

**DIGITAL VIDEO RECORDERS, ADVERTISEMENT
AVOIDANCE, AND FAIR USE**

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I. INTRODUCTION

The CEO of TiVo, the company that invented the digital video recorder (“DVR”), recently warned a group of advertisers that “what happened to the music business” is bound to happen to the television industry due to rising “television commercial avoidance and the growing epidemic of fast forwarding thru [sic] ads.”¹ Recent data on DVR

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1. Posting of Jack Myers to The Huffington Post, TV Industry Faces Ad Avoidance Crisis More Severe Than Financial Crisis, Warns TiVo CEO, http://www.huffingtonpost.com/jack-myers/tv-industry-faces-ad-avoi_b_136421.html (Oct. 21, 2008, 07:10 EST). TiVo believes that it can serve as an alternative route to reaching viewers. *See id.*

adoption and usage supports this prediction. DVR users record 30% of their total television viewing to watch at a later time, a practice known as time-shifting.² When viewing these recorded programs, users watch approximately 40% of the commercials, presumably fast-forwarding through the remaining 60%.³ Additionally, DVR penetration is rising rapidly, growing from under 5% of households in January 2006 to over 30% by March 2009.⁴ The result is declining live television ratings and advertising revenue.⁵ Due to this increased DVR usage, the television industry faces an “advertisement avoidance crisis” that threatens to destroy the decades-old revenue model of advertiser-supported television.

Moving away from an advertiser-supported television revenue model is not necessarily an unwelcome development. A different revenue model might lead television networks to produce a broader range of programming, since the current model places constraints on the type of content broadcast. For example, advertisers may not be willing to support controversial content, effectively stifling its production. Similarly, because television advertisers seek to reach a large number of people in the most desirable demographics, programming that appeals only to a niche audience receives little support from advertisers. Additionally, the time viewers spend watching television commercials is largely wasted, as they typically receive little value from watching advertisements.⁶ A replacement revenue model could potentially eliminate these negative aspects of advertiser-supported television. However, no replacement revenue model is in sight.

2. See NIELSEN, HOW DVRs ARE CHANGING THE TELEVISION LANDSCAPE 10 fig.10 (2009), http://blog.nielsen.com/nielsenwire/wp-content/uploads/2009/04/dvr_tvlandscape_043009.pdf. The average was calculated by multiplying the “% of all Time Shifters” by the “% of Time Shifting” and summing the results.

3. *Id.*

4. *Id.* at 3 fig.1.

5. See, e.g., Bill Carter, *Uneven Gains in Delayed TV Viewing*, N.Y. TIMES, Oct. 14, 2008, at B4; Rebecca Dana & Sam Schechner, *TV's Fall Lineup Disappoints Hopes for a Quick Recovery*, WALL. ST. J., Oct. 1, 2008, at B6. *But see* Bill Carter, *TV Finds that Mortal Foe, DVR, Is a Friend After All*, N.Y. TIMES, Nov. 2, 2009, at B1 (reporting that the viewing of advertisements in recorded programming has increased); Posting of Tim Jones to Electronic Frontier Foundation Deeplinks Blog, *DVR Is TV's New BFF*, <http://www.eff.org/deeplinks/2009/11/dvr-tvs-new-bff> (Nov. 2, 2009).

6. This is not always the case, as some television advertisements, such as those run during the Super Bowl, are entertaining and thus benefit viewers. In addition, advertisements can communicate valuable information to consumers about new products or services. One might argue that advertisers could stop viewers from skipping commercials if they consistently produced relevant and entertaining advertisements. This solution is unlikely for two reasons. First, it would require a rather profound change in viewers' low expectations for standard commercials. Until these expectations change, DVR users will likely continue skipping blocks of commercials on a regular basis and therefore would not learn of the improved quality of the advertisements. Second, effective advertisements are costly, and the potential for increased viewership simply may not justify production costs necessary to produce high-quality advertisements on a regular basis.

The lack of a replacement revenue model has the potential to reduce the quality of television programming as networks are forced to cut costs to maintain profitability. As costs become more salient, there is bound to be a shift away from expensive scripted television programs toward less expensive reality shows, games shows, and talk shows.⁷ Programming decisions will increasingly depend not on the quality or popularity of a show but rather almost entirely on the production costs of alternative content choices. Failing to solve the advertisement avoidance crisis likely will make both viewers and content providers worse off, as networks eliminate programming choices to maintain profitability in response to reduced ad revenues. Advertisement avoidance could even result in the wholesale elimination of free or low-cost television if networks cannot sufficiently cut costs to generate profits in the face of declining advertising revenue.

This Note argues that a replacement revenue model (or any effort to sustain the advertiser-supported model) has yet to emerge primarily because DVR providers lack any incentive to work with content providers to craft a solution to the advertisement avoidance crisis. Relying upon the experience of the music industry with file-sharing, this Note proposes a legal solution to the television advertisement avoidance crisis.⁸ Part II documents how clarifying the legal status of Internet file-sharing has led to innovative online music distribution systems that make both consumers and copyright holders better off. Part III examines the current legal status of DVRs, with an emphasis on the relevance of *Sony Corp. of America v. Universal City Studios, Inc.*,⁹ and proposes the adoption of a legal standard for DVRs that encourages innovation and benefits both consumers and copyright holders.

7. The most dramatic move by a network in response to DVR usage was NBC's decision to replace five hours of scripted television with a new "DVR proof" show hosted by Jay Leno that emphasized topical comedy. Bill Carter, *NBC Offers Marketers an Expanded Fall Lineup*, N.Y. TIMES, May 5, 2009, at B3. Although this plan was ultimately unsuccessful, it still provides an example of the potential consequences of declining advertisement viewing. Amy Chozick & Sam Schechner, *NBC Puts 'Jay Leno' Back into Old Slot*, WALL ST. J., Jan. 11, 2010, at B1. It is important to note that NBC was pleased with "The Jay Leno Show" because it was still profitable even with low ratings. *Id.* However, affiliate stations pressured NBC to reverse course because the low ratings impacted local news broadcasts that aired after Jay Leno's show. *Id.*

8. Although this Note focuses on a potential legal solution, one can envision a wholly market-based solution to the advertisement avoidance crisis without a change to the legal status of DVRs. Such a solution could arise if cable companies, the largest providers of DVRs, were to merge with television networks. These merged entities would have a financial, rather than legal, incentive to tackle the advertisement avoidance crisis. Comcast's purchase of a controlling stake in NBC indicates that mergers of cable companies and television networks are possible. See Sam Schechner, Jeffrey McCracken & Max Colchester, *Comcast, GE Set to Unwrap NBC Universal Deal*, WALL ST. J., Dec. 3, 2009, at B1.

9. 464 U.S. 417 (1984).

II. A USEFUL MODEL: EMERGING SOLUTIONS TO THE CRISIS IN THE MUSIC INDUSTRY

The rise of rampant illegal Internet file-sharing posed a significant threat to the traditional business model of the music industry. However, the eventual legal response to this development created incentives for businesses to work with copyright holders to fashion authorized alternatives to peer-to-peer services like Napster. The result has been the proliferation of a wide variety of legal online music distribution systems that have increased the availability of music to consumers while still providing significant compensation to copyright holders. This experience can help inform the crafting of a proper legal response to the television advertisement avoidance crisis.

A. *Napster and Grokster Restricted the Promotion of Unrestrained File-Sharing*

The crisis in the music industry began in earnest with the rise of Napster, which had 60 million users at its height.¹⁰ The record companies quickly brought suit against Napster and eventually obtained an order that forced Napster to shut down after it failed to adequately filter copyrighted music from its service.¹¹ After the district court entered a preliminary injunction in favor of the plaintiff record companies, Napster appealed, and the Ninth Circuit affirmed the key aspects of the injunction.¹² In *A&M Records, Inc. v. Napster, Inc.*,¹³ the court held that plaintiffs were likely to prevail on their claims against Napster for direct, contributory, and vicarious copyright infringement.¹⁴ The court also rejected Napster's reliance upon *Sony* and refused to find that the fair use doctrine protected the file-sharing occurring on its network.¹⁵ However, the court in *Napster* did not resolve whether a distributor of peer-to-peer software that lacked a centralized server could be liable for the infringement of its users.

10. See *Song Blocking Hits Napster Usage*, BBC NEWS, Mar. 24, 2001, <http://news.bbc.co.uk/2/hi/business/1239531.stm>.

11. See *A&M Records, Inc. v. Napster, Inc.* ("*Napster II*"), 284 F.3d 1091 (9th Cir. 2002) (upholding preliminary injunction mandating filtering and order directing Napster to shut down for failure to adequately comply with the filtering requirements).

12. See *A&M Records, Inc. v. Napster, Inc.* ("*Napster*"), 239 F.3d 1004 (9th Cir. 2001). Although it ruled against Napster on most issues, the court found that the district court's preliminary injunction was "overbroad because it place[d] on Napster the entire burden of ensuring" that copyright infringement was not occurring on its network. *Id.* at 1027. The court instead found that copyright holders had a burden to provide Napster with notice of copyright works available on the Napster network. *Id.*

13. 239 F.3d 1004.

14. *Id.* at 1013–14, 1019–24.

15. *Id.* at 1014–19.

In *Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.*,¹⁶ the Supreme Court held that operators of decentralized peer-to-peer file-sharing networks could be liable for the copyright infringement of third parties on their networks if they “communicated an inducing message to their software users.”¹⁷ The Court rejected the Ninth Circuit’s holding that *Sony* prevented liability because the software at issue was “capable of substantial lawful use” and the companies involved lacked “knowledge of specific unlawful uses.”¹⁸ Calling this “an erroneous understanding of *Sony*,”¹⁹ the Court refused to revisit the *Sony* case and instead adopted a theory of inducement under which “one who distributes a device with the object of promoting its use to infringe copyright, as shown by clear expression or other affirmative steps taken to foster infringement, is liable for the resulting acts of infringement by third parties.”²⁰ The Court further explained that this standard would not disturb the holding of *Sony* because “mere knowledge of infringing potential or of actual infringing uses would not be enough . . . to subject a distributor to liability.”²¹ However, the Court suggested that the operators of the defendant peer-to-peer networks had sufficiently encouraged users to engage in copyright infringement by, among other things, promoting their software as an alternative to Napster and linking “to articles promoting its software’s ability to access popular copyrighted music.”²²

As these cases make clear, copyright holders now have the ability to shut down companies that distribute or encourage the distribution of copyrighted music via the Internet without their permission.²³ Although the shutdown of Napster and similar first-generation peer-to-peer networks did not eliminate file-sharing of recorded music, file-sharing activity is increasingly decentralized or private and thus less attractive to users.²⁴ Moreover, the remaining high-profile music file-

16. 545 U.S. 913 (2005).

17. *Id.* at 937.

18. *Id.* at 934.

19. *Id.*

20. *Id.* at 936–37.

21. *Id.* at 937.

22. *Id.* at 938.

23. A recent example of this power is provided by the experience of SeeqPod, a music search and recommendation engine. The company declared bankruptcy shortly after being sued by various record companies for linking to unauthorized copyrighted material. See Posting of Eliot Van Buskirk to Wired Epicenter Blog, SeeqPod Files for Bankruptcy Following Major Label Lawsuits, <http://www.wired.com/epicenter/2009/04/seeqpod-bankrup/> (Apr. 1, 2009, 07:07 EST).

24. The best example of decentralization is the DHT implementation of the BitTorrent peer-to-peer protocol, which does not require any centralized computer to coordinate file-sharing. See Wikipedia, *Distributed Hash Table*, http://en.wikipedia.org/wiki/Distributed_hash_table (as of May 8, 2010, 20:06 GMT); Wikipedia, *BitTorrent (protocol)*, [http://en.wikipedia.org/wiki/BitTorrent_\(protocol\)](http://en.wikipedia.org/wiki/BitTorrent_(protocol)) (as of May 8, 2010, 20:06 GMT). Decentralized networks may not be as robust or fast as centralized peer-to-peer networks. Torrent-Freak, P2P Researchers Fear BitTorrent Meltdown,

sharing networks have been the subject of legal action that has occasionally resulted in the termination of these networks.²⁵ Most importantly, due to the threat of legal liability after *Napster* and *Grokster*, no company can base its business model on the operation of an illegal file-sharing network and still hope to obtain financing from a venture capitalist or an acquisition offer from a viable firm. If the legal system had taken the opposite approach and declined to impose liability on companies like Napster, operating a music distribution network without having to negotiate with copyright holders would still be a legitimate business model. As described in the next Section, despite some early resistance from the record companies,²⁶ a vibrant and varied array of legal online music distribution networks has emerged.

B. The Subsequent Rise of Innovative Music Distribution Systems

In the wake of *Napster* and *Grokster*, numerous companies began creating innovative digital music distribution systems. Additionally, some musicians, most notably the band Radiohead, turned to direct Internet distribution of their music.²⁷ There are many variations among these approaches, but each shares the common characteristic of providing increased consumer access to music while compensating copyright holders. Although it is too early to tell if these solutions will be able to completely replace the revenue lost from CD sales, it appears that they will at least produce enough revenue to create suffi-

<http://torrentfreak.com/p2p-researchers-fear-bittorrent-meltdown-090212/> (Feb. 12, 2009) (describing research highlighting the vulnerability of the DHT protocol). File-sharing has become more private in that many of the BitTorrent tracker sites that serve as gateways for peer-to-peer networks restrict access to a set of trusted users. See Wikipedia, *BitTorrent Tracker*, http://en.wikipedia.org/wiki/BitTorrent_tracker#Private_trackers (as of May 8, 2010, 20:08 GMT). Private networks are more difficult for mainstream users to access.

25. See, e.g., *Huge Pirate Music Site Shut Down*, BBC NEWS, Oct. 23, 2007, http://news.bbc.co.uk/2/hi/uk_news/england/tees/7057812.stm (describing the shutdown of the OiNK private music torrent site); Posting of David Kravets to Wired Threat Level Blog, *Pirate Bay Future Uncertain After Operators Busted*, <http://www.wired.com/threatlevel/2008/01/pirate-bay-futu/> (Jan. 31, 2008, 08:54 EST). The Pirate Bay has switched from a centralized tracker to a decentralized DHT distribution system partially in response to legal pressure. Nate Anderson, *Pirate Bay Moves to Decentralized DHT Protocol, Kills Tracker*, ARS TECHNICA, Nov. 17, 2009, <http://arstechnica.com/tech-policy/news/2009/11/pirate-bay-kills-its-own-bittorrent-tracker.ars>; see also TorrentFreak, *BitTorrent's Future? Decentralized Search and Hosting*, <http://torrentfreak.com/bittorrents-future-decentralized-search-and-hosting-100109/> (Jan. 9, 2010) (advocating complete decentralization of BitTorrent file-sharing in order to avoid legal action initiated by copyright holders).

26. For example, the record companies opposed some online music business models that they have now embraced. Compare Courtney Macavinta, *MP3.com's Move To Copy CDs Stirs Debate*, CNET NEWS, Jan. 28, 2000, http://news.cnet.com/MP3.coms-move-to-copy-CDs-stirs-debate/2100-1023_3-236237.html (describing the RIAA's lawsuit against MP3.com after it launched "services offering customers access to their CD collections online"), with *infra* note 37 (describing similar service offered by Lala).

27. See, e.g., Jon Pareles, *Pay What You Want for This Article*, N.Y. TIMES, Dec. 9, 2007, § 2, at 1.

cient incentives for musicians to continue to record and release music.²⁸

The most conventional, and arguably most successful, online distribution method is the digital download model. Under this model, users pay a one-time fee for the right to download a specific song or album, usually in a compressed file format such as MP3 or AAC. The most significant player in this market is Apple's iTunes Music Store, which is the top music retailer in the United States²⁹ and has sold over ten billion songs.³⁰ Many other companies offer similar download services, including Amazon, Rhapsody, Wal-Mart, Microsoft, and even Napster (which is now owned by Best Buy).

The digital download model is conventional in the sense that, unlike the other systems discussed below, the user purchases a song in a similar fashion as she would a physical CD. However, there are several unique features to digital music stores. Three of these features clearly benefit consumers. First, consumers have a much greater ability to purchase individual songs. Prior to digital download systems, if a consumer wanted to buy only one track on an album, she would have to purchase the entire album unless a physical version of the single track had been released. Second, delivery of music purchased via digital download is practically instantaneous. Third, because online retailers of digital music do not need to invest in physical inventory, these retailers offer a dramatically greater selection of available music.³¹ But the protection of digital downloads by digital rights management ("DRM") technology renders the post-purchase use of digital downloads far more restrictive than the post-purchase use of a CD,³² and as such, makes consumers worse off. The DRM tide seems to have turned, however, and most digital music stores are now offering DRM-free songs.³³ Thus, on the whole, the digital download model

28. The latest data from the RIAA shows that in 2008 the music industry generated around \$2.7 billion in revenue from digital distribution, compared to around \$5.8 billion from physical distribution. RECORDING INDUS. ASS'N OF AM., 2008 YEAR-END SHIPMENT STATISTICS (2008), <http://76.74.24.142/1D212C0E-408B-F730-65A0-C0F5871C369D.pdf>. Although the combined revenue figure is down significantly from the 1999 peak of approximately \$14.6 billion in total revenue, digital revenue now appears to be growing at a faster rate than that at which physical revenue is falling. *Id.* (reporting a 26.6% decline in CD sales, but a 27.6% increase in digital single sales and a 33.9% increase in digital album sales).

29. Press Release, Apple, iTunes Store Top Music Retailer in the US (Apr. 3, 2008), <http://www.apple.com/pr/library/2008/04/03itunes.html>.

30. Press Release, Apple, iTunes Store Tops 10 Billion Songs Sold (Feb. 25, 2010), <http://www.apple.com/pr/library/2010/02/25itunes.html>.

31. As of February 2010, the iTunes catalog consisted of 12 million songs. *Id.*

32. For background on DRM, see Timothy K. Armstrong, *Digital Rights Management and the Process of Fair Use*, 20 HARV. J.L. & TECH. 49, 56-67 (2006).

33. See Antony Bruno, *Rhapsody Goes DRM-Free*, BILLBOARD, June 30, 2008, http://www.billboard.biz/bbbiz/content_display/industry/e3i8338a3cc42d9fb0224da954eff479041; Brad Stone, *Copy an iTunes Song? Go Ahead, Apple Says*, N.Y. TIMES, Jan. 7, 2009, at B1; Posting of Matt Buchanan to Gizmodo, Amazon Officially First To Drop Major

provides greater flexibility and increased access than its real-world counterpart.

The main alternative to digital downloads is streaming audio services, of which there are several varieties. Rather than downloading and retaining copies of songs on their own devices, users listen to songs stored on remote servers by streaming ephemeral copies via the Internet. The first attempts at developing streaming music distribution systems were centralized subscription services, most notably Rhapsody.³⁴ For a relatively low monthly fee (currently \$9.99), subscribers to Rhapsody can listen to an unlimited number of songs from a catalog of millions.³⁵ However, subscription streaming services do not appear to be generating anywhere near the revenue of iTunes.³⁶

Other music streaming sites are ad-supported, providing users with free access to music in exchange for viewing or listening to advertisements.³⁷ The most successful streaming music service to date is Google's YouTube, which is somewhat surprising because it is primarily known as a user-generated video site.³⁸ Music videos, however, are extremely popular on the service, and the volume of music-

DRM: Sony the Fourth and Final Big Label Onboard, <http://gizmodo.com/343475/amazon-officially-first-to-drop-major-drm-sony-the-fourth-and-final-big-label-onboard> (Jan. 10, 2008, 16:30 EST).

34. Although Rhapsody is dominant in this market, there are other subscription music services. Napster sells a subscription streaming service very similar to Rhapsody. Microsoft offers a download-based subscription service called Zune Pass. Another download-based subscription service is eMusic, which is primarily focused on independent and unsigned artists.

35. Rhapsody — Pricing & Plans, <http://www.rhapsody.com/-discover/plans> (last visited May 8, 2010).

36. As of 2008, there were 775,000 Rhapsody subscribers. Staci D. Kramer, *RealNetworks Breaks Out Subscriber Numbers for First Time: 775,000 Pay for Rhapsody*, PAIDCONTENT.ORG, Feb. 12, 2009, <http://www.paidcontent.org/entry/419-realnetworks-breaks-out-subscriber-numbers-for-first-time-775000-pay-fo/>; see also Posting of Saul Hansell to N.Y. Times Bits Blog, *Rhapsody Runs Hard Just To Stay in Place*, <http://bits.blogs.nytimes.com/2008/06/30/rhapsody-runs-hard-just-to-stay-in-place/> (June 30, 2008, 07:09 EST) (describing lack of Rhapsody subscriber growth).

37. Ad-supported music streaming services include MySpace Music, Pandora, and Last.fm. Another promising streaming variant is Lala, an ad-free service that uniquely combines aspects of Rhapsody and iTunes. See Posting of Jason Kincaid to TechCrunch, *Lala May Have Just Built the Next Revolution in Digital Music*, <http://www.techcrunch.com/2008/10/20/lala-may-have-just-built-the-next-revolution-in-digital-music/> (Oct. 20, 2008). The site allows users to stream any song once for free. *Id.* If they want to hear the song again, users can either pay 10 cents for unlimited streaming or around 90 cents to download a DRM-free MP3 version of the song. *Id.* Users can also upload any music files that they have on their computers, allowing them to stream their entire digital music collection for free via Lala. *Id.* Lala was eventually acquired by Apple. Brad Stone, *Apple Strikes Deal to Buy The Music Start-Up Lala*, N.Y. TIMES, Dec. 5, 2009, at B2. Apple decided to shut down Lala on May 31, 2010. See *Apple to Shut Down Lala Music Site*, N.Y. TIMES, May 1, 2010, at B2.

38. As of May 2010, twenty-one of the twenty-five all-time most viewed YouTube videos contain copyrighted music. See YouTube, *Most Viewed, All Categories, All Time*, <http://www.youtube.com/browse?s=mp&t=a&cr=US&p=1> (last visited May 8, 2010). The majority of these videos are professionally produced music videos.

related streaming on YouTube has become a significant source of revenue for record companies.³⁹ Under all of the ad-supported services, consumers benefit from free access to a large amount of music, while content owners receive a share of the generated advertising revenue.⁴⁰ An additional, perhaps significant, benefit of the ad-supported model is that users can legally incorporate copyrighted music into their own content, something that would not be feasible (primarily because of transaction costs) without the blanket licenses that ad-supported services have negotiated with copyright holders.⁴¹

Despite the fears of some commentators,⁴² the *Napster* and *Grokster* decisions provided the correct incentives for both sides — innovative technology firms and record companies — to work together to increase consumer access to music.⁴³ If the legal system had done

39. See Greg Sandoval, *Universal Music Seeing 'Tens of Millions' from YouTube*, CNET NEWS, Dec. 18, 2008, http://news.cnet.com/8301-1023_3-10126439-93.html (“Since 2005, Universal has gone from making zero dollars on music videos to nearly \$100 million.”). Presumably in recognition of the popularity of music videos on YouTube, Google and the major record companies partnered to create a music video website called VEVO that acts as a centralized network for finding music videos available on YouTube. Press Release, VEVO, VEVO Launches as the World’s Premiere Destination for Premium Music Video & Entertainment (Dec. 9, 2009), <http://www.vevo.com/media-room/press-releases/7/2009-12-09/VEVO-LAUNCHES-AS-THE-WORLDS-PREMIERE-DESTINATION-FOR-PREMIUM-MUSIC-VIDEO-ENTERTAINMENT>. Within weeks of its launch, VEVO became the most-visited online music website in the United States. Posting of Erick Schonfeld to TechCrunch, *YouTube Helps Vevo Overtake MySpace Music in the U.S. (Plus, Top Ten Music Properties)*, <http://techcrunch.com/2010/01/13/youtube-vevo-overtake-myspace-music/> (Jan. 13, 2010).

40. Some observers have questioned the viability of this business model. See, e.g., Posting of Michael Arrington to TechCrunch, *The Sorry State of Music Startups*, <http://www.techcrunch.com/2009/03/27/the-sorry-state-of-music-startups/> (Mar. 27, 2009) (arguing that ad-supported music startups are not viable because the record companies demand a flat-rate payment for each streamed song). Recent actions by some record companies, including the writing down of investments in music startups, lend some support to this critique. See Greg Sandoval, *Imeem, Lala Investments Not Paying for Warner*, CNET NEWS, May 7, 2009, http://news.cnet.com/8301-1023_3-10235895-93.html (reporting that Warner Music Group wrote down its \$33 million investment in imeem and Lala and is disappointed in the amount of revenue being generated from MySpace Music).

41. See Sandoval, *supra* note 39 (explaining that YouTube and Universal Music Group “share ad revenue for music posted to the site by users”); YouTube, *Video Identification Tool: YouTube Copyright Policy*, <http://www.google.com/support/youtube/bin/answer.py?hl=en&answer=83766> (last visited May 8, 2010) (describing YouTube’s automatic system that alerts copyright holders when their content is uploaded and allows them to choose whether to allow, block, or monetize the usage). For a discussion of the benefits of allowing the incorporation of copyrighted works into new user-generated works, see generally LAWRENCE LESSIG, *REMIX: MAKING ART AND COMMERCE THRIVE IN THE HYBRID ECONOMY* (2008).

42. See, e.g., Posting of Rob Hof to BusinessWeek Online Tech Beat, Larry Lessig: *Grokster Decision Will Chill Innovation*, http://www.businessweek.com/the_thread/techbeat/archives/2005/06/larry_lessig_gr.html (June 28, 2005).

43. Although the *Grokster* Court did not adopt the standard advocated by a variety of prominent law and economics professors, the resulting decision nonetheless removed “blanket immunity the moment a firm can demonstrate sufficient legitimate use” and created an “incentive to respect existing copyright rights when doing so is economical.” Brief of Amici

nothing to stop Napster and Grokster, compensation to copyright holders would be much lower and consumers would be worse off than they currently are due to a lack of innovation in distribution networks. The more comprehensive, tax-based systems proposed by Professors William Fisher and Neil Netanel⁴⁴ might result in significant benefits to both consumers and producers and greater overall social welfare. However, the solutions that are emerging under the post-*Napster* and *Grokster* copyright framework provide similar societal benefits and have a critical practical advantage in that there was no need to muster the political will necessary to implement a significant legislative change in copyright law.

III. ESTABLISHING A LEGAL FRAMEWORK TO ENCOURAGE SOLUTIONS TO THE ADVERTISEMENT AVOIDANCE CRISIS

With a clarification of the legal status of unauthorized file-sharing, the significant challenge facing the music industry by digital technology has been transformed into an opportunity for enhancing the welfare of both consumers and copyright holders. This Part considers the current legal status of DVRs, explores the relevance of *Sony*, and proposes a new legal standard designed to replicate the type of innovation seen in the music industry after *Napster* and *Grokster*.

A. *The Legality of DVRs Remains Unclear*

Despite the growing adoption of DVRs and their negative impact on television ratings and advertising revenues, copyright holders have yet to bring suit against providers of standard DVR devices.⁴⁵ The likely explanation for the lack of such litigation is the Supreme Court's holding in *Sony* that the sale of a similar device — the Betamax VCR — did not constitute contributory copyright infringement.⁴⁶ In the two suits that have been brought against DVR

Curiae Kenneth J. Arrow et al. in Support of Petitioners at 9, 11, *Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913 (2005) (No. 04-480).

44. See WILLIAM W. FISHER III, *PROMISES TO KEEP* 199–258 (2004); Neil Weinstock Netanel, *Impose a Noncommercial Use Levy to Allow Free Peer-to-Peer File Sharing*, 17 *HARV. J.L. & TECH.* 1 (2003).

45. By “standard DVR,” this Note refers to a DVR that is a set-top box residing in a user's home that allows for the fast-forwarding, but not automatic skipping, of commercials. Currently, all TiVo models and DVRs provided by cable and satellite operators are standard DVRs.

46. *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 456 (1984); see also FISHER, *supra* note 44, at 132 (“The close resemblance of the first-generation [DVRs] to VCRs suggested to the studios that a contributory-infringement lawsuit against the manufacturers of the former would probably fail.”).

providers,⁴⁷ the devices at issue had technical features very different from those found in standard DVRs. This suggests that copyright holders, afraid of an adverse ruling based upon *Sony*, have only been willing to challenge the legality of DVRs with features that can easily be distinguished from those of VCRs.

The first suit against a DVR provider was brought against the manufacturer of the ReplayTV DVR, a device that had the ability to automatically skip commercials.⁴⁸ Several scholars anticipated that this case would be an important battle that would clearly establish the legal status of DVRs. Fred von Lohmann called the ReplayTV case “the next big copyright battle,”⁴⁹ and Professor William Fisher observed that “[t]he stage was . . . set for a potentially far-reaching analysis, not only of the legality of enhanced [DVRs], but also of the proper shape of copyright law in the new technological environment.”⁵⁰ However, before the case could reach a formal resolution, the manufacturer of the ReplayTV DVR was forced to seek bankruptcy protection and then was acquired by another firm.⁵¹ The new owners disabled the unique ReplayTV features,⁵² and the suit was eventually dropped.⁵³

47. *Cartoon Network LP v. CSC Holdings, Inc.*, 536 F.3d 121 (2d Cir. 2008), *cert. denied*, 129 S. Ct. 2890 (2009); Complaint, *Paramount Pictures Corp. v. ReplayTV, Inc.*, Civ. No. 01-09358-FMC (C.D. Cal. Oct. 31, 2001).

48. See *Paramount Pictures Corp. v. ReplayTV, Inc.*, 298 F. Supp. 2d 921, 923 (C.D. Cal. 2004) (tracing the history of the dispute between copyright owners and the producers of the ReplayTV DVR); Electronic Frontier Foundation, *Paramount v. ReplayTV*, <http://www.eff.org/cases/paramount-v-replaytv> (last visited May 8, 2010) (hosting filings and other documents related to the ReplayTV case); see also Doug Isenberg, *ReplayTV Lawsuit: Napster Redux?*, CNET NEWS, Nov. 12, 2001, http://news.cnet.com/ReplayTV-lawsuit-Napster-redux/2010-1071_3-281601.html (describing the ReplayTV commercial-skipping capability). The ReplayTV device also allowed users to share recorded programs with each other over the Internet. See Isenberg, *supra* (describing the ReplayTV “Send Show” feature). Since this Note focuses on the facilitation of advertisement avoidance by DVRs, it will not discuss the possibility that DVRs will allow sharing of recorded programs with others.

49. Fred von Lohmann, *ReplayTV Zaps Ads and Permits Show Swapping: Get Ready for the Next Big Copyright Battle*, CAL. LAW., June 2002, at 29.

50. FISHER, *supra* note 44, at 133.

51. Katie Dean, *Bankruptcy Blues for PVR Maker*, WIRED, Mar. 24, 2003, <http://www.wired.com/entertainment/music/news/2003/03/58160> (“Chief among Sonicblue’s problems was a lawsuit brought against it by 27 entertainment companies that object to features on ReplayTV that allow users to share recorded shows and automatically skip over commercials.”). Dean notes that “[a]t a February summit on digital rights, Sonicblue’s Ballard lamented the fact that his company was spending \$3 million a quarter on legal expenses.” *Id.*

52. Eric A. Taub, *ReplayTV’s New Owners Drop Features that Riled Hollywood*, N.Y. TIMES, July 21, 2003, at C3.

53. See Declan McCullagh, *Judge Deletes Suit by ReplayTV Owners*, CNET NEWS, Jan. 12, 2004, http://news.cnet.com/Judge-deletes-suit-by-ReplayTV-owners/2100-1025_3-5139477.html (“With the court’s approval, the Hollywood firms and Sonicblue — which filed for bankruptcy protection — agreed to dismiss the case on Nov. 12.”). The dismissal of the suit against ReplayTV’s manufacturer did not end the case entirely. Five ReplayTV DVR users represented by the Electronic Frontier Foundation

More recently, copyright holders brought suit against the cable provider Cablevision for implementing a centralized DVR-like system called remote storage DVR (“RS-DVR”).⁵⁴ The RS-DVR system allows “Cablevision customers who do not have a stand-alone DVR to record cable programming on central hard drives housed and maintained by Cablevision at a ‘remote’ location.”⁵⁵ In *Cartoon Network LP v. CSC Holdings, Inc.*,⁵⁶ the plaintiffs, holders of “copyrights to numerous movies and television programs,” alleged that Cablevision was directly infringing upon “their exclusive rights to both reproduce and publicly perform their copyrighted works.”⁵⁷ The Second Circuit reversed the district court’s awarding of summary judgment to the plaintiffs, concluding that Cablevision was not engaging in direct copyright infringement.⁵⁸ In a rather narrow holding, the court concluded that under the RS-DVR system, the *users*, not Cablevision itself, made copies of the plaintiffs’ works.⁵⁹ Thus, the court did not reach the merits of whether use of a DVR would constitute copyright infringement. It also emphasized that its holding “[did] not address . . . liability for contributory infringement” and noted that many

(“EFF”) had joined the ReplayTV suit as defendants in order to get a “court to rule that using their ReplayTVs to skip commercials, record shows for later viewing, and send shows is fair use, not copyright infringement.” Electronic Frontier Foundation, Newmark, et al., v. Turner Broadcasting System, Inc. et al., <http://www.eff.org/cases/newmark-v-turner> (last visited May 8, 2010). Eventually the copyright holders granted “covenants not to sue” to the five users but to no other ReplayTV users. *Id.* This prompted the EFF to request that the existing suit be turned “into a class action . . . that would benefit all owners of legacy ReplayTV DVRs.” *Id.* This request was denied. *Id.* However, there is no evidence that any ReplayTV user was actually sued for using the device.

54. See *Cartoon Network LP v. CSC Holdings, Inc.*, 536 F.3d 121 (2d Cir. 2008), *cert. denied*, 129 S. Ct. 2890 (2009). For a more in-depth discussion of the issues involved in *Cartoon Network*, see generally Vivian I. Kim, Note, *The Public Performance Right in the Digital Age: Cartoon Network LP v. CSC Holdings*, 24 BERKELEY TECH. L.J. 263 (2009), and Cindy Abramson, Note and Recent Development, *Where’s the Remote? The Importance of the Location of the Remote Control (and the One Who Uses It) in Determining Liability for Copyright Infringement for Remote Storage DVRs*, 27 CARDOZO ARTS & ENT. L.J. 145 (2009).

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

56. 536 F.3d 121.

57. *Id.* at 124. The plaintiffs did not allege that Cablevision was liable for contributory copyright infringement. *Id.* Professors Menell and Nimmer suggest that this was an attempt to avoid having to deal with *Sony*. See Peter S. Menell & David Nimmer, *Legal Realism in Action: Indirect Copyright Liability’s Continuing Tort Framework and Sony’s De Facto Demise*, 55 UCLA L. REV. 143, 185–86 (2007) (“Likewise, the same plaintiffs, when targeting the Betamax’s great-grandchild — a remote-storage digital video recorder (DVR) system — simply claimed that its manufacturer engaged in direct copyright infringement, thereby likewise saving themselves headaches rooted in *Sony’s* legacy.”).

58. *Cartoon Network*, 536 F.3d at 130–39.

59. *Id.* at 132. The court also held that the playback of recorded shows was not a public performance because “each RS-DVR playback transmission is made to a single subscriber using a single unique copy produced by that subscriber” and thus could not be considered a performance to the public. *Id.* at 139.

of the facts relied upon by the district court seemed “more relevant to the question of contributory liability.”⁶⁰

Given this limited amount of litigation and the lack of any decision squarely dealing with standard DVRs, it remains an open question whether a suit against a DVR provider would be successful.⁶¹ However, this question is only open if *Sony* can be distinguished. The next Section argues that it can be distinguished, even in a suit involving standard DVRs.

B. Distinguishing Sony

DVRs are often described as modern VCRs.⁶² If this description is accurate, then any suit against a DVR provider would be futile under *Sony*. The Supreme Court concluded in *Sony* that the Betamax device was “capable of substantial noninfringing uses,” primarily because it allowed users to record programs for later viewing.⁶³ The Court held that this time-shifting constituted a non-infringing use for two reasons: First, a substantial number of copyright holders of broadcast television programs did not object to time-shifting; and second, unauthorized time-shifting was a fair use.⁶⁴ This Section outlines several reasons why, despite the similarities between DVRs and VCRs, *Sony* should not control the outcome of suits against DVR providers.

1. DVRs Cause Greater Harm to the Market

Of the four fair use factors,⁶⁵ the greatest difference between DVRs and VCRs is in application of the fourth factor: the effect of the use upon the potential market. In *Sony*, the Court concluded that copyright holders had “failed to demonstrate that time-shifting would cause any likelihood of nonminimal harm to the potential market for, or the value of, their copyrighted works.”⁶⁶ With television, the most significant potential harm is that viewers will be able to avoid watch-

60. *Id.* at 139–40, 132.

61. See Fred von Lohmann, *Fair Use as Innovation Policy*, 23 BERKELEY TECH. L.J. 829, 834 (2008) (“Do the private copies made by . . . TiVo owners fall within the scope of the fair use doctrine? Without litigation leading to reported federal court rulings, the question is extremely difficult to answer.”); Ethan O. Notkin, Note, *Television Remixed: The Controversy over Commercial-Skipping*, 16 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 899, 937 (2006) (“As has been demonstrated, the legality of commercial-skipping continues to be uncertain.”).

62. See, e.g., Lessig Blog, Continuing Congressional Confusion on Copyrights, http://www.lessig.org/blog/2004/07/continuing_congressional_confusion.html (July 7, 2004, 12:23 EST) (“ReplayTV is the digital equivalent of the VCR.”).

63. *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 456 (1984).

64. See *id.*

65. 17 U.S.C. § 107 (2006).

66. *Sony*, 464 U.S. at 456.

ing commercials when they view broadcasts of copyrighted content. Thus, the relevant market is not primarily the sale of the content itself, but the sale of advertisements, the prices of which correspond to the number of viewers.⁶⁷ The Court in *Sony* did not directly discuss the potential for advertisement avoidance but highlighted in a footnote the district court's rejection of "plaintiffs' suggestion that the commercial attractiveness of television broadcasts would be diminished."⁶⁸ According to the district court, "[t]o avoid commercials during playback, the viewer must fast-forward and, for the most part, guess as to when the commercial has passed. For most recordings, either practice may be too tedious."⁶⁹

Although this reasoning may be accurate for VCRs, DVRs are much more efficient at both recording and skipping commercials. First, as compared to a VCR, it is much easier to set up a DVR to record a program. DVRs come with graphical menus that have built-in listings of available television shows, allowing users to easily find and schedule recordings. Users can record an entire season of a show and limit recordings to only new episodes. TiVo DVRs even have functionality that automatically records programs that it thinks a user might enjoy.⁷⁰ In contrast, users are required to enter the specific time the program is aired to record programs on a VCR.⁷¹ There were some attempts to ease the difficulty of scheduling recordings on VCRs, such as the VCR Plus+ service that assigned short-cut codes to individual programs, but even this system required consulting with a separate

67. The copyright holders in *Sony* also worried that VCRs would decrease the audience for reruns and harm both the value of theatrical exhibitions of content and the market for rentals and sales. *See id.* at 453; *see also* Peter S. Menell & David Nimmer, *Unwinding Sony*, 95 CAL. L. REV. 941, 947 (2007) (noting plaintiffs' fear "that households were creating home movie libraries"). With hindsight, it seems to be clear that these fears were unfounded. *See von Lohmann, supra* note 61, at 840 (noting the *Sony* plaintiffs' "dire predictions did not come to pass").

68. *Sony*, 464 U.S. at 452 n.36.

69. *Id.* at 452–453 n.36 (quoting *Universal City Studios, Inc. v. Sony Corp. of Am.*, 480 F. Supp. 429, 468 (C.D. Cal. 1979)). In dissent, Justice Blackmun concluded that time-shifting could not be a fair use in part because of a concern that commercial avoidance would cause substantial harm to the market for the copyrighted works. *See id.* at 483–86 (Blackmun, J., dissenting).

70. TiVo, *Never Miss a Show*, <http://www.tivo.com/mytivo/product-features/never-miss-a-show/index.html> (follow right arrow hyperlink; then follow "TiVo Suggestions" hyperlink) (last visited May 8, 2010) ("By tracking your 'Thumbs Up' and 'Thumbs Down' preferences, TiVo is able to learn your likes and dislikes over time, and provide you with increasingly on-the-mark programming suggestions.").

71. To make matters worse, the timed recording feature of VCRs requires that the built-in clock is correctly set. A very large number of VCR users were unable to figure out how to perform this task. *See* Dave Wilson, *PBS Project Could Set VCR Time in a Flash*, L.A. TIMES, Aug. 23, 2001, at B1 ("The flashing '12:00' on videocassette recorders represents everything wrong with modern technology. But help may be on the way with better equipment that automatically sets VCR clocks en masse."). VCRs eventually were marketed with an automatic clock-setting feature. *Id.* Of course, manual recording was always an option, but manual recording is far less efficient than timed recording since it requires the user to access the VCR at the precise moment recording is desired.

listing of television programs to obtain codes.⁷² Second, DVRs can store a large number of programs on their built-in hard drives, while VCRs utilize tapes with limited capacities (usually around two hours on the best quality settings). Thus, unlike DVRs, VCRs require users to frequently change tapes or overwrite old recordings. Third, most DVRs allow users to record a program while they watch a different live or recorded program. Fourth, DVRs provide more efficient options for skipping commercials contained in recorded programs. While both VCRs and DVRs have fast-forwarding functionality, most DVRs also have a feature that allows users to skip ahead exactly thirty seconds (the length of most commercials) by pressing a single button.⁷³ It is also technically possible for DVRs to automatically skip through commercials.⁷⁴ These practical technical differences have resulted in many more users recording television shows and skipping commercials with DVRs than ever occurred when only VCRs were available.

2. The Post-Hoc Justification for *Sony* Is Inapplicable

The *Sony* decision has been justified on the grounds that VCRs ended up being a significant source of revenue for copyright holders through sales and rentals of recorded content. For example, Fred von Lohmann has argued that:

The VCR made possible the home video market, a market which today generates more than double the revenues collected at the box office [T]he fair use of time-shifting, in effect, provided part of the ‘startup capital’ for Sony’s Betamax. And the VCR’s beachhead in the living room ultimately came to benefit both copyright owners and the technology sector.⁷⁵

However, this justification for the *Sony* holding is almost entirely inapplicable in the context of DVRs because, unlike with VCRs, it appears that there is far less potential for copyright holders to leverage the proliferation of DVRs by selling content directly to consumers.

72. See Wikipedia, *Video Recorder Scheduling Code*, http://en.wikipedia.org/wiki/Video_recorder_scheduling_code (as of May 8, 2010, 20:43 GMT).

73. See CNET Reviews, *Activating TiVo 30-Second Skip Tips and Tricks*, http://reviews.cnet.com/9602-12576_7-0.html?messageID=2510215 (last visited May 8, 2010) (describing how to enable the thirty-second skip feature on a TiVo DVR).

74. However, likely due to the ReplayTV suit, this feature was never adopted by other DVR manufacturers. Von Lohmann notes that automatic commercial-skipping was available “on certain higher-end analog VCRs.” Von Lohmann, *supra* note 49. However, these VCRs were not widely adopted and did not exist when *Sony* was decided.

75. Von Lohmann, *supra* note 61, at 840–41.

Von Lohmann argues that there may be opportunities for copyright holders to capitalize on DVRs, such as by partnering with DVR providers to use the devices to stream paid content or display targeted advertisements.⁷⁶ Despite the rather widespread adoption of DVRs, these alternative markets have yet to become significant.⁷⁷ Moreover, the advertisement avoidance features of DVRs could be restricted without having any impact on the alternative DVR usages that von Lohmann suggests may develop.

3. DVR Technology Allows for Crafting a Remedy that Separates Infringing and Non-Infringing Uses

The *Sony* Court faced a zero-sum choice: it could either prohibit or allow the production of VCRs.⁷⁸ Given these options, the Court made the reasonable decision that the amount of non-infringing use that would be foreclosed by a ruling against Sony was simply too great. With DVRs, the choices are far less limited, as the nature of the technology allows for a more precise prohibition on infringing uses without eliminating non-infringing uses. Although at the time *Sony* was decided it was feasible to produce a VCR that could play back, but not record, video tapes, the existence of this restriction did not actually expand the choices available to the Court because it did not preserve the primary non-infringing use: time-shifting.⁷⁹

In the DVR context, however, it is possible to detect when a television broadcast switches to commercials. Indeed, it is this capability that allowed the creation of the ReplayTV automatic commercial-skipping feature. This technology opens up the possibility of a modified DVR that restricts advertisement avoidance but still allows time-shifting. Another technology that allows for a more surgical remedy is

76. *Id.* at 842–43.

77. There are some signs that these alternative markets have begun to develop, as TiVo now supports streaming rented content via Netflix and purchasing video via Amazon's Video on Demand service. See Amazon Video On Demand – TiVo, <http://www.tivo.com/mytivo/product-features/on-demand/amazon-video-on-demand/index.html> (last visited May 8, 2010); Instantly Watch Movies & TV Episodes from Netflix on Your TiVo Box, <http://www.tivo.com/mytivo/product-features/on-demand/watch-netflix/> (last visited May 8, 2010). However, it does not appear that cable or satellite companies have begun to offer similar services on their own DVRs, which is significant given their high market share. See NIELSEN, *supra* note 2, at 3 (reporting that 95% of DVRs are obtained from cable or satellite providers).

78. Professors Menell and Nimmer have examined the feasibility of possible alternative designs for the Betamax VCR available at the time *Sony* was decided. See Menell & Nimmer, *supra* note 67, at 1018–20. They concluded that it would not have been technically feasible for the Betamax to prohibit fast-forwarding of commercials without also eliminating the ability to fast-forward other material. See *id.* They also do not believe that it was feasible at the time to restrict recording to only those programs that were authorized by copyright holders. See *id.*

79. See von Lohmann, *supra* note 61, at 852 (mentioning the possibility of playback-only VCRs at the time).

broadcast flags.⁸⁰ DVRs could be required to respect the recording preferences of broadcasters as outlined in digital signals accompanying television content. Through the use of these flags, copyright holders who wish to allow for time-shifting, like Fred Rogers and the other content producers described in *Sony*,⁸¹ could authorize DVR users to record their programs. Copyright holders concerned about time-shifting could send a flag prohibiting recording. There are numerous other variants of technical restrictions that could be built into DVRs, each providing additional possibilities for a court crafting an appropriate legal remedy.⁸²

C. Drawing the Appropriate Legal Line for DVRs

Assuming, as argued in the previous Section, that *Sony* is not entirely dispositive, courts will need to determine what (if any) DVR functionality should be considered to be non-infringing under the fair use doctrine. The most radical option would be to deem DVRs entirely outside of the scope of fair use protection. Another rather extreme option would require DVR providers to respect broadcast flags sent by copyright holders indicating that they do not authorize the recording of their programming. Both of these remedies ignore the fundamental principle of *Sony*: that time-shifting of television programs has significant social value. As the Court explained, “to the extent time-shifting expands public access to freely broadcast television programs, it yields societal benefits” and “making television broadcasting more available” is in the public interest.⁸³ DVRs, like VCRs before them, are mainly problematic from the perspective of copyright holders in that they facilitate the avoidance of advertisements. When this practice becomes widespread, as is currently happening, television networks are unable to generate as much revenue from selling commercials as before.⁸⁴

80. See generally Electronic Frontier Foundation, Broadcast Flag, <http://www.eff.org/issues/broadcast-flag> (last visited May 8, 2010) (discussing the EFF’s opposition to efforts to implement a mandatory broadcast flag system that would allow copyright holders to control the ability of devices to record their content).

81. See *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 445–46 (1984).

82. For example, DVRs could be designed to limit the number of commercials that could be skipped per hour rather than eliminating the ability to skip commercials entirely.

83. *Sony*, 464 U.S. at 454.

84. Networks potentially could replace some lost revenue by overlaying advertisements over programming content at the edges of the screen, similar to the method utilized by YouTube. See YouTube, Advertising, InVideo Ads, http://www.youtube.com/t/ads_invideo (last visited May 8, 2010) (describing YouTube’s overlay ad technology). Another potential form of hard-to-skip advertising is product placement, wherein advertisers pay for products to be incorporated into the storyline of program. See generally JEAN-MARC LEHU, *BRANDED ENTERTAINMENT: PRODUCT PLACEMENT & BRAND STRATEGY IN THE ENTERTAINMENT BUSINESS* (2007); *HANDBOOK OF PRODUCT PLACEMENT IN THE MASS MEDIA: NEW STRATEGIES IN MARKETING THEORY, PRACTICE, TRENDS, AND ETHICS* (Mary-

Copyright law should tolerate time-shifting but restrict advertisement avoidance. A fair use standard for DVRs that respects this balance would allow users to record, fast-forward, rewind, and pause the content of television shows, but prevent fast-forwarding or skipping of commercials.⁸⁵ As was the case with music file-sharing, clarifying the legal standard applicable to DVRs has the potential to solve the advertisement avoidance crisis and increase the welfare of consumers and copyright holders.

D. The Proposed Legal Standard for DVRs Should Result in Innovative Solutions Beneficial to Consumers and Copyright Holders

From the consumer perspective there is good reason to believe that a shift clarifying the rights of copyright holders will not be a disruptive force that will make consumers worse off. Instead, it would likely result in options that would improve consumer welfare. If the manufacture and distribution of a DVR that allows for commercials to be fast-forwarded or skipped is found to violate copyright law, this does not necessarily mean that consumers will lose these valuable features. Rather, DVR providers will simply be forced to negotiate with television networks to obtain permission to offer devices that facilitate advertisement avoidance, just as companies providing online music services were forced to negotiate with record companies after *Napster* and *Grokster*. Although these negotiations may at times be protracted, as has sometimes been the case in the music realm,⁸⁶ it is likely in the interest of both copyright holders and DVR providers to eventually enter into revenue-sharing agreements for commercial-skipping DVRs that are mutually beneficial to both parties.⁸⁷

A potential concern is that by giving copyright holders the ability to demand compensation from DVR providers, consumers will be

Lou Galician, ed. 2004). Such advertisements are unlikely to be able to generate the same amount of revenue as traditional advertisements. Even if they could generate sufficient revenue, proliferation of these in-program advertisements may not be desirable from the perspective of viewers, since they can be distracting from the actual program content.

85. Under the proposed standard, some commercial-skipping would still be allowed in order to preserve the social benefits of time-shifting. For example, users should be able to quickly skip to different segments of a recorded program without having to view advertisements. Thus, a DVR feature that allowed users to jump ten or fifteen minutes forward or backward would be fair use, as it would not facilitate the avoidance of advertisements in the same way fast-forwarding or skipping in smaller intervals does.

86. See, e.g., Greg Sandoval, *YouTube Users Caught in Warner Music Spat*, CNET NEWS, Jan. 27, 2009, http://news.cnet.com/8301-1023_3-10150588-93.html (reporting dispute between YouTube and Warner Music over the renewal of a deal that allowed YouTube users to utilize Warner Music recordings in their videos).

87. This assumes that the value to a television network of a DVR user actually viewing advertisements is less than the amount of net income a DVR provider receives from a DVR subscription fee. This is a difficult empirical question because the answer depends on numerous variables, including viewing habits of DVR and non-DVR viewers, advertising rates, and the profit margin of providing DVRs.

forced to pay substantially higher prices for DVRs that allow for advertisement avoidance. However, given that there is only limited competition in the DVR market,⁸⁸ the price of typical DVRs may already be set at the highest amount the market will bear.⁸⁹ If this is true, DVR providers would have a limited ability to pass along the cost of compensating copyright holders to consumers, assuming market structure remains constant.⁹⁰ Instead, there is likely to be a shift of producer surplus from DVR providers, mainly cable and satellite companies, to television networks.

A change in the law may not only leave consumers as well off as they currently are, but also could result in substantial benefits as choice is increased in the DVR market. Under the current system, there are several alternative DVRs that are currently not viable but would become viable under the new legal standard. The most obvious example is a “fair use DVR”⁹¹ that restricts advertisement avoidance. DVR providers have little incentive to produce such DVRs at the moment, since doing so would impose additional costs (e.g., standard DVRs would have to be programmed to limit commercial fast-forwarding) without providing any additional revenue.⁹²

However, the new legal rule proposed in this Note changes the cost structure of providing standard DVRs, making fair use DVRs potentially more profitable. Assuming that the cost of programming standard DVRs to not skip commercials is lower than the cost of sharing revenue with copyright holders, providing a fair use DVR would

88. The two main sources of DVRs are cable or satellite television providers and TiVo. *See generally* TiVo, TiVo Premier Product Information: Compare – TiVo, <http://www.tivo.com/products/tivo-premiere/premiere-compare.html#tab> (last visited May 8, 2010). However, more companies may offer DVRs in the future. *See* Posting of Nilay Patel to Engadget, Ten Years of TiVo: How Far We Haven’t Come, <http://www.engadget.com/2009/04/28/ten-years-of-tivo-how-far-we-havent-come/> (Apr. 28, 2009, 14:30 EST) (predicting that Microsoft will enter the DVR market). For now, however, little choice exists in the market and the vast majority of DVR users obtain their DVRs from their cable or satellite providers. *See* NIELSEN, *supra* note 2 (reporting that 95% of DVRs are obtained from cable or satellite providers).

89. DVRs with automatic commercial-skipping would likely command a higher price under the current legal and market structure. However, since the legal action against ReplayTV, automatic commercial-skipping has not been offered by DVR providers.

90. As discussed later in this Section, the market structure may change if other types of DVRs, such as those that do not allow for advertisement avoidance, are made available. However, a full model of such changes is beyond the scope of this Note.

91. By “fair use DVR,” this Note refers to a DVR that allows users to record, fast-forward, rewind, and pause the content of television shows but prevents fast-forwarding or skipping of commercials. *See supra* Part III.C.

92. Even in the absence of a legal requirement, restricting the functionality of DVRs could be used to facilitate price discrimination that would potentially lead to additional revenue from DVR consumers who are priced out of the market for standard DVRs. However, DVR providers have chosen not to offer such a product, perhaps because they estimate that this price discrimination either would not result in sufficient additional revenue to justify the costs or would cause too many customers to stop paying for higher-priced standard DVRs.

now be less expensive than providing a DVR that facilitates advertisement avoidance. Depending on the amount of demand for a fair use DVR, such devices might be significantly more profitable for DVR providers than standard DVRs even if they can only charge a much lower price for the more restricted device.⁹³ Presumably, some consumers (such as those with low opportunity costs) would be willing to sacrifice the ability to skip commercials in exchange for a reduction in price. The option of a fair use DVR would make these consumers better off than the current system, under which they would either be priced out of the DVR market entirely or forced to pay a higher price for a DVR with functionality (fast-forwarding through ads) that they do not highly value. Thus, a potentially significant number of consumers will be able to experience the core benefits of the DVR — time-shifting and pausing of live TV — at a price lower than that under the current system.

Consumers would also benefit if other DVR variants emerge. For example, DVRs with automatic commercial-skipping could be provided for a premium fee, which would make those who strongly dislike advertisements or have very high opportunity costs better off.⁹⁴ Another example is a DVR, priced in between the fair use and the standard DVR variants, that allows fast-forwarding but also overlays ads whenever a user fast-forwards or pauses.⁹⁵ The end result of the legal change advocated in this Note would be a robust DVR market that provides consumers with options that more closely align with their actual preferences — a form of socially-beneficial price discrimination.⁹⁶

It is important to note that no matter which DVR variants are successful, copyright holders will be better off than they are under the current system. If consumers switch to the fair use DVR, more advertisements will be viewed for two reasons: First, consumers switching

93. For example, assume that a DVR provider could charge \$15 per month for a standard DVR and \$7 per month for a fair use DVR. If the negotiated royalty rate is greater than \$8, the DVR provider will generate more revenue selling the fair use DVR.

94. After the ReplayTV case, DVR providers have been reluctant to market devices with this feature because of the threat of litigation. It is not entirely clear, however, why DVR providers have not entered into deals with copyright holders that would authorize automatic commercial-skipping and thus eliminate the litigation risk. One explanation is that the marginal benefit to consumers of this functionality is not very high, and therefore, DVR providers would be unable to obtain sufficient additional revenue to justify paying a royalty to copyright holders. This cost calculation changes if DVR providers must also pay a royalty for providing standard DVRs. Depending on the preferences of consumers, a premium DVR may be economically viable.

95. DVR providers have already begun to implement such advertisements, but they do not appear to be sharing the revenue generated from such ads with copyright holders or adjusting the price consumers pay for DVRs equipped with this feature. See Stephanie Clifford, *Ads that TiVo Hopes You'll Talk to, Not Zap*, N.Y. TIMES, Apr. 22, 2009, at B1.

96. See William W. Fisher III, *When Should We Permit Differential Pricing of Information?*, 55 UCLA L. REV. 1 (2007) (suggesting that price discrimination is socially beneficial when it offers options that align with consumer preferences).

from standard DVRs will no longer be able to fast-forward through commercials; and second, users that did not have a DVR may watch more television (including advertisements) because of their newfound access to efficient time-shifting. Television networks will then be able to charge a higher amount to advertisers, as fewer ads are avoided by those adopting fair use DVRs. Alternatively, for DVRs that facilitate advertisement avoidance, the television networks will be compensated for the reduced advertisement viewership through revenue-sharing agreements with DVR providers.

IV. CONCLUSION

The DVR is an extremely useful technological development that both saves viewers time and creates a more enjoyable viewing experience. However, the DVR also threatens the primary revenue model that supports the production of high-quality television programming. Copyright law should provide a remedy to this threat that balances the interests of consumers with those of copyright holders. The experience of the music industry serves as evidence that legal lines can be drawn that will promote innovative solutions to the problems created by new technology. Courts should follow this example in crafting the appropriate legal rule for DVRs.