributory copyright infringement liability should attach. The court's reasoning in reaching this decision has further divorced liability for direct copyright infringement from intermediary content providers by solely attaching this legal responsibility to consumer end-users.²⁶ In order to justify its decision, the Second Circuit, dangerously extended the view regarding Internet Service Providers (ISPs)²⁷ and Bulletin Board Systems (BBSs)²⁸ as passive owners of contributory infringement systems by applying it beyond the realm of the Internet.²⁹

The court's emphasis on the transitory duration of the copyrighted works' embodiment in the buffers,³⁰ as well as the role of the buffers in preventing the copies from being impermissibly "fixed"³¹ in avoidance of direct infringement, may have an impact on a topic debated vigorously on a global scale: facilitating the process of "screen-scraping"³² to aggregate data for use on a third-party website. While employing screen-scrapers to obtain facts and statistics from third-party websites is not typically held to be an illegal practice in the United States, many courts consider it to be an unethical business practice.³³

25. *Cartoon Network*, 536 F.3d at 130 (stating that data is not "fixed" in buffers for more than a transitory duration where the data resides in such a buffer for no more than 1.2 seconds before being overwritten).

26. Turner's Memorandum of Law, *supra* note 4, at 13.

27. An *Internet Service Provider* is "an organization that provides access to the Internet. Connection to the user is provided via dial-up, ISDN, cable, DSL and T1/T3 lines." PCMag.com, Encyclopedia Definition of: ISP, http://www.pcmag.com/encyclopedia_term/0,2542,t=ISP&i=45481,00.asp (last visited Oct. 4, 2008).

28. A *BBS* is "[a] computer system used as an information source and forum for a particular interest group. A BBS functions somewhat like a stand-alone Web site, but without graphics. However, unlike Web access via one connection to the Internet, each BBS had its own telephone number to dial up." PCMag.com, Encyclopedia Definition of: BBS, http://www.pcmag.com/encyclopedia_term/0,2542,t=bulletin+board&i=38485,00.asp (last visited Oct. 19, 2009).

29. *Cartoon Network*, 536 F.3d at 124.

30. *Id.* at 127.

31. See 17 U.S.C. § 101 (2006) (defining "fixed").

32. *Screen-scraping* (or "scraping") is the process of

[a]cquiring data displayed on screen by capturing the text manually with the copy command or via software. Web pages are constantly being screen scraped in order to save meaningful data for later use. In order to perform scraping automatically, software must be used that is written to recognize specific data.

PCMag.com, Encyclopedia Definition of: Screen-Scraping, http://www.pcmag.com/encyclopedia_term/0,2542,t=screen+scraping&i=50921,00.asp (last visited Oct. 19, 2009); see also *infra* Part IV.

33. *Register.com, Inc. v. Verio, Inc.*, 356 F.3d 393 (2d Cir. 2004) (permitting suit to be brought for potential harm to Register.com's computer systems through use of the screen-scraping program); *American Airlines, Inc. v. Farechase, Inc.*, Cause No. 067-194022-02 (Dist. Ct. Tex. Mar. 28, 2003), available at http://www.eff.org/Cases/AA_v_FareChase/20030310_prelim_inj.pdf (permitting plaintiff to seek temporary injunction against Farechase for, in part,

This note is divided into five parts. Part I highlights the differences between stand-alone DVR systems and Cablevision's RS-DVR system. Part II describes the court's key holdings in the *Cartoon Network* case, namely finding that the use of buffers in the RS-DVR system to produce reproductions of a "transitory duration" are not capable of infringing directly. Part II also explains the court's conclusion that it is end-users, and not the cable provider, that supply the volitional conduct necessary for direct copyright infringement liability. Part III examines the court's misguided logic in allowing systems employing buffers to escape culpability as direct infringers, and proceeds to describe the dangers of extending the *Netcom* volition test beyond the relative confines of Internet services. Such judicial methodology allows for an adequate inquiry into *who* is making the unauthorized copies without exploring *why*. Finally, Part IV and V demonstrate how the Second Circuit's decision may aid providers of screen-scraping programs to avoid direct infringement liability by utilizing buffers to engage in the questionably unethical practice of data extraction and aggregation. This note concludes by stressing the need to reign in the court's jurisprudential view granting the nearly blanket status of buffers as a non-infringing technology.

I. ARE ALL DIGITAL VIDEO RECORDERS CREATED EQUAL?

A. HOW DVRs WORK

In order to better understand the court's erroneous reasoning in this case, it is essential to understand the basics of how a standard "set-top DVR" device³⁴ works in contrast to how Cablevision's RS-DVR system operates. Basically, set-top DVR devices, or Personal Video Recorders (PVRs),³⁵ are in-home consumer machines that allow cable subscribers to record programming, store the copied program on the internal hard drive, and play it back at a later time at the user's request.³⁶ These devices operate much like a Video Cassette Recorder (VCR) does with videotapes.³⁷

unauthorized screen-scraping of American Airlines website for a commercial purpose). *See, e.g.*, News Release, Ryanair, Bravofly Ltd Discontinues Screenscraping Ryanair.com: Ryanair to Cancel All Screenscraper Bookings (May 8, 2008), *available at* <http://www.ryanair.com/site/EN/news.php?yr=08&month=aug&story=reg-en-050808> (Howard Millar, CFO of Ryanair, categorizing screen-scraping activity of Ryanair's fare prices as "anti-consumer activity"); *see also infra* Part IV.A–B.

34. Set-top DVR devices are cable boxes, often offered by cable operators themselves, that have DVR digital playback technology embedded within them. Turner's Memorandum of Law, *supra* note 4, at 6.

35. *Id.*

36. *Id.*

37. *Id.*

But how does one's favorite episode of "The Simpsons"³⁸ get from the content provider to a consumer's DVR box for playback? Television signals used to be sent primarily in analog broadcast form, transmitted as a series of continuous waves.³⁹ In order to provide more channels of programming to subscribers, programming distributors have increasingly moved towards the use of digital cable broadcasting that delivers these encoded signals in digital form.⁴⁰ One major difference between broadcast television and cable transmission is that under the digital cable delivery system, traditional analog signals are converted into compressed digital signals⁴¹ and transmitted to cable subscribers.⁴²

The delivery of these digitized data streams begins with content owners sending feeds (data streams containing the shows that we know and love) to one of the cable provider's central facilities, which aggregates all the programming feeds into one large stream of data.⁴³ After the real-time cable television programming (or "linear network programming")⁴⁴ is sent from the content providers to a cable operator, the cable company instantaneously transmits the programming feed directly to subscribers.⁴⁵ It is important to note that the program data is only converted into packets of data at the central facility so that programs may be tagged with "program identifiers,"⁴⁶ which in turn allow the subscribers' cable boxes to decode the signal when received.⁴⁷ Because this data passes through the cable company's hardware pursuant to negotiated and statutorily-mandated licensing agreements between the content owners and the cable provider,⁴⁸

38. *The Simpsons* is an animated program whose registered copyright is owned by The FOX Broadcasting Company. FOX Broadcasting Company, *The Simpsons*, <http://www.thesimpsons.com/index.html> (last visited Oct. 19, 2009).

39. *Twentieth Century Fox Film Corp. v. Cablevision Sys. Corp.*, 478 F. Supp. 2d 607, 610 (S.D.N.Y. 2007), *rev'd in part, vacated in part sub nom. Cartoon Network L.P. v. CSC Holdings, Inc.*, 536 F.3d 121 (2d Cir. 2008), *cert. denied sub nom. CNN, Inc. v. CSC Holdings, Inc.*, 129 S. Ct. 2890 (2009).

40. *Id.*

41. Compressed analog signals are analog signals that have been digitized and compressed spatially, taking up less bandwidth per channel, as well as temporally. MICHAEL MILLER, *HOW HOME THEATER AND HDTV WORK* 28 (Greg Wiegand et al. eds., Michael Troller Illustrator, 2006). This type of compression allows cable companies to transmit 10 digital channels into the same bandwidth (6 MHz) of one traditional analog broadcast channel. *Id.*

42. *Id.*

43. *Twentieth Century*, 478 F. Supp. 2d at 610–11.

44. Turner's Memorandum of Law, *supra* note 4, at 3.

45. *Id.* at 5.

46. *Twentieth Century*, 478 F. Supp. 2d at 610.

47. MILLER, *supra* note 41, at 29.

48. *Twentieth Century*, 478 F. Supp. 2d at 610. This type of content distribution, as well as content supplied to cable operators for use in VOD services, is governed by licensing affiliation agreements entered into between suppliers of copyrighted programming and the cable operators broadcasting this material. Turner's Memorandum of Law, *supra* note 4, at 4.

no unlicensed copies are made or stored while the data is being aggregated and encoded at this central facility.⁴⁹

Once the encoded signal reaches a consumer's PVR tuner,⁵⁰ the signal is sent to both an internal hard drive to record and store programming, and an MPEG-2⁵¹ decoder to convert the signal back to analog so that the signal may be sent to the television⁵² for the subscriber's viewing pleasure. The television watcher at home determines which shows to record and sets the PVR accordingly through the use of an on-screen programming guide.⁵³ This data is stored on the internal hard drive, similar in operation to a hard disk on a personal computer,⁵⁴ and the recorded material remains available for the cable subscriber to play back at any time.⁵⁵

B. THE RS-DVR SYSTEM'S UNIQUE OPERATION

Cablevision's RS-DVR system provides digital video playback through a different means than that employed by standard PVRs.⁵⁶ The RS-DVR system allows customers to record cable programming on hard drives housed and maintained by Cablevision at a central location without the use of a set-top PVR box.⁵⁷ All that is required of consumers to play back recorded content through a home television set is the use of a standard cable box equipped with RS-DVR software and a remote control.⁵⁸

These systems diverge at the point when the various broadcast television and cable channels, which provide programming content, transmit their television programs as signals to cable companies such as Cablevision.⁵⁹ Instead of adhering to the typical process of aggregating all

49. Under this type of system, all transmission activities are governed by licensing agreements between the cable company and the providers of the copyrighted programs. Turner's Memorandum of Law, *supra* note 4, at 5.

50. MILLER, *supra* note 41, at 29.

51. MPEG stands for Moving Pictures Experts Group. PCMag.com, Encyclopedia Definition of: MPEG, http://www.pcmag.com/encyclopedia_term/0,2542,t=MPEG&i=47295,00.asp (last visited Oct. 19, 2009). An MPEG is "an ISO/ITU standard for compressing digital video. Pronounced 'em-peg,' it is the universal standard for digital terrestrial, cable and satellite TV, DVDs and digital video recorders (DVRs)." *Id.* MPEG-2 provides broadcast quality video and is used as the compression standard for DVD information, as well as digital television. *Id.*

52. Jonathan Strickland & James Bickers, *How DVR Works*, <http://electronics.howstuffworks.com/dvr1.htm> (last visited Oct. 19, 2009) (discussing how a basic digital video recorder receives television signals).

53. MILLER, *supra* note 41, at 167.

54. *Id.*

55. Twentieth Century Fox Film Corp. v. Cablevision Sys. Corp., 478 F. Supp. 2d 607, 612 (S.D.N.Y. 2007), *rev'd in part, vacated in part sub nom.* Cartoon Network L.P. v. CSC Holdings, Inc., 536 F.3d 121 (2d Cir. 2008), *cert. denied sub nom.* CNN, Inc. v. CSC Holdings, Inc., 129 S. Ct. 2890 (2009).

56. Cartoon Network L.P. v. CSC Holdings, Inc., 536 F.3d 121, 124 (2d Cir. 2008), *cert. denied sub nom.* CNN, Inc. v. CSC Holdings, Inc., 129 S. Ct. 2890 (2009).

57. *Id.*

58. *Id.*

59. *Id.*

the programming feeds into one large stream of data in preparation of transmission to viewers' individual homes,⁶⁰ Cablevision's RS-DVR system splits the linear network data stream into two separate data streams.⁶¹ One stream is broadcasted immediately to customers,⁶² while the other stream is channeled into a device called the Broadband Media Router (BMR) which buffers the data stream, then reformats it before sending it to a remote data server (the Arroyo Server).⁶³

After the entirety of this second stream of data moves into the first buffer (the "primary ingest buffer"), the server automatically checks if a customer has scheduled a recording of any particular program.⁶⁴ If such a request has been made by a subscriber, the data flows into a secondary buffer, and then onto an individual hard disk allocated for that specific customer where a copy is stored for customer playback.⁶⁵ Irrespective of whether a copy has been requested by a subscriber, the BMR holds at most 1.2 seconds of programming time,⁶⁶ and the primary ingest buffer overwrites the data occupying this buffer every 0.1 seconds.⁶⁷ The steps in this process subsequent to the splitting of the signal into a second data stream are not present in set-top DVRs, since the stand-alone machines conduct this recording function once the media has already been transmitted to individual cable subscribers.⁶⁸

II. KEY HOLDINGS IN THE *CARTOON NETWORK* CASE

In *Cartoon Network L.P. v. CSC Holdings, Inc.*,⁶⁹ a multitude of content providers and copyright owners⁷⁰ brought action against cable television operator Cablevision⁷¹ in an attempt to enjoin the commercial release of Cablevision's new RS-DVR system to consumers.⁷² The plaintiffs claimed

60. See *supra* text accompanying note 43.

61. *Cartoon Network*, 536 F.3d at 124.

62. See Turner's Memorandum of Law, *supra* note 4, at 3; see also *supra* text accompanying note 45.

63. *Cartoon Network*, 536 F.3d at 124.

64. *Id.*

65. *Id.*

66. *Id.* at 125.

67. *Id.* at 124.

68. *Twentieth Century Fox Film Corp. v. Cablevision Sys. Corp.*, 478 F. Supp. 2d 607, 612 (S.D.N.Y. 2007), *rev'd in part, vacated in part sub nom. Cartoon Network L.P. v. CSC Holdings, Inc.*, 536 F.3d 121 (2d Cir. 2008), *cert. denied sub nom. CNN, Inc. v. CSC Holdings, Inc.*, 129 S. Ct. 2890 (2009).

69. 536 F.3d at 124.

70. *Id.* at 121. Plaintiffs in this lawsuit included a large number of content providers that included movie picture production companies such as Twentieth Century Fox Film Corporation, Paramount Pictures Corporation, and Disney Enterprises, as well as television network entities such as CBS Broadcasting, NBC Studios, and Cartoon Network. *Id.*

71. *Id.* Cablevision's operating company, CSC Holdings, Inc., was also named as a defendant in this suit. *Id.*

72. *Id.* at 124.

that the operation of this system would cause direct infringement of their copyrights by producing unlicensed copies of works stored in the RS-DVR buffers.⁷³ Since all data automatically flowed through the primary ingest buffer, plaintiffs alleged that the data stream that passed through this buffer created infringing copies, regardless of whether customers scheduled a recording (that is, regardless of whether consumers initiated any copying of the works).⁷⁴

The Second Circuit announced three key holdings addressing the three ways in which Cablevision allegedly directly infringed on the plaintiffs' copyrighted programming.⁷⁵ First, the court held that per the provisions of the Copyright Act of 1976, in order for a reproduction to be deemed an infringing "copy,"⁷⁶ it must not only embody a "tangible medium of expression,"⁷⁷ but also satisfy a "duration requirement"⁷⁸ of being permanent or stable for "a period of more than transitory duration."⁷⁹ Cablevision's use of buffers rapidly and automatically overwrites all processed programming data within 1.2 seconds.⁸⁰ This immediate overwriting of portions of the copyrighted works contained in the data stream prevents these reproductions from becoming "copies"⁸¹ and thus their unauthorized creation does not constitute direct infringement.⁸²

Secondly, the court ruled that although Cablevision's hard drives would contain unauthorized fixed copies of the copyrighted programming, Cablevision would not incur liability for direct copyright infringement for storing these copies on its server.⁸³ The Second Circuit adopted the "volitional conduct" standard⁸⁴ set forth by the Northern District of California in *Religious Technology Center v. Netcom On-Line Communication Services*⁸⁵ which requires a volitional act on the part of a passive owner of an electronic facility in order for direct copyright infringement liability to attach.⁸⁶ Here, the court viewed the volitional conduct associated with making the copies as from the individual acts of Cablevision's customers.⁸⁷ Cablevision itself was regarded as a passive

73. *Id.* at 125.

74. *Id.* at 127.

75. *Id.* at 126.

76. 17 U.S.C. § 101 (2006) (defining "copies").

77. § 101 (defining "fixed").

78. *Cartoon Network*, 536 F.3d at 127 (quoting Melville B. Nimmer & David Nimmer, *Nimmer on Copyright*, § 8.02[b][3], at 8-32 (2007)).

79. *Id.* (quoting § 101 (defining "fixed"))

80. *Id.* at 124.

81. § 101 (defining "copies").

82. *Cartoon Network*, 536 F.3d at 130.

83. *Id.* at 133.

84. *Id.* at 131.

85. *Religious Tech. Ctr. v. Netcom On-Line Comm'n Servs.*, 907 F. Supp. 1361 (N.D. Cal. 1995).

86. *Id.* at 1370.

87. *Cartoon Network*, 536 F.3d at 133.

owner⁸⁸ since its RS-DVR system responding automatically to users' scheduling of recordings.⁸⁹

Lastly, the Second Circuit addressed the legality of Cablevision's retransmitting of the stored programming from the cable company's remote location into the homes of individual viewers.⁹⁰ The court decided that despite the "time-shifting"⁹¹ of the copyrighted programming and transmission to many individual subscribers, Cablevision's system does not infringe on the plaintiffs' public performance rights.⁹² The RS-DVR system allows customers to produce a single unique copy on Cablevision's hard drives for playback, transmissions of which do not constitute performances "to the public"⁹³ and thus do not infringe on the plaintiffs' copyrights.⁹⁴

In bringing this action, the plaintiffs had alleged only theories of direct copyright infringement based on their exclusive rights to reproduce and publicly perform their works, but did not raise claims of contributory infringement.⁹⁵ In analyzing the arguments, the court was careful in its attempt to make a determination by addressing the sole legal claim of whether direct infringement by Cablevision had occurred.⁹⁶ The defendants, on the other hand, waived any fair use⁹⁷ defense⁹⁸ most likely

88. *Id.* at 133. The court did state that Cablevision may have been liable for *contributory* copyright infringement but did not address the claim since plaintiffs did not allege such a theory. *Id.* at 124, 133.

89. *Id.* at 131.

90. *Id.* at 139.

91. *Time-shifting* is "record[ing] a video or audio program when it is broadcast and watch[ing] it at a later time." Buffer Definition, *supra* note 21.

92. *Cartoon Network*, 536 F.3d at 139.

93. Under 17 U.S.C. § 101 (2006):

To perform or display a work 'publicly' means (1) to perform or display it at a place open to the public or at any place where a substantial number of persons outside of a normal circle of a family and its social acquaintances is gathered; or (2) to transmit or otherwise communicate a performance or display of the work to a place specified by clause (1) or 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.

Id.

94. *Cartoon Network*, 536 F.3d at 139.

95. *Id.* at 124.

96. *Id.*

97. *Fair Use* is defined as:

A reasonable and limited use of a copyrighted work without the author's permission Fair use is a defense to an infringement claim, depending on the following statutory factors: (1) the purpose and character of the use, (2) the nature of the copyrighted work, (3) the amount of the work used, and (4) the economic impact of the use.

BLACK'S LAW DICTIONARY 617 (7th ed. 1999).

98. *Cartoon Network*, 536 F.3d at 124.

due to the high probability that the economic nature and market impact of their actions would preclude this defense for Cablevision.⁹⁹

III. THE COURT'S MISPLACED REASONING REGARDING BUFFER COPYING¹⁰⁰

A. DECONSTRUCTING THE BUFFER LOGIC

In reaching its decision and absolving Cablevision of any liability for direct copyright infringement incurred through the ownership and maintenance of its RS-DVR service, the Second Circuit first turned its focus to whether buffering data that contains copyright works constitutes the reproduction of a “fixed copy” as defined in the United States Code.¹⁰¹ Since copyright holders have the sole right to reproduce their works “in copies,”¹⁰² the court sought to answer the threshold question of whether the reproductions, assuming *arguendo* that these copyrighted works were reproduced through Cablevision’s volitional conduct,¹⁰³ constituted “copies” as defined in the Copyright Act and thus should have been subjected to the infringement scrutiny in the first place.¹⁰⁴ According to the language of the Copyright Act, direct infringement occurs when a “copy” of the material is made “in which a work is fixed by any method . . . from which the work can be . . . reproduced.”¹⁰⁵ The court correctly recognized that if the buffer data containing the copyrighted work is not “fixed,” then an infringing “copy” has not been produced.¹⁰⁶ This means that even if a copy is made (according to its colloquial meaning), the reproduction might not be a statutorily prohibited “copy” in violation of the Copyright Act if the plaintiff does not meet the burden of demonstrating that this reproduction also was “fixed.”¹⁰⁷

In conducting its analysis of this issue, however, the Second Circuit utilized an abbreviated version of § 101 of the Copyright Act,¹⁰⁸ whereby it

99. Posting of Solveig Singleton to IPCentral Weblog, http://weblog.ipcentral.info/archives/2007/07/more_cablevisio.html (Jul. 25, 2007, 19:47 EST).

100. For a helpful discussion of the possible policies behind the Second Circuit’s decision and supplemental analysis of the “fixation” and “volition” requirements, see Megan Cavender, *RS-DVR Slides Past Its First Obstacle and Gets the Pass for Full Implementation*, 10 N.C. J. L. & TECH. 145 (2008).

101. *Cartoon Network*, 536 F.3d at 127 (stating that proof of infringement on a copyright holder’s reproduction rights requires a showing that the works were “reproduce[d]” in “copies” as defined by § 106(1)).

102. 17 U.S.C. § 106(1) (2006).

103. See brief discussion *supra* Part II and discussion *infra* Part III.C–D.

104. *Cartoon Network*, 536 F.3d at 127.

105. 17 U.S.C. § 101 (2006).

106. *Cartoon Network*, 536 F.3d at 127.

107. See *MAI Systems Corp. v. Peak Computer, Inc.*, 991 F.2d 511 (9th Cir. 1993) (stating that plaintiff’s must prove that “copies” are indeed “fixed” per the definitions provided in § 101 in order to hold defendants liable for direct copyright infringement).

108. § 101.

misinterpreted the statute's provision.¹⁰⁹ The Court condensed the provision¹¹⁰ to read: "a work is 'fixed' in a tangible medium of expression when its embodiment . . . is sufficiently permanent or stable to permit it to be . . . reproduced . . . *for a period of more than transitory duration.*"¹¹¹ When read in this shortened form, the court erroneously construed the language as requiring the embodiment of the copy to remain for longer than a transitory duration.¹¹² This essentially means that despite Cablevision's concession that the data contained in the buffers exists for a long enough period of time to make a reproduction,¹¹³ merely because the embodiment is ephemeral enough to be considered "transitory" the court deemed the reproduction as falling short of what the Copyright Act defines as a "fixed copy."¹¹⁴ In contrast, the provision should have been interpreted to indicate that a work is "fixed" if the copies (here, the data being buffered in the BMR)¹¹⁵ are embodied in a sufficiently permanent state that allows the copyrighted work to be communicated or reproduced (i.e., the data containing the programming being reproduced in the primary ingest buffers)¹¹⁶ for a period of more than transitory duration. In other words, according to the latter interpretation rejected by the court, the requisite period of more than transitory duration is met if the embodiment persists long enough for Cablevision to generate a reproduction or communication from them.¹¹⁷ Thus, Cablevision would likely have been found liable for producing impermissible fixed copies if these proper infringement criteria were applied.

So, why should we care if these buffer copies are excused from liability for directly infringing on copyrighted material? Should heed be paid to the assertion that we must pardon this use of buffers, since a vast amount of the technologies we use in our everyday life need to create fleeting and temporary buffer copies to function?¹¹⁸

109. *Second Circuit Gets it Wrong*, *supra* note 24.

110. § 101; *see also supra* text accompanying note 22 (complete definition of "fixed" pursuant to § 101).

111. *Cartoon Network*, 536 F.3d at 127 (emphasis in original) (citing § 101).

112. *Id.*

113. *Id.* at 129.

114. *Id.*

115. *Id.*

116. *Id.*

117. The Copyright Act is properly interpreted in the case to denote that as long as a copy may be perceived, reproduced, or communicated, either directly or indirectly (directly by human eyes or indirectly with the aid of a machine or device), the unauthorized creation of such a copy may constitute an infringement of the copyright holder's ownership rights. Haochen Sun, *Reconstructing Reproduction Right Protection in China* (pt. 2), 53 J. COPYRIGHT SOC'Y U.S.A. 223, 270 (2006).

118. Brief for Law Professors as Amici Curiae Supporting Defendants-Counterclaimants-Appellants and Reversal, at 18–19, *Cartoon Network L.P. v. CSC Holdings, Inc.*, 536 F.3d 121 (2d Cir. 2008) (No. 07-1480-cv(L), 07-1511-cv(CON)) (stating that the Copyright Act should not be interpreted to allow for potential infringement liability for the use of all devices that make

B. EFFECTS ON EVERYDAY USERS OF MODERN TECHNOLOGY

To address the latter question, if copies made through the use of buffered data were indeed deemed “fixed” and subject to direct infringement charges, it is unlikely that end-user consumers would be found liable for playing a song on their iPod or operating a digital phone despite their necessary use of buffers.¹¹⁹ The transitory Random-Access Memory (RAM) copies created in this manner would in all likelihood be defensible based on the fair-use doctrine.¹²⁰

Courts evaluate the affirmative defense of fair use¹²¹ according to four factors stated in the Copyright Act.¹²² Although none of these four factors are dispositive in determining whether fair use may be successfully applied,¹²³ meeting the criterion regarding “the effect of the use upon the potential market for or value of the copyrighted work”¹²⁴ is the most persuasive of the four statutorily enumerated fair-use factors.¹²⁵ Because of this weighted view, courts would not attach liability to average users engaged in noncommercial activities who are utilizing buffer-necessary technology for personal use, where the owner of the copyright is not likely affected financially by (nor likely even aware of) most of these daily occurrences.¹²⁶ The likeliness that this consumer-friendly outcome would come to fruition under the above circumstances is further buttressed by the Supreme Court’s employment of an “equitable rule of reason” analysis, which allows more flexibility in deciding which other factors may be deemed acceptable purposes regarding a fair use determination.¹²⁷ For example, the Supreme Court has criticized the Ninth Circuit Court of Appeals for not allowing “entertainment” or “increased access” to new technology to be considered acceptable purposes within the

transient RAM reproductions, such as computers, CD players, iPods, digital phones, and television, or any other digital information-processing device).

119. *Id.*

120. Ned Snow, *The TiVo Question: Does Skipping Commercials Violate Copyright Law?*, 56 SYRACUSE L. REV. 27, 63–65 (2005) (describing how stand-alone DVR and similar device usage is generally protected from direct infringement by a fair-use defense).

121. See BLACK’S, *supra* note 97 (listing the four statutory factors to be included for consideration in evidencing a showing of fair use).

122. *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 448 (1984).

123. *Id.* at 448–49.

124. 17 U.S.C. § 107(4) (2006).

125. See *Stewart v. Abend*, 495 U.S. 207, 238 (1990) (characterizing the commercial fair-use factor as “central fair use factor”); see also *Sony*, 464 U.S. at 448–49 (stating that although not conclusive, the first factor to be considered in a fair use analysis is the commercial character of an allegedly infringing activity).

126. Snow, *supra* note 120, at 63–65, 67 (2005) (stating that this highly influential fair-use factor will likely be met where the purposes for using the copyrighted work are noncommercial and incentives for creative efforts are not hindered).

127. *Sony*, 464 U.S. at 455 n.40.

scope of the fair use allowance,¹²⁸ explaining that not every fair use must be productive in nature.¹²⁹

C. EXTENSION OF THE VOLITION TEST IN DIRECT INFRINGEMENT CASES

Consumer end-users and providers of systems that utilize buffers should not have to rely on a determination of the applicability of the fair use doctrine to avoid liability for direct infringement. Perhaps the courts could arrive at a more appropriate solution by realizing the important distinction between digital systems that use buffers to *incidentally* make reproductions in providing non-infringing services, and those systems that use buffers *primarily* in making reproductions to disseminate copyrighted material.¹³⁰ This solution would not require the courts to impose blanket liability on the use of all buffers making digital reproductions, placing the burden on defendants to invoke a proper defense.¹³¹ Instead, it would compel the courts to make a determination of infringement liability for the use of buffers by placing greater weight on the system providers' intentions to aid in spreading copyrighted material. In this way, direct infringement claims involving the use of buffers could be decided with an eye to discerning whether the core purpose of the system provided was to create unauthorized reproductions, as opposed to those acting as passive agents (which may merely allow for the possible facilitation of end-users' infringing activity).¹³² Adoption of this method necessitates initially looking at the level of how passive a given system is in each case, in order to discover who is actually making these unauthorized copies: the end-user consumer or the host who maintains and creates this digital technology.¹³³ Otherwise stated, before the courts can address *why* the providers of these systems are creating copies, it needs to deal with *who* is producing these copies.¹³⁴

One of the difficulties the court faces in making a determination of direct copyright infringement liability, as opposed to contributory liability, is deciding who was responsible for reproducing the works in question

128. *Universal City Studios, Inc. v. Sony Corp. of Am.*, 659 F.2d 963, 970 (9th Cir. 1981), *rev'd*, 464 U.S. 417 (1984).

129. Matthew W. Bower, *Replaying the Betamax Case for the New Digital VCRs: Introducing TiVo to Fair Use*, 20 CARDOZO ARTS & ENT. L.J. 417, 432 (2002) (discussing the Court's jurisprudence regarding fair use as a defense against infringement allegations where defendants have engaged in television program time-shifting).

130. Turner's Memorandum of Law, *supra* note 4, at 15.

131. *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 590 (1994) (stating that fair use is an affirmative defense and accordingly the defendant bears the burden of proof in asserting such a defense).

132. Turner's Memorandum of Law, *supra* note 4, at 15–16 (describing the non-passive nature of Cablevision's RS-DVR service).

133. *Cartoon Network L.P. v. CSC Holdings, Inc.*, 536 F.3d 121, 130–33 (2d Cir. 2008), *cert. denied sub nom. CNN, Inc. v. CSC Holdings, Inc.*, 129 S. Ct. 2890 (2009).

134. *Id.*

when end-users are provided access to copyrighted works from a service provider.¹³⁵ In copyright infringement cases, determining who made unauthorized reproductions of copyrighted work is usually the least of the court's problems.¹³⁶ The outcome of the case normally rests on a finding of whether the activity engaged in by the accused party substantively constitutes an allegedly infringing act, rather than identifying the appropriate party to whom liability should attach.¹³⁷ The additional problem of determining who actually created an infringing copy frequently arises and has greater relevance in cases such as *Cartoon Network*, where end-users or customers engage in potentially infringing conduct by utilizing defendants' systems to create a copy.¹³⁸ Since the plaintiffs were alleging only charges of direct copyright infringement and not contributory infringement, the Second Circuit's analysis of which party was supplying the requisite volitional conduct was a key issue in deciding where the blame should be placed.¹³⁹ In order to be found accountable for direct infringement, a party must have provided the volitional conduct in making the reproductions.¹⁴⁰

Slowly, courts have adopted this "volition test," applying it through a line of cases¹⁴¹ beginning with *Religious Technology*.¹⁴² In *Religious Technology*, a Bulletin Board System operator and Internet access provider, Netcom On-Line Communications Services, Inc. (Netcom), were excused from liability on a direct copyright infringement claim when a former minister of Scientology turned critic of the religion, Dennis Erlich, posted portions of late Scientology founder L. Ron Hubbard's works on a

135. See *CoStar Group, Inc. v. LoopNet, Inc.*, 373 F.3d 544 (4th Cir. 2004); *Playboy Enters., Inc. v. Webworld, Inc.*, 991 F. Supp. 543 (N.D. Tex. 1997); *Religious Tech. Ctr. v. Netcom On-Line Comm'n Servs.*, 907 F. Supp. 1361 (N.D. Cal. 1995).

136. *Cartoon Network*, 536 F.3d at 130.

137. *Id.*

138. See, e.g., *Religious Tech. Ctr.*, 907 F. Supp. at 1367–68 (determining whether defendant ISP or third-party customer who posted copyrighted work created a "copy" when work was posted automatically); see also *Princeton Univ. Press v. Mich. Document Servs.*, 99 F.3d 1381, 1383–84 (6th Cir. 1996) (en banc) (weighing the issue of whether copy shops were liable for direct infringement when unauthorized copies are made at the behest of requesting customers); *RCA/Ariola Int'l, Inc. v. Thomas & Grayston Co.*, 845 F.2d 773, 776–77 (8th Cir. 1988) (discerning whether to attach direct liability to customers or to businesses who allowed these customers to use in-house equipment to copy sound recordings).

139. *Cartoon Network*, 536 F.3d at 124, 130.

140. *Religious Tech. Ctr.*, 907 F. Supp. at 1370 (stating that although contributory infringement may still attach, direct copyright infringement requires a showing of a causal or volitional element in producing unauthorized copies beyond mere ownership of a machine facilitating third-party reproductions).

141. See, e.g., *CoStar Group, Inc. v. LoopNet, Inc.*, 373 F.3d 544 (4th Cir. 2004); *Perfect 10, Inc. v. Cybernet Ventures, Inc.*, 213 F. Supp. 2d 1146 (C.D. Cal. 2002); *Playboy Enters., Inc. v. Webworld, Inc.*, 991 F. Supp. 543 (N.D. Tex. 1997).

142. *Religious Tech. Ctr.*, 907 F. Supp. 1361.

Usenet¹⁴³ BBS.¹⁴⁴ The plaintiffs, copyright holders of Mr. Hubbard's works,¹⁴⁵ sued in response to Netcom's refusal to comply with their request that Erlich not be allowed to gain access to the Internet through the access provider's system.¹⁴⁶ Netcom asserted that it would be impracticable to prescreen a user's BBS postings and that they were not responsible for creating the unauthorized reproductions. In addition, Netcom argued that they were merely providing its subscribers with access to a system that third parties might possibly utilize to make copies.¹⁴⁷ The District Court for the Northern District of California proceeded to expound the newfound principle that "[a]lthough copyright is a strict liability statute, there should still be some element of volition or causation which is lacking where a defendant's system is merely used to create a copy by a third party."¹⁴⁸ Thus, the court excused from direct infringement liability those entities that provide access to and maintain systems which possess a certain degree of "passivity," where the systems are conduits for the volitional conduct of potentially infringing end-users.¹⁴⁹

Prior to the decision in *Cartoon Network*,¹⁵⁰ courts primarily used the "passivity test" in determining direct infringement liability only in cases where the defendant was an ISP, BBS operator, or provider of some other type of web-based service.¹⁵¹ However, the Second Circuit has extended this principle to apply outside of this framework by allowing Cablevision, a digital cable operator, to escape culpability as a direct infringer.¹⁵² The court viewed Cablevision simply as a provider of the RS-DVR service and data stream buffers, which are conduits for the end-user subscribers'

143. A *Usenet* (or *User Network*) is "[a] public access network on the Internet that provides group discussions and group e-mail. It is a giant, dispersed bulletin board that is maintained by volunteers who provide news and mail feeds to other nodes." PCMag.com, Encyclopedia Definition of: Usenet, http://www.pcmag.com/encyclopedia_term/0,2542,t=Usenet&i=53545,00.asp (last visited Oct. 19, 2009).

144. *Religious Tech. Ctr.*, 907 F. Supp. at 1365–66, 1372.

145. *Id.* Plaintiffs in this case were Religious Technology Center (RTC) and Bridge Publications, Inc. (BPI) who held copyrights in the unpublished and published works of L. Ron Hubbard, the late founder of the Church of Scientology. *Id.*

146. *Id.* at 1366.

147. *Id.* at 1368–70.

148. *Id.* at 1370.

149. *Cartoon Network L.P. v. CSC Holdings, Inc.*, 536 F.3d 121, 131–33 (2d Cir. 2008) (briefly discussing the history of the volition test and its application), *cert. denied sub nom.* CNN, Inc. v. CSC Holdings, Inc., 129 S. Ct. 2890 (2009).

150. *See generally id.*

151. *See, e.g.*, *Field v. Google Inc.*, 412 F. Supp. 2d 1106 (D. Nev. 2006) (Internet search engine operator defendant); *see also* *CoStar Group, Inc. v. LoopNet, Inc.*, 373 F.3d 544 (4th Cir. 2004) (ISP defendant); *Perfect 10, Inc. v. Cybernet Ventures, Inc.*, 213 F. Supp. 2d 1146 (C.D. Cal. 2002) (age verification web-service defendant); *Sega Enters. Ltd. v. Maphia*, 948 F. Supp. 923 (N.D. Cal. 1996) (BBS operator defendant); *Religious Tech. Ctr. v. Netcom On-Line Comm'n Servs.*, 907 F. Supp. 1361 (N.D. Cal. 1995) (ISP and BBS defendants).

152. *Cartoon Network*, 536 F.3d 121.

requests to record programs and create infringing copies.¹⁵³ In doing so, the court labeled the cable provider as merely maintaining a passive system that lacks the requisite volitional conduct necessary to be deemed a direct infringer.¹⁵⁴ This broadened view of passive system operators will have negative consequences for owners of copyrighted materials attempting to safeguard their exclusive proprietary rights. Such ramifications may persist if the courts rely upon this more widely interpreted passive system analysis, which names end-users as sole suppliers of the volitional conduct. Applying the volition test in this way may prevent copyright holders from pursuing litigation against entities who are both more efficiently enjoined from facilitating infringement and more easily identifiable as the true creators of the unauthorized copies.¹⁵⁵

D. PUTTING ASIDE THE VOLITION TEST WHEN A BUFFER'S SOLE FUNCTION IS TO INFRINGE

An alternative (and arguably better) approach would require that courts look past this relatively new volition element in direct infringement cases involving buffers such as *Cartoon Network*, where the sole purpose of the technology is to provide a means to create unauthorized reproductions of copyrighted works.¹⁵⁶ This proposed jurisprudential view should be adopted because prior case law has specifically limited application of the *Netcom* passivity defense to cases where the digital services at issue did not create unauthorized reproductions as their primary *raison d'être*, but rather as incidental to providing a non-infringing service.¹⁵⁷

The Second Circuit in *Cartoon Network* dismissed the plaintiffs' argument that to allow Cablevision to provide the RS-DVR service is to allow it to directly profit from the reproduction of unauthorized works by providing subscribers with a commercial service geared towards facilitating

153. *Id.* at 133.

154. *Id.* at 131 (stating that the *Netcom* passivity test applies in the current case and transcends the Internet).

155. Access providers of information and digital works have historically made for more attractive defendants, due in part to the relative ease of identifying them relative to end-users. *See, e.g.,* Niva Elkin-Koren, *Making Technology Visible: Liability of Internet Service Providers for Peer-to-Peer Traffic*, 9 N.Y.U. J. LEGIS. & PUB. POL'Y 15, 26 (2006).

156. It is important to note here that the Second Circuit stated in *Cartoon Network* that through the use of the RS-DVR service, indeed, someone is directly infringing on the plaintiff's copyright. 536 F.3d at 130. The court said that "after an RS-DVR subscriber selects a program to record, and that program airs, a copy of the program—a copyrighted work—resides on the hard disks of Cablevision's Arroyo Server, its creation unauthorized by the copyright holder. The question is *who* made this copy." *Id.* Without the court's view of Cablevision's RS-DVR service and buffer components as passive systems, it would follow that end-users were not the ones making copies of these works and thus direct liability would almost certainly attach to Cablevision's actions.

157. *See, e.g.,* *CoStar Group, Inc. v. LoopNet, Inc.*, 373 F.3d 544 (4th Cir. 2004); *Perfect 10, Inc. v. Cybernet Ventures, Inc.*, 213 F. Supp. 2d 1146 (C.D. Cal. 2002); *Playboy Enters, Inc. v. Webbworld, Inc.*, 991 F. Supp. 543 (N.D. Tex. 1997).

copyright infringement.¹⁵⁸ In ignoring this assertion, the court failed to recognize principles established in pioneering cases distinguishing *Netcom*¹⁵⁹ on the basis of the nature of the defendant as a provider of systems whose functions are dedicated solely to aiding in the creation of unauthorized copies.¹⁶⁰ Cablevision's data stream buffers are dedicated exclusively to aiding consumers in creating copies of programs,¹⁶¹ yet the cable company has escaped direct liability.¹⁶²

While the Supreme Court has recognized that an entity commits contributory infringement "by intentionally inducing or encouraging direct infringement,"¹⁶³ the case law is relatively sparse regarding when the line has been crossed in facilitating third-party infringing behavior in such a significant way as to impute direct infringement liability.¹⁶⁴ District courts that have addressed this issue have held that providers whose systems are instrumental in allowing end-users to make infringing copies—and who profit from encouraging these third-party users to engage in this conduct—are liable for direct copyright infringement.¹⁶⁵ In such instances, the focus shifted away from the passivity of the systems. Instead, the determination of culpability was made by primarily examining whether the defendants had control over the content of information provided to its subscribers and whether the defendants developed these systems to commercially profit off of this infringing third-party behavior.¹⁶⁶ For example, in *Playboy Enterprises, Inc. v. Webbworld, Inc.*,¹⁶⁷ the District Court for the Northern District of Texas held that where the defendant, a website operator, "exercised total dominion over the content of its site and the product it offered its clientele"¹⁶⁸ and "developed and launched the . . . software for commercial use,"¹⁶⁹ it could not evade liability for direct infringement by claiming that it was merely a passive conduit that automatically responded to the requests of users.¹⁷⁰ By establishing a business model based around providing systems that enable third-party infringement while controlling the

158. *Cartoon Network*, 536 F.3d at 133 (stating that although case law exists supporting the argument, there are no binding cases requiring the Second Circuit to find that facilitating copying in such a major way as the RS-DVR service should impute direct copyright infringement).

159. *Religious Tech. Ctr. v. Netcom On-Line Commc'n Servs.*, 907 F. Supp. 1361, 1368–1370 (N.D. Cal. 1995).

160. *See Playboy Enters., Inc. v. Russ Hardenburgh, Inc.*, 982 F. Supp. 503, 513 (N.D. Ohio 1997); *Webbworld, Inc.*, 991 F. Supp at 552.

161. *See* discussion on RS-DVR operation *supra* Part I.B.

162. *Cartoon Network*, 536 F.3d at 138–40.

163. *MGM Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913, 930 (2005).

164. *Russ Hardenburgh*, 982 F. Supp. at 511.

165. *See Webbworld*, 991 F. Supp. at 552; *Russ Hardenburgh*, 982 F. Supp. at 513.

166. *See Webbworld*, 991 F. Supp. at 552; *Russ Hardenburgh*, 982 F. Supp. at 512–15.

167. *Webbworld*, 991 F. Supp. 543.

168. *Id.* at 552.

169. *Id.* at 553.

170. *Id.*

digital content provided, an entity effectively becomes an infringing volitional actor.

In the same way, Cablevision's development of an RS-DVR system that utilizes buffers to create unauthorized copies of copyrighted content licensed solely for instantaneous linear network programming¹⁷¹ should preclude its ability to evade direct infringement liability. However, in hearing the case on appeal, the Second Circuit gave short shrift¹⁷² to the finding of the District Court for the Southern District of New York that the RS-DVR system in fact provides sufficiently significant involvement in the end-users' requests to record copies to hold Cablevision liable for the plaintiffs' claims.¹⁷³ The appellate court condoned the use of technologies such as the buffer system used in the Arroyo Server which serve no other practical purpose than as a necessary step in the process of infringement.¹⁷⁴ Properly interpreted, development of these systems interferes with copyright holders' exclusive rights¹⁷⁵ to reproduce and authorize reproduction of their copyrighted works.¹⁷⁶ The consequences of this ill-reasoned decision could bleed into the judicial interpretation of future copyright cases¹⁷⁷ where analogous technology blurs the line as to where volitional conduct takes place, and whether direct liability should attach to end users or with those entities that offer these copying services.

IV. SCREEN-SCRAPING

The outcome of this case may have a considerable impact on future judicial determinations regarding a number of potentially infringing technologies. This shift in viewpoint will likely affect those digital technologies that utilize buffers,¹⁷⁸ as well as those designed as tools to aid infringing behavior.¹⁷⁹ The nexus between the Second Circuit's view of

171. See explanation *supra* Part I.A–B.

172. *Cartoon Network L.P. v. CSC Holdings, Inc.*, 536 F.3d 121, 131–32 (2d Cir. 2008), *cert. denied sub nom. CNN, Inc. v. CSC Holdings, Inc.*, 129 S. Ct. 2890 (2009).

173. *Twentieth Century Fox Film Corp. v. Cablevision Sys. Corp.*, 478 F. Supp. 2d 607, 621 (S.D.N.Y. 2007), *rev'd in part, vacated in part sub nom. Cartoon Network L.P. v. CSC Holdings, Inc.*, 536 F.3d 121 (2d Cir. 2008), *cert. denied sub nom. CNN, Inc. v. CSC Holdings, Inc.*, 129 S. Ct. 2890 (2009). It is important to reiterate here that Cablevision developed, maintained, and operated a system that splits data through the use of buffers. *Id.* at 619. This process required reconfiguration of the linear channel programming signals through the use of equipment Cablevision physically controlled at the head-end. *Id.* Combined with the fact that the cable company maintained control over source programming and individual subscriber hard drive capacity, it is easy to see how Cablevision may be viewed as the proper defendant here for producing unauthorized copies. *Id.*

174. *Cartoon Network*, 536 F.3d at 139–40.

175. *Twentieth Century*, 478 F. Supp. 2d at 622.

176. 17 U.S.C. § 106(1) (2006).

177. See generally Cavender, *supra* note 100, at 153–60.

178. See *supra* Part III.A–B.

179. See *supra* Part III.C–D.

buffers as transitory and non-infringing in nature,¹⁸⁰ and the court's dismissal of prior persuasive jurisprudence (that would otherwise impose liability for direct infringement on systems dedicated to facilitating the unauthorized copying of works)¹⁸¹ may also have significant consequences in the area of screen-scraping.¹⁸² Programmers who write screen-scraping applications may incorporate buffering and quick cache¹⁸³ flushing into their programs in order to avoid copyright infringement claims.¹⁸⁴ This may consequently encourage those who initiate such programs to engage in unethical practices by reducing the risk of liability. In order to understand how the Second Circuit's view of the nature of buffer technology may result in an evasion of important copyright principles and potentially promote unethical behavior, it is important to first get a working knowledge of what this practice entails.

"Screen-scraping" occurs when software developers and data aggregators employ the use of programs that rove the Internet and programmatically evaluate digitally displayed information in order to extract from it the specific information the user requests.¹⁸⁵ These screen-scraping or "spidering programs" are programmed to automatically collect information contained on websites, so that large amounts of data can be sifted through, thus "saving [users] the trouble of having to browse it all manually."¹⁸⁶ Although there is a distinction between "spiders" (which rove and collect entire web pages or files) and "scrapers" (which collect specific pieces of information from within these files), for purposes of this note,

180. See discussion *supra* Part III.A.

181. See discussion *supra* Parts III.C, IV.

182. See discussion *infra* Part V.

183. Cache ("[p]ronounced 'cash'") is

used to speed up data transfer and may be either temporary or permanent. Memory and disk caches are in every computer to speed up instruction execution and data retrieval and updating. These temporary caches serve as staging areas, and their contents are constantly changing. Browser caches and Internet caches store copies of Web pages retrieved by the user for some period of time in order to speed up retrieval the next time the same page is requested.

PCMag.com, Encyclopedia Definition of: Cache, http://www.pcmag.com/encyclopedia_term/0,2542,t=cache&i=39177,00.asp (last visited Oct. 19, 2009).

184. Eric Goldman Technology & Marketing Law Blog, http://blog.ericgoldman.org/archives/derivative_liability/ (Aug. 4, 2008, 06:59 PST).

185. Robert Hess, *Web Q&A: Printing from a Web Page, Screen Scraping, Origin of an HTTP Request, and More*, MSDN MAG., <http://msdn.microsoft.com/en-us/magazine/cc302055.aspx> (last visited Oct. 19, 2009).

186. These screen-scraping spiders "range in complexity from the simplest script to grab the latest weather information from a web page, to the armies of complex spiders working in concert with one another, searching, cataloging, and indexing the Web's more than three billion resources for a search engine like Google." KEVIN HEMENWAY & TARA CALISHAIN, *SPIDERING HACKS: 100 INDUSTRIAL STRENGTH TIPS & TOOLS xv* (Rael Dornfest & Dale Dougherty eds., 2004).

these terms will be used interchangeably.¹⁸⁷ These types of processes are usually employed in concert.¹⁸⁸ Programmers often unleash “a program that uses a spider to follow links but then uses a scraper to gather particular information.”¹⁸⁹

**A. THE NEXUS BETWEEN THE TYPE OF DATA EXTRACTED BY
SCREEN-SCRAPERS AND THE COPYRIGHT PROTECTION
AFFORDED**

Screen-scraping practices, by their very nature, are often viewed as intrusive.¹⁹⁰ Since scraping often involves one business actor’s process of data aggregation from information acquired on another entity’s website, disputes involving this practice “tend to involve commercial access of a website for profit and to the commercial detriment of the website owner.”¹⁹¹ The required data may be copyrighted material embedded in a page,¹⁹² but often the digital data desired for commercial purposes is comprised of facts and information gleaned from a company’s pricing structure or stored database.¹⁹³ Although those employing the scraped data may simply want to gain an edge in collecting stock information, researching real estate listings, or tracking insurance prices, owners of the websites being scraped often do not want their information being aggregated by an outside user even when the website and information are made public.¹⁹⁴ However, if “[c]ompanies usually go to great lengths to disseminate information about their products or services. . . . [W]hy would a website owner not wish to have his or her website’s information scraped?”¹⁹⁵

A simple, but perhaps overlooked, response to this question is that some view aggregation of their data as unethical since they invested the time and cost to put together this information in the first place.¹⁹⁶ As the

187. *Id.* at 2.

188. *Id.*

189. While spider programs generally follow a series of Internet links, gathering up content, scrapers will instead pull data directly from web pages. *Id.*

190. See discussion *infra* Part IV.A–B.

191. George Fibbe, Associate, Yetter, Warden & Coleman L.L.P., Speaker at the Mercer Law Review Symposium: The Internet: Place, Property, or Thing—All or None of the Above (Oct. 30, 2003), in 55 *MERCER L. REV.* 919, 921 (2004).

192. Lauren Yamamoto, Note, *Copyright Protection and Internet Fan Sites: Entertainment Industry Finds Solace in Traditional Copyright Law*, 20 *LOY. L.A. ENT. L. REV.* 95, 124 (2000) (discussing the licensee’s or copyright holder’s use of embedding to prevent unwanted access to copyrighted material).

193. Ryan Smith, *Screen-scraping Ethics: The Ethics of Website-data Extraction*, ASSOCIATED CONTENT, Sept. 2, 2008, http://www.associatedcontent.com/article/932829/screenscraping_ethics.html?page=3&cat=15.

194. *Id.*

195. *Id.*

196. *Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 349 (1991) (acknowledging that while the result of data aggregation is not ultimately unfair, it may seem to the plaintiff that this practice is somewhat unethical).

Supreme Court recognized in *Feist Publications, Inc. v. Rural Telephone Service Co., Inc.*, “[i]t may seem unfair that much of the fruit of the compiler’s labor may be used by others without compensation.”¹⁹⁷ These sentiments may not be unwarranted. For example, when airline flight prices are scraped via spidering software by a price comparison website, the target airline may accurately observe that a user of screen-scraping programs interferes with the relationship between the airline and their customers by inflating their flight prices and charging the customer an additional unjustified service fee.¹⁹⁸ However, in *Feist*, the Supreme Court decided that facts themselves are not copyrightable, and the primary objective of copyright is not to reward the labor of authors, but “[t]o promote the Progress of Science and useful Arts”¹⁹⁹ per the Copyright Clause of the U.S. Constitution.²⁰⁰ In doing so, the *Feist* Court ruled that the plaintiff’s substantial efforts and investments in compiling an alphabetized white pages telephone directory database would be afforded no remedy under the Copyright Act for the defendant competitor company’s appropriation of this data.²⁰¹ Since public websites often only display factual data, it follows that facts and information located on public websites which are collected

197. *Id.*

198. Shoosmiths, *How to Stop Your Website Being ‘Screen Scraped,’* Sept. 22, 2008, <http://www.shoosmiths.co.uk/news/1525.asp>. The target airline

may also claim that websites using screen scrapers fail to pass on important flight information, such as cancellations and delays, to customers after the booking has been made and slow down the airline’s own transactional website. This has led to a spate of disputes between the airlines and websites using screen scraping.

Id. These practices, caused by the scraping site’s detachment from the target airline’s actual services, may subtract from the value of the airline’s service by negatively affecting the customer’s experience. *Id.* By gleaning the flight information, daily pricing, and other fare data from an airline’s online booking site, those parties utilizing screen-scrapers and offering tickets through their sites are unjustly building a business model around “shopping . . . fares for their [own] businesses.” E. Alan Arnold, Senior Attorney, Delta Airlines, Speaker at the Mercer Law Review Symposium: The Internet: Place, Property, or Thing—All or None of the Above (Oct. 30, 2003), in 55 MERCER L. REV. 919, 944 (2004).

199. *Feist*, 499 U.S. at 349 (alteration in original).

200. U.S. CONST. art. I, § 8, cl. 8.

201. Philip J. Cardinale, *Sui Generis Database Protection: Second Thoughts in the European Union and What it Means for the United States*, 6 CHI.-KENT J. INTELL. PROP. 157, 159–60 (2007), available at <http://jip.kentlaw.edu/art/volume%206/6%20Chi-Kent%20J%20Intell%20Prop%20157.pdf>. Cardinale added that the Supreme Court rejected the long-standing “sweat of the brow” doctrine by

primarily us[ing] language from the Copyright Acts of 1909 and 1976 to locate an originality requirement in the Constitution’s intellectual property clause. In doing so, [the Court] jettisoned labor theories that were traditionally sufficient in many jurisdictions to uphold copyrights for items such as scaled reproductions of statues and bingo cards.

Id. at 159–60.

through the use of a screen-scraping program would also not result in the spider programmer incurring liability for direct copyright infringement.

B. SCREEN-SCRAPING “UNETHICS”

The United States judiciary has asserted the meager copyrightability of factual works and information by “appl[ying] *Feist* with a reasonable degree of consistency since 1991.”²⁰² As a result, those seeking to protect the product of their invested time and effort, embodied in factual data, will find little help in the provisions of the Copyright Act.²⁰³ Commercial website owners attempting to block the activity of screen-scrapers and content aggregation programs have similarly been unsuccessful in litigating these issues under a copyright infringement theory.²⁰⁴ However, just because employing data aggregation spider programs have not typically been deemed illegal under copyright law does not mean that this practice is ethical.²⁰⁵ These target companies, whose data and information are being scraped, are joined in their opposition by many judicial decisions and legislative actions that recognize the harms that this usurpation can cause.²⁰⁶

The court’s general animus toward screen-scraping practices can be seen in its willingness to extend jurisprudential limits to accommodate claims against defendant developers and employers of data aggregation programs. While commercial data systems can no longer be protected from unauthorized data aggregation practices by relying solely on the copyrightability of facts, courts have not been very sympathetic to those who screen-scrape competing companies’ websites.²⁰⁷ As a result, courts often allow plaintiffs to proceed with charges on theories other than copyright infringement,²⁰⁸ namely trespass-to-chattels claims²⁰⁹ and alleged

202. David E. Shipley, *Thin But Not Anorexic: Copyright Protection for Compilations and Other Fact Works*, 15 J. INTELL. PROP. L. 91, 130 (2007).

203. See Cardinale, *supra* note 201.

204. See Linda A. Goldstein, 25th Annual Institute on Computer & Internet Law – Online Advertising: Rules of the Net, in 25th ANNUAL INSTITUTE ON COMPUTER & INTERNET LAW, at 291, 333–37 (PLI Patents, Copyrights, Trademarks, & Literary Prop., Course Handbook Series No. 5994, 2005) (citing a number of screen-scraping cases, each brought under multiple causes of action where copyright infringement claims failed).

205. See discussion *infra* Part IV.B.

206. *Id.*

207. Brian Carver, *Screen-Scraping: How to Use a Bot and Not Get Busted*, INTELL. PROP. BULL. (Fenwick & West, L.L.P., Mountain View, Cal.), Fall 2007, at 4.

208. See Goldstein, *supra* note 204, at 332–33.

209. See, e.g., *American Airlines, Inc. v. Farechase, Inc.*, Cause No. 067-194022-02, 2–4 (Dist. Ct. Tex. Mar. 8, 2003), available at http://www.eff.org/Cases/AA_v_FareChase/20030310_prelim_inj.pdf (granting an injunction in part on a trespass-to-chattels theory, noting an infringement on server capacity and potential harm caused to customer goodwill through the use of a scraper program that gleaned web-fare information and undermined plaintiff’s distribution model); *Oyster Software, Inc. v. Forms Processing, Inc.*, No. C-00-0724 JCS, 2001 WL 1736382 (N.D. Cal. Dec. 6, 2001) (allowing Oyster’s trespass-to-chattels claim to proceed to trial for defendant’s unauthorized use of plaintiff’s computer system); *eBay, Inc. v. Bidder’s Edge, Inc.*, 100 F. Supp. 2d 1058, 1071–73 (N.D. Cal. 2000) (issuing a preliminary injunction based on

violations of a website's terms of use.²¹⁰ Defendants who utilize spidering programs against competitors very frequently incur liability, "especially where the site has posted terms of use prohibiting commercial use of the site's content."²¹¹ Courts' eagerness to punish screen-scraping through a number of imperfect causes of action serves as evidence of the judiciary's normative view that this practice inherently violates ethical standards.

Many proposed and enacted pieces of legislation also seem to coincide with or embody a disdain for these unethical scraping practices. Website owners often rely on the anti-circumvention measures contained in the Digital Millennium Copyright Act (the DMCA)²¹² to thwart would-be appropriators of data by utilizing "self-help" technological protection measures, such as encryption, digital watermarks,²¹³ password protection,²¹⁴ and the embedding of data within a copyrighted page.²¹⁵ The provisions of the DMCA protect those that employ these self-help measures by finding violations where persons utilize or profit from programs "primarily designed or produced for the purpose of circumventing a technological measure that effectively controls access to a [copyrighted] work"²¹⁶ or those programs that have "only limited commercially significant purpose . . . other than to circumvent a technological measure that effectively controls access to a [copyrighted] work."²¹⁷ In other words, where owners of

damages caused by lost server capacity on a trespass-to-chattels theory for employment of a data-aggregation bot unleashed on plaintiff's website); *CompuServe, Inc. v. Cyber Promotions, Inc.*, 962 F. Supp. 1015, 1022–23 (S.D. Ohio 1997) (allowing an actionable trespass-to-chattels claim for lost storage capacity and processing efficiency due to the sending of automated unsolicited commercial e-mails); *Thrifty-Tel, Inc. v. Bezenek*, 54 Cal. Rptr. 2d 468, 472 (Cal. Ct. App. 1996) (finding liability for unauthorized use of a telephone company's computer system based on a trespass-to-chattels cause of action).

210. *See, e.g.*, *Register.com, Inc. v. Verio, Inc.*, 356 F.3d 393 (2d Cir. 2004) (defendant was enjoined from scraping in part for failure to comply with a non-commercial terms of use agreement); *Cairo, Inc. v. Crossmedia Servs., Inc.*, No. C 04-04825 JW, 2005 WL 756610, at *1 (N.D. Cal. Apr. 1, 2005) (courts allowed claim to proceed based partly on failure to comply with terms of use when defendant's robot culled uncopyrighted data from plaintiff's website); *Ticketmaster Corp. v. Tickets.com, Inc.*, No. CV997654HLHVBKX, 2003 WL 21406289, at *1 (C.D. Cal. Mar. 7, 2003) (although no liability ultimately attached, plaintiff was granted a preliminary injunction and allowed to proceed with claim based in part on defendant's failure to comply with terms of use on plaintiff's website); *Pollstar v. Gigmania, Ltd.*, 170 F. Supp. 2d 974 (E.D. Cal. 2000) (cause of action allowed for failure to comply with website's terms of use when defendant's scraper program accessed plaintiff competitor's website to glean information). All of these cases also involved allegations of a competitor linking to or scraping data from the website, and included allegations of additional torts. Mark A. Lemley, *Terms of Use*, 91 MINN. L. REV. 459, 470 (2006).

211. *See* Carver, *supra* note 207, at 3. This tendency toward liability extends beyond misappropriators of copyrighted works: "[D]ata aggregators that ultimately direct traffic and sales to the originating sites have found themselves losing in court." *Id.*

212. 17 U.S.C. § 1201 (2006).

213. Lee Kovarsky, *A Technological Theory of the Arms Race*, 81 IND. L.J. 917, 922–27 (2006).

214. *See* Yamamoto, *supra* note 192, at 121 n.256.

215. *Id.*

216. § 1201(a)(2)(A).

217. § 1201(a)(2)(B).

copyrighted materials have set up technological barriers to digitally accessing their work product, one may not provide or use a screen-scraping service whose main purpose is to get around these barriers either to gain access to the copyrighted material or profit from it.²¹⁸ While the main thrust of the DMCA's enactment was to afford added protection to the creativity of artistic works,²¹⁹ the recognition of the need to promote innovation in the digital medium²²⁰ supports the peripheral effect of chilling efforts to aggregate data contained in copyrighted pages.

In addition, many legislators have addressed the lack of fairness and reduced commercial development incentive that the practice of unauthorized information aggregation may cause.²²¹ From 1996 to 2007, there were six database protection bills introduced.²²² Two were passed by a House of Representatives vote (although eventually shelved by the Senate) and an additional two were approved by the standing House Judicial Committees.²²³ The introduction of these bills signifies the legislature's awareness of the importance of the electronic database industry and its increasing vulnerability to unscrupulous practices.²²⁴ However, since the intellectual property clause of the U.S. Constitution²²⁵ was interpreted by the Supreme Court in *Feist* as requiring "originality,"²²⁶ bills that would

218. § 1201(a)(3) (clarifying the definitions of the illegal activities described in § 1201(a)(2)).

219. See Yamamoto, *supra* note 192, at 119–21.

220. 144 CONG. REC. S12730 (daily ed. Oct. 20, 1998) (statement of Sen. Leahy).

221. See Cardinale, *supra* note 201, at 161–68.

222. *Id.* (providing a summary of legislative efforts regarding database protection).

223. See generally *id.* at 162–68 (describing the history of database protection bills). House Bill 3531 (the Database Investment and Intellectual Antipiracy Act of 1996) was referred by the Subcommittee to the House Judiciary Committee in 1996, although discussions were halted and the bill was sidelined at the end of the 104th Congress' term. H.R. 3531, 104th Cong. (1996). In 1998, during the 105th Congress, the House passed House Bill 2652 (the Collections of Information Antipiracy Act) only to have it tabled by the Senate on one occasion and subsequently excised from the language of the Digital Millennium Copyright Act during negotiations later that year. H.R. 2652, 105th Cong. (1998). The 106th Congress re-introduced this bill as House Bill 354 in 1999, along with an opposing bill, House Bill 1858, only to find House Bill 354 rejected by the Energy and Commerce Committee following the Judiciary Committee's approval. H.R. 354, 106th Cong. (1999). Lastly, in early 2004, the House Judiciary Committee passed House Bill 3261 (the Database and Collections of Information Misappropriation Act) only to fall prey to the opposition's staunch resistance in the 108th Congress. H.R. 3261, 108th Cong. (2004). In the same year, competing House Bill 3872 (Consumer Access to Information Act) also floundered. H.R. 3872, 108th Cong. (2004).

224. See, e.g., H.R. REP. NO. 108-421, pt. 1, at 7–9 (2004). The report stated:

In cyberspace, technological developments represent a threat as well as an opportunity for collections of information, just as for other works. Copying factual material from a third party's collection and rearranging it to form a competing information product—behavior that copyright protection alone may not effectively prevent—is cheaper and easier than ever through digital technology that is now in widespread use.

Id. at 8.

225. U.S. CONST. art. I, § 8, cl. 8.

226. See *supra* Part IV.A.

effectively prohibit the use of spidering programs to aggregate data without the target company's permission must be able to "withstand judicial scrutiny under the Commerce Clause . . . [by] fram[ing] database protection proposals as a matter of protecting commercial interests, via unfair competition and misappropriation doctrines, rather than [intellectual] property."²²⁷ Thus, the continued goal of protective legislation has been framed as an effort to protect the economic interests of principal companies from unfair competition,²²⁸ rather than ensuring the exclusive control of creative work product afforded to artists and inventors.²²⁹ This acknowledgement of the need to safeguard against potential economic harm²³⁰ reinforces the categorization of screen-scraping and data misappropriation as unethical practices.

V. THE SECOND CIRCUIT'S PROMOTION OF SCREEN- SCRAPING PRACTICES AND THE NEED TO REEL IN THE NON-INFRINGEMENT STATUS OF BUFFERS

The unethical behavior of screen-scraping will likely increase after programmers latch on to the possible defenses to copyright infringement arising from the *Cartoon Network* decision. One of the most important principles to emerge from *Cartoon Network* is the notion that loading a program into a form of RAM does not necessarily constitute an

227. See Cardinale, *supra* note 201, at 161.

228. These proposed legislative bills echo the sentiment of the European Union Directive on Legal Protection of Databases 96/9/EC, adopted by the European Union in 1996. H.R. REP. NO. 108-421, at 8. Both the EU Directive and its influenced U.S. counterparts recognize the competitive disadvantage created when firms who have invested time and money in maintaining data systems are hurt economically by third-party misappropriation of factual data through the use of digital technologies. *Id.* The shift in U.S. policymakers view of screen-scraping is underscored by this proliferation of proposed legislation. See *id.* at 9.

229. This is evidenced by the language of the proposed bills, which state, in part, that it is a violation to extract data maintained by another person only when there has been a substantial investment of resources or time. See, e.g., S. 2291, 105th Cong. § 1202 (1998); H.R. 3261, 108th Cong. § 3 (2003).

230. The need to protect against economic harm caused by digital data aggregation technologies is an important issue. As one author elegantly stated:

The strongest argument for database protection is the prevention of copying by a competitor seeking to compete head-to-head with the original compiler. Compiling a database is an expensive, time-consuming proposition; copying a database is cheap, particularly when digital technology can automate the copying. The copyist therefore does not share the original compiler's development costs and can undercut the original compiler's price. The original compiler must match this lower price to remain competitive, and may not be able to recoup its development costs as a result. Knowing that this outcome is possible, companies may not bother to compile databases in the first place, thus denying the public the benefit of useful products.

Charles C. Huse, *Database Protection in Theory and Practice: Three Recent Cases*, 20 BERKELEY TECH. L.J. 23, 33 (2005) (footnotes omitted).

unauthorized copy, as a matter of law.²³¹ Prior to the Second Circuit's decision, the controlling legal principle used to determine whether RAM constitutes a statutorily defined "copy" was found in *MAI Systems Corp. v. Peak Computer, Inc.*²³² The Second Circuit distinguished this case by declaring that the *MAI* decision failed to address the "transitory duration" requirement in determining whether a copy is "fixed."²³³ Thus, a ruling was made on how the statute should be interpreted—free from *stare decisis*.²³⁴ The conclusion reached by the appellate court was that even if an *entire* work is put through a buffer, as long as these small increments of data are overwritten quickly, no direct copyright infringement has occurred.²³⁵

The Second Circuit's ruling in this case will encourage the proliferation of unethical screen-scraping practices by allowing potential defendants to use buffers to procure information contained in copyrighted websites and databases. Those seeking to engage in this web activity can sidestep liability for direct copyright infringement by downloading a copyrighted page, processing the data, and then overwriting or eliminating the copies.²³⁶ In redefining the process of reproducing copyrighted material and quickly overwriting the data obtained as "non-infringing conduct,"²³⁷ the court has provided users of scraping robots with a possible mechanism for letting the uncopyrightable "ends" excuse the "means."²³⁸ More simply, as long as a scraper can sift the uncopyrightable facts from the copyrighted material quickly enough that a court would deem it "transitory" (for example, a buffer), the user gets to keep all the uncopyrighted data to utilize for her own financial gain.²³⁹

231. *Cartoon Network L.P. v. CSC Holdings, Inc.*, 536 F.3d 121, 124 (2d Cir. 2008), *cert. denied sub nom. CNN, Inc. v. CSC Holdings, Inc.*, 129 S. Ct. 2890 (2009).

232. *MAI Systems Corp. v. Peak Computer, Inc.*, 991 F.2d 511 (9th Cir. 1993) (holding that defendant computer maintenance company's booting of plaintiff's computer, and consequent loading of plaintiff's operating system into RAM, is "sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration," thus, demonstrating infringing behavior by satisfying the Copyright Act's statutory definition of "fixed" copies).

233. 17 U.S.C. § 101 (2006) (using "fixed" as a term to define "copies").

234. *Cartoon Network*, 536 F.3d at 128 (finding that interpretation of the "transitory duration" language was left open since the *MAI Systems* court did not discuss or analyze this term).

235. *Id.* at 129–30 (finding that the buffered data fell outside of the "transitory duration requirement" prong of the "fixed-copy" test).

236. Eric Goldman Technology & Marketing Law Blog, *supra* note 184.

237. See discussion *supra* Part III.A.

238. In the current example, the "ends" would be obtaining uncopyrightable data, while the "means" would be utilizing buffers or quickly rewriting the portions of data containing the copyrighted works.

239. This practice would not likely violate the anti-circumvention provisions of the Digital Millennium Copyright Act, since they primarily protect against "any technology . . . that . . . is primarily designed or produced for the purpose of circumventing a technological measure that effectively controls access to a work protected under this title. . . ." 17 U.S.C. § 1201–(1)(A) (2006) (emphasis added). Since facts are not protected by the Copyright Act, buffers employed to circumvent direct infringement for scraping of embedded data would not likely be seen as a

Without this crucial layer of protection, financial actors may find it more difficult to secure profitability, resulting in a diminished incentive to invest in innovation and provide a public good.²⁴⁰ In the same way that the driving force behind copyright innovation is the desire for economic gain, which in turn produces a public good,²⁴¹ firms are likewise motivated to gather and utilize data based upon a desire for profit.²⁴² As digital communication systems expand and “the economic value of online databases increases, so too does the potential market harm wrought by database security breaches.”²⁴³ Thus, there is a great need to mitigate the financial harm that might result from excusing buffered screen-scraping, since the digital age has extended this market far into the global arena.²⁴⁴

Screen-scraping practices may also be encouraged by the Second Circuit’s unwillingness to attach liability to digital services that construct their business models around employing buffers that serve the sole purpose of facilitating copyright infringement.²⁴⁵ For example, assume that a spidering program is integrated into a scraper’s service, allowing third-party end-users to provide the requisite “volitional conduct” for copyright infringement to attach where copyrighted pages are downloaded to extract information (for example, by initiating an unauthorized search for corporations that use a specific phone company). If this bot²⁴⁶ uses buffers to quickly overwrite all copyrighted portions of the data stream, even where the data stream transmits the “embodiment”²⁴⁷ of the entire copyrighted webpage bit by bit, the *Cartoon Network* court would likely forgive the

technology primarily designed to gain access to copyrighted works. *See supra* text accompanying note 196.

240. *See* Huse, *supra* note 228, at 33.

241. *See, e.g.*, William M. Landes & Richard A. Posner, *An Economic Analysis of Copyright Law*, 18 J. LEGAL STUD. 325, 325–26 (1989); Joseph P. Liu, *Copyright Law’s Theory of the Consumer*, 44 B.C. L. REV. 397 (2003); John Quiggin & Dan Hunter, *Money Ruins Everything*, 30 HASTINGS COMM. & ENT. L.J. 203, 238 (2008).

242. *See* Huse, *supra* note 230, at 33.

243. *See* Cardinale, *supra* note 201, at 176. The author notes that the expansion of the Internet carries with it the growing importance of database and information protection. *Id.* The spread of digital information access becomes a greater focus “[a]s online databases continue to quickly grow in value, and as the factual reliability of a database becomes arguably a more considerable ‘value added’ feature in the internet context.” *Id.*

244. *See* Directive 96/9/EC, The Legal Protection of Databases, 1996 O.J. (L 77) 20, 20–28 (EC). The Reciprocity Provision in Recital 56 grants protection from unauthorized data extraction for databases created by non-EU Member States, only where the third-party country adopts protective measures that “offer comparable protection” to those provided by the EU Directive. *Id.*

245. *See* discussion *supra* Part III.D.

246. A *Bot* is “[a] program used on the Internet that performs a repetitive function Bots are used to provide comparison shopping. . . . The term is used for all variety of macros and intelligent agents that are Internet or Web related.” PCMag.com, Encyclopedia Definition of: Bot, http://www.pcmag.com/encyclopedia_term/0,2542,t=bot&i=38865,00.asp (last visited Oct. 19, 2009).

247. *Cartoon Network L.P. v. CSC Holdings, Inc.*, 536 F.3d 121, 127 (2d Cir. 2008) (referencing the “embodiment requirement” for fixed copies found in 17 U.S.C. §101 (2006)), *cert. denied sub nom. CNN, Inc. v. CSC Holdings, Inc.*, 129 S. Ct. 2890 (2009).

intrusive process as creating a non-infringing copy.²⁴⁸ However, even if the court did find that a fixed copy had been made, under the same erroneous buffer logic that exculpated Cablevision from liability, employers of the buffered screen-scraping program would not have committed the volitional conduct necessary to be labeled as direct copyright infringers.²⁴⁹ By applying the court's reasoning and viewing the providers of buffered screen-scraping services as passive non-volitional actors, there will be little stopping the emboldened programmers of spidering bots from engaging in this harmful behavior.

VI. CONCLUSION

The Second Circuit erred in giving a broad and sweeping pardon for direct copyright infringement both to creators of unauthorized "transitory" copies and to those who maintain and produce systems that are dedicated to infringement-facilitating practices. While there certainly will be harm to the U.S. business sector, it remains to be seen how much damage the fallout from this decision will cause to society at large. It would be prudent for other courts to avoid this short-sighted jurisprudence.

The appellate court's adjudication opened the door for Cablevision's new consumer-friendly technology, but its lasting declarations continue to leave the door unlocked for more sinister bots and spiders to be unleashed on future commercial innovators.²⁵⁰ In allowing buffers to get around the "transitory duration" requirement for direct infringement, devisors of screen-scraping programs are given the key to practicing unauthorized and unethical data aggregation with few consequences. With an increasing need for protective legislation perhaps far on the horizon,²⁵¹ courts need to recognize the dangers of screen-scraping and reign in this ill-concluded decision.

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248. *See id.* at 129–30 (excusing creators of "transitory" buffer copies from direct infringement liability).

249. *See supra* Part III.D.

250. *See* discussion *supra* Part IV.B.

251. *See* Cardinale, *supra* note 201, at 168 (stating that in recent years "no database protection legislation has been openly debated, nor will it be").

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