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# Case Study of Apple, Inc. for Business Law Students: How Apple's Business Model Controls Digital Content Through Legal and Technological Means

*Margo E.K. Reder\**

## I. INTRODUCTION

This article describes a six-week long exercise that incorporates a dynamic learning approach into an e-commerce or Internet technology business law elective course; the exercise pursues an entrepreneurial approach to the use of an appropriate business model by emphasizing the interaction between technology, business, and law.<sup>1</sup> “Students learn best when they are actively involved in and responsible for their own learning.”<sup>2</sup> Because of student familiarity with technology, Apple, Inc., and Apple products provide the backdrop for this coursework. This active learning exercise yields engaged students, who gain the ability to address these issues outside of the classroom. This exercise is meant to create a forum for interactive learning along with a context for this experience. “At a basic level, undergraduate law courses inform students about key legal concepts and foundation principles. Students absorb legal concepts better when faculty provide an appealing vehicle for the review of complex legal materials.”<sup>3</sup>

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<sup>1</sup>For this course at Boston College, we use the text, GERALD R. FERRERA ET AL., *CYBERLAW: TEXT AND CASES* (2004).

<sup>2</sup>See Lucille M. Ponte, *The Case of the Unhappy Sports Fan: Embracing Student-Centered Learning and Promoting Upper-Level Cognitive Skills Through an Online Dispute Resolution Simulation*, 23 J. LEGAL STUD. EDUC. 169, 169–70 (2006).

<sup>3</sup>See *id.* at 173.

With this in mind, students first study business models of current businesses in the technology sector. Students consider their products and services and future plans all as components of any business models in an attempt to analyze what works—companies producing revenue for products or services in high demand—and why it works—typically because these companies create superior, innovative products or services that customers will choose over those of competitors, as well as pay for those products or services. Even if the businesses' products or services are given away free to customers, as are Google search queries, companies still produce revenue from, in this example, selling online display ads to third parties. By focusing on technology as a means of supporting business goals, students quickly discover that the current legal environment lags behind rapid developments in business. Advances in technology outpace legal developments, and legal responses to the technology business environment.

Prior to beginning the Apple case study, students first study models of start-up businesses and then study legal issues relevant to the start-up phase. While studying start-up businesses, students focus on the logistics of starting a business and the products and services of the business. Students then address legal topics relevant to a business's start-up phase, including trademarks, copyrights, trade secrets, patents, and contracts. This allows students to apply their knowledge to a familiar technology, iPods and the iTunes Music Store, while working through the Apple, Inc. case study. Students work in groups, drawing on their knowledge of legal concepts and business strategies studied earlier in the course; through the case study, students achieve an in-depth understanding of and context for an understanding of how Apple exploits these legal concepts and business strategies and then describe how they contribute to Apple's success. This course concludes with an inventory of the technology Apple deploys and how it protects this technology through enforcement of intellectual property rights.

This course material has been developed and Apple was selected as a subject for a case study because the students already are conversant with this technology and the company. This familiarity frees students to concentrate on the legal significance of the company's business and technology strategies. The concepts are presented in ways that resonate with students' experiences; this provides a framework for the materials and promotes student insight and understanding beyond mere abstract academic learning. Specifically, students learn to recognize how each of these legal concepts and business strategies contributes to an aspect of the company's

business plan and thus, the company's success. Through the course materials and case study exercise, students analyze and learn how a company develops a business model, deploys technology, and then uses intellectual property laws as well as contract law to successfully execute its business model. This article first describes the process and methodology for teaching entrepreneurial business strategies, intellectual property, and contracts. The article then describes how students synthesize all of these course components by working through the inventory and questionnaire that is the central feature of the case study. Finally, the case study is supplemented by discussion points for instructors.

## II. COURSE CONTENT

For teaching a course focusing on technology and law with an entrepreneurial approach, we devote the first weeks to developing proficiency in the subject matter of the course. Students read about technology companies, with an emphasis on how technology produces revenue as an end-product or service, or where it contributes to producing revenue as an underlying component of a product or service. After students understand the role of technology in a successful enterprise, students then turn their attention to the “building blocks” or assets of a technology company—the intellectual property (IP) and, finally, the exploitation of those assets through technology transfer strategies—either partnering or by the sale or licensing of that IP. There is an emphasis on both skill development and critical thinking in this course, as students learn skills such as registering and checking the legal status of IP, using IP as an asset and for defensive purposes, as well as evaluating IP through the study of cases, statutes, and current developments in the field. It is vital that instructors incorporate international legal materials into the study of IP because IP is impacted greatly by the global economy. For example, registration of the iTunes mark in the United States is enforceable only within the United States and extraterritorial registration and enforcement of IP rights requires additional legal steps. An understanding of each form of IP requires students to study domestic and international cases, statutes and treaties.

### *A. Trademarks*

Students are assigned readings and cases on trademarks. Then students are asked to develop a name for a hypothetical business and learn how to

register and brand it. Further, students develop a domain name strategy<sup>4</sup> for this mark; and then they consider it strategically—what rights mark owners have, including how to protect as well as exploit marks.

### *B. Copyrights*

Students next study readings and cases on copyrights. Students are asked to identify business assets that are covered by copyright. They learn how to register a copyright and what rights copyright owners have. They learn how to protect copyrights, exploit their value, and control uses of their copyrights by others. Further, students learn how the Digital Millennium Copyright Act protects content and how this law strengthens copyright owners' claims as against users.

### *C. Patents*

Students next study readings and cases on patents. As with the other forms of IP, students learn what the appropriate statutory subject matter for patents is, how to file for patents, and what rights filing confers on patent-holders. Students are asked to identify business assets potentially covered by patents and to find out if they are in fact patented. Students learn that unlike trademarks and copyrights, patenting offers more legal protections. Venture capitalists typically evaluate a start-ups' patent portfolios first, as this is seen as a crucial gauge of a company's viability.

### *D. Trade Secrets*

Students then study that final form of IP with readings and cases on trade secrets. This is an often underappreciated form of IP, but one that has risen in importance, especially for companies that need to quickly innovate and market new technology or modify and update their technology frequently.<sup>5</sup> In fact because of the 2007 Supreme Court case, *KSR Interna-*

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<sup>4</sup>This involves both offensive and defensive strategies as businesses register and protect marks that they want as well as those they do not want anyone else to register. See DAVID KESMODEL, *THE DOMAIN GAME* (2008); ELLEN RONY & PETER R. RONY, *THE DOMAIN NAME HANDBOOK: HIGH STAKES AND STRATEGIES IN CYBERSPACE* (1998).

<sup>5</sup>See Randall Stross, *The Human Touch That May Loosen Google's Grip*, N.Y. TIMES, June 24, 2007, available at [http://www.nytimes.com/2007/06/24/business/yourmoney/24digi.html?bl&ex=1182916800&en=0e89eebe2b245dac\\*&ei=5087%0A](http://www.nytimes.com/2007/06/24/business/yourmoney/24digi.html?bl&ex=1182916800&en=0e89eebe2b245dac*&ei=5087%0A) (commentary on the rising value and appeal of trade secrets).

*tional Co. v. Teleflex, Inc.*, companies will perhaps be more inclined to protect their IP as a trade secret rather than seeking patent protection. In *KSR*, the Court raised the threshold for nonobviousness.<sup>6</sup>

### *E. Contracts and Licensing*

The next course topic students cover is contracts and licensing. This course assumes a basic understanding of the elements of a contract (offer, acceptance, consideration, etc.) that students presumably learned in an Introduction to the Legal Environment course. The emphasis here is on the transactional aspect of contracts and licensing, especially on end-user license agreements (EULAs), now more typically known as software license agreements (SLAs), and technology transfer agreements. Starting with a target business with IP assets, students identify other companies interested in the purchase or license of the IP assets and then develop agreements for their sale or transfer. These agreements again have an offensive and defensive posture, as they are meant to convert the IP into a revenue source and protect these assets from unauthorized uses and users. Transactional law concerns the process of exploiting the IP through the sale or licensing of these assets. SLAs represent the vehicle for this, and perhaps more importantly, serve as the medium for content owners to maintain control over later uses of the content.

### *F. Antitrust*

Finally, students study antitrust readings and cases. While antitrust may not seem to logically follow the students' study of contract and licensing issues, antitrust law also addresses agreements: illegal agreements in restraint of trade. To the extent agreements are unlawful, antitrust law provides a means for resolution of those issues. Students learn to identify practices that restrain trade, typically found where businesses do not compete on price or quality and instead rely on restrictive agreements to inhibit competition. While contracts and licensing are of course legal

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<sup>6</sup>*KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1744–46 (2007) (holding that combining existing elements in a way that neither defied conventional wisdom nor resulted in novel unexpected benefits was not sufficiently inventive and nonobvious, reasoning that just because no one before had combined those elements in that particular way was an insufficient justification to conclude that the new combination merited a patent).

agreements, software is a nonrival product<sup>7</sup> and thus highly susceptible to monopoly control,<sup>8</sup> potentially triggering antitrust complaints by competitors and subsequent review by regulators.<sup>9</sup>

Following a comprehensive study of these legal topics, students have the knowledge necessary to work through a technology company case study. Completion of the case study provides students with a more meaningful understanding of how IP and contract law fit into a company's business model, especially one that relies heavily on technology, with company assets in both physical and digital format, and the distribution of the assets involving both traditional retail and internet delivery platforms.

### III. CASE STUDY MATERIALS AND PROCESS

The MP3 technology is thoroughly familiar to students, and instructors can capture students' knowledge of this technology and use it to educate students about the interaction of this technology with business and law. Students acquire a more thorough understanding of the materials as they have a familiar platform from which to study these subjects. Students are asked to bring in their iPods, along with a printout of Apple's iTunes Terms of Service to class. With students working in groups, invariably at least one student owns an iPod and is an iTunes user. As a class exercise, students complete an inventory and questionnaire to complete regarding Apple's iPod and its iTunes Music Store (iTMS) software. Students have access to iPods, as well as computers, where they download the iTMS software. They also use their class notes, text, cases, and class materials as a reference

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<sup>7</sup>See Steven Hetcher, *The Emergence of Website Privacy Norms*, 7 MICH. TELECOMM. TECH. L. REV. 97, 110–11 & n.59 (2000–2001) (nonrival is an economic concept describing the phenomenon of a product when used by one person does not alter or take away that amount of the product still available for others to consume—like software and unlike trees or other physical goods).

<sup>8</sup>See Timothy Teter, Note, *Mergers and the Machines—An Analysis of the Pro-Compatibility Trend in Computer Software Copyright Cases*, 45 STANFORD L. REV. 1061, 1067 (1993) (describing phenomenon of demand for software compatibility, which increases the purchase of that software further, and these network externalities may enable a software producer to “achieve a far-reaching monopoly”).

<sup>9</sup>See Jay P. Kesan & Andres A. Gallo, *Optimizing Regulation of Electronic Commerce*, 72 U. CIN. L. REV. 1497, 1521 (2004) (noting that “if any firm can introduce specific software that everybody uses, then it is almost impossible for any other competitor to compete in that market”).

guide to complete the inventory. Students study every physical component of the iPod, including the product appearance and design, packaging, instructions, logos, and symbols, all of which are covered by some form of IP. Further, they look at the iTunes site and consider how that too is protected by some form of IP. Students inventory all of the above, and identify what form of IP it is and how it would be protected. For example, students realize that even for the name Apple, for example, the company must have a trademark in that name. This is true for its other marks: iPod and iTunes. Students must determine who might want to use these names; what uses are legitimate, and what uses are infringing. For example, aspects of the iPod product design are functional and covered by patent law; as well, to the extent the design is nonfunctional, it is covered by trademark law.

Students research the expiration date of both national and international legal protections as to each form of IP they've identified. For this, students go to various Web sites, including sites such as the World Intellectual Property Organization, the Library of Congress's Copyright Office, and the Patent and Trademark Office. Typically students first notice that many competitors' products "play off" of the iPod, including its distinctive name and appearance. For example, students will find when they work on a trademark search that companies have already registered names potentially confusingly similar to the iPod name. In addition, students discover that different forms of IP have different terms of protection, that copyrights and patents have defined terms of protection, while trademarks and trade secrets last potentially forever. Although this is covered in most business law texts, the case study make the concepts "real" to the students, and they gain insight that IP is an asset, and managers must craft offensive and defensive strategies to manage their IP portfolios domestically and internationally.

The next three parts of the inventory address the iTunes Software License Agreement (SLA). Students have hard copies of the SLA, which contains those terms users are asked to agree to as a condition precedent to receipt of the software. This is often the first time students will have taken the time to read these agreements, despite having "agreed" to many such SLAs already.<sup>10</sup> With their current foundation in IP, students more fully

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<sup>10</sup>This is another teachable moment when instructors can use this part of the exercise to inform students that software agreements are legally enforceable agreements and encourage students to read them in full.



understand and appreciate the importance of the iTMS SLA as a legal document as well as a core component of a business strategy. Students are asked to identify and classify each substantive clause of the SLA. For example, when the Terms of Service, Clause 13a provides, “No portion of the Service may be reproduced in any form or by any means. You agree not to modify . . . sell, distribute, or create derivative works based on the Service, in any manner . . . ,”<sup>11</sup> students identify and classify what form of IP this clause refers to, and what uses it impacts.

The next aspect of the case study asks students to identify instances of where the SLA’s terms provides users with a *different* set of rights from those provided in the various IP laws. For example, in Clause 13a cited in the previous paragraph, students will discover that Apple’s agreement limits users’ fair use rights. Students begin to see then how contract law interacts with, and in many instances, encloses IP. This is when the students really begin to piece the business model together and learn how business, technology, and law interact to create a successful company strategy.

Finally students are asked to reflect on how it is that Apple can, and does, control content and uses, and then to describe how this impacts innovation and free-market competition in ways that potentially violate the antitrust laws. Students have so much relevant personal knowledge on these points and can easily describe how the iPod is unable to do some function that they think it should be able to do. For example, students report that they cannot interoperate Microsoft’s hardware (its Zune MP3 player) with Apple’s software (its iTMS). And they often report that they cannot make their desired number of copies of a song they could have made had they been starting with a CD version of that same song. They also complain about the copy protection on downloaded songs. Students begin to understand that these restrictions are *not inherent in the software and hardware*; rather, these limitation technologies exist as a function of the goals of Apple’s business model and legal strategy.

After completion of the inventory, students summarize their findings and describe how Apple relies on a legal structure—making use of IP and contract laws—to deploy its technology and successfully compete in the digital media business. Students realize that Apple’s business model for both its hardware and software sales relies on a three-point plan to:

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<sup>11</sup>See Apple’s iTunes Music Store Terms of Service Web site, <http://www.apple.com/legal/itunes/us/service.html> [hereinafter Terms of Service].

(1) deals with the major music labels to license and distribute the labels' recording content of their artists for them, (2) integrate its proprietary hardware and software (in a way that excludes participation by other companies), and (3) control uses and users' rights through its SLA.

Following the students' completion of the inventory, the instructor may lecture on any or all of the points that the students have worked through in this exercise. The lecture provides feedback to the student groups on the quality and thoroughness of their work, and the combination of the student group work and the lecture builds towards a detailed understanding of how Apple integrates technology and law in its business model.

## IV. DISCUSSION POINTS

The following section describes all facets of Apple's business model, including how the technology works and how Apple manages its IP as well as its contracts with content providers and its agreement (the SLA) with customers/users. Discussion of this material is most appropriate after students conduct their own investigation and complete the case study.

### *A. The Business's Products and Services*

Apple introduced its now-signature product, the iPod in 2001<sup>12</sup> and a pay-per-song service, iTunes just two years later.<sup>13</sup> The iPod was an instant success, becoming the default for the MP3 player consumer electronics product category, because of its cool design and rich features, including capacity, download speed, and ease of use. The iTunes service likewise represented an industry breakthrough in an era defined by (1) free music download services like the illegal, now-defunct KaZaA and the original Napster (which offered low-quality, mainly pirated recordings), and (2) subscription services like the now-defunct PressPlay (which locked in users to fees and limited use of the content).<sup>14</sup> Apple cofounder and CEO

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<sup>12</sup>See Ian Fried, *Apple's iPod Spurs Mixed Reactions*, NEWS.COM, Oct. 23, 2001, [http://news.com.com/2101-1040\\_3-274821.html](http://news.com.com/2101-1040_3-274821.html).

<sup>13</sup>See Tom Mainelli, *Apple Unveils Online Music Service*, PCWORLD.COM, Apr. 28, 2003, <http://www.pcmworld.com/article/id,110482-page,1/article.html>.

<sup>14</sup>*Id.*

Mr. Steven Jobs' intent with the MP3 product and iTunes service was to create an online environment closely resembling the physical environment and experience of purchasing music at a shop because, as he noted, "people want to buy downloads like they buy CDs."<sup>15</sup> It was at once revolutionary and obvious; importantly, it closely mimics the way users search peer-to-peer (P2P) for music online, seamlessly integrating the hardware and software. In advance of the launch, Jobs signed unprecedented deals with the five major music labels: BMG, EMI, Sony, Universal, and Warner (now four due to the Sony-BMG merger) to distribute their songs online and, collectively, they control over 70 percent of the world's music.<sup>16</sup>

The iTunes service began with 200,000 tracks, now up to 3.5 million tracks; and it has sold in excess of 3 billion songs.<sup>17</sup> Apple charges 99 cents per download—low enough to generate users' acceptance (or at the least, not too much resistance) to legally purchase content, and just high enough to garner acceptance as a distribution outlet for major music labels who have in fact agreed to extend the deal for another period. Apple has captured approximately 70 percent of the global market for legitimate digital music downloads.<sup>18</sup> iTunes is currently selling 5 million songs a day.<sup>19</sup> Global market share for the iPod device is more difficult to determine because, even while sales are increasing, the market is expanding as is the number of manufacturers, because the digital music player market is morphing to incorporate smartphones and other technologies (hence Apple's recent launch of its iPhone product).<sup>20</sup>

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<sup>15</sup>*Id.*

<sup>16</sup>See Steve Jobs, *Thoughts on Music* Feb. 6, 2007, <http://www.apple.com/hotnews/thoughtsonmusic/>.

<sup>17</sup>See *iTunes Has Sold More than 3 Billion Songs*, MSNBC.COM July 31, 2007, <http://www.msnbc.msn.com/id/20055235/>.

<sup>18</sup>John Borland, *iTunes Outsell Traditional Music Stores*, CNET.COM, Nov. 21, 2005, [http://news.com.com/iTunes+outsells+traditional+music+stores/2100-1027\\_3-5965314.html](http://news.com.com/iTunes+outsells+traditional+music+stores/2100-1027_3-5965314.html).

<sup>19</sup>See Mark Hachman, *Norway, France, Germany Renew Fight Against iTunes*, PCMAG.COM, Jan. 24, 2007, [http://www.pcmag.com/print\\_article2/0,1217,a=199429,00.asp](http://www.pcmag.com/print_article2/0,1217,a=199429,00.asp).

<sup>20</sup>Amanda Cantrell, *Apple's Remarkable Comeback Story*, CNNMONEY.COM, Mar. 29, 2006, [http://money.cnn.com/2006/03/29/technology/apple\\_anniversary/?cnn=yes](http://money.cnn.com/2006/03/29/technology/apple_anniversary/?cnn=yes).

### B. The Technology—Patents, Trade Secrets, Standards, Licenses, Royalties

Apple's business model for its iTunes and iPods sales relies on: (1) distribution deals for licensing others' content, (2) integration of proprietary hardware and software (Apple's proprietary platform, the iTunes, playable only on Apple's proprietary iPod players), and (3) its ability to tightly circumscribe users' rights based on three points of control—copyright laws, contracts, and technology measures.

#### 1. The Distribution Deals

The specifics of distribution deals are not published, but clearly the music labels that agreed to have their content distributed over the iTunes platform placed conditions on Apple whereby Apple would be responsible for content control, that is, limiting the ability of its users' to further redistribute the music industry's content—and it is equally clear that Apple benefits from these conditions. According to Mr. Jobs,

a key provision of our agreements with the music companies is that if our DRM [digital rights management] system is compromised and their music becomes playable on unauthorized devices, we have only a small number of weeks to fix the problem or they can withdraw their entire music catalogue from our iTunes store.<sup>21</sup>

The labels make money as their licensing deal generates revenue and by demand for similar deals from other sites. Apple makes money as users log onto iTunes for the legal purchase of genuine content. Consider the scenario where there is no control of content, if the labels did *not* require conditions on the control of content, and Apple did *not* create any of its own controls for the content; the first user would purchase the content, redistribute that content for free, and without any limit to all other P2P users. Then there would be no significant benefit to the Apple-label licensing deal. The labels' content distribution deal is significantly compromised; and Apple fares no better—it makes no money from the iTunes (except of course, ninety-nine cents for the first and, in theory, only purchased download of each track).

#### 2. Integration of Proprietary Hardware and Software

Apple has fashioned a “go it alone” strategy, for the time being, keeping iTunes as a closed and unlicensed system, even while attracting a market

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<sup>21</sup>See Jobs, *supra* note 16.

with a loyal following. Specifically, Apple first created a digital music player, the iPod, now, a family of iPod MP3 products. Later, Apple created the software, the iTunes site, for the legal purchase of content provided by others. It developed a proprietary DRM system it calls "FairPlay" that "envelopes each song purchased . . . in special and secret software so that it cannot be played on unauthorized devices."<sup>22</sup> And to prevent illegal copies (which would violate the Apple-labels deal, and represent lost Apple revenue), it required that the "DRM system must allow only authorized devices to play the protected music."<sup>23</sup>

Here's how FairPlay works: When you buy songs at the iTunes Music Store, you can play them on one—and only one—line of portable player, the iPod. And when you buy an iPod, you can play copy-protected songs bought from one—and only one—online music store, the iTunes Music Store.<sup>24</sup>

Put another way, FairPlay iTunes songs will not play on anyone else's (i.e., Sony or Microsoft) hardware. This architecture of control is executed "'top to bottom' with proprietary systems for selling, playing and protecting music."<sup>25</sup> The FairPlay DRM is managed as a company trade secret.

A brief background on the technology is useful because technological means are one of the methods of content control at the foundation of Apple's business model. Audio files are digitized and compressed before they are transferred. Many readers are familiar with the popular format known as MP3.<sup>26</sup> The Internet's fundamental architecture is P2P so this provides the means of transfer and distribution, and the MP3 is a compression software format that facilitates the near-instantaneous transfer of audio files to the extent users have bandwidth capacity. For its format, Apple chose to adopt AAC (Advanced Audio Coding) technology, also known as MP4. AAC was developed by the Moving Picture Experts Group (MPEG) that includes Dolby, Fraunhofer (FhG), AT&T, Sony and Nokia.<sup>27</sup> Sony

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<sup>22</sup>See *id.*

<sup>23</sup>*Id.*

<sup>24</sup>See Stross, *supra* note 5.

<sup>25</sup>See Jobs, *supra* note 16.

<sup>26</sup>See Douglas Heingartner, *Patent Fights Are a Legacy of MP3's Tangled Origins*, N.Y. Times, Mar. 5, 2007, available at <http://www.nytimes.com/2007/03/05/technology/05music.html>.

<sup>27</sup>See Apple's AAC Audio Web page, <http://www.apple.com/quicktime/technologies/aac/> (last visited Nov. 15, 2008).

also uses this format in its PlayStation.<sup>28</sup> AAC is known for its superior performance and sound quality. Significantly, and in contrast to MP3 files,<sup>29</sup> no patent license fees or royalty payments are due on the distribution of MP4-encoded files, but fees are due for developers of end-user codes and/or decoder products.<sup>30</sup> Every Apple-licensed file is saved in AAC format and then further encoded with Apple's proprietary DRM, FairPlay, a digital rights management encryption scheme. FairPlay is based on technology Apple licenses from the creator, Veridisc.

The FairPlay DRM algorithm works by "generating random encryption keys for each title purchased," and then it automatically stores the keys in the user's computer and iPod. The keys are used to decrypt the AAC file to access and play the content. Further, users are required to authorize and de-authorize every computer they want to play titles on.<sup>31</sup> FairPlay does not affect the copy ability of the file; rather it is used to manage the decryption of the content.

FairPlay manages uses and administers a level of copy protection that apparently is agreeable to both Apple and the labels. It is an open question of course if the level of copy protection is appropriate as to users who generate all sorts of euphemisms for "FairPlay,"<sup>32</sup> and "DRM."<sup>33</sup> In fact, what Apple calls iTunes "features," are what users call "limitations." It is critical to sort out what FairPlay permits and what it does not permit; and then it is necessary to consider if it is *not* a permitted use, what are users doing *anyway* with the content, and how are they creating "work-arounds" or "hacks" in order to use the content *as they wish*.

FairPlay allows these uses for its tracks:

- Tracks may be copied to any number of iPods;

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<sup>28</sup>*Id.*

<sup>29</sup>See Saul Hansell, *MP3 Patents in Upheaval After Verdict*, N.Y. Times, Feb. 23, 2007, available at <http://www.nytimes.com/2007/02/23/technology/23patent.html>.

<sup>30</sup>See Via.com's licensing pages: [http://www.vialicensing.com/Licensing/MPEG4\\_FAQ.cfm?faq=6#6](http://www.vialicensing.com/Licensing/MPEG4_FAQ.cfm?faq=6#6); [http://www.vialicensing.com/Licensing/MPEG4\\_FAQ.cfm?faq=1#1](http://www.vialicensing.com/Licensing/MPEG4_FAQ.cfm?faq=1#1) (last visited Nov. 15, 2008).

<sup>31</sup>See <http://www.answers.com/topic/fairplay-1> (last visited Nov. 15, 2008).

<sup>32</sup>FairPlay architecture has been called crippleware. See *infra* note 37 and accompanying text.

<sup>33</sup>Digital rights management is euphemistically known to many as digital restrictions management. See Free Software Foundation's Campaign Web page, <http://www.fsf.org/campaigns/drm.html> (last visited Nov. 15, 2008).

- Tracks may be played simultaneously on up to five authorized computers every twenty-four hours by sharing over a local network using Apple's (again) closed, proprietary system, the Digital Audio Access Protocol (DAAP)—in streaming-format only;
- Tracks may be copied to an audio CD any number of times. (This CD may then be ripped or burned, but it does not attain first sale status, and it may not be leased, lent or distributed.);
- iTunes playlist may be copied to a CD up to seven times, before it has to be changed.<sup>34</sup>

FairPlay does not allow these uses for its tracks:

- Track may not be played on a *non-iPod* player;
- FairPlay restricts the making of back-up copies: songs can only be copied to five computers;
- FairPlay restricts users from converting content to other formats: all content is sold with Apple's DRM, FairPlay;
- FairPlay limits portable player compatibility to iPod and other Apple devices;
- FairPlay does not allow remixing: users cannot edit, excerpt, or otherwise sample songs;
- Users may not write FairPlay content to a data CD-RW and later listen to this content on a compatible car or home stereo;
- Users may not copy FairPlay content to personal digital assistants (PDAs) (i.e., Palm, BlackBerry devices, etc.);
- Users may not stream content from personal computers to their home stereos over their home networks.<sup>35</sup>

Note though, that users may upload to their iTunes Library playlists any content, even content that did not originate from the iTunes Store, so that users' playlists typically contain a mix of files that are in a variety of digital formats. Users can burn these tracks to an audio CD, then rip them back into their iTunes library using iTunes' CD import feature, and convert the

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<sup>34</sup>See Apple's Web page on *Burning Playlists with Purchased Songs in iTunes 4.5 and Later* (Sept. 21, 2006), <http://docs.info.apple.com/article.html?artnum=93016>.

<sup>35</sup>This restriction remains in the body of the paper, because it was historically true, and only recently did Apple decide to allow streaming of iTunes libraries over home networks. See Apple's Web page on *AirPort Express with AirTunes*, <http://www.apple.com/airportexpress/> (last visited Dec. 21, 2008). This illustrates the dynamism of services delivered by the internet; how hacks and work-arounds will be developed, and in reaction to these acts, companies adjust to market demand.

selection to MP3, unencumbered by the AAC-FairPlay scheme. Also, iTunes 4.0 users could freely access shared music over the Internet, but Apple removed this feature.<sup>36</sup>

The content downloaded from iTunes, because of this AAC+FairPlay scheme, is playable only on Apple's proprietary players—the iPod family of devices. This integration provides customers with a seamless user experience, from purchase to use. Apple's business model relies on this integration of software, which may or may not be profitable, with its hardware that is profitable. Integration though, in this case, means technical limitations and a corresponding lack of interoperability across the marketplace. So, for example, users may not play iTunes content on Microsoft's Zune, or Sony's MP3 players, because no portable player aside from Apple's supports Apple's FairPlay—its proprietary DRM—that it has not licensed to anyone else. This lack of interoperability may be a key part of Apple's business model, for it helps maintain digital download market share, and thus it is instrumental in the plan to make this unit profitable. But keeping this system proprietary and closed has real costs—it is clear that this lack of interoperability raises antitrust concerns, and has become the central basis for the lawsuit,<sup>37</sup> as well as the regulatory inquiries now directed at Apple.<sup>38</sup>

### 3. Apple Tightly Circumscribes Users' Rights Based on Three Points of Control

Apple relies on contract laws, IP laws, and technology measures in combination as a strategy to govern users' actions with respect to purchased content. Apple's digital content business model thrives because of this three-part regime.

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<sup>36</sup>See Peter Cohen, *iTunes Update Disables iTunes Playlist Sharing*, MACWORLD.COM, May 27, 2003, available at <http://www.macworld.com/news/2003/05/27/itunes/>.

<sup>37</sup>Tucker v. Apple, Inc., No. C06-4457 (N.D. Cal. July 21, 2006), <http://blog.seattlepi.nwsourc.com/microsoft/library/applesuit.pdf>. For a complete list of all filings in this case, see the Justia Web site, <http://news.justia.com/cases/742336/> (last visited Dec. 21, 2008). The court is scheduled to consider a Motion for Class Certification in March 2009. See the Justia Web site, [http://dockets.justia.com/docket/court-candce/case\\_no-5:2005cv00037/case\\_id-26768/](http://dockets.justia.com/docket/court-candce/case_no-5:2005cv00037/case_id-26768/) (last visited Dec. 21, 2008). Cf. Somers v. Apple Inc., No. CV07-6507 (N.D. Cal. Dec. 31, 2007) (alleging that Apple illegally tied DRM-protected audio and video files purchased from the iTunes tied to the iPod product as well as deliberately crippling the iPod from playing WMA files, a Microsoft format); Slatery v. Apple Comp., Inc., No. C05-00037 (N.D. Cal. Jan. 3, 2005).

<sup>38</sup>See Gregg Keizer, *Apple May Be Next in EU Antitrust Sights*, COMPUTERWORLD.COM, Sept. 20, 2007, <http://computerworld.co.nz/news.nsf/news/303C9EB5AC275FF6CC25735B001536DC>.



*Contract Laws.* In the purchase of software, users are actually purchasing a license to use the software rather than owning the software in the way one might own physical goods such as desks or even cars. As such, courts construe the parties' software transaction not as a sale, but rather as a license agreement between the parties with the license defining their respective rights and responsibilities.<sup>39</sup> Further, licensing agreements are considered contracts that are the subject matter of state-law regulation. Apple deploys these in a format students may characterize as ubiquitous, almost-never-read, definitely-not-comprehensible-to-the-average-user, agreements-that-no-one-really-agrees-to SLAs.<sup>40</sup>

Courts allow parties wide discretion in their SLA terms, and generally enforce these private agreements, even when users agree to forgo rights they otherwise are entitled to.<sup>41</sup> It is in this manner that courts construe SLAs, and, in the United States at least, they uphold agreements, even when the parties have agreed to reallocate copyright entitlements.<sup>42</sup> For example, the following are excerpts from the iTunes Terms of Service in which iTunes offers the service on a take-it-or-leave-it basis, unilaterally authored and imposed, in which users have to agree to forgo many legal rights in order to download the software. The following is a representative, but not an exhaustive list, of examples in the Terms of Service (ToS), and it becomes evident how Apple's provisions execute this architecture of control.

TERMS OF SERVICE: "THIS IS A LEGAL AGREEMENT . . . YOU MUST ACCEPT AND ABIDE BY THESE TERMS AS PRESENT [sic] TO YOU." . . .

*Clause 4:* "Use of the Service requires a compatible device . . . ."

*Clause 8b:* "You understand that the Service, and products . . . include a security framework using technology that protects digital information and limits your usage of Products to certain usage rules established by Apple and the licensors. You agree to comply with such Usage Rules . . . and you agree not to

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<sup>39</sup>For an example of this treatment, see *Teragram Corp v. Marketwatch.com, Inc.*, 444 F.3d 1 (1st Cir. 2006) (construing contract dispute over licensed software).

<sup>40</sup>See Apple's Software License Information Web page, <http://www.apple.com/legal/sla/> (last visited Dec. 21, 2008).

<sup>41</sup>See *Mortgage Plus, Inc. v. DocMagic, Inc.*, 2004 U.S. Dist. Lexis 20145 (D. Kan. Aug. 23, 2004) (ruling that the SLA is a valid contract).

<sup>42</sup>See *Bowers v. Baystate Tech., Inc.*, 320 F.3d 1317 (Fed. Cir. 2003).

violate or attempt to violate any security components. You further agree not to . . . circumvent, reverse-engineer, decompile, disassemble, or otherwise tamper with any of the security components related to such Usage Rules . . . You agree not to modify the software in any manner or form, or to use modified version of the software . . . .”

*Clause 9b:* Usage Rules “You shall be authorized to use the Products only for personal, noncommercial use . . . You shall be entitled to export, burn . . . or copy [audio] Products solely for personal, noncommercial use. You shall not be entitled to burn Video Products.” . . . .

*Clause 13a:* “No portion of the Service may be reproduced in any form or by any means. You agree not to modify . . . sell, distribute, or create derivative works based on the Service, in any manner . . . .”

*Clause 13c:* “All copyright in and to the Service . . . the iTunes Store (including the compilation of content, postings, links) . . . are owned by Apple and/or its licensors. THE USE OF THE SOFTWARE . . . EXCEPT FOR USE[S] . . . PERMITTED IN THESE TERMS OF SERVICE, IS STRICTLY PROHIBITED AND INFRINGES ON THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS AND MAY SUBJECT YOU TO CIVLE [sic] AND CRIMINAL PRENATIES [sic], INCLUDING POSSIBLE MONETARY DAMAGES, FOR COPYRIGHT INFRINGEMENT.”

*Clause 13d.* Trademarks. “You are granted no right or license with respect to any of the [Apple] trademarks and any use of such trademarks.”<sup>43</sup>

It becomes abundantly clear after reading these excerpts that these contract terms displace legal rights recognized under copyright law. Two questions arise in this situation: whether state contract law preempts federal law and whether SLAs are valid. As to the first, courts rule that a contract best reflects the parties’ intentions, and therefore courts will not rewrite private agreements.<sup>44</sup> As to the second issue, courts tend to uphold the validity of SLAs under the same theory. Whether there are limits to the validity of these unilaterally imposed, liability-limiting, control-maximizing license agreements is an open question.<sup>45</sup> In Apple’s ToS, Apple essentially dictates what uses and actions with respect to files are permitted or pro-

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<sup>43</sup>See Terms of Service, *supra* note 10.

<sup>44</sup>See *Mortgage Plus*, 2004 U.S. Dist. LEXIS 20145.

<sup>45</sup>*Comb v. PayPal, Inc.*, 218 F. Supp. 2d 1165 (N.D. Cal. 2002). See also *Winig v. Cingular Wireless, LLC*, 2006 U.S. Dist. LEXIS 73137 (N.D. Cal. Sept. 27, 2006).

hibited, in ways that potentially violate customers' fair use rights.<sup>46</sup> Second, in *Clause 18*, Apple unilaterally absolves itself of any liability, which potentially contravenes public policy objectives.<sup>47</sup> A contract may not be enforceable in such instances.<sup>48</sup> Furthermore contract remedies typically involve merely an award of damages, much "less potent" than copyright remedies that typically involve damages, plus injunctive relief and attorneys' fees.<sup>49</sup> Moreover, because contracts are interpreted differently by each state, the precedential value of decisions is limited to that state. It is apparent that Apple sets before users an agreement that supports its business model, but at the expense of users' statutory rights.

*IP Law.* Apple invokes the copyright law as the second point of control in this model, specifically the Copyright Infringement Act, and the Digital Millennium Copyright Act (DMCA).<sup>50</sup> As to the former, the ToS specifically highlight that copyright ownership vests in the rights holders, and Apple takes particular care to ensure users are aware that they are agreeing to forgo their fair use rights. In *Clause 13c*, Apple's ToS simultaneously tell users that the its personally crafted SLA trumps federal copyright law, except and only to the extent that Apple reserves the right to invoke copyright law for remedies when it pursues users for infringement, who should be liable, if at all, merely for breach of contract.<sup>51</sup> Copyright infringement remedies provide for a comprehensive plan of civil and criminal penalties, damages, lost profits, attorney's fees, seizure, forfeiture, and injunctions.<sup>52</sup>

With regard to the DMCA, the statutory provisions create a cause of action for copyright owners as against users who bypass or circumvent ac-

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<sup>46</sup>Report, *iTunes—How Copyright, Contract, and Technology Shape the Business of Digital Media—A Case Study*, June 15, 2004, <http://cyber.law.harvard.edu/media/uploads/81/iTunesWhitePaper0604.pdf> [hereinafter *iTunes Report*].

<sup>47</sup>Terms of Service, *supra* note 11.

<sup>48</sup>*iTunes Report*, *supra* note 46, at 18–19. *See also* Comb, *supra* note 45.

<sup>49</sup>*iTunes Report*, *supra* note 46, at 17–19.

<sup>50</sup>*See infra* notes 51–55 and accompanying text.

<sup>51</sup>Terms of Service, *supra* note 11.

<sup>52</sup>*See* 17 U.S.C. §§ 502–506 (2006), *available at* [http://www.law.cornell.edu/uscode/html/uscode17/usc\\_sup\\_01\\_17\\_10\\_5.html](http://www.law.cornell.edu/uscode/html/uscode17/usc_sup_01_17_10_5.html).

cess and copy restrictions.<sup>53</sup> Of course, Apple's DRM, FairPlay is just this. The DMCA provides for civil as well as criminal penalties.<sup>54</sup> An example of the powerful reach of the DMCA is the prohibition of personal, noncommercial uses, which are potentially fair uses, in its provisions that, "no person shall circumvent a technological measure that effectively controls access to a work protected under this title."<sup>55</sup> Further, the statute addresses trafficking in circumvention technology stating,

no person shall manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof, that—(A) is primarily designed or produced for the purpose of circumventing protection afforded by a technological measure that effectively protects a right of a copyright owner.<sup>56</sup>

One who posts circumvention technology, or even posts a link to a site discussing circumvention technology potentially violates this trafficking section. The DMCA criminalizes acts users take for granted including posting, linking, sharing, engaging in fair use of content, making back-up copies, format-shifting, platform-shifting, and modifying devices.<sup>57</sup>

Such users, which Apple calls hackers or jail breakers, regularly hack into Apple's FairPlay. The phenomenon of civil disobedience, with such acts clearly violating the DMCA, is so widespread that one Internet search yielded these (and many other) search results: "iPod hack a day,"<sup>58</sup> "50 fun

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<sup>53</sup>12 U.S.C. §§ 1201–1204 (2006), available at [http://www.law.cornell.edu/uscode/html/uscode17/uscode17\\_usc\\_sup\\_01\\_17\\_10\\_12.html](http://www.law.cornell.edu/uscode/html/uscode17/uscode17_usc_sup_01_17_10_12.html). See also DAVID P. TWOMEY & MARIANNE MOODY JENNINGS, BUSINESS LAW 172 (2d ed. 2008).

<sup>54</sup>17 U.S.C. § 1201 (2006), available at [http://www.law.cornell.edu/uscode/html/uscode17/uscode17\\_usc\\_sec\\_17\\_00001201-000-.html](http://www.law.cornell.edu/uscode/html/uscode17/uscode17_usc_sec_17_00001201-000-.html). Criminal liability attaches to the extent the violation is willful and for commercial gain. See 17 U.S.C. § 1204 (2006), available at [http://www.law.cornell.edu/uscode/html/uscode17/uscode17\\_usc\\_sec\\_17\\_00001204-000-.html](http://www.law.cornell.edu/uscode/html/uscode17/uscode17_usc_sec_17_00001204-000-.html).

<sup>55</sup>*Id.* § 1201 a(1)(A), available at [http://www.law.cornell.edu/uscode/html/uscode17/uscode17\\_usc\\_sec\\_17\\_00001201-000-.html](http://www.law.cornell.edu/uscode/html/uscode17/uscode17_usc_sec_17_00001201-000-.html).

<sup>56</sup>*Id.* § 1201 b(1)(A), available at [http://www.law.cornell.edu/uscode/html/uscode17/uscode17\\_usc\\_sec\\_17\\_00001201-000-.html](http://www.law.cornell.edu/uscode/html/uscode17/uscode17_usc_sec_17_00001201-000-.html).

<sup>57</sup>iTunes Report, *supra* note 46, at 41.

<sup>58</sup>See <http://ipod.hackaday.com/> (last visited Dec. 21, 2008).

things to do with your iPod;”<sup>59</sup> “iPod Hacks—the latest and the greatest;”<sup>60</sup> and how about this intriguing one: “How to turn your iPod into a universal infrared remote control.”<sup>61</sup> Even *Time Magazine’s* online edition published “How to Hack an iPod.”<sup>62</sup> Two people within this hacking community are worth mention. The first, Igor Skochinsky, creator of the FairPlay-cracking app, “QTFairUse6,” observed, “If I bought something, I should be able to do with it what I want, as long as I don’t give it away for free or use it for commercial purposes.”<sup>63</sup> Then Jon Johansen of DVD-cracking fame (his screen name: “DVD-Jon”), turned his ample talents to hacking iTunes’ FairPlay, writing a series of programs to work around Apple’s closed system in order to open up its content and render it interoperable with other MP3 players.<sup>64</sup> So far Apple has declined to file suit against these users, presumably preferring instead to quickly (and quietly) use technological means in order to recapture total control through periodic initiatives aimed at reengineering FairPlay and rereleasing the updated iTunes software, which renders any hacked iPods unusable as well as nullifying the users’ SLAs, all while avoiding publicity surrounding the hacks.

We are left with this curious situation in which Apple is quite aware of the hacks. In fact Steve Jobs addressed this recently when he wrote,

the problem, of course, is that there are many smart people in the world, some with a lot of time on their hands, who love to discover such secrets and publish a way for everyone to get free (and stolen) music. They are often successful in doing just that, so any company trying to protect content using a DRM must frequently update it with new and harder to discover secrets. It is a cat-and-mouse game.<sup>65</sup>

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<sup>59</sup>See <http://www.kottke.org/plus/50-ways-ipod/> (last visited Dec. 21, 2008).

<sup>60</sup>See <http://www.ipodhacks.com/> (last visited Dec. 21, 2008).

<sup>61</sup>See Phillip Torrone, *How-To Turn Your iPod into a Universal Remote Control*, EADGET.COM, July 27, 2004, <http://features.engadget.com/2004/07/27/how-to-turn-your-ipod-in-to-a-universal-infrared-remote-control/> (last visited Dec. 21, 2008).

<sup>62</sup>See Chris Taylor, *How to Hack on iPod*, TIME.COM, Apr. 14, 2002, <http://www.time.com/time/magazine/article/0,9171,1101020422-230383,00.html> (last visited Dec. 21, 2008).

<sup>63</sup>See Sean Captain, *So Much Music, So Few Choices*, NYTIMES.COM, Nov. 16, 2006, available at <http://www.nytimes.com/2006/11/16/technology/16basics.html>.

<sup>64</sup>See Robert Levine, *Unlocking the iPod*, CNN.COM, Oct. 23, 2006, [http://money.cnn.com/magazines/fortune/fortune\\_archive/2006/10/30/8391726/index.htm](http://money.cnn.com/magazines/fortune/fortune_archive/2006/10/30/8391726/index.htm). Johansen’s Web site is found at <http://www.doubletwist.eu/> (last visited Dec. 21, 2008).

<sup>65</sup>Jobs, *supra* note 16.

So, even as Apple has at its disposal potent contract and copyright enforcement tools, it has not yet fully exploited their potential perhaps because of litigation's limited effectiveness, that is, Apple would have to file lawsuits against each individual user, taking down each defendant one at a time. Perhaps Apple assumes that technology measures, specifically Fair-Play innovations, rather than legal measures, are the best offense and defense as to those users asserting rights of fair use, including reverse engineering and the privilege to hack. Apple at the moment has chosen to innovate, rather than litigate, by adopting ever-more sophisticated technology measures through each upgrade and rerelease.

*Technology Measures.* This is the third, final point of control. The Fair-Play DRM as described above is a compromise, an accommodation between the labels/content owners and Apple/the distributors to appease content holders, while making content available in the format most desired. Steve Jobs noted that,

Apple was able to negotiate landmark usage rights at the time (2004), which include[s] allowing users to play their DRM protected music on up to five computers and onto an unlimited number of iPods. Obtaining such rights from the music companies was unprecedented at the time, and even today is unmatched.<sup>66</sup>

Even though the labels required DRM as a condition of the deal, the technology serves the interests of Apple as well. Apple built iTunes into a market-leading distributor by combining its use with the iPod product family. Because Apple's market-leading products contain the proprietary FairPlay DRM technology, the Apple platform remains closed to all but legitimate users and hackers. For example, competitors and collaborators, who would perhaps wish to license FairPlay from Apple, may not; therefore users who may like the iTunes experience, but who prefer Microsoft's Zune player, are out of luck. It's clear that the Apple's FairPlay has an enormous impact on how users interact with content. It has an enormous impact, too, on the structure of the online digital media market precisely because of its market strength and refusal to open its platform to others. Moreover, Apple's regime of contract, copyright, and technology controls are further supported by the legitimate threat of a successful enforcement effort.

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<sup>66</sup>*Id.*

#### 4. Effect of this Three-Point Plan of Content Control

Apple's strategy has not gone unnoticed, and in fact Apple is defending its practices at this time. Members of the European Union have begun hearings, and taken enforcement actions,<sup>67</sup> and two cases are currently in litigation in the United States over assertions that Apple's business model violates antitrust and consumer protection laws.

*EU Investigations, Regulatory Inquiries.* Characterizing the iTunes software-iPod hardware tie-in as illegal, consumer groups in Britain, France, Germany, Norway, Denmark, and Sweden formed a coalition to force Apple to open its FairPlay DRM and allow consumers to use the iTunes with devices other than Apple's iPods.<sup>68</sup> The coalition charges that iTunes unfairly locks in users because of this lack of interoperability.<sup>69</sup> The coalition has requested the European Commission to enact a charter of consumer digital rights.<sup>70</sup> Moreover, some countries are sponsoring their own legislation. For example, France is considering legalizing the use of software that decrypts DRM systems to make content interoperable across platforms.<sup>71</sup> Additionally, the French Legislature is considering requiring online music sites to offer downloads in a variety of formats.<sup>72</sup> A Norwegian consumer group characterizes the lock-in as illegal and has given Apple until September 2007 to change its policies. Norway supports the following proposals:

1. Apple should license FairPlay DRM to all interested parties;
2. Apple should join other content distributors to develop an open-source DRM standard; or
3. Apple should remove the FairPlay DRM altogether.<sup>73</sup>

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<sup>67</sup>See *supra* note 38 and accompanying text.

<sup>68</sup>See Hachman, *supra* note 19; see also Joe Lewis, *Germany, France Join Crusade Against iTunes*, WEBPRONEWS.COM, Jan. 23, 2007, <http://www.webpronews.com/node/34808>.

<sup>69</sup>See Eric Pfanner, *Europe Cool to Apple's Suggestions on Music*, N.Y. Times, Feb. 8, 2007, available at <http://www.nytimes.com/2007/02/08/technology/08music.html?ex=1328590800&en=cb031f0e6081287b&ei=5088&partner=rssnyt&emc=rss>.

<sup>70</sup>*Id.*

<sup>71</sup>See Jacqui Cheng, *iTunes DRM*, Jan. 22, 2007, <http://arstechnica.com/news.ars/post/20070122-8676.html>.

<sup>72</sup>*Id.*

<sup>73</sup>See Hachman, *supra* note 19.

Perhaps taking note of the *EU v. Microsoft* antitrust enforcement action that took years to resolve,<sup>74</sup> Steve Jobs addressed EU antitrust concerns over his iTMS-iPod model, noting the irony of it:

Imagine a world where every online store sells DRM-free music encoded in open licensable formats. In such a world, any player can play music purchased from any store, and any store can sell music which is playable on all players. This is clearly the best alternative for consumers, and Apple would embrace it in a heartbeat. If the big four music companies would license Apple their music without the requirement that it be protected with a DRM, we would switch to selling only DRM-free music on our iTunes store . . . . Much of the concern over DRM systems has arisen in European countries. Perhaps those unhappy with the current situation should redirect their energies towards persuading the music companies to sell their music DRM-free. For Europeans, two and a half of the big four music companies are located right in their backyard. The largest, Universal, is 100% owned by Vivendi, a French company. EMI is a British company, and Sony BMG is 50% owned by Bertelsmann, a German company. Convincing them to license their music to Apple and others DRM-free will create a truly interoperable music marketplace. Apple will embrace this wholeheartedly.<sup>75</sup>

*Tucker v. Apple, Inc. Class Action Litigation.* Tucker's suit, filed July 2006, has thus far survived a motion to dismiss by Apple.<sup>76</sup> Tucker claims that Apple overlaid FairPlay onto the AAC format and deliberately disabled the iPod processor's default feature allowing Windows Media Audio (WMA)-formatted media to play. Therefore, only Apple's format may play on iPods, and so Tucker characterizes Apple's FairPlay as "crippleware."<sup>77</sup> Tucker asserts that Apple's intentional design that limits interoperability so as to exclude the WMA format (used by AOL, Wal-Mart, Napster, Music-Match, Best Buy, Yahoo! Music Zune, Virgin, etc.) violates the antitrust laws. Specifically, Tucker charges that Apple illegally ties the iPod to the iTMS and illegally maintains a monopoly because it controls 83 percent of

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<sup>74</sup>See Steve Lohr & Kevin J. O'Brien, *Microsoft Is Yielding in European Antitrust Fight*, N.Y. Times, Oct. 23, 2007, available at <http://www.nytimes.com/2007/10/23/technology/23soft.html?ref=business> (reporting that Microsoft has given up its nine-year fight against EU antitrust regulators); see also Pfanner, *supra* note 68.

<sup>75</sup>See Jobs, *supra* note 16.

<sup>76</sup>*Tucker v. Apple Computer, Inc.*, No. C 06-4457 (N.D. Cal. July 21, 2006), <http://i.i.com.com/cnwk.1d/i/z/200701/appletucker.pdf>.

<sup>77</sup>*Id.* at 7.



the online music market amounting to market power, and through this strategy monopolizes relevant markets.<sup>78</sup>

*Effect on Innovation and Future Technologies.* No matter the outcome of the legislative initiatives or the lawsuit, the effect of running separate, closed proprietary systems that do not interoperate between platforms means that it raises costs and slows innovation; whatever innovation there is, is dictated by the market leader, Apple, plus it inhibits competition.<sup>79</sup> Apple, “by expanding the complexity of the product to an integrated service . . . is actually increasing entry barriers in the portable players market.”<sup>80</sup> Apple’s FairPlay DRM, as further reinforced by the EULA and the DMCA, represents the “deployment of a market strategy based on excluding competition through restricted interoperability.”<sup>81</sup> The frustration over the lack of interoperability trickles down to the user-level too, as manifest by the widespread acts of civil disobedience by a broad spectrum of users.

Going forward, the options conceivably include: (1) a DRM-free opened and unlicensed system, featuring complete interoperability, which works well for manufacturers and users, but leaves content providers with little protection and no guarantees for maintaining the value of their assets; (2) a system of forced licensing, where each manufacturer must license their proprietary format to every other manufacturer; or (3) a unified industry-wide standard platform created by all manufacturers. Again, users’ interests are served quite well in this third scenario, as are the interests of the content holders; yet in this last scenario, the manufacturers are left with little protection and no guarantees. Sharing code with competitors is highly problematic, making it even more difficult to keep up with hackers and innovations.<sup>82</sup> It’s all about uses—what users wish to do with content they’ve purchased or licensed, what uses content providers wish to allow, and, finally, what uses content distributors are allowed to allow under the terms of their distribution agreement. Users want what they want, when

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<sup>78</sup>*Id.* at 5–10.

<sup>79</sup>iTunes Report, *supra* note 46, at 47.

<sup>80</sup>*Id.* at 46.

<sup>81</sup>*Id.* at 45.

<sup>82</sup>See Jobs, *supra* note 16.

they want it, how they want it, and on as many platforms and devices as they want. And as content providers wish to “wean” users off of P2P sites and attract them to their sites, how much copy protection can be supported in an environment where Apple and other legitimate sites are essentially “competing with free”?

A regime that focuses on a tiered set of rights may work, whereby users pay based on the level of rights they are allowed. For example, for content that remains in the FairPlay DRM wrapper, users could pay just a small amount for a streamed version of the content; or they might pay more for a one-time copy of the content, then even more for a ten-time copy, and even more for content that is interoperable among devices, and so forth. Or perhaps in the future, only music new to the market would be sold with a DRM-wrapper, one lasting just a few months. Or perhaps new artists will bypass the major labels, further erode the market structure of concentration that the labels presently possess, and dramatically shift the balance of power.

## V. CONCLUSION

Students will appreciate the realities an operating business faces after studying these materials. They gain an appreciation of the role IP plays in a new economy business model, how contracts and SLAs provide both revenue and act as points of control, and how a company implements its business model. They learn how for its iPod hardware and iTunes software, Apple relies on control and enforcement through IP and contract laws combined with technology means and tools, and has been highly successful to date. A number of factors threaten Apple’s continued success with this business model, including the antitrust lawsuit, and EU regulatory actions. Apple’s wait-and-see, stay-the-course approach is a legitimate response, while it attempts to defend these actions, because of rapidly evolving market forces and innovations. Through this exercise, students become invested in each of the topics, and this engages them more fully in the study of business law.