

ANTITRUST, INTELLECTUAL PROPERTY, AND THE ITUNES ECOSYSTEM: A STUDY OF THE ANTITRUST IMPLICATIONS OF APPLE'S FAIRPLAY TECHNOLOGY WITH A NOD TO THE PECULIARITIES OF INTELLECTUAL PROPERTY*

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I. INTRODUCTION

In December 2008, Apple's iTunes online music store surpassed Wal-Mart as the largest music retailer in the world.¹ In the closely related portable music player market, Apple's iPod enjoys similar success.² Undoubtedly, Apple's insight and innovation won much of this eminence. However, a close look at Apple's business practices reveals some conduct that draws a suspicious eye from antitrust and intellectual property laws.

The first part of this article traces the development of online music and the subsequent proliferation of copyright infringement. The next part outlines the technical details, benefits, and drawbacks of Apple's iTunes ecosystem, a notable combination of Apple products and services. The third part undertakes a traditional antitrust analysis of Apple's conduct and suggests the need for deeper inquiry. The next part investigates how Apple's conduct implicates intellectual property law. The fifth part reviews the doctrine of intellectual property misuse and how it might apply to Apple. The final part revisits the antitrust

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¹ Press Release, Apple, Inc., iTunes Store Top Music Retailer in the US (Apr. 3, 2008), <http://www.apple.com/pr/library/2008/04/03itunes.html> [hereinafter iTunes Store].

² Jessica Hodgson, *Leap Year Trips Zune in Black Eye for Microsoft*, WALL ST. J., Jan. 2, 2009, at A9, available at <http://online.wsj.com/article/SB123074469238845927.html>.

analysis in view of the misuse doctrine. The conclusion wraps up with a brief commentary from the author.

A. *Peace, Love, and Online Music*

We are all familiar with the inspiring majesty of music. From the classical masterpieces of Mozart to the era-defining rock of the Beatles, music has many forms and just as many applications. Consequently, the world of music constantly pushes the evolution of technology, searching for new ways to reach audiences.

The advent of the phonograph placed in the hands of the average person the power to enjoy virtually any musical work independent of its artist. After some time, the cassette tape superseded the phonographic record. The tape, in turn, abdicated its throne to the revolutionary compact disc, more commonly known as the CD. The CD remains one of the most ubiquitous media for musical expression, possibly due to the application of its core technology to innumerable arts including cinematography, computer programming, and data storage. However, the CD's popularity is diminishing due to demand for more flexibility and features.

For many music fans, digital computer files that store musical works provide the ideal medium of the current era. Digital files provide many advantages over CDs, including easier distribution, decreased physical size, increased flexibility of the particular device for sound reproduction, and the ability to include digital data such as artist information and graphical artwork.³ Digital music files are easy to distribute because no physical or personal interaction is required. Instead, a digital data network may distribute music files in a short period of time with little personal effort.⁴ Digital music files are physically small because each one is an abstract collection of data independent of the particular medium that contains it.⁵ Therefore, as technological advancement provides smaller, more efficient methods for digital storage, digital music evolves similarly. The flexibility of digital music files arises from the same idea: as long as a device has some manner for storing digital files, reading those files, and converting those files from digital information to sound waves, enjoying a musical work requires little else. Finally, because digital files can contain information

³ See Brendan M. Schulman, *The Song Heard 'Round the World: The Copyright Implications of MP3s and the Future of Digital Music*, 12 HARV. J.L. & TECH. 589, 626–27 (1999).

⁴ See *id.*

⁵ See *id.*

of any kind, digital music files may contain much more than music—they may contain textual information, graphical images, or even video.

The advantages of digital files coupled with the efficiency of online purchasing have helped Internet music stores to become the most prevalent form of commercial music distribution.⁶ But even before commercial sales of music over the Internet became popular, a more menacing form of online music distribution was born: illegal sharing of copyrighted music on peer-to-peer (P2P) networks.

B. The Unscrupulous Copyists

At least in the United States, copyright law gives artists the exclusive right to control dissemination of their creative works.⁷ This protects the incentive of the artist who might otherwise be deterred by unscrupulous copyists seeking to reap the rewards of her work without any investment in its creation.⁸ Historically, technological barriers made it very difficult to violate copyright law, either on a personal or commercial level. On a personal level, devices to reproduce phonographs, tapes, or (until recently) CDs without perceptible quality-loss were prohibitively expensive.⁹ On a commercial level, the scale of production required for profitable unlawful copying was great enough to ensure discovery and legal action.¹⁰ Around the turn of the twenty-first century, technological advancements made CD copying feasible for the average person.¹¹

⁶ See iTunes Store, *supra* note 1.

⁷ 17 U.S.C. § 106 (2006).

⁸ *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 450–51 (1984) (“The purpose of copyright is to create incentives for creative effort. Even copying for noncommercial purposes may impair the copyright holder’s ability to obtain the rewards that Congress intended him to have.”).

⁹ *Chamberlain Group, Inc. v. Skylink Techs., Inc.*, 381 F.3d 1178, 1197 (Fed. Cir. 2004) (“Whereas large-scale copying and distribution of copyrighted material used to be difficult and expensive, it is now easy and inexpensive.”).

¹⁰ Mark F. Schultz, *Fear and Norms and Rock & Roll: What Jambands Can Teach Us About Persuading People to Obey Copyright Law*, 21 BERKELEY TECH. L.J. 651, 659 n.17 (2006) (“It took expensive equipment to create commercial grade copies and significant (albeit illicit) distribution channels to sell enough copies to make the cost and risk of copying worthwhile, as consumer CD-recorders had not yet hit the market.”).

¹¹ Schulman, *supra* note 3, at 626–27 (“CD-ROMs were considered largely uncopyable, or prohibitively expensive to copy, until recently, so this physical protection worked quite well, and much better than copy protection based on magnetic floppy disks.”).

However, perhaps because CDs require physical distribution, copyright infringement did not reach epidemic proportions.¹²

The tides turned when digital music files began to amass a significant audience. As people realized the potential advantages of digital music files, computer scientists answered with programs enabling average computer users to convert CDs into digital music files.¹³ The contemporaneous explosion of computer networks, particularly the Internet, enabled the seamless sharing, both legal and illegal, of music files without perceptible boundaries. Software for searching and sharing music file collections saw universal adoption, facilitating unregulated, and mostly illegal, Internet-wide sharing of copyrighted musical works.¹⁴ These software programs, which work by connecting the computers of many users (peers) directly together, are commonly referred to as P2P file sharing programs. Because the users in a P2P network may connect to each other directly to transfer files, there generally is no intermediary capable of monitoring and regulating the transferred content.¹⁵ Consequently, the world of online copyright infringement flourished.

1. Solutions: Nailing Napster

The recording industry, often through the Recording Industry Association of America (RIAA), a trade group that represents the major labels of the industry, responded by filing lawsuits against custodians of various P2P networks, including the infamous Napster.¹⁶ Napster, the first well-known and universally adopted P2P file-sharing network, was the ideal target.¹⁷ The difficulty, of course, was that the administrators of these networks were not directly infringing copyright laws.¹⁸ Rather, they simply provided computer systems to

¹² *See id.*

¹³ *See id.* at 625 (“However, MP3 files may be created by anyone with an original music CD, and there is no control over what information an encoder of an MP3 file must provide because it is an open music format.”).

¹⁴ Monika Roth, *Entering the DRM-Free Zone: An Intellectual Property and Antitrust Analysis of the Online Music Industry*, 18 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 515, 516–17 (2008).

¹⁵ *Id.*

¹⁶ *A&M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004, 1011 (9th Cir. 2001).

¹⁷ Nicola F. Sharpe & Olufunmilayo B. Arewa, *Is Apple Playing Fair? Navigating the iPod FairPlay DRM Controversy*, 5 NW. J. TECH. & INTELL. PROP. 332, 337–38 (2007).

¹⁸ *A&M Records*, 239 F.3d at 1013, 1021–22, 1027 (Napster users engaged in direct infringement, consequently a prima facie case was made against Napster for being secondarily liable for the direct copyright infringement by a third party and a preliminary injunction against Napster was warranted).

coordinate the P2P networks and catalogue the various files shared on them.¹⁹ They did not participate directly in the illicit transfer of copyrighted material among users—the “real” culprits.²⁰

Before Napster’s time, the Supreme Court addressed a similar problem in *Sony Corp. of America v. Universal City Studios, Inc.*²¹ There, television companies sued Sony for contributory copyright infringement, alleging that purchasers of its video tape recorder were using it to illegally record copyrighted material.²² The Court held that because some broadcasters allowed time-shifting—present recording for later viewing—of their works, the video tape recorder was capable of substantial non-infringing use.²³ Accordingly, Sony was not liable for contributory infringement.²⁴

Informed only by *Sony*, early courts struggled with the *Sony* decision’s application to P2P file sharing. It was clear that P2P file sharing was capable of substantial non-infringing use, but it was also clear that P2P systems were being used almost exclusively for illegal sharing of copyrighted music. Nevertheless, in *A&M Records Inc. v. Napster, Inc.*,²⁵ the Ninth Circuit issued an injunction ordering Napster to prevent trading of copyrighted music on its network.²⁶ The court concluded that Napster was liable for contributory infringement because Napster (1) had knowledge of the infringing activity and (2) made a material contribution to the infringing activity.²⁷ A few years later, the Seventh Circuit faced a similar case, *In re Aimster Copyright Litigation*.²⁸ Aimster was a P2P software provider similar to Napster. Considering the same contributory infringement question posed in *Napster*, the Seventh Circuit promulgated a different rule. The court held that “some estimate of the respective magnitudes of [the] uses is necessary for a finding of contributory infringement.”²⁹ The *Aimster* decision thus created a circuit split and left the issue decidedly unsettled.

¹⁹ *Id.* at 1011.

²⁰ Roth, *supra* note 14, at 518.

²¹ 464 U.S. 417 (1984).

²² *Id.* at 420.

²³ *Id.* at 454–55.

²⁴ *Id.* at 456.

²⁵ 239 F.3d 1004 (9th Cir. 2001).

²⁶ *Id.* at 1029.

²⁷ *Id.* at 1020, 1022.

²⁸ 334 F.3d 643 (7th Cir. 2003).

²⁹ *Id.* at 649.

The Supreme Court finally agreed to decide the issue in *MGM Studios Inc. v. Grokster, Ltd.*³⁰ In *Grokster*, a group of movie studios brought a copyright infringement suit against Grokster, the administrator of a P2P network.³¹ Unlike Napster, Grokster designed its network in a decentralized fashion that prevented administrators from knowing what file transfers took place.³² Grokster promoted its service as a Napster alternative and “took active steps to encourage infringement.”³³ The Court found that the “principal object” of Grokster’s business model was to encourage infringement.³⁴ Relying on the theoretical underpinnings of the “rule on inducement of infringement,” the Court stated that “one who distributes a device with the object of promoting its use to infringe copyright, as shown by clear expression or other affirmative steps taken to foster infringement, is liable for the resulting acts of infringement by third parties.”³⁵ Applying this rule, the Court unanimously held that Grokster could be liable for inducing copyright infringement.³⁶

Regardless of the recording industry’s success against P2P administrators in the legal arena, P2P networks continue not only to exist, but to evolve in ways that make them more resilient to legal aggression. Most notably, a P2P transfer technology known as bit torrent has seen wide adoption.³⁷

2. Solutions: Fighting the Fans

Before *Grokster*, perhaps recognizing the rise of invulnerable P2P networks, the RIAA began pursuing another avenue of vindication: filing lawsuits against individual P2P network users engaging in direct copyright infringement.³⁸ This path proved considerably more difficult due to the technical complexity of P2P networks, the difficulty of proving the true and certain identity of a direct infringer, and the public backlash against the tactic.³⁹

³⁰ 545 U.S. 913 (2005).

³¹ *Id.* at 919–21.

³² *Id.* at 923.

³³ *Id.* at 923–24.

³⁴ *Id.* at 926.

³⁵ *Id.* at 936–37.

³⁶ *MGM Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913, 941 (2005).

³⁷ Thomas Mennecke, *RIAA Drops Lawsuit Campaign—Mostly*, SLYCK, Dec. 19, 2008, http://www.slyck.com/story1812_RIAA_Drops_Lawsuit_Campaign_Mostly.

³⁸ Lital Helman, *When Your Recording Agency Turns Into an Agency Problem: The True Nature of the Peer-to-Peer Debate*, 50 IDEA 49, 64 (2009).

³⁹ *Id.* at 65, 67.

The RIAA's unreserved and often bullying tactics included issuing subpoenas to a deceased grandmother,⁴⁰ an elderly computer novice,⁴¹ several single mothers,⁴² a 12-year-old girl,⁴³ and individuals without a computer.⁴⁴ These incidents created a public relations disaster for the RIAA, and in December 2008, the RIAA announced its plans to drop its legal assault and search for more effective ways to combat online music piracy.⁴⁵

3. Solutions: DRM, the Digital Defender

Not long after the explosion of P2P file sharing, the recording industry realized that it must embrace the Internet as a music distribution mechanism or face certain failure at the hands of online infringers and more technologically advanced competitors. Internet stores legally selling digital music files began to appear, and they have since enjoyed great success.⁴⁶ To prevent legally purchased and downloaded music files from being illegally shared, online music stores implemented a promising solution to illegal online music sharing: digital rights management (DRM) software.

DRM is a fairly broad term that may be used to describe a wide variety of access control technologies employed to regulate the viewing and reproduction of various media.⁴⁷ In the context of digital music, DRM software combats illegal file sharing by allowing only the true purchaser of a digital music file to enjoy its content. The current most popular online music retailer, Apple Inc.'s iTunes Store, employs DRM technology to control the playback and transfer of the music files it sells.⁴⁸

⁴⁰ Eric Bangeman, "I Sue Dead People . . .", ARS TECHNICA, Feb. 4, 2005, <http://arstechnica.com/news.ars/post/20050204-4587.html>.

⁴¹ *Grandmother Piracy Lawsuit Dropped*, BBC NEWS, Sept. 25, 2003, <http://news.bbc.co.uk/2/hi/entertainment/3140160.stm>.

⁴² Sarah McBride & Ethan Smith, *Music Industry to Abandon Mass Suits*, WALL ST. J., Dec. 19, 2008, at B1, available at <http://online.wsj.com/article/SB122966038836021137.html>.

⁴³ John Borland, *RIAA Settles With 12-Year-Old Girl*, CNET NEWS, Sept. 9, 2003, http://news.cnet.com/RIAA-settles-with-12-year-old-girl/2100-1027_3-5073717.html.

⁴⁴ Anders Bylund, *RIAA Sues Computer-Less Family, 234 Others, for File Sharing*, ARS TECHNICA, Apr. 24, 2006, <http://arstechnica.com/news.ars/post/20060424-6662.html>.

⁴⁵ McBride & Smith, *supra* note 42.

⁴⁶ See iTunes Store, *supra* note 1.

⁴⁷ See Roth, *supra* note 14, at 522.

⁴⁸ Roth, *supra* note 14, at 524.

II. THE APPLE iTUNES ECOSYSTEM

A. *The iPod*

With digital music files becoming increasingly popular, users sought substitutes for their portable cassette and CD players. Thus, the market for portable digital audio players, more commonly known as MP3 players, was born. Although the Apple iPod was hardly the first portable MP3 player, it was not long after its October 2001 unveiling that it became the best-selling and most widely used MP3 player.⁴⁹

B. *The iTunes Software*

In order to enjoy a portable MP3 player, a music listener must transfer digital music files from a computer to the portable player. Many portable MP3 players do not require special software for accomplishing this task. However, transferring music files to an iPod requires the use of Apple's iTunes software.⁵⁰

The iTunes software contains a number of additional features, including tools for converting CDs to digital music files, tools for organizing and sorting a library of music files, and a robust music player for playing digital music files through connected speakers.

C. *The iTunes Store*

The iTunes Store is integrated into the iTunes software. This integration provides a single convenient interface for a user to purchase and legally download music files, seamlessly add them to a music library, and easily transfer them to an iPod. Indeed, much of the appeal of the iTunes software, iTunes Store, and iPod comes from this simple, tightly integrated "ecosystem." Despite the benefits of the iTunes ecosystem, it has a significant drawback: lack of interoperability.

⁴⁹ Jefferson Graham, *Downloaders Dance to Apple's iTunes*, USA TODAY, Dec. 15, 2003, at 12B, available at http://www.usatoday.com/tech/news/2003-12-14-apple2_x.htm; Press Release, PR Log, About MP3 Player, MP4 Player and Ipod, (Dec. 25, 2008) <http://www.prlog.org/10159806-about-mp3-player-mp4-player-and-ipod.html>.

⁵⁰ See Apple, Inc., iPod Classic—Technical Specifications, <http://www.apple.com/ipodclassic/specs.html> (last visited Feb. 15, 2010) [hereinafter iPod Specifications].

D. *The Hidden Downside*

Digital music files come in a variety of formats. The format of a music file dictates the algorithm (codec) required to convert the digital information to sound waves. The most popular format for music files is the MP3 format; hence the term “MP3 player” is often used to describe any device for playing digital music files. Notably, the MP3 format does not include native support for DRM protection.⁵¹ Many online music stores opt alternatively for the WMA format, which has built-in support for DRM.⁵² Apple, on the other hand, encodes music files purchased from the iTunes Store in the AAC format.⁵³ The AAC format is standardized and accessible to the public, but it does not include native DRM support. Apple developed the FairPlay DRM system to add this functionality.⁵⁴

Prior to January 2009, when Apple moved away from using DRM, Apple “wrapped” tracks purchased from the iTunes Store in a FairPlay DRM “container.”⁵⁵ While the underlying AAC format is a public standard, Apple’s FairPlay wrapper prevents purchased tracks from playing without FairPlay support. Because Apple declines to license FairPlay to competitors,⁵⁶ music files with FairPlay DRM purchased from the iTunes Store will play only in the iTunes software or on an iPod.⁵⁷ Non-technical users may not have realized this limitation when they purchased music files from the iTunes Store. Apple’s most prevalent notice of this significant limitation appears buried in the iTunes Store Terms of Service, which provide in pertinent part:

⁵¹ See Deana Sobel, Note, *A Bite out of Apple? iTunes, Interoperability, and France’s Dadsvi Law*, 22 BERKELEY TECH. L.J. 267, 281 (2007).

⁵² Electronic Frontier Foundation, *The Customer Is Always Wrong: A User’s Guide to DRM in Online Music*, ELECTRONIC FRONTIER FOUNDATION, <http://www.eff.org/pages/customer-always-wrong-users-guide-drm-online-music> (last visited Feb. 15, 2010) [hereinafter Electronic Frontier Foundation, *Online Music Guide*].

⁵³ Sharpe & Arewa, *supra* note 17, at 346.

⁵⁴ See *id.* at 333.

⁵⁵ See Mike Ingram, *Behind Apple’s Decision to Drop Anti-Copying Measures in iTunes*, WORLD SOCIALIST WEB SITE, Jan. 19, 2009, <http://www.wsws.org/articles/2009/jan2009/appl-j19.shtml>; Marc Perton, *Did Apple Really Sell 10 Billion Songs on iTunes?*, CONSUMERIST, Feb. 26, 2010, <http://consumerist.com/2010/02/no-apple-hasnt-really-sold-10-billion-songs-on-itunes.html>.

⁵⁶ Sharpe & Arewa, *supra* note 17, at 344; see also Steve Jobs, *Thoughts on Music*, APPLE.COM, Feb. 6, 2007, <http://www.apple.com/hotnews/thoughtsonmusic/> (explaining why Apple refuses to license FairPlay).

⁵⁷ Despite Apple’s decision to move away from DRM, tracks purchased from the iTunes Store prior to January 2009 remain encoded and limited by FairPlay. See Perton, *supra* note 55.

- a. Products Requirements. You acknowledge that use of Products may require the use of other hardware and software products (e.g., the ability to make copies of Products on physical media and render performance of Products on authorized digital player devices), and that such hardware and software is your responsibility. . . .
- b. Use of Products. You acknowledge that Products (other than the iTunes Plus Products) contain security technology that limits your usage of Products to the following applicable Usage Rules, and, whether or not Products are limited by security technology, you agree to use Products in compliance with the applicable Usage Rules.⁵⁸

By the time an iTunes Store customer realizes the limitations of purchased music files, she may have already invested considerably in a library of music. In such a case, the cost of obtaining the music files again from another store would likely dissuade her from purchasing anything other than Apple's products.

The iTunes ecosystem presents another notable compatibility problem. As mentioned previously, many competitors of the iTunes Store opt for alternative forms of DRM, such as the WMA-protected format.⁵⁹ Unlike Apple's FairPlay DRM, most alternative forms of DRM are available for licensing.⁶⁰ Consequently, any developer or manufacturer who wishes to include support for such DRM mechanisms in a playback device may do so. This provides users of a particular playback device with a variety of choices for purchasing online music, and conversely, it provides customers of a particular online store a variety of choices for portable players. The Apple iPod, however, supports only FairPlay DRM, and music files laced with alternative forms of DRM will not play on the iPod.⁶¹ Although the iPod will happily play DRM-free music, its lack of support for alternative DRM schemes considerably limits users.

⁵⁸ Apple, Inc., iTunes Store—Terms and Conditions, <http://www.apple.com/legal/itunes/us/terms.html#SERVICE> (last visited Feb. 15, 2010).

⁵⁹ See Electronic Frontier Foundation, *Online Music Guide*, *supra* note 52.

⁶⁰ Microsoft Corp., Licensing Chipsets and Devices that Support Windows Media DRM (Dec. 2007), http://www.microsoft.com/windows/windowsmedia/licensing/Licensing_DRM_Chips.aspx.

⁶¹ See iPod Specifications, *supra* note 50; James Kim, *I Want a Dual-DRM iPod*, CNET REVIEWS, Apr. 10, 2006, http://reviews.cnet.com/4520-6450_7-6487563-1.html ("It makes me irate that digital-rights management (DRM) keeps me from playing my WMA tracks on my iPod.").

III. ANTITRUST IMPLICATIONS

Apple's business decisions with regard to the closed nature of the iTunes ecosystem may have implications beyond consumer frustration.⁶² In the United States, antitrust laws promote competition by prohibiting various forms of anticompetitive conduct.⁶³ Federal antitrust laws target practices that harm competition while having little economic benefit or business purpose. This article focuses on Apple's conduct with regard to the Sherman Act, one of the most significant federal antitrust statutes. Violations of the Sherman Act may draw treble damages and criminal charges.⁶⁴ Section 1 of the Sherman Act prohibits contracts, combinations, or conspiracies that unreasonably restrain competition.⁶⁵ Section 2 of the Sherman Act prohibits anticompetitive conduct employed to maintain or acquire monopoly power.⁶⁶

A. *The iTunes Store-iPod Tie*

One form of conduct that may violate the Sherman Act is known as "tying." Tying occurs when there is "an agreement by a party to sell one product but only on the condition that the buyer also purchases a different (or tied) product, or at least agrees that he will not purchase that product from any other supplier."⁶⁷ Such arrangements can harm competition by forcing

the buyer into the purchase of a tied product that the buyer either did not want at all, or might have preferred to purchase elsewhere on different terms. When such "forcing" is present, competition on the merits in the market for the tied item is restrained and the Sherman Act is violated.⁶⁸

⁶² For example, litigation concerning this question is currently ongoing and has been underway since 2005. See *The Apple iPod iTunes Anti-Trust Litigation*, No. C-05-00037-JW (HRL) (N.D. Cal. Mar. 2, 2010), available at http://dockets.justia.com/docket/court-candce/case_no-5:2005cv00037/case_id-26768/.

⁶³ *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 5–6 (1958).

⁶⁴ Sherman Act, 15 U.S.C. §§ 1–2 (2006).

⁶⁵ *United States v. Topco Assocs., Inc.*, 405 U.S. 596, 601 (1972).

⁶⁶ *Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004) ("It is settled law that this offense requires, in addition to the possession of monopoly power in the relevant market, the willful acquisition or maintenance of that power as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident.") (citation omitted) (internal quotations omitted).

⁶⁷ *N. Pac. Ry.*, 356 U.S. at 5–6.

⁶⁸ *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 12 (1984).

In some circumstances, a tying arrangement may constitute a “per se” violation of the Sherman Act. “Per se” violations are agreements or practices “which because of their pernicious effect on competition and lack of any redeeming virtue are conclusively presumed to be unreasonable and therefore illegal without elaborate inquiry as to the precise harm they have caused or the business excuse for their use.”⁶⁹ As the Supreme Court’s initially strong disapproval of tying arrangements has diminished, the burden of establishing a “per se” illegal tying arrangement has increased.⁷⁰ After *Jefferson Parish Hospital District No. 2 v. Hyde*,⁷¹ a tying arrangement is only “per se” illegal “when the seller has some special ability—usually called ‘market power’—to force a purchaser to do something that he would not do in a competitive market.”⁷² Additionally, the tie must foreclose a substantial volume of commerce.⁷³ While this remains the law, some lower courts have suggested an end to the “per se” rule entirely.⁷⁴

Where application of the per se rule is not appropriate, a court will analyze a tying arrangement under the “rule of reason.”⁷⁵ The rule of reason allows a court to consider anticompetitive harms as well as pro-competitive justifications.⁷⁶ Under such an analysis, a tying arrangement will only be illegal if an inquiry into actual market conditions reveals significant anticompetitive effects without countervailing pro-competitive benefits.⁷⁷

Given this legal framework, Apple’s use of FairPlay DRM in the iTunes ecosystem may involve an illegal tie. Because music files purchased from the iTunes Store before January 2009 will only play on an iPod, Apple appears to have tied music purchased from its iTunes Store to its iPod.

As a foundational matter, a tie requires two distinct product markets.⁷⁸ The Supreme Court has held that this inquiry turns not on the functional relationship between the products, but rather on the character of the demand for the

⁶⁹ *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 5 (1958).

⁷⁰ *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 35 (2006).

⁷¹ 466 U.S. 2 (1984).

⁷² *Id.* at 13–14.

⁷³ *Id.* at 16.

⁷⁴ *See, e.g., United States v. Microsoft Corp.*, 253 F.3d 34, 94 (D.C. Cir. 2001).

⁷⁵ *Jefferson Parish Hosp.*, 466 U.S. at 35 (O’Connor, J., concurring).

⁷⁶ *Id.*

⁷⁷ *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 35 (1984) (O’Connor, J., concurring).

⁷⁸ *Id.* at 20–21 (Stevens, J., majority opinion) (“These cases make it clear that a tying arrangement cannot exist unless two separate product markets have been linked.”).

two items.⁷⁹ Thus, no tying arrangement can exist unless there is a sufficient demand for the purchase of the tied product—separate from the tying product—to identify a distinct product market.⁸⁰ The iTunes Store and the iPod clearly represent two distinct product markets: The iTunes store competes in the online music market, while the iPod competes in the portable MP3 player market. The presence of different competitors in each of these markets substantially supports this conclusion. In the online music market, Apple competes with companies like RealNetworks, Wal-Mart, Amazon, and Napster; while in the portable MP3 player market, Apple competes with companies like Microsoft, Sony, Creative, and SanDisk.⁸¹

While not determinative, the functional relationship between the iTunes Store and the iPod player does explain their independent demand characteristics. Music files purchased from an online music retailer do not require a portable MP3 player for enjoyment. Indeed, many listeners prefer to enjoy purchased music through speakers attached to a computer. Likewise, listeners who purchase a portable MP3 player may obtain their music files from a variety of sources including retail CDs. This further supports the conclusion that a music file purchased from the iTunes Store and an iPod represent distinct products.

Next, a tie requires “an agreement by a party to sell one product but only on the condition that the buyer also purchases a different (or tied) product, or at least agrees that he will not purchase that product from any other supplier.”⁸² Although the purchase of music from the iTunes Store does not necessarily require the simultaneous purchase of an iPod, the Supreme Court has clearly stated that tying may exist when an arrangement forces the subsequent purchase of a tied product or exclusion of competing products.⁸³ Apple’s FairPlay DRM technology ensures that music files purchased from the iTunes Store prior to January 2009 will play only in iTunes software and on iPod.⁸⁴ Apple thus ac-

⁷⁹ *Id.* at 21–22.

⁸⁰ *Id.*

⁸¹ CNET Reviews, CNET’s Quick: Major Online Music Stores and Services, http://reviews.cnet.com/4520-11297_7-6518467-2.html?tag=rb_content;rb_mtx (last visited Feb. 15, 2010); CNET Reviews, MP3 Players, http://reviews.cnet.com/mp3-player-reviews/?tag=rb_shell;rb_content (last visited Feb. 15, 2010).

⁸² *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 5–6 (1958).

⁸³ *See Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 21–22 (1984) (ruling on the anti-trust implications of tying in the anesthesiology context).

⁸⁴ Peter Cohen, *iTunes Store goes DRM-free*, Macworld.com, Jan. 6, 2009, <http://www.macworld.com/article/137946/2009/01/itunestore.html> (however, users can pay to “upgrade” their library by paying an additional fee of \$0.30 per song); *see also Report: Apple’s iPad E-Book Store to Use DRM*, REUTERS, Feb. 16, 2010,

completes the tie technologically, via DRM limitations—listeners may purchase music files from the iTunes store, but only on the condition that they purchase an iPod for enjoying the music on a portable MP3 player, or at least agree that they will not purchase a competing portable player for this purpose.

Finally, an illegal tie requires anticompetitive forcing.⁸⁵ A “per se” application of illegal tying would deem this requirement satisfied where the seller has market power in the tying product and the tie forecloses a substantial volume of commerce.⁸⁶ Market power may follow from a high market share.⁸⁷ With a market share of approximately seventy percent, Apple likely possesses market power in the online music market.⁸⁸ Moreover, Apple’s market share combined with its considerable sales volume is certainly enough to conclude that the tie forecloses a “substantial volume of commerce.”⁸⁹

B. The iPod-iTunes Store Tie

Apple’s iTunes ecosystem may also involve another tie between the same products, but in the opposite direction. Specifically, an iPod owner may be compelled to purchase online music files only from the iTunes Store. While the details of this tie are less clear, the facts appear to lay a solid foundation.

Apple likely possesses considerable market power in the portable MP3 player market, with the iPod claiming a significant seventy percent market share.⁹⁰ The question of whether there is an actual tie is not so transparent. Apple’s iPod does not require that users purchase music files from the iTunes Store. Indeed, Apple includes functionality in its iTunes software to convert music CDs to digital music files for transfer to an iPod. Further, iPod users may acquire music files from any other source, including competing online music retailers, as long as those files are not encumbered by DRM protection. However, this ostensible freedom may be illusory. Online music sales will likely soon

<http://www.reuters.com/article/idUS71889259820100216> (“Music from the iTunes store was the first to see [the FairPlay] system dropped in 2009, though other types of content from the marketplace still use FairPlay.”).

⁸⁵ *Hyde*, 466 U.S. at 16.

⁸⁶ *Id.* at 14.

⁸⁷ *Id.* at 17.

⁸⁸ Ed Christman, *Digital Developments Could Be Tipping Point for MP3*, REUTERS, Dec. 1, 2007, <http://www.reuters.com/article/technologyNews/idUSN0132743320071201>.

⁸⁹ See iTunes Store, *supra* note 1.

⁹⁰ See Hodgson, *supra* note 2.

surpass those of physical CDs,⁹¹ and many of the iTunes Store's online competitors employ alternative forms of DRM protection. But Apple's iPod will only play music files that are DRM-free or encoded with Apple's FairPlay DRM. Thus, it appears that Apple has used its iPod to foreclose a substantial volume of commerce in the online music market by excluding competitors who choose to employ DRM mechanisms.

While this tie may not offend competition enough to warrant an antitrust violation on its own, Apple's conduct taken as a whole may. Just as a man with a mighty grip may single-handedly form an adamantine tie with another by grasping his hand, two men with more moderately disposed strengths may form a bond of similar firmness by interlocking grips in a concerted effort. Analogous to the later scenario, Apple has formed a kind of kind of interlocking, bi-directional tie that when taken as a whole appears to be decidedly anticompetitive.

C. *Apple's Refusal to Deal*

An alternative basis for Apple's antitrust liability arises from its FairPlay DRM technology licensing practices. The general rule is that a party has no unqualified duty to transact business with a competitor.⁹² In *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP*,⁹³ the Supreme Court articulated three reasons why requiring firms to "share the source of their advantage" with rivals "is in some tension with the underlying purpose of antitrust law."⁹⁴ First, compelling firms to share "may lessen the incentive for the monopolist, the rival, or both to invest in . . . economically beneficial facilities."⁹⁵ Second, "[e]nforced sharing also requires antitrust courts to act as central planners, identifying the proper price, quantity, and other terms of dealing—a role for which they are ill suited."⁹⁶ Finally, "compelling negotiation between competitors may facilitate the supreme evil of antitrust: collusion."⁹⁷ Indeed, impos-

⁹¹ Jacqui Cheng, *iTunes Sells 25% of All Music in the US, 69% of Digital*, ARS TECHNICA, Aug. 18, 2009, <http://arstechnica.com/apple/news/2009/08/itunes-sells-25-of-all-music-in-the-us-69-of-digital.ars>.

⁹² *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 600–01 (1985).

⁹³ 540 U.S. 398 (2004).

⁹⁴ *Id.* at 407–08.

⁹⁵ *Id.*

⁹⁶ *Id.* at 408.

⁹⁷ *Id.*

ing liability for a refusal to deal seems to extend a proscription of anticompetitive conduct to an affirmative duty to assist rivals.⁹⁸

Nevertheless, in rare circumstances the Supreme Court imposes antitrust liability on a party who refuses to deal with competitors.⁹⁹ Such conduct may violate section 2 of the Sherman Act when it constitutes monopolization or an attempt to monopolize.¹⁰⁰ The seminal case on the matter is *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*¹⁰¹ Aspen Skiing Co., the owner of three of four major ski areas in Aspen, Colorado, discontinued its participation in an “all-Aspen” lift ticket offered jointly with the fourth ski area; the “all-Aspen” ticket provided convenience to skiers who visited the resort.¹⁰² Aspen Skiing Co. subsequently prevented Aspen Highlands, the owner of the fourth major ski area, from purchasing its lift tickets, even at retail price, for use in its own “all-Aspen” package.¹⁰³ Considering the circumstances in detail, the Supreme Court affirmed a judgment against Aspen Skiing Co. for violation of section 2 of the Sherman Act.¹⁰⁴ While the holding in *Aspen* appears limited to the specific facts of that case, it does create potential antitrust liability for certain refusals to deal.¹⁰⁵

Closely related to a refusal to deal analysis is the “essential facilities” doctrine, which may impose antitrust liability where a firm with market power exploits control over an essential resource to deny competitors entry into a market.¹⁰⁶ For example, in *United States v. Terminal Railroad Association*,¹⁰⁷ a group of railroads controlling all railway bridges and switching yards into and out of St. Louis, Missouri, prevented competing railway companies from offering transportation to and through that destination.¹⁰⁸ The Supreme Court held this to be an illegal restraint of trade.¹⁰⁹ In a later case, the Supreme Court found that Otter Tail, an electrical utility company that sold electricity both directly to

⁹⁸ *See id.*

⁹⁹ *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 600–01 (1985).

¹⁰⁰ *Id.*

¹⁰¹ 472 U.S. 585 (1985).

¹⁰² *Id.* at 592.

¹⁰³ *Id.* at 594.

¹⁰⁴ *Id.* at 587, 611.

¹⁰⁵ *Verizon Commc’ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 409 (2004) (holding that “*Aspen Skiing* is at or near the outer boundary of § 2 liability”).

¹⁰⁶ *See United States v. Terminal R.R. Ass’n*, 224 U.S. 383, 394–95 (1912).

¹⁰⁷ 224 U.S. 383 (1912).

¹⁰⁸ *Id.* at 398.

¹⁰⁹ *Id.* at 409–10.

consumers and to municipalities who resold to consumers, violated the Sherman Act by refusing to supply electricity at wholesale and instead serving customers directly itself.¹¹⁰ Thus, in the clear absence of pro-competitive business justifications, excluding competitors by denying access to an essential facility may constitute an antitrust violation.

Did Apple's refusal to license its FairPlay DRM technology or to support alternative DRM schemes on the iPod constitute an illegal refusal to deal or a denial of access to an essential facility? Apple may have little business justification for refusing to license FairPlay DRM. In fact, such licensing could expand the range of potential iTunes Store customers by allowing purchased music files to play on more portable devices. With the iTunes Store holding seventy percent of the online music market, access to technology allowing iTunes music files to play may constitute an essential facility. Furthermore, Apple may have taken active steps to remove inherent support for alternative forms of DRM from the iPod's hardware.¹¹¹ A court might analogize this removal to Aspen Skiing Co.'s withdrawal from the "all-Aspen" lift ticket in *Aspen*.¹¹² Nevertheless, courts are extremely reluctant to impose mandatory licensing.¹¹³ As such, it is unlikely that Apple offended antitrust laws by refusing to license its FairPlay DRM technology or by removing DRM compatibility from the iPod.

D. *The Unanswered Questions*

The preceding discussion circumscribes most critical commentaries on the antitrust implications of the iTunes ecosystem. A closer analysis, however, reveals a number of difficulties with such a limited perspective.

A cursory review of the relevant facts may suggest that Apple violated section 1 of the Sherman Act by tying its iTunes Store to the iPod; but in the tying context, a section 1 violation still requires a "contract . . . in restraint of trade."¹¹⁴ This contract is usually a contract of sale or a licensing agreement between a buyer and seller that explicitly requires the buyer to forgo competing products in favor of the tied product. While a customer of the iTunes Store who purchased music files before January 2009 certainly entered into a sales con-

¹¹⁰ *Otter Tail Power Co. v. United States*, 410 U.S. 366, 381 (1973).

¹¹¹ *See Tucker v. Apple Computer, Inc.*, 493 F. Supp. 2d 1090, 1099 (N.D. Cal. 2006) (denying defendant's motion to dismiss).

¹¹² *Aspen Skiing Co. v. Aspen Highlands Skiing Corp.*, 472 U.S. 585, 595 (1985).

¹¹³ *See Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP*, 540 U.S. 398, 407 (2004).

¹¹⁴ 15 U.S.C. § 1 (2006).

tract, the terms of the contract do not impose an obligation on the buyer to purchase an iPod, to refrain from purchasing a competing player, or even to play the music files only on Apple devices. Rather, the alleged tie is technological: Apple enforces the tie by making it very difficult, if not impossible, to play FairPlay-encoded iTunes music files with any software other than iTunes or with any portable player other than iPod.¹¹⁵ Apple thus has two compelling arguments against a tying allegation: (1) there is no *contract* in restraint of trade, and (2) Apple customers are technically (*vis-à-vis* practically) free to play purchased music files on any device they want.

The later defense appears to have empirical support. Jon Lech Johansen, famously known for cracking the DRM scheme used to encrypt the ubiquitous DVD format, released an open source program called QTFairUse capable of removing Apple's FairPlay DRM protection from music files purchased from the iTunes Store.¹¹⁶ Other developers released software packages with similar capabilities, including PlayFair, JHymn, and Requiem.¹¹⁷ Perhaps most notably, RealNetworks introduced its Harmony technology in 2004.¹¹⁸ Harmony technology allowed customers of RealNetworks' RealPlayer Music Store to play purchased music files on the iPod.¹¹⁹ Before Harmony, this was not possible because the RealPlayer Music Store utilized a different form of DRM protection not supported by the Apple iTunes ecosystem.

Additionally, iTunes customers may use the iTunes software to transfer purchased music files to an audio CD, a process called burning. Burning removes the FairPlay DRM protection from music files. However, this method is cumbersome, time consuming, and can result in quality loss—especially if the

¹¹⁵ See Kim, *supra* note 57 (“It makes me irate that digital-rights management (DRM) keeps me from playing my WMA tracks on my iPod.”).

¹¹⁶ *iTunes Copy Protection “Cracked,”* BBC NEWS, Oct. 25, 2006, <http://news.bbc.co.uk/2/hi/6083110.stm?lsm/>.

¹¹⁷ See *Apple Forces SourceForge to Remove PlayFair*, AFTERDAWN.COM, Apr. 9, 2004, <http://www.afterdawn.com/news/archive/5126.cfm>; Hymn Project, JHymn Info and Help, <http://www.hymn-project.org/jhymndoc/> (last visited Feb. 15, 2010); Erica Sadun, *Apple Issues C&D Takedown Order to Hymn Project Software*, TÚAW, Feb. 20, 2008, <http://www.tuaw.com/2008/02/20/apple-issues-candd-takedown-order-to-hymn-project-software/>.

¹¹⁸ *RealNetworks Introduces Harmony, Enabling Consumers to Buy Digital Music that Plays on All Popular Devices*, PHYSORG.COM, July 26, 2004, <http://www.physorg.com/news495.html> (quoting RealNetworks' press release regarding Harmony).

¹¹⁹ *Id.*

customer desires to convert the audio CD back to digital music files, a process called ripping, for use on a computer or portable player.¹²⁰

Apple may also successfully argue that use of FairPlay DRM in the iTunes ecosystem was the most effective way to inhibit copyright infringement. Indeed, Apple publicly stated that the FairPlay DRM system was necessary to uphold its contractual obligations to the record labels whose music Apple distributes.¹²¹ This may be a compelling justification for Apple's actions, especially if Apple can show that, absent the FairPlay DRM system, record labels would be reluctant to distribute their music via the iTunes Store.

Collectively, these considerations may undermine theories of Apple's antitrust liability. However, a more scrutinizing look at how Apple has ensured the effectiveness of its technological tie uncovers a new universe of questions and concerns.

IV. APPLE'S ENFORCEMENT TACTICS

Copyright protection was Apple's justification for the FairPlay DRM system.¹²² Apple, however, is not the copyright holder. The copyright holders are the artists who distribute their works through the iTunes Store. Therefore, it seems Apple has little power to legally enforce the copyrights of iTunes music files.¹²³ Not owning copyrights in the music itself, Apple appears to have few options for directly combating software developers who distribute programs like QTFairUse and Harmony that circumvent Apple's FairPlay DRM scheme. However, the 1998 Digital Millennium Copyright Act (DMCA) turns this view on its head.

The DMCA added an entirely new dimension to U.S. copyright law. Among other things, the DMCA criminalizes production and dissemination of technology, devices, or services intended to circumvent measures that control access to copyrighted works; and it criminalizes the act of circumventing an access control, whether or not there is actual infringement of an underlying copyright.¹²⁴ Although the DMCA appears in the same title of the United States

¹²⁰ See Kevin J. Harrang, *Challenges in the Global IT Market: Technology, Creative Content, and Intellectual Property Rights*, 49 ARIZ. L. REV. 29, 34 (2007).

¹²¹ Jobs, *supra* note 56.

¹²² *Id.*

¹²³ See 17 U.S.C. § 501(b) (2006) ("The legal or beneficial owner of an exclusive right under a copyright is entitled, subject to the requirements of section 411, to institute an action for any infringement of that particular right committed while he or she is the owner of it.").

¹²⁴ 17 U.S.C. § 1201 (2006).

Code as traditional copyright law, it creates an altogether new right to control *access* to eligible works.¹²⁵ Thus some critics refer to the anticircumvention right, extending far beyond traditional copyright, as “paracopyright.”¹²⁶

In copyright law, the fair use doctrine provides an important exception to the rights of a copyright holder. Depending on the circumstances, the exception legalizes otherwise prohibited uses of a copyrighted work.¹²⁷ For example, fair use may sanction unauthorized use of a work for various purposes “including quotation for criticism and commentary, many educational uses, and the reverse engineering of software for purposes of interoperability.”¹²⁸

After the enactment of the DMCA, an important question arose: Does fair use apply to the anticircumvention right, making it legal to bypass an access control in order to make fair use of the underlying copyrighted work? After all, the DMCA includes the mandate that “[n]othing in this section shall affect rights, remedies, limitations, or defenses to copyright infringement, including fair use, under this title.”¹²⁹ However, courts have held that the anticircumvention provisions of the DMCA are not concerned with use.¹³⁰ Thus, circumventing an access control, even for the purpose of employing an underlying copyrighted work for a legal purpose, appears to violate the DMCA.¹³¹

The DMCA drastically altered the universe of copyright law in another important way: It gave parties other than a copyright holder the right to seek legal relief. For example, in *RealNetworks, Inc. v. Streambox, Inc.*,¹³² RealNetworks published a popular software package used to receive streaming music or video from a remote server via the Internet.¹³³ The RealPlayer software employed a “secret handshake” protocol that allowed the receiver and server to recognize one another.¹³⁴ Streambox produced a competing software program that could play RealPlayer signals by emulating the “secret handshake” proto-

¹²⁵ Dan L. Burk, *Anticircumvention Misuse*, 50 UCLA L. REV. 1095, 1096 (2003).

¹²⁶ *Id.* at 1119.

¹²⁷ *Id.* at 1105.

¹²⁸ *Id.* at 1119.

¹²⁹ 17 U.S.C. § 1201(c).

¹³⁰ See *Universal City Studios, Inc. v. Corley*, 273 F.3d 429, 443 (2d Cir. 2001) (“Instead, it simply clarifies that the DMCA targets the *circumvention* of digital walls guarding copyrighted material (and trafficking in circumvention tools), but does not concern itself with the *use* of those materials after circumvention has occurred.”).

¹³¹ See *id.* at 444.

¹³² No. C99-2070P, 2000 WL 127311 (W.D. Wash. Jan. 18, 2000).

¹³³ *Id.* at *1.

¹³⁴ *Id.* at *2.

col.¹³⁵ RealNetworks brought suit against Streambox, alleging that their receiving software constituted a circumvention device under the DMCA.¹³⁶ “In an unpublished opinion, the court granted the preliminary injunction, holding that the emulation of the ‘secret handshake’ protocol constituted a circumvention of the RealPlayer restriction features.”¹³⁷

The implications of the DMCA extend far beyond copyright law. For example, it creates the unfortunate possibility that a market participant might employ the anticircumvention right to exclude competition—a possibility with serious antitrust consequences. Dan L. Burk, an early commentator, was quick to point out this problem, explaining, “[E]xamples such as the DVD CSS or RealAudio ‘secret handshake’ serve to illustrate the general point that control of a dominant technical protection standard can allow a firm or group of firms to dictate who will be allowed to offer competing or complementary products in a given market.”¹³⁸ Apple, is that you?

Perhaps using Burk’s commentary as a business plan, Apple engaged in precisely this practice. In February 2008, Apple sent a cease and desist letter to the web host of the QTFairUse and Requiem projects demanding removal of all download links to programs for bypassing FairPlay DRM.¹³⁹ Apple also sent cease and desist letters to SourceForge.net, an open source software development community, demanding removal of the PlayFair project and subsequently to Sarovar, an Indian software development community to which the PlayFair project moved.¹⁴⁰ Most notably, Apple responded to RealNetworks’ Harmony technology with the following statement:

We are stunned that RealNetworks has adopted the tactics and ethics of a hacker to break into the iPod®, and we are investigating the implications of their actions under the DMCA and other laws. We strongly caution Real and their customers that when we update our iPod software from time to time it is highly likely that Real’s Harmony technology will cease to work with current and future iPods.¹⁴¹

¹³⁵ *Id.* at *4.

¹³⁶ *See id.* at *7–8.

¹³⁷ Burk, *supra* note 125, at 1111.

¹³⁸ *Id.* at 1138.

¹³⁹ Posting of kdawson to Slashdot, *Apple Sends Cease-and-Desist to the Hymn Project*, <http://apple.slashdot.org/article.pl?sid=08/02/23/1915254> (Feb. 23, 2008, 15:14) [hereinafter Hymn Project].

¹⁴⁰ Posting of michael to Slashdot, *Apple Hunts Playfair in India*, <http://apple.slashdot.org/article.pl?sid=04/04/16/1358215&tid=141> (Apr. 16, 2004, 11:05) [hereinafter Playfair].

¹⁴¹ A Copyrighter’s Musings, *Apple Threatens Real*,

But RealNetworks' Harmony technology was arguably the least worrisome of the bunch. It merely added FairPlay-compatible DRM wrappers to music files purchased from the RealPlayer Music Store; it did not purport to bypass or remove FairPlay DRM protecting music files purchased from the iTunes Store.¹⁴²

Arguably, the Harmony case plainly illustrates that Apple was interested in suppressing competition, not preventing copyright infringement. However, it also appears that Apple merely exercised its anticircumvention right under the DMCA. So while Apple's conduct may be clear, its legal consequence, if any, is not.

V. THE DOCTRINE OF INTELLECTUAL PROPERTY MISUSE

Apple's particular conduct, and its potentially salient effects, may present a novel character; however, the leveraging of intellectual property rights for dubious purposes does not. Intellectual property, including patents, trademarks, and copyrights, gives owners certain legal rights. Like traditional real and personal property, intellectual property broadly entails a right to exclude others.¹⁴³ Real property, for example, gives an owner the right to exclude others from his land; similarly, a patent gives a patentee the right to exclude others from making, using, or selling his invention.¹⁴⁴ The right to exclude, however, does not encompass the right to make unqualified and unrestricted use. An owner of real property, for example, will be prohibited from using her land in way that interferes with the rights of her neighbors.¹⁴⁵ Likewise, an intellectual property owner will be prohibited from improperly leveraging such property in a way that offends the rights of others.¹⁴⁶ This concept is embodied in the doctrine of misuse, which first arose in the patent context.

<http://blogs.law.harvard.edu/cmusings/2004/07/29/apple-threatens-real/> (July 29, 2004, 13:47 EST).

¹⁴² See Niva Elken-Koren, *Making Room for Consumers Under the DMCA*, 22 BERKLEY TECH. L.J. 1119, 1126 (2007).

¹⁴³ See, e.g., *Eldred v. Ashcroft*, 537 U.S. 186, 216 (2003); *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 433 (1982); *Comm'r v. Wodehouse*, 337 U.S. 369, 419–20 (1949).

¹⁴⁴ See *Eldred*, 537 U.S. at 186; *Loretto*, 458 U.S. at 419.

¹⁴⁵ Nuisance law embodies this principle. RESTATEMENT (THIRD) OF PROP.: SERVITUDES § 2.16.

¹⁴⁶ See *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 42–43 (2006).

A. Patent Misuse

A patent owner enjoys the right to exclude others from making, using, or selling her patented invention.¹⁴⁷ Patent owners enforce this right by bringing suit for infringement. To prevail in a suit for direct infringement, the patentee must demonstrate that the allegedly infringing activity sufficiently embodies the legal scope of the patented invention.¹⁴⁸ However, direct infringement does not cover devious schemers who would, for example, produce and sell the essential but unassembled components of a patented product, fully cognizant that such components will be used for infringing activity. To address this shortcoming, courts developed the doctrine of contributory infringement.¹⁴⁹ A patentee may employ the doctrine of contributory infringement to sue a party who instigates infringement by selling a product that has no substantial non-infringing use or by actively encouraging infringing activity.¹⁵⁰

Shortly after the doctrine of contributory infringement developed in the courts, some patentees employed the doctrine to improperly expand the scope of their patents.¹⁵¹ Most instances of such conduct involved the use of tying arrangements, which forced the purchaser of a patented product to buy additional, unpatented goods.¹⁵² In this scenario, patentees would restrain competition in the market for the tied, unpatented good by suing third-party suppliers for contributory infringement.¹⁵³ In response, courts developed the defense of patent misuse, which applied when a patentee sued a seller of a tied, unpatented good for contributory infringement.¹⁵⁴ Although originally patent misuse applied as a defense only in this context, the Supreme Court eventually recognized an independent doctrine of patent misuse as a defense to any infringement action in *Morton Salt Co. v. G.S. Suppiger Co.*¹⁵⁵ The doctrine expanded to prohibit a wide range of anticompetitive activities, including tying and attempting to collect royalties beyond the patent term.¹⁵⁶

¹⁴⁷ 35 U.S.C. § 271(a) (2006).

¹⁴⁸ *See id.*

¹⁴⁹ *See Dawson Chem. Co. v. Rohm & Haas Co.*, 448 U.S. 176, 189 (1980).

¹⁵⁰ Burk, *supra* note 125, at 1118.

¹⁵¹ *See id.* at 1119–20.

¹⁵² *See Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 31, 38 (2006).

¹⁵³ *See id.* at 38.

¹⁵⁴ *See Burk, supra* note 125, at 1115–16.

¹⁵⁵ 314 U.S. 488, 490–91 (1942).

¹⁵⁶ *See id.*

In response to the continued expansion of the patent misuse doctrine, Congress enacted 35 U.S.C. § 271 as part of the Patent Act of 1952.¹⁵⁷ Section 271 defines the boundaries of contributory infringement and limits the application of the patent misuse doctrine.¹⁵⁸ In its current form, the statute limits misuse by providing that:

No patent owner . . . shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of his having . . . conditioned the license of any rights to the patent or the sale of the patented product on the acquisition of a license to rights in another patent or purchase of a separate product, unless, in view of the circumstances, the patent owner has market power in the relevant market . . .¹⁵⁹

Thus § 271 mandates that patent misuse will not apply in the tying context unless the patentee has “market power in the relevant market.”¹⁶⁰ Reminiscent of related antitrust law, this explicit threshold implies that existence of a patent does not itself imply market power; the Supreme Court has held as much.¹⁶¹

B. Copyright Misuse

Copyrights, like patents, grant owners certain exclusionary rights. By the same token, an owner may leverage a copyright to improperly extend its reach in a way that offends competition. For example, an artist may condition the sale of a copyrighted work on the purchase of other, less desirable, works. Courts originally expressed uncertainty about extending the misuse doctrine to copyright law.¹⁶² Recent cases, however, have reversed this trend, and the doctrine of copyright misuse enjoys notable acceptance.¹⁶³

Like patent misuse, the defense of copyright misuse applies when a copyright holder has illegally extended her monopoly beyond the scope of the copyright or violated the public policies underlying the copyright laws.¹⁶⁴ In *Lasercomb America, Inc. v. Reynolds*,¹⁶⁵ the leading case on copyright misuse, the Fourth Circuit refused to enforce a copyright where the owner prevented

¹⁵⁷ Burk, *supra* note 125, at 1117.

¹⁵⁸ 35 U.S.C. § 271 (2006).

¹⁵⁹ *Id.* § 271(d).

¹⁶⁰ *Id.*

¹⁶¹ See *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 35 (2006).

¹⁶² See Burk, *supra* note 125, at 1125.

¹⁶³ *Id.*

¹⁶⁴ *Id.* at 1124.

¹⁶⁵ 911 F.2d 970 (4th Cir. 1990).

licensees from independently developing a competing product for ninety-nine years.¹⁶⁶ The court, drawing heavily from the patent misuse reasoning in *Morton Salt*,¹⁶⁷ held that the license agreement was an impermissible attempt to suppress competition and further noted that the ninety-nine year prohibition could outlast the copyright itself.¹⁶⁸

Notably, Congress has not codified the limits of copyright misuse as they have for patent misuse, and the extent of the doctrine remains relatively uncertain. Regardless, most courts describe copyright misuse as simply the extension of patent misuse to the copyright context.¹⁶⁹ Still others explain that “The copyright misuse defense is analogous to the patent misuse defense”¹⁷⁰ Accordingly, established principles of the patent misuse doctrine should substantially inform any potential application of copyright misuse.

C. *Apple’s Misuse*

Apple’s alleged tying practices clearly implicate copyright law, at least the DMCA, in some way. However, Apple’s actions do not fall cleanly into any category of conduct explicitly allowed or disallowed under the doctrine of misuse. Thus, the applicability of misuse to Apple’s conduct is ripe for consideration.

Misuse is an equitable doctrine derived from the “unclean hands” doctrine.¹⁷¹ The essence of both doctrines is that a court will not grant relief to a plaintiff who himself has violated the rights of others.¹⁷² Thus the misuse doctrine is broad, flexible, and discretionary, allowing courts to employ misuse as a panacea, especially when suspect conduct does not clearly violate established principles of law.¹⁷³ Accordingly, a proper misuse analysis incorporates not only a review of precedent, but also a fresh review of present circumstances.

Apple holds significant market shares in both the retail online music and portable MP3 player markets. Ostensibly to protect artist copyrights, Apple

¹⁶⁶ *Id.* at 979.

¹⁶⁷ *See id.* at 975–76.

¹⁶⁸ *Id.* at 979.

¹⁶⁹ *See Video Pipeline, Inc. v. Buena Vista Home Entm’t, Inc.*, 342 F.3d 191, 203–04 (3d Cir. 2003).

¹⁷⁰ *Alcatel USA, Inc. v. DGI Techs., Inc.*, 166 F.3d 772, 792 (5th Cir. 1999).

¹⁷¹ *Dawson Chem. Co. v. Rohm & Haas Co.*, 448 U.S. 176, 186 (1980); *Morton Salt Co. v. G.S. Suppiger Co.*, 314 U.S. 488, 492–94 (1942).

¹⁷² *Morton Salt Co.*, 314 U.S. at 492–94.

¹⁷³ *See id.*

employs its FairPlay DRM technology to control how customers may enjoy music files from the iTunes Store. However, Apple also uses its FairPlay DRM technology to ensure the closed nature of the iTunes ecosystem. Music files purchased from the iTunes Store before January 2009 must be used with an iPod, and the iPod will not play DRM protected music files not from the iTunes Store. While computer developers may break this technological, rather than contractual, tie by distributing software to remove Apple FairPlay DRM from purchased music files, Apple upholds the tie by wielding the legal force of the DMCA anticircumvention right. But the DMCA was enacted to help protect the rights of artists in their works, not to restrain competition in ancillary markets.¹⁷⁴ Considering this, the anticircumvention right equates to a form of intellectual property, and its employment to expand protection beyond its intended scope amounts to classic intellectual property misuse.¹⁷⁵ Indeed, scholars recognized the potential for misuse in precisely this situation.¹⁷⁶

Apple contends that it is protecting the rights of artists, a goal within the purview of the anticircumvention right.¹⁷⁷ Arguably, Apple's attempts to eradicate software that indiscriminately removes FairPlay DRM protection from iTunes music files are justified: Such software has large potential for abuse. However, Apple's conduct with regard to RealNetworks' Harmony technology exposes much more sinister motives. Harmony allowed users to encode music files from RealNetworks' online music store into a FairPlay compatible format, enabling the files to play on an iPod. Apple responded swiftly and aggressively, threatening legal action and modifying the iPod firmware to render Harmony inoperable.¹⁷⁸ RealNetworks eventually threw in the towel, explaining in a 2005 SEC filing:

“If Apple decides to commence litigation against us in order to prevent interoperation with its products, we may be forced to spend money defending their legal challenge, which could harm our operating results.”

. . . .

. . . [There are additional considerations, including] a risk that: “Apple will continue to modify its technology to ‘break’ the interoperability that Harmony provides to consumers, which Apple has done in connection with the release of certain new products. If Apple chooses to continue this course of action, Harmony may no longer work with Apple's products, which could harm our

¹⁷⁴ See Burk, *supra* note 125, at 1104.

¹⁷⁵ See *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 35 (2006).

¹⁷⁶ See Burk, *supra* note 125, at 1004.

¹⁷⁷ Jobs, *supra* note 56.

¹⁷⁸ A Copyrighter's Musings, *supra* note 141.

business and reputation, or we may be forced to incur additional development costs to refine Harmony to make it interoperate again.”¹⁷⁹

Harmony did not remove FairPlay DRM; in fact, it added it.¹⁸⁰ RealNetworks thus broke the tie between the iPod and the iTunes Store by allowing the iPod to play songs purchased from competing online music stores. Apple’s justification for its aggression?—zilch. Invoking the DMCA to fetter RealNetworks’ Harmony technology could hardly be a more blatant attempt to restrain competition. Apple has thus leveraged its anticircumvention right in its FairPlay DRM system to exclude beneficial competition beyond the bounds contemplated by the DMCA. Accordingly, the equitable principles of intellectual property misuse should apply.

1. Implications of Apple’s Misuse

Misuse is an equitable defense to infringement, but exactly how it should operate in the instant case is less clear. Apple does not hold copyrights in the works underlying FairPlay protected music files. It therefore seems unreasonable to prevent the rights holders from maintaining suits for infringement because of Apple’s bad behavior—equity should not disadvantage copyright holders simply because a third party abuses a right arising from its distribution of protected works. More appropriately, misuse should operate to prohibit Apple from asserting its anticircumvention right under the DMCA. This will chastise Apple while preserving the rights of copyright holders. Alternatively, misuse could preclude suit only where Apple cannot demonstrate that a violation of the anticircumvention provision is accompanied by infringement of an underlying copyright. This would prevent Apple from exercising its anticircumvention right to restrain competition where actual copyright infringement is not clearly taking place.

VI. REVISITING THE ANTITRUST ANALYSIS

A review of Apple’s business practices as they relate to the doctrine of misuse reveals a new aspect of Apple’s potential antitrust liability. A defense of intellectual property misuse is separate and distinct from an affirmative antitrust violation. Nevertheless, courts have viewed anticompetitive activity with a

¹⁷⁹ *Real Reveals Real Apple Legal Threat*, MACWORLD, Aug. 10, 2005, <http://www.macworld.co.uk/news/index.cfm?RSS&NewsID=12310>.

¹⁸⁰ Elkin-Koren, *supra* note 142, at 1135 & n.52.

more suspect eye when intellectual property is involved.¹⁸¹ Historically, for example, a patent warranted an irrebuttable presumption of market power for the purpose of analyzing a tying arrangement under the antitrust laws.¹⁸² While this is no longer the case,¹⁸³ it demonstrates a willingness to acknowledge the particularly salient effects of leveraging intellectual property rights. In Apple's case, the roll of the anticircumvention right is particularly pertinent to an analysis of antitrust liability for tying and refusal to deal.

A. *The Tie*

At the most basic level, Apple's conduct should preclude it from arguing that no explicit, contractual tie between the iTunes Store and the iPod exists. While as much may be true, Apple has maintained the tie in an alternative fashion: by threatening to exercise its anticircumvention right under the DMCA.¹⁸⁴ Thus, while not contractual, the tie enjoys legal protection, and any antitrust analysis should presume the existence of a contract.

Apple's legal activity may also impact antitrust liability. The general rule is that an action for infringement of intellectual property does not by itself create antitrust liability unless the action is both objectively baseless and brought or maintained in bad faith.¹⁸⁵ Proof of baselessness and bad faith may not be required if there is evidence that the infringement action is part of a larger scheme of antitrust violations;¹⁸⁶ but the infringement suit must advance the goal of the larger antitrust offense.¹⁸⁷ Courts reluctantly impose antitrust consequences on infringement litigation, not wanting to deter intellectual property owners from enforcing their colorable property rights.¹⁸⁸

On top of this reluctance is the fact that Apple, regardless of its legal threats, has not initiated any actual suits for violation of the DMCA in further-

¹⁸¹ See *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 10–11 & n.13 (1984).

¹⁸² *Id.*

¹⁸³ See *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 42 (2006) (finding that Congress overruled the presumption that a patent warrant an irrebuttable presumption of market power by amending the Patent Act).

¹⁸⁴ A *Coyprighte*r's Musings, *supra* note 141; Hymn Project, *supra* note 139; Playfair, *supra* note 140.

¹⁸⁵ See *Prof'l Real Estate Investors, Inc. v. Columbia Pictures Indus., Inc.*, 508 U.S. 49, 65 (1993); 1 JAY DRATLER, JR. & STEPHEN M. MCJOHN, *LICENSING OF INTELLECTUAL PROPERTY* § 2.04[1] (2009).

¹⁸⁶ *Id.*

¹⁸⁷ *Id.*

¹⁸⁸ *Id.*

ance of the iTunes Store-iPod tie. Likely, this results from the effectiveness of Apple's legal threats. Furthermore, Apple's claims of DMCA violations are not based on invalid intellectual property. To the contrary, the copyrights in works underlying Apple's FairPlay DRM system are valid and enforceable. Apple, of course, does not own these copyrights; nevertheless, they are valid. Finally, veritable proof of a larger scheme of antitrust violations will likely evade easy production.

So while Apple's legal activity may bear some weight in an antitrust analysis, existing precedent suggests that it will be far from determinative. A court will likely approach the question from a "totality of the circumstances" perspective, which will allow consideration of Apple's conduct as a whole in view of all relevant circumstances.

B. The Refusal to Deal

When a party uses intellectual property rights to enforce a refusal to deal, the general rule is that an intellectual property owner has no obligation to transact business with rivals.¹⁸⁹ For example, in *CSU, L.L.C. v. Xerox Corp.*,¹⁹⁰ the Federal Circuit held that a "patent holder may enforce the statutory right to exclude others . . . free from liability under the antitrust laws" in the "absence of any indication of illegal tying, fraud in the Patent and Trademark Office, or sham litigation."¹⁹¹ Nevertheless, some courts seem more willing to impose antitrust liability when intellectual property is involved. For example, in *Image Technical Services, Inc. v. Eastman Kodak Co.*,¹⁹² the Ninth Circuit affirmed a finding of antitrust liability where Kodak refused to sell patented and copyrighted parts with no bona fide business justification.¹⁹³

The provisions of 35 U.S.C. § 271 may also inform an antitrust analysis of a refusal to license intellectual property. In the patent context, § 271 provides that "No patent owner . . . shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of his having . . . refused to license or use any rights to the patent . . ."¹⁹⁴ The statute does not explicitly refer to antitrust liability, and commentators have noted that Congress could easily have

¹⁸⁹ See *CSU, L.L.C. v. Xerox Corp.* (*In re Indep. Serv. Orgs. Antitrust Litig.*), 203 F.3d 1322, 1328 (Fed. Cir. 2000).

¹⁹⁰ *In re Indep. Serv. Orgs. Antitrust Litig.*, 203 F.3d 1322 (Fed. Cir. 2000).

¹⁹¹ *Id.* at 1327.

¹⁹² 125 F.3d 1195 (9th Cir. 1997).

¹⁹³ *Id.* at 1228.

¹⁹⁴ 35 U.S.C. § 271(d) (2006).

done so.¹⁹⁵ More importantly, the Supreme Court has suggested that the provisions of § 271 do not create antitrust immunity.¹⁹⁶ Nevertheless, the policy underlying the provisions of § 271 may reflect what Congress considers permissible exercise of intellectual property rights. This consideration seems to point away from antitrust liability for a refusal to license intellectual property.

In view of the policy underlying 35 U.S.C. § 271 and the Supreme Court's hesitance to compel cooperation among competitors, Apple's refusal to license its FairPlay technology does not likely offend antitrust laws. Nevertheless, cases like *Kodak* suggest that evidence of Apple's anticompetitive intent could create antitrust liability.

C. *Aside: Patented FairPlay and Misuse*

Apple's FairPlay technology does not appear to be patented. However, an interesting situation arises if we consider hypothetically that it is. The analysis would be largely the same with one important exception: § 271 limits the application of the misuse doctrine in the patent context.¹⁹⁷ Let us further assume that Apple violated antitrust laws in the refusal to deal context but not in the tying context. This situation creates an interesting anomaly: The Sherman Act will potentially subject Apple to criminal liability and treble damages, but the patent misuse doctrine will not preclude Apple from successfully suing for patent infringement. This results from the mandate under § 271 that patent misuse will not apply where a patent owner has "refused to license or use any rights to the patent."¹⁹⁸ The implications of this hypothetical lie beyond the scope of this paper; nevertheless, the possibility represents an interesting scenario worth mentioning.

VII. CONCLUSION

Apple's business practices with regard to its FairPlay DRM technology raise potential antitrust concerns. This paper presents a novel basis for examining Apple's conduct through an intellectual property lens. Arguably, the doctrine of intellectual property misuse should preclude Apple from upholding its

¹⁹⁵ U.S. DEPARTMENT OF JUSTICE & THE FEDERAL TRADE COMMISSION, ANTITRUST ENFORCEMENT & INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION 25 (2007), available at <http://www.usdoj.gov/atr/public/hearings/ip/222655.pdf>.

¹⁹⁶ *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 42–43 (2006).

¹⁹⁷ 35 U.S.C. § 271(d).

¹⁹⁸ *Id.*

tie by enforcing its anticircumvention rights under the DMCA. Further, a misuse analysis may provide additional fodder for an antitrust suit against Apple.

Regardless of whether an antitrust suit or misuse defense against Apple would succeed in the legal arena, recent developments illustrate how Apple's conduct may not have harmed competition after all. The online music market has evolved considerably since its inception, as have the demands of music fans. Fans are more wary of suffocating DRM restrictions and more determined to seek out acceptable alternatives. Responding to this development, Wal-Mart recently announced its decision to sell only DRM-free music.¹⁹⁹ Amazon subsequently announced the unveiling of an entirely DRM-free music store.²⁰⁰ Finally, in January 2009, Apple announced that it would begin removing FairPlay DRM from many music tracks available in the iTunes Store and stated its plans to make iTunes Store music entirely DRM-free by April 2009.²⁰¹ We must now ask ourselves: Given the recent trend away from DRM without any legal involvement, does Apple's conduct deserve legal condemnation? It may be relevant that Apple's actions appear to have spurred a beneficial move away from restrictive DRM.²⁰²

¹⁹⁹ Thomas Ricker, *Wal-Mart Begins Selling DRM-Free MP3s*, ENGADGET, Aug. 21, 2007, <http://www.engadget.com/2007/08/21/wal-mart-begins-selling-drm-free-mp3s/>.

²⁰⁰ Joshua Topolsky, *Amazon Launches DRM-Free "Amazon MP3" Music Downloads*, ENGADGET, Sept. 25, 2007, <http://www.engadget.com/2007/09/25/amazon-launches-drm-free-amazon-mp3-music-downloads/>.

²⁰¹ Press Release, Apple, Inc., *Changes Coming to the iTunes Store* (Jan. 6, 2009), <http://www.apple.com/pr/library/2009/01/06itunes.html>.

²⁰² *But see* Eric Lai, *Apple disses our DRM for iPad, Adobe says*, COMPUTERWORLD, Feb. 18, 2010, http://www.computerworld.com/s/article/9158398/Apple_disses_our_DRM_for_iPad_Adobe_says (last visited Mar. 11, 2010) (noting that the FairPlay DRM is still used to protect TV shows and movies, and is rumored to be used for e-books for use on Apple's upcoming iPad).