COPYRIGHT IN THE NEW MILLENNIUM: IS THE CASE AGAINST REPLAYTV A NEW BETAMAX FOR THE DIGITAL AGE?

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I. INTRODUCTION

As our society continues its transformation towards complete digitization, many difficult legal issues related to digital technologies and devices remain unsolved. Nowhere is this truer than in the world of copyright law. As the Internet and digital media become ubiquitous household goods, new technologies, devices and services threaten copyright holders with severe, previously unimagined menaces.

The battle surrounding copyrights in the digital age pits large-scale copyright holders — such as record companies, television and movie studios — against individuals who seek to use new technologies and devices to make unauthorized use or copies of copyright-protected material. In the midst of the 1990’s, new digital technologies and devices began to threaten the music industry and the basic economic model upon which it functions. While the music industry fought in the courts, the major television and movie producers watched closely as modern digital technologies and devices were challenged under copyright law and precedent. Now, much to the chagrin of the major television and movie studios, the battle raging around copyright law in the digital age has finally shifted to issues surrounding copyrights for television and movie programming.

In October and November of 2001, four separate but related suits claiming various copyright infringements were filed in U.S. District Court against SonicBlue, the manufacturer of a personal video recorder (“PVR”) named the ReplayTV 4000.2 The outcome of this legal action could carry significant implications for a number of reasons. First, as the first consequential action regarding a commercial device that transmits digital video files via a broadband Internet connection, the outcome could have huge ramifications for all television and movie studios. Specifically, these suits could have a major impact on the studios’ ability to rely exclusively on an advertisement-based business model to provide revenues. These cases are also the first to focus on the capabilities of PVRs. As a result, the outcome could have major implications on the future form of and abilities provided by PVRs. These cases will finally provide courts the opportunity to (1) review the effectiveness, prudence and fairness of current copyright law and precedent in our modern digital age and (2) clarify and update long-standing legal doctrines ingrained in copyright law and precedent.

Section I of this Note will review modern digital technologies to explain why they severely threaten the effectiveness and security afforded by copyrights. Section II will examine and describe the development of the current statutory and legal landscape surrounding copyrights in the digital age. Section III details the basic functions of and which the music industry operates).

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1. I would like to thank Johanna Mikes, Legislative Counsel in the Office of Rep. Rick Boucher (D-VA), for her guidance and support. All errors are my own.

the novel features included in the ReplayTV 4000 device, which have caused the studios to take legal action. Section IV examines the specific copyright infringement claims within the studios' suits and ReplayTV's defenses to these claims. Finally, Section V looks at the major implications of this legal action in terms of (1) its possible effect on the television and movie studios and PVRs in general as well as (2) its impact on the common law that surrounds copyright.

II. DIGITAL MEDIA TECHNOLOGY

The transformation to a digital society has included advances that allow people to listen to music or watch a movie from any type of device at any time. To comprehend how digitization can cause such a revolution, one must first understand how digital technologies work and how they differ from analog technologies that previously dominated our world.

In a basic sense, the term "digital" refers to a signal consisting of a stream of ones and zeros, called binary code, which is used to represent voice, video or data. In contrast, the term "analog" generally refers to a method of signaling that relies on continuous changes in the amplitude or frequency of a radio transmission to convey information. While these two technologies focus on the same task — providing a vehicle to allow for the representation of information — the differences between their levels of effectiveness are a world apart.

Digital technologies provide an assortment of advantages over analog technologies. First, digital technology makes it significantly easier to duplicate information and produce replicas of a much higher quality. Second, the use of digital information enhances the ability of an individual to electronically distribute information. Digital information, unlike information stored in an analog format, can be greatly compressed to allow for the dissemination of a huge amount of information in a short period of time. Finally, digital technology allows for the encryption of information in a manner never seen before.

Before detailing the major advances provided by digital technologies, it is important to note a fundamental difference between digital and analog technologies. Information must be in a digital form to allow for storing, manipulation or transfer by a computer. The computer age therefore must be a digital one. This idea is fundamental because as computers have become an integral part of our society, digital technologies that are vital in enabling computers to function have also become indispensable.

A. Copying/Duplication

One of the most significant aspects of digital technology is the fact that digital information can be copied almost endlessly without any threat of degradation of the information. In contrast, each time a piece of analog information is copied, it is subject to natural degeneration. The reason for this difference in the amount of information degradation is based on the simplicity of the binary code. When a receiver of digital information is acting to read and then display information, it only has to distinguish between two digital possibilities — either a "1" or a "0". Because receivers of digital information have so few possibilities to read and interpret, they are less likely to misinterpret the information. On the other hand, receivers of analog information must continuously distinguish between the many possible signal levels contained in the analog information in order to read and then display the information. Thus, the opportunity for misinterpreted information and the subsequent deterioration of the quality of the information is greatly enhanced.
B. Compression

Modern compression capabilities represent a second important advance that makes digital technologies superior to analog. Compression technology reduces the size of a digital file by use of a compression algorithm that removes redundant or non-essential information.\(^\text{16}\) Compression technologies permit a huge amount of digital information to be included in a single digital file.\(^\text{17}\) Combined with modern high-speed broadband Internet access, compression technologies allow for previously unattainable and unthinkable distribution of digital multimedia files.\(^\text{18}\) For example, a single uncompressed compact disc track would take well over two hours to download over a standard, dial-up phone line.\(^\text{19}\) Conversely, an entire CD, converted to MP3,\(^\text{20}\) could be downloaded using a high-speed cable modem in around twenty minutes.\(^\text{21}\)

C. Encryption

Finally, digital information is capable of being encrypted, a security measure that is unavailable when dealing with analog information. The process of encryption involves running a readable message known as 'plaintext' through a computer program that translates the message according to an equation or algorithm into unreadable 'cybertext.'\(^\text{22}\) Ideally, data that has been encrypted can only be read or understood after it has been decrypted — translated back into the original plaintext — by someone using the appropriate "key" to unlock the encrypted data.\(^\text{23}\) By encrypting a digital file so that only a registered user can receive and interpret the information, copyright holders can protect their copyrighted material from unlawful duplication and distribution.\(^\text{24}\) Unfortunately for copyright holders, no encryption program is impervious from being attacked and broken by a "hacker" given adequate time and resources.\(^\text{25}\) Therefore, the power to protect copyrighted material provided by encryption technology is somewhat limited.\(^\text{26}\)

The first two advantageous capabilities of digital technology — the ability to make unlimited perfect copies and the applicability of compression technology — combine to pose a serious threat to copyright holders. Today, potential copyright abusers can use these characteristics of digital technology to achieve previously unfathomable levels of unauthorized distribution. Ironically, the final major capability of digital technology — the ability to encrypt — may act as a saving grace by providing copyright holders a powerful defense in protecting their copyrights in the modern world of digital distribution.\(^\text{27}\)

Encryption technology is also the basis of modern digital rights management schemes.\(^\text{28}\) Digital rights management ("DRM") refers to technology and distribution platforms that provide content providers and copyright holders control over the digital distribution of their content.\(^\text{29}\) DRM schemes aim to prevent unauthorized use, distribution and copying while using digital technologies and the Internet to provide widespread, authorized distribution.\(^\text{30}\) DRM systems rely on encryption technology to protect copyrighted material by embedding licensing data that is used to enforce usage rules regarding the protected data.\(^\text{31}\) The growing importance of DRM systems provided a major impetus for the passage of the Digital Millennium Copyright Act\(^\text{32}\) ("DMCA"), specifically its novel anti-circumvention provisions.\(^\text{33}\)

\(^{16}\) See WEBSTER'S NEW WORLD DICTIONARY OF COMPUTER TERMS 160 (8th ed. 2000) (using compression technology does act to degrade the quality of the compressed information slightly but this degradation is not noticeable to the user of the information.).

\(^{17}\) See Kramarsky, supra note 5, at 6-7.

\(^{18}\) Id.

\(^{19}\) Id. at 6.

\(^{20}\) Id. at 7. MP3 is the most popular current compression technology that allows music files to be compressed to approximately one-twelfth of its original, uncompressed size with little loss of quality. See id. (citing from WEBSTER'S NEW WORLD DICTIONARY OF COMPUTER TERMS, at 358).

\(^{21}\) See Kramarsky, supra note 5, at 7.


\(^{23}\) See id.; see also Kramarsky, supra note 5, at 8.

\(^{24}\) See Kramarsky, supra note 5, at 8.

\(^{25}\) Id. at 8-9.

\(^{26}\) Id.

\(^{27}\) See Kramarsky, supra note 5, at 4.


\(^{29}\) Id.

\(^{30}\) Id.

\(^{31}\) Id.


\(^{33}\) See Damien Cave, Chained Melodies, at http://sa-
III. LEGAL LANDSCAPE FOR DIGITAL COPYRIGHT

The basis for modern copyright law is a complex combination of Constitutional protections, Congressional statutes, and common law precedent. To understand the full legal landscape that will govern the ReplayTV suit, it is vital to comprehend the Constitutional rights, statutory guidelines, and court decisions that have developed modern copyright law. To this end, this section will examine (1) the Constitutional concerns connected to copyright laws, (2) the most recent major federal copyright statute and (3) the major court decisions that relied upon and developed current copyright law.

The right to possess a copyright for one's intellectual property is rooted in the Constitution. Article 1, Section 8 mandates that an author be given certain short-term exclusive rights on the ability to use a work "to Promote the Progress of Science and useful Arts."34 This Constitutional mandate is needed because inherent in giving someone the right to control the expression of information is the need to curtail expressive conduct of others — a limitation that naturally infringes on the First Amendment.35 This inherent conflict between copyrights and First Amendment protections is therefore a centerpiece of the considerations that must be balanced in every legal and legislative decision related to copyright law.

As a result of this conflict, Congress and the courts perpetually face a difficult balancing act when dealing with copyright laws and issues. This balancing act surrounds the vital but opposing policy interest considerations that underlie copyright laws. On the one hand, there is an interest in rewarding creators by providing sufficient incentives to create works.36 Conversely, there is the vital need to protect the public's right to free expression and "society's competing interest in the free flow of ideas, information and commerce."37

Not surprisingly, the introduction and adoption of new media technologies and devices create new challenges to this delicate balance within copyright law. Each new technology or device that provides new capabilities that can pose threats to copyrights furnishes Congress and the courts with issues and concerns that have never been dealt with before. Thus, Congress and the courts must analyze the impact that the new technology or device has on the delicate balance of rights ingrained within the copyright law. This inherent struggle between new technologies and copyright law means that copyright law can sometimes act to stifle the introduction or use of new devices and technologies.38 This is especially true when copyright owners attack manufacturers of new technologies and devices instead of going after consumers who use the new technology or device to infringe on a copyright.39

From its inception, copyright law has been developed and refined to deal with "significant changes in technology."40 In fact, it was the invention of the printing press — the most revolutionary new technology ever created — that gave rise to the original need for copyright laws.41 Thus, "[r]epeatedly, as new developments have occurred in the country, it has been Congress that has fashioned the new rules that new technology made necessary."42 For example, the introduction of the player piano roll provided the impetus for Congress's passage of the Copyright Act of 1909.43 Likewise, advances in copying technology — most notably the proliferation of Xerox machines — led to the enactment of the fair use provisions (a subject that will be discussed in great detail later in the paper), included in the 1976 Copyright Act which revised the 1909 Act.44

F.3d 1004 (9th Cir. 2001) (In the Napster case, the music industry and holders of music copyrights went after Napster and got it shut down, rather than going after the individuals who were unlawfully swapping copyrighted material on Napster's service).

35 See Kramarsky, supra note 5, at 2.
36 See generally A & M Records, Inc. v. Napster, 239
37 See Fair Usage Definition Called Key to Digital Rights Management, COMMUNICATIONS DAILY, Feb. 6, 2002 (included in the Today's News section).
38 See id.; see generally Id. at 430-31 n.11.
39 Id. at 430-31 n.11.
40 Id. at 431; see generally White-Smith Music Publishing Co. v. Apollo Co., 209 U.S. 1 (1908) (a case that preceded the enactment of the Copyright Act of 1909).
41 Id.
A. The DMCA

Following the precedent set by past legislative responses to adjust copyright law to advances in technology, the proliferation of digital technologies — specifically, the Internet’s capacity for distribution of and access to digital copyrighted content — and the move towards digital rights management schemes led to the passage of the DMCA.\(^{45}\) The DMCA extended copyright law to incorporate two different kinds of legal protections relevant to digital media.\(^{46}\) First, it provides for traditional infringement protections as established by the Copyright Act.\(^{47}\) Second, it creates new, anti-circumvention and anti-trafficking protections unrelated to the more traditional infringement protections.\(^{48}\)

Despite the DMCA’s focus on digital technologies, the case against ReplayTV involves only claims related to traditional infringement protections — it does not include claims under the anti-circumvention provisions.\(^{49}\) In fact, ReplayTV is the only party in the case that relies on the DMCA by arguing that it deserves to be shielded from liability for any of the alleged infringing conduct under the “safe harbor” provisions of Section 512.\(^{50}\) The newer anti-circumvention provisions in the DMCA\(^{51}\) are not available to the studios because currently over-the-air and non-broadcast television programming is not transmitted in an encrypted or otherwise technology-protected manner.\(^{52}\) Therefore, over-the-air and non-broadcast programming is not protected by “a technological measure” meant “to control access to a work protected under the Copyright Act” or “to protect a right of a copyright owner” as required under the anti-circumvention provisions.\(^{53}\)

Considering that the DMCA is not heavily implicated, the suit against ReplayTV will be decided under precedent related to copyright infringement set by the courts over the last twenty years. Because the case against ReplayTV will be decided in this manner, understanding how copyright law — specifically the concepts of secondary liability and fair use — has been developed and transformed is vital to understanding this legal action.

B. Secondary Liability in Copyright Law

Although the Copyright Act provides prohibitions to “direct infringement” of a copyright, the Act fails to expressly establish liability for non-infringers that facilitate or allow infringement by others.\(^{54}\) However, over the last twenty years, the concept of secondary liability for copyright infringement “grew out of tort and master liability principles and out of section 106[‘s]” [of the Copyright Act] grant of the exclusive right ‘to authorize.’\(^{55}\) Two types of secondary liability have been developed: vicarious infringement and contributory infringement.\(^{56}\)

As a threshold matter, to prevail on either a vicarious or contributory copyright infringement claim, a plaintiff must first show direct infringement by a third party.\(^{57}\) After direct infringement by a third party is proven, the two types of secondary liability have their own distinct requirements to prove liability. Vicarious liability is present if it is established that a defendant possesses (a) the right and ability to supervise the infringing conduct of its users and (b) has an obvious and direct financial interest in the exploitation of the copyrighted material.\(^{58}\) On the other hand, a defendant is liable for contributory infringement when it (a) with knowledge of the侵权 activity (b)

\(^{45}\) Bruce G. Joseph & Dineen P. Wasylik, Copyright Issues on the Internet and the DMCA, 653 Pluralsight 245, 252-53 (2001) [hereinafter Joseph & Wasylik]; see also Cave, supra note 33.

\(^{46}\) See Kramarsky, supra note 5, at 15.

\(^{47}\) Id.

\(^{48}\) Id.


\(^{50}\) See ReplayTV’s Answer to Amended Complaint at 18, Paramount Pictures Corporation, et al. v. ReplayTV, Inc. and Sonicblue, Inc. (C.D. Cal. 2001) (No. 01-09358) [hereinafter REPLAYTV’S ANSWER]; see generally 17 U.S.C. §512(a)-(d) (2000).


\(^{54}\) See generally 17 U.S.C. §106 (2000); see also Sony Corp. 464 U.S. at 434.

\(^{55}\) See Joseph & Wasylik, supra note 45, at 254.

\(^{56}\) See id. at 254-55.

\(^{57}\) See Sony Corp., 464 U.S. at 434.

\(^{58}\) See Fonovisa, Inc. v. Cherry Auction, Inc., 76 F.3d 259, 262 (9th Cir.1996); see also Gershwin Publishing Corp. v. Columbia Artists Management, Inc., 443 F.2d 1159, 1162 (2d. Cir. 1971).
induces, causes or materially contributes to the infringing conduct of another.\textsuperscript{59}

A solid example of the two doctrines of secondary liability for copyright infringement in practice occurred in the Court of Appeals for the Ninth Circuit’s decision in Fonovisa, Inc. v. Cherry Auction, Inc.\textsuperscript{60} In this case, the owner of copyrights and trademarks for musical recordings sued operators of a swap meet for copyright infringement based on sales of counterfeit recordings by independent vendors at these swap meets.\textsuperscript{61} The Ninth Circuit first held the landlord of the swap meet vicariously liable for the direct infringement of the independent vendors because (1) through registration of vendors, the landlord had sufficient control of his swap meet to police the actions of the vendors, and (2) the landlord profited directly from the rents paid by vendors and indirectly from concession sales and parking fees.\textsuperscript{62} The court also held the landlord to be liable for contributory infringement because (1) the widespread availability of pirated tapes at the swap meet demonstrated that the landlord had knowledge of the infringing activity, and (2) by providing support services for the vendors — including the provisioning of space, utilities, parking, advertising, plumbing and customers — the landlord materially contributed to the infringing activity of the vendors.\textsuperscript{63}

The most important Supreme Court decision regarding copyright law; and (3) it explained and extended the definition of fair use in a never before seen manner.

1. Application of Secondary Liability to Copyright Law

In Betamax, the Supreme Court, for the first time, explicitly approved applying the concept of secondary liability for the direct infringement of third parties to copyright law.\textsuperscript{65} The Court firmly accepted importing secondary liability from other areas of law, specifically patent law, into copyright law.\textsuperscript{66} This importation was grounded on the idea that “adequate protection of a monopoly [the copyright] may require the courts to look beyond actual duplication of a device or publication to the products or activities that make such duplication possible.”\textsuperscript{67}

2. Importation of the Staple Article of Commerce Doctrine

In approving the use of secondary liability in copyright law, the Court also imported the "staple article of commerce doctrine" from patent law into the copyright secondary liability analysis.\textsuperscript{68} As originally defined by the Court, this doctrine is justified by the concept that “a sale of an article which though adapted to an infringing use is also adapted to other and lawful uses, is not enough to make the seller a contributory infringer. Such a rule would block the wheels of commerce.”\textsuperscript{69} By importing this doctrine into copyright law, the Court held that “[t]he staple article of commerce doctrine must strike a balance between a copyright holder’s legitimate demand for effective — not merely symbolic — protection of the statutory monopoly, and the rights of others freely to engage in substantially unrelated areas of commerce.”\textsuperscript{70} Accordingly, the Court established the idea that the sale of copying equipment will not constitute contributory infringement if “the product is widely used for legitimate, unobjectionable

\textsuperscript{59} See Fonovisa, 443 F.2d at 264; see also Gershwin Publishing Corp., 443 F.2d at 1162.

\textsuperscript{60} Fonovisa, 76 F.3d at 262.

\textsuperscript{61} See generally id.; see also Joseph & Wasylik, supra note 45, at 255.

\textsuperscript{62} See Fonovisa, 76 F.3d at 263.

\textsuperscript{63} Id. at 264.

\textsuperscript{64} See generally Sony Corp., 464 U.S. at 429.

\textsuperscript{65} Id. at 435-36.

\textsuperscript{66} Id.

\textsuperscript{67} Id. at 442.

\textsuperscript{68} See id.

\textsuperscript{69} Id. at 441. (quoting from Henry v. A.B. Dick Co., 224 U.S. 1, 48 (1912), overruled on other grounds, Motion Picture Patents Co. v. Universal Film Mfg. Co., 243 U.S. 502, 517 (1917).

\textsuperscript{70} Sony Corp., 464 U.S. at 442.
purposes" and further, the copying device "need merely be capable of substantial non-infringing uses."\footnote{71} In further explaining this test, the Court explained that in order to decide whether a device is capable of "commercially significant non-infringing uses," a court must analyze both the practical and the possible uses of the device to determine if a "significant" number of the uses would be non-infringing.\footnote{72} In the end, the Court held the Betamax recorder's ability to facilitate private, non-commercial time-shifting in the home — this being the ability to make a recording of a copyrighted broadcast in order to watch at a time more suitable than the time of the original broadcast — to be a commercially significant non-infringing use.\footnote{73}

3. Explanation and Extension of the Definition of "Fair Use"

The third major concept related to copyright law that came from the Betamax decision surrounds the definition of "fair use." The Betamax case established that private, non-commercial time-shifting is a commercially significant, non-infringing "fair use."\footnote{74} The Court supported this finding by relying on the concept that not all unauthorized uses of a copyrighted work are necessarily infringing activities.\footnote{75} This decision on "fair use" was crafted after analyzing and implementing the judicially created but now statutorily defined doctrine of "fair use."\footnote{76}

To understand the importance of the doctrine of "fair use," one must begin by understanding that the definition of exclusive rights provided to copyright holders in Section 106 of the Copyright Act is prefaced by the words "subject to sections 107 through 118."\footnote{77} These sections describe a variety of uses for copyrighted work that "are not infringements of copyright notwithstanding the provisions of §106."\footnote{78} For the purposes of the Betamax case, and the case against ReplayTV as well, Section 107 of the Copyright Act is the most important of these limiting sections. Section 107 establishes that "[n]otwithstanding the provisions of section 106, the fair use of a copyrighted work, including such use by reproduction in copies... is not an infringement of copyright."\footnote{79} Section 107 further provides the statutory test that courts must use in determining whether "the use made of any work... is a fair use" and thus non-infringing.\footnote{80}

Specifically:

the factors to be considered shall include: (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work.\footnote{81}

As applied in Betamax, the Court relied on Section 107's four factors to draw three major conclusions about time-shifting as a legitimate "fair use." First, "time-shifting for private home use must be characterized as a non-commercial, nonprofit activity."\footnote{82} Second, when one considers the nature of a televised copyrighted audiovisual work, and that time-shifting merely enables a viewer to witness in its entirety free of charge, the fact that the entire work is reproduced does not have its ordinary effect of militating against a finding of fair use.\footnote{83} Finally, the plaintiff copyright holders failed "to demonstrate that time-shifting would cause any likelihood of nonminimal harm to the potential market for, or the value of, their copyrighted works," because the studios' argument that time-shifted shows will not be counted in the ratings, and therefore revenues will be decreased, was only speculative.\footnote{84} Based on these conclusions, the Court made its final holding that the private, noncommercial time-shifting made possible by the Betamax video recorders was a legitimate, unauthorized "fair use" of copyrighted materials.\footnote{85} Therefore, the Betamax video recorder was capable of substantial non-infringing uses that made

\footnotesize
\begin{itemize}
  \item \footnote{71} Id.
  \item \footnote{72} Id.
  \item \footnote{73} Id.
  \item \footnote{74} Id.
  \item \footnote{75} Id. at 447.
  \item \footnote{77} 17 U.S.C. §106 (2000) (Some of the basic rights given to copyright holders is the exclusive rights to: (1) reproduce copyrighted work; (2) to prepare derivative work: based on the copyrighted work; (3) to distribute copies of the copy-
  \item \footnote{78} Id.
  \item \footnote{79} 17 U.S.C. §107 (2000).
  \item \footnote{80} Id.
  \item \footnote{81} Id.
  \item \footnote{82} Sony Corp., 464 U.S. at 449.
  \item \footnote{83} Id. at 449-50.
  \item \footnote{84} Id. at 456; see also id. at 452-54.
  \item \footnote{85} See Sony Corp., 464 U.S. at 455-56.
\end{itemize}
Sony’s sale of the device immune from claims of contributory liability for copyright infringement.86

The most important application of the Betamax decision related to copyrights in the digital world occurred in Ninth Circuit’s decision in A & M Records, Inc. v. Napster, Inc.87 In this now-famous case, the major record companies and music publishers brought a copyright infringement action seeking an injunction to shut down Napster’s Internet file sharing service.88 Because the service allowed users to download MP3 music files from other users’ computer hard drives onto their own hard drives, the plaintiff copyright holders claimed that Napster was liable for both vicarious and contributory copyright infringement.89

As a threshold matter, the court had to decide whether Napster’s affirmative defense that its users’ actions constituted “fair use” of the copyright owner’s works overcame a finding of underlying direct infringement by the users of Napster.90 The court found that eighty-seven percent of the music traded on Napster’s network was copyrighted material and that at least seventy percent was material whose copyright was owned by the plaintiffs.91 Further, the court held that the unauthorized uploading and downloading of this copyrighted material constituted direct infringement.92

While Napster never actually disputed that some of its users were copying copyrighted materials, it identified three specific bases for its “fair use” defense: “sampling, where users make temporary copies of a work before purchasing; space-shifting, where users access a sound recording through the Napster system that they already own in audio CD format; and permissive distribution of recordings by both new and established artists.”93 Applying the four non-exclusive factors from section 107, the court found that neither sampling nor “space shifting” constituted a protected “fair use” in the Napster context.94

Regarding sampling, the Ninth Circuit upheld the district court’s findings that (1) sampling is essentially a commercial use; (2) sampling involves the downloading of an entire work; (3) that the musical works in this case are creative works close to the core protection of copyright; and (4) the downloading of songs for sampling purposes materially harms the commercial value of the copyrighted material.95 As to this fourth point, the court held that even if a sampler goes out and buys the whole CD after sampling one of its songs, the ability to “download a full, free and permanent copy of the recording” seriously impairs the copyright holder’s right to offer its own product within the “developing digital download market.”96

The court further rejected Napster’s claim that their users were engaging in “space shifting,” a use deemed to be a “fair use” by the Ninth Circuit in Recording Industry Association of America v. Diamond Multimedia Systems, Inc.97 The court refused to apply either the “space-shifting” model from Diamond or the “time-shifting” model from Betamax to the Napster case holding, “[b]oth Diamond and [Betamax] are inapposite because the methods of shifting in these cases did not also simultaneously involve distribution of the copyrighted material to the general public; the time or space-shifting of copyrighted material exposed the material only to the original user.”98

After finding that Napster’s users were engaging in direct copyright infringement not protected by a “fair use” defense, the court proceeded to examine whether Napster was likely liable for vicarious and contributory infringement. Relying upon its previous decision in Fonovisa, the Ninth Circuit first held that there was a high likelihood that Napster was liable for vicarious infringement because: (1) Napster did not fully exercise its expressly reserved right to control access to its system via its express reservation of rights policy; and (2) it enjoyed a direct benefit from

86 Id. at 456.
88 See generally id.
89 See id. at 1011.
90 See id. at 1013-1019.
92 Id. at 1013-14.
93 Id. at 1014.
94 Id. at 1014-19.
95 Id. at 1018-19.
96 Id. at 1019.
97 Recording Industry Association of America v. Diamond Multimedia Systems, Inc., 180 F.3d 1072 (9th Cir. 1999). (In Diamond, the Ninth Circuit held “space shifting” — that being, in this case, the copying of an MP3 file from a user’s hard drive to the user’s portable MP3 player — was a protected fair use because it is “paradigmatic noncommercial personal use entirely consistent with the [Copyright Act].”). Id. at 1179.
98 Napster, 239 F.3d at 1119.
the availability of the infringing materials because they act as a "draw" for customers. The court further held that there was a high likelihood that Napster was also liable for contributory infringement because: (1) it had both actual and constructive knowledge of the infringing acts of its users; and (2) like the swap meet owner in *Fonovisa*, it had materially contributed to the infringing activity by providing the "site and facilities" for the direct infringement.100

In holding that Napster was likely liable for contributory infringement, the court made a clear departure from the *Betamax* Court's application of the staple article of commerce doctrine. The court reasoned that because it had already held that Napster had actual knowledge of its users direct infringement, the staple article of commerce doctrine was inapplicable as a defense to contributory infringement.101 In making this decision, the court pointed to internal Napster documents and documents provided by the opposing party to prove that Napster had actual knowledge of the infringing activities of its users.102 The court further held that the staple article of commerce doctrine had no application to Napster's potential liability for vicarious infringement because the *Betamax* decision did not allow it to be applied as such.103 Despite holding that the staple article of commerce doctrine did not shield Napster from possible liability for contributory infringement, the court did proceed to reject the district court's holding that Napster had failed to prove that its system was capable of substantially non-infringing uses because the district court had failed to look at both current uses and the system's capabilities as a whole.104 In drawing a distinction between claims of contributory and vicarious infringement and holding that actual knowledge of infringing activities prohibited use of the staple article of commerce doctrine, the *Napster* decision limited the power of the staple article of commerce doctrine to act as a shield from secondary liability.

IV. THE REPLAYTV 4000

The device at the center of this legal battle is a PVR, sometimes called a digital video recorder, named the ReplayTV 4000105 (hereinafter the "4000"). In a basic sense, a PVR is a videocassette recorder ("VCR") for the digital age. Instead of copying programs onto analog videotape like VCRs, PVRs capture programs on a computer-like hard drive as digital files.106 A PVR user is able to program the PVR to record a show "just by highlighting its title in an onscreen program guide and tapping a button on the remote. . ."107 One of the most revolutionary features of PVRs is the ability to pause and/or rewind live television broadcasts; a feature made possible because its hard drive automatically stores whatever program is on before expunging the content if not directed to store it.108

After a sluggish introduction, approximately one million homes now own some type of digital recording device.109 Currently, the market leader for PVR sales, and ReplayTV's biggest competitor, is the TiVo device, manufactured by Sony, Inc.110 The 4000 is intended to compete directly with the well-known TiVo device, and to this end the 4000 includes three features that have never been offered before in a PVR.111 First, the 4000 includes a "Send Show" feature that allows the user to e-mail stored programs to third parties.112 Second, the 4000 includes an "AutoSkip" feature that enables users to watch a recorded program without having to view the commercials shown during broadcast.113 Third, the 4000 includes a "Show Organizer" feature that allows a user to sort and store recorded programs by genre, title, or other related categories.114 Before explaining

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99 Id. at 1023-24.
100 Id. at 1020-22.
101 Id. at 1020.
102 Id.
103 Id. at 1022-23.
104 Id. at 1021.
105 There are actually four different models of the 4000 available. The model 4040 has a 40-gigabyte hard drive, the 4080 model has an 80-gigabyte drive, the 4160 has a 160-gigabyte drive and the 4320 model is equipped with a 320-gigabyte hard drive. See Mike Langberg, *DVR Is Future, But Don't Go There Yet*, CHARLESTON GAZETTE, Feb. 24, 2002 [hereinafter Langberg, *DVR is Future*].
106 See Christopher Stern, *It May Finally Be Showtime for DVRs, WASH. POST, Jan., 18, 2002, at E1.*
107 Id.
108 Id.
109 Id. (This approximate number includes all types of PVR hardware that is offered by satellite broadcasters and Microsoft's Ultimate TV device.).
110 Id.
111 See *Brad King, ReplayTV on Sale Despite Suits, WIRE.COM, at http://www.wired.com/news/print/0,1294,48691,00.html (Nov. 29, 2001).*
112 See id.
113 See id.
114 See *REPLAYTV FEATURES, at http://www.sonicblue.com/ /video/replaytv/replaytv_4000_features.asp* (last vis-
these controversial features in detail, it is vital to first understand the extensive technical requirements needed to install and run a 4000 at full capacity.

To fully enable the 4000, a user must have an Ethernet connection set up in their house. This Ethernet connection is needed to facilitate a home network that allows a user to connect multiple devices to an Internet connection; for the 4000, the home network must further be connected to a DSL, cable modem, T-1, or equivalent broadband connection. Currently, there are very few homes equipped to handle the requirements of the 4000.

A. “Send Show” Feature

The most revolutionary addition to the 4000 is the “Send Show” feature. This is the first device that incorporates a PVR’s ability to make digital recordings with the ability to use high-speed broadband connections to distribute the content. The “Send Show” feature takes advantage of this connectivity by enabling an owner to send digital copies of any program stored on their hard drive to up to fifteen other people. To send a program to a third party, the intended recipient must own and use a 4000 device, and the sender must know the “address” of the receiving PVR. The makers of the 4000 further claim that those who receive a program are not able to in turn send it to other 4000 users themselves, but this contention is disputed by the studios who claim that receivers of programs can in fact re-send programs to others.

The “Send Show” feature can also be used to distribute both digital photos from a digital camera and digital home movies recorded on a digital camcorder to third parties who are users of the 4000. It further enables a user to distribute a stored program throughout their own house, thus allowing one to watch a program in their bedroom that was recorded on another 4000 device located in the living room. While real time room-to-room transfer of a program over a home network is possible, out-of-home transfers over a high-speed Internet connection still take a long time. For example, transferring a full program to another user’s 4000 system, like a two-hour movie, can still take a full day or more.

B. “AutoSkip” Feature

The second feature of the 4000 that has drawn the ire of the studios enables a user to watch a recorded program without having to view the commercials shown during the broadcast. When a user selects a stored program for watching, the 4000 gives a choice between watching the program with or without commercials. The makers of the 4000 claim that the “AutoSkip” feature will skip approximately 96% of intra-program commercials under perfect conditions. This success rate has actually been gauged to be closer to between 70% – 90% of intra-program commercials and varies with each program. It is vital to...
note that the ability to automatically fast-forward past commercials is not a completely novel feature as multiple kinds of 4-head VCRs have been on the market for several years that also enable a user to skip commercials while viewing a recorded program.\textsuperscript{130}

C. Seeking, Recording, Sorting and Storage Features

A final set of combined features of the 4000 is also implicated in the studios’ suit. Included within the 4000’s interactive programming screen is a feature that allows users to use keywords — such as a particular genre of TV programs or movies, a particular actor or character, a particular director, or the specific title of a TV program or movie — to find programs to record.\textsuperscript{131} This “Keyword” feature is not exclusive to the 4000, as it is a feature available on almost all PVRs currently on the market.\textsuperscript{132} The 4000 also comes equipped with a hard drive which allows for expanded storage of recorded programs.\textsuperscript{133} Thus, depending on the model of the 4000 owned, users are able store 40, 80, 160, or 320 hours of recorded programming.\textsuperscript{134} Further, in response to the extended storage capabilities, the 4000 also offers a new “Show Organizer” feature that allows a user to sort and organize all recorded programs into related categories.\textsuperscript{135}

The studios’ suit against ReplayTV focuses on all of these features of the 4000, especially the novel “Send Show” and “Auto Skip” features, and their predicted repercussions on the market for, and value of, the studios’ copyrighted material.\textsuperscript{136}

V. THE SUIT AGAINST REPLAYTV

The first suit against ReplayTV, brought by Paramount Pictures, Disney, NBC, ABC, UPN, CBS and Viacom, was filed October 31, 2001.\textsuperscript{137} Three separate suits by other studios followed within the next month.\textsuperscript{138} Subsequently, the four suits were consolidated into one and the trial began in August, 2002.\textsuperscript{139}

The studios’ combined suit lodges five specific complaints against ReplayTV, but this article will only focus on the complaints for direct, contributory and vicarious copyright infringement.\textsuperscript{140} The studios bring this action to obtain preliminary and permanent relief against an unlawful plan by [ReplayTV] to arm their customers with — and continuously assist them in using — unprecedented new tools for violating [the studio’s] copyright interests in the programming [the studios] supply to various television distribution services, including [the studios’] own program services.\textsuperscript{141}

To this end, the studios request that the court (1) declare that ReplayTV have contributorily and vicariously infringed on the studios’ copyrights and (2) grant preliminary and permanent injunctive relief to enjoin ReplayTV from provisioning, using or supporting the use of the “AutoSkip” and

\textsuperscript{130} Time Warner Entertainment Co., et al. v. ReplayTV, Inc., et al., No. 01-09693 (C.D. Cal. filed Nov. 9, 2001); MGM, et al. v. ReplayTV Inc., et al., No. 01-09802 (C.D. Cal. filed Nov. 15, 2001); Columbia Pictures, et al. v. ReplayTV Inc., et al., No. 01-10221 (C.D. Cal. filed Nov. 28, 2001).

\textsuperscript{131} See Greenberg & Nail, supra note 119; see also Mark Seavy, Sonicblue Readies Betamax Defense in PVR Suit, COMMUNICATIONS DAILY, Dec. 26, 2001 (“Commercial advance... is technology that has been available in VCRs for 6 years... [c]ommercial skip feature has been included in ‘tens of millions’ of VCRs since Thomson debuted technology in RCA 4-head hi-fi and mono units in 1955.”).

\textsuperscript{132} See REPLAYTV FEATURES, supra note 114.

\textsuperscript{133} See Jon Healey, Studios Assail Replay TV Technology in Courts: Lawsuits Claim the Key Functions of Personal Video Recorders Violate Copyrights, L.A. TIMES, Feb. 11, 2002, C6 [hereinafter Healey].

\textsuperscript{134} See id.

\textsuperscript{135} See REPLAYTV FAQ, supra note 115.

\textsuperscript{136} See REPLAYTV FEATURES, supra note 114.

\textsuperscript{137} See generally STUDIO’S COMPLAINT, supra note 49.

\textsuperscript{138} See Networks, Cable Allege ReplayTV Copyright Violation, COMMUNICATIONS DAILY, Nov. 1, 2001 (included in the Today’s News section).

\textsuperscript{139} See STUDIO’S COMPLAINT, supra note 49, at 24-29 (The other three claims are: (1) violation of Section 553 of the Communications Act that makes it unlawful for any person to intercept or receive or assist in intercepting or receiving any communications service offered over a cable system, unless specifically authorized to do so; (2) violation of Section 605 of the Communications Act which forbids any person receiving, assisting in receiving, transmitting, or assisting in transmitting, any interstate communication by radio from publishing the contents thereof except through authorized channels; and (3) violation of CA Business & Professional Code 17200 which provides injunctive and other relief against “any unlawful, unfair or fraudulent business act or practice.”).

\textsuperscript{140} Id. at 2-3.
"Send Show" functions.142 This section will establish and analyze the studios' claims of contributory and vicarious infringement and ReplayTV's defenses to these claims.

A. Direct Infringement

As stated previously, a plaintiff must show direct infringement by a third party to prevail on either a contributory or a vicarious copyright infringement claim.143 Thus, the court's first step in analyzing the studio's secondary liability claims must be to determine if individual users of the 4000 are, in fact, directly infringing on the studio's copyrights.144 Because the users are making unauthorized copies of the studio's copyrighted material, only a determination that the unauthorized copying constitutes permissible "fair use" will shield ReplayTV from a finding that the users of the 4000 are directly infringing on the studios' copyrights.145 To determine whether the use made of the studios' works is a fair use, the court must assess the copying activities of the users of the 4000 under the four factors laid out in section 107.146

The studios' suit charges that the "AutoSkip" and the "Send Show" features by themselves, and the "Keyword" and "Show Organizer" features combined with extended storage capabilities, enable a user of the 4000 to directly infringe upon the studios' copyrighted material.147 It is clear within the studios' complaint that they are focusing on the fourth factor listed in Section 107 — "the effect of the use upon the potential market for or value of the copyrighted work" — as the basis for their arguments against ReplayTV's fair use defense.148

Concerning the "AutoSkip" feature, the studios argue that allowing viewers to watch programming without commercials will negatively affect the potential market for and value of its copyrighted material.149 This argument surrounds the advertisement-based business model for free television and basic non-broadcast services by which "[the studios'] copyrighted works are paid for."150 Specifically, the studios fear that "[a]dvertisers will not pay to have their advertisements placed within television programming delivered to viewers when the advertisements will be invisible to those viewers."151 Thus, "by eliminating the embedded advertising, [ReplayTV's] copying-and-commercial-deletion feature will (as to those who employ the feature) eliminate the source of payment to the copyright owner for the very program being viewed."152 In a basic sense, the studios argue that by enabling viewers to watch programs that are void of commercials, the 4000 establishes a copying-and-commercial-deletion scheme that constitutes copyright infringement.153 In sum, the studios claim that the "unauthorized making of copies of television programming for the purpose of viewing with all commercials automatically deleted is not a fair use, and goes far beyond the narrowly circumscribed conduct discussed by the Supreme Court in the 1984 Sony Betamax decision."154

As to the "Send Show" feature, the studios again focus their infringement arguments on the ill effect they believe will result from unauthorized distribution of copyrighted material to third parties.155 To prove this contention, the studios put forth four theories to demonstrate how the "Send Show" feature will have a serious negative impact on the potential market for, and value of, its copyrighted work.

First, the studios make the point that an owner of the 4000 could record and then send any TV program or theatrical film to a third party regardless of "whether the third parties themselves had a subscription to the program service (i.e., Showtime, HBO or any other subscription based cable service) from which the program was copied."156 The studios fear that this type of activity would make it unnecessary for third parties to subscribe

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142 Id. at 29.
143 See Sony Corp., 464 U.S. at 434; see also, infra section II B, discussion of secondary liability in copyright law.
144 See Sony Corp., 464 U.S. at 434; see also, infra section II B, discussion of secondary liability in copyright law.
147 See STUDIO'S COMPLAINT, supra note 49, at 2-10; see Complaint of Metro-Goldwyn-Mayer (MGM) et al., at 10-11, MGM, et al. v. ReplayTV Inc., et al., No. 01-09802 (C.D. Cal. filed Nov. 15, 2001) [hereinafter MGM'S COMPLAINT].
149 See STUDIO'S COMPLAINT, supra note 49, at 19-21.
150 Id. at 5.
151 Id.
152 Id.
153 Id. at 8.
154 Id. at 20-21.
155 See id. at 21-23.
156 Id. at 21.
to the subscription-based service, thus jeopardizing the subscription services' business and, over time, the service's overall existence. The studios also fear that this function would also severely threaten both the market for and existence of pay-for-view services that both provide another market for the studios' copyrighted material and also are operated by the studios themselves.

Second, the studios argue that the "Send Show" feature threatens the "system by which costly copyrighted material is offered by free, over-the-air television networks and local stations." In particular, the studios fear that advertisers who pay local stations to run advertisements intended for the local audience will not be willing to "pay for viewers in their local area" who see the programming via a copy distributed by a viewer who lives in another market with different local advertisements.

Third, the studios fear that the "Send Show" feature will "impair" the ability of studios, as copyright holders and as operators of both broadcast and cable networks, to realize the full value of, their copyrighted material are so damaged by the unauthorized copying and distribution of this programming, that the studios' claim that the "AutoSkip" feature will cause substantial harm to the markets for prerecorded DVD, videocassette and other copies of those episodes and films, and for syndication and subsequent telecasts.

ReplayTV's defense to these claims of direct infringement by users of the 4000 centers on the argument that the users' actions constitute a legitimate unauthorized "fair use" of the copyrighted material. ReplayTV contends that the 4000, and all of its extended use features, enables users to perform noncommercial time-shifting; an activity that was determined to be a protected "fair use" by the Supreme Court in the Betamax decision. Specifically, ReplayTV argues that the commercial advance feature, the "AutoSkip" feature in the 4000, has been available in VCRs for over six years, and there has been "no apparent effect on the incentives" for creating movies and TV programming since its introduction.

Further, ReplayTV contends that "[n]o principal of copyright requires consumers to watch commercials... [n]o case has ever held that fair-use rights turn on whenever a viewer intends to skip part of what was copied." To further undercut the studios' claim that the "AutoSkip" feature will cause substantial harm to the market for the studios' programming, ReplayTV asserts "[the studios] and their businesses have been able to adapt to new technologies (such as cable, the VCR, satellite, and television itself) so as to derive substantial revenue streams from such technolo-

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157 Id.
158 Id.
159 Id. at 22.
160 Id.
161 Id.
162 Id. (As an example, daytime soaps broadcast by ABC are later shown on SoapNet, a non-broadcast channel available to cable and satellite viewers. Further, there are a few popular network prime-time dramas that are shown on non-broadcast program services shortly after their initial network broadcast.)
163 Id.
164 Id. at 23.
165 Id. at 22.
166 MGM'S COMPLAINT, supra note 147, at 10.
167 Id.
168 Id. at 11.
170 Id. at 3-8
171 Id. at 5.
172 Id. at 4-5.
gies..."173 To this end, "the television and motion picture industry may continue to evolve to embrace additional markets and means for collecting revenues, potentially including direct advertising to consumers based on their preferences, product placement in television programming, and marketing of materials to consumers through set top boxes and interactive television."174

As to the "Send Show" feature, ReplayTV focuses its response on (1) a fair use defense and (2) dispelling any analogy between this case and the case against Napster. ReplayTV asserts because (1) a user can only send a program to fifteen other ReplayTV users known to him or her and (2) the distributed program can't be retransmitted a second time, the "limited transmissions of works to friends" allowed by the "Send Show" feature is a "fair use — no different from the sharing of videocassettes among friends today."175 To bolster this "fair use" defense, and to debunk the studios' arguments as to the possible injury the feature will have on the studios' markets, ReplayTV makes two further arguments. First, ReplayTV asserts that in the case of free programming, the 4000's ability to share works with friends who missed the original broadcast will in fact increase, not decrease, the viewing public, thus allowing more people, who were entitled to see the program for free in the first place, to see the studios' programming.176 Second, in the case of subscription programming, ReplayTV contends that the "vast majority" of those "television aficionados" who buy a 4000 device also subscribe to premium channels; therefore, "[b]ecause recordings can only be sent from one ReplayTV 4000 user to another, the recipient, like the sender, has generally already paid the subscription for the show he missed."177 ReplayTV goes on to point out that it honors "Macrovision" — a copy protection technology that Congress has authorized the studios to use to protect premium programming (such as digital pay-per-view) from second generation copying — and thus the 4000 will not allow a Macrovision or other copy-protected program to be sent to another user.178

As to the studios' attempt to analogize the "Send Show" feature to Napster's file sharing service, ReplayTV points to three major differences to try and dispel the analogy. First, ReplayTV points out that unlike Napster, which operated a centralized index of music files offered by its users, ReplayTV operates no index.179 Second, unlike Napster, which allowed one person to download unlimited copies of music files and then make these files available for download by an unlimited number of additional users, a single 4000 user can transmit a show "to only a small number of other ReplayTV users known to [the user]."180 Third, while Napster allowed for the download and transmittal of music recordings originally sold in audio CDs that required payment, the 4000 allows for only the transmittal of programs "already available to those other ReplayTV 4000 users for free (or have been paid for already in their cable subscription)."181 While the Ninth Circuit held in Napster that the unlimited circulation of works, not generally available for free, was "reducing CD sales" and therefore was not "fair use," ReplayTV argues that the basic differences between Napster and the 4000 undermine any possible conclusion that a reduction in sales will occur for the studios as a consequence of the "Send Show" feature.182 Thus, ReplayTV argues that the actions of the users of the 4000 constitute fair use.183

B. Contributory Infringement

If the studios are able to convince the court that the users of the 4000 are engaging in direct infringement, the door is open to ReplayTV being held liable for contributory infringement. As a general proposition, the studios claim that ReplayTV is liable for contributory infringement because: (1) "[ReplayTV] know or have reason to


173 REPLAYTV'S ANSWER, supra note 50, at 9.
174 Id.
175 REPLAYTV'S CONFERENCE RESPONSE, supra note 160, at 6.
176 See id.
177 Id. at 7.
178 REPLAYTV'S CONFERENCE RESPONSE, supra note 160, at 7; see REPLAYTV'S ANSWER, supra note 50, at 11; see also MACROVISION, VIDEO COPY PROTECTION, at
know of the direct infringement of [the studios'] copyrights" and in fact "actively promote the infringements as a reason to purchase. . ." the 4000; and (2) by introducing and including the "Send Show" and "AutoSkip" features in the 4000, ReplayTV enables, materially contributes, and induces unlawful infringement of the studios' copyrights. Relying on the Fonovisa and Napster decisions, and their treatment of claims of contributory infringement, it seems possible that the court will hold that there is a high likelihood that ReplayTV is liable for contributory infringement. If a "fair use" defense fails, ReplayTV has one more Betamax-related defense to try to protect themselves from liability for contributory infringement. Specifically, ReplayTV can attempt to rely upon the staple article of commerce doctrine, as established in Betamax, to shield them from any liability for contributory infringement. As explained before, the Court in Betamax relied upon the staple article of commerce doctrine to establish the concept that the sale of copying equipment will not constitute contributory infringement if the product is (1) widely used for legitimate, unobjectionable purposes and (2) is capable of substantial non-infringing uses. Looking at this possible defense as it was explained and applied in the Betamax case, it would seem that ReplayTV has a strong basis to claim that the 4000 is both widely used for legitimate unobjectionable purposes and is capable of substantial, non-infringing uses because the 4000 allows its users to: (1) perform private, non-commercial time-shifting in the home, (2) perform space-shifting between different ReplayTV devices within a home and (3) transmit collections of digital photographs and video to third parties. Unfortunately for ReplayTV, this seemingly strong defense against contributory infringement liability may not be available.

As detailed above, the manner in which the staple article doctrine was treated in the Napster decision was a clear departure from the doctrine's treatment in Betamax. Specifically, the Napster court held the staple article of commerce doctrine to be inapplicable when the device's manufacturer already has actual knowledge of its users' direct infringement. If the court here decides to follow the Napster court's treatment of the staple article doctrine, and further holds that ReplayTV has actual knowledge of its users' direct infringement — a likely proposition because ReplayTV highlights the "Send Show" and "AutoSkip" features to promote the 4000 — it is probable that ReplayTV will be unable to use the staple article of commerce defense to shield itself from liability for contributory infringement.

C. Vicarious Infringement

The studios' claim of vicarious infringement centers on the updated program listing, called the "Replay/Channel Guide," which provides a listing of all television programs available to a viewer. The studios argue that users of the 4000 can engage in unauthorized copying only by using the "Replay Guide" which is updated daily by ReplayTV. The studios further assert that ReplayTV, via the broadband connection to the 4000, continuously collects information regarding "what their customers want or may want to copy/distribute" and then "match" this information with the "Replay Guide." The studios contend that, when combined, these actions show that ReplayTV possesses the right and ability to supervise the infringing conduct of its users — the second prong of the vicarious liability test established in Fonovisa. Further, the studios claim that ReplayTV has a direct financial interest in the "infringements of [the studios'] copyrights" because
ReplayTV’s “economic success is directly tied to the popularity of the infringing conduct that [ReplayTV] seeks to encourage.” In the view of the studios, these contentions regarding ReplayTV’s right and ability to supervise the infringing conduct of its users and its direct financial interest in such conduct combine to make ReplayTV liable for vicarious infringement.

In contrast, ReplayTV denies the contention that only through continuous assistance by ReplayTV is the 4000 capable of copying television programs. ReplayTV does admit that it makes an updated viewing guide available to consumers daily, but does not believe that this updating of the guide is the key to allowing users to record programming. Overall, ReplayTV contends that despite the fact that it updates the viewing guide daily and that it collects anonymous information from its consumers, it has neither the right nor the ability to supervise the infringing conduct of its users and thus can not be liable for vicarious infringement.

VI. OVERALL IMPLICATIONS

The outcome of the suit against ReplayTV is destined to become a very important decision. As ReplayTV notes, “[i]t is no hyperbole to state that [this] case [is] the most important [case] for the television and movie industry since [Betamax].” Indeed, the case against ReplayTV has many similarities to the Betamax case: (1) when faced with a new, threatening copying device, the studios have gone to the courts to try and stop the introduction of the device instead of bringing suit against the individuals who use the device to directly infringe on copyrights; (2) the studios’ infringement case against the device focuses on the likely negative effects the device would have on the potential market for and value of their copyrighted materials; and (3) the device manufacturer’s main defense against the infringement charges relies on a novel “fair use” argument. However, although many similarities exist between this case and Betamax, there are two major differences that separate the cases: (1) the case against ReplayTV involves digital and not analog technologies; and (2) the structure of modern broadcasting — including over-the-air, basic cable, and premium cable services — is more complex today as compared to twenty years ago.

The court’s determinations on the issues, claims and defenses presented in the case against ReplayTV will have huge implications for copyright law in our now digital age. Specifically, the court's decision on ReplayTV's “fair use” defense, and thus the merits of the studios' updated market based claims, the court’s treatment of the staple article of commerce doctrine, and the court’s overall conclusions about PVRs’ keyword and storage capabilities are reasons why this case is poised to become the new Betamax for the age of PVRs. Further, the outcome of this case could carry major repercussions for the television and movie studios and for PVRs in general.

A. Implications of ReplayTV’s Fair Use Defense

The decision by the Betamax Court that the private, non-commercial time-shifting allowed for by the VCR was a legitimate and protected fair use was revolutionary. People now take for granted that it is legal to make a copy of a TV broadcast for private, non-commercial use, but this was not a reality until the Betamax decision. What ReplayTV asks the court to hold in this case could be an equally revolutionary decision. In a basic sense, the court must make three separate decisions related to “fair use.” First, it must determine whether private, non-commercial time-shifting done on behalf of and then transmitted to a small number of third parties also constitutes a protected “fair use.” Second, the court must determine whether it is a “fair use” to watch a recorded program while intentionally deleting the commercials included in the original broadcast. Third, the court must determine whether it is a “fair use” to record and then store copies of programs by related categories within a digital library on the hard drive of a PVR. Further, in making these decisions, the court will have to weigh the question of whether modern digital technologies — which

194 Id. at 25-26.  
195 REPLAYTV’S ANSWER, supra note 50, at 10-11.  
196 Id.  
197 Id. at 10; see also SONICBLUE INC., PRIVACY POL-ICY, at http://www.sonicblue.com/company/privacy.asp (last checked Mar. 2, 2002).  
198 REPLAYTV’S ANSWER, supra note 50, at 10-11.  
199 REPLAYTV’S CONFERENCE RESPONSE, supra note 160, at 13.
enable users to transmit recorded programs, watch programs without commercials and store multiple programs organized by categories on a hard drive — provide such advantages over analog technologies as to alter the court’s analysis and conclusions related to the four statutory factors in Section 107 of the Copyright Act, specifically the effect of the use on the market for, and value of, the copyrighted material. The court’s answers to these novel questions will directly impact the definition of “fair use” in the digital age by establishing the definition of “fair use” in relation to PVRs.

In many senses, the arguments lodged by the studios ask the courts to make a decision that would be just as revolutionary as the one requested by ReplayTV. First, the studios are asking the court to hold for the first time that users of copying devices are required to watch the commercial aired with the original broadcast when watching their time-shifted copy. Second, the studios are requesting the court to hold, again for the first time, that a device that could possibly enable users to act as to undermine the current advertising-based, business model for its copyrighted television and movie programming does not empower users to take actions protected by the “fair use” doctrine. Third, the studios are seeking for the court to hold, also for the first time, that the “fair use” doctrine does not allow users to make and store digital libraries of copyrighted material because these collections will undermine the market for DVDs, videocassettes and television re-runs. Finally, the studios are asking the court to hold that the 4000’s possible negative impact on the ability of the studios to create and harness emerging markets for its copyrighted material — specifically “repurposing” and pay-per-view markets — means that the actions of ReplayTV’s users do not fall within the definition of “fair use.”

In sum, the studios are seeking to limit the definition of “fair use” in a manner that will protect their current business models.

In addition, the studios are asking the court to rely on arguments that are prospective assumptions as to the future effects the 4000 will have on the market for and value of their copyrights. The studios are not equipped with actual facts and figures of damages caused by the 4000, which is not surprising because the 4000 has only been on the market for a short period of time. In fact, ReplayTV asserts that its manufacturing capacity, even if exhausted, could allow for “no more than 0.02% of television viewing households in America” to own and use a 4000. If the court accepts these prospective arguments as to the likely affects of the 4000 on the market for, and value of, the studios’ copyrighted material, it would go against the precedent set in the Betamax decision where the Court rejected the use of speculative arguments to prove a likelihood of harm.

The weight of the studios’ arguments regarding the 4000’s likely negative affect on the market for, and value of, its copyrighted material is also limited by the present shape of broadband connectivity available in the country today. Most modern high-speed home Internet connections — those being DSL, cable or T1 connections — do not allow for the transmitting speeds needed to effectively and efficiently distribute video over the Internet. The current connection speeds are such that transmitting video files, which usually contain millions of bytes of information, takes a huge amount of time; this is especially true because almost all home Internet providers cap upload speeds, which is the speed at which data moves from a house to the Internet.

Thus, despite the fact that the Betamax Court turned away the studios’ speculative arguments re-

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*See STUDIO’S COMPLAINT, supra note 49, at 19-21.
*See id.; see also id. at 21-23.
*See MGM’S COMPLAINT, supra note 147, at 10-11.
*See STUDIO’S COMPLAINT, supra note 49, at 22.
*See id.; see also id. at 452-54.
*See Langberg, DVR is Future, supra note 105 (It took two hours and ten minutes to download a 93-megabyte file that consisted of a two-minute clip from TV show recorded at the highest quality level. While in the future consumers will be equipped with ultrafast home Internet connections that will allow for the real time upload and download of broadcast-quality video, that time is not going to be a reality any day soon.); see also SONICBLUE, TECHNICAL SPECIFICATIONS FOR THE REPLAYTV 4000, at http://www.sonicblue.com/video/replaytv/replaytv_4000_tech.asp (last checked Mar. 3, 2002) (Stated in small print at the bottom of this page is the following, “(If your ISP limits outbound data transfer speeds, it may take a day or more to completely send an hour of recorded material over the Internet.”).
lated to future harm on the market for, and value of, their copyrighted material, the studios are once again asking the courts to rely on theoretical arguments related to future harm, based on circumstances that have yet to become a reality, to undermine a "fair use" defense. The main difference is that today, the studios' arguments are bolstered by two modern characteristics. One, the innate advantages of — and thus the inherent threats made because of — digital technologies. Two, the more complex structure of modern broadcasting which now includes basic cable and premium cable services on top of free over-the-air broadcasting services. The importance of these modern characteristics may prove to be the basis by which the court today will allow the studios' prospective, hypothetical arguments to be sufficient in proving the likelihood of harm to the market for, and value of, the studios' copyrighted work.

On the other hand, if the courts reject the studios' arguments related to the vital significance of advertising to the current market for the studios' copyrighted material, then the studios may have to initiate wide-scale changes to the reliance on paid commercials as the main source of revenue from their investment in the copyrighted material. Therefore, as suggested by ReplayTV's pleadings, the studios would have to look at product placement in television programming, direct advertisements to consumers and marketing through set top boxes and interactive TVs as alternate methods for recouping the costs of its copyrighted material. In effect, the courts' decision in this case could force the television and movie industries to begin to adapt and transform the advertising-based business model that they have relied upon for the last thirty years.

B. Implications to the Staple Article of Commerce Doctrine

Another reason this case is vital to copyright law in the digital age is the opportunity it provides the courts to explain how modern courts should treat the staple article of commerce doctrine, originally established by the Betamax decision eighteen years ago. As discussed earlier, if the doctrine is applied as it originally was in Betamax then it would seem that ReplayTV would have a strong defense to shield it from liability for contributory infringement. But, if the doctrine is treated in the same manner as it was in the Napster decision, it may mean that the doctrine is basically dead as a source of protection for the manufacturers of devices capable of enabling users to infringe copyrights. This would seemingly be the case because it would be very unlikely that manufacturers would be able prove that they didn't have actual knowledge of the infringing uses of their consumers under the standard set in Napster. As an alternative, the courts could decide to limit the Napster treatment of the staple article of commerce doctrine to cases involving copyrights of music recordings.

This case thus allows the courts to take two vital actions related to the staple article of commerce doctrine. First, it provides the courts the opportunity to re-examine the different treatments of the doctrine in the Betamax and Napster decisions to determine which of the treatments is correct. Second, this overall examination of ReplayTV's staple article of commerce doctrine defense to shield them from possible liability for contributory infringement will help define how this doctrine fits into modern copyright law in today's digital age. In fact, these questions regarding the treatment given to the staple article of commerce doctrine are so important that it is likely that the Supreme Court will, at some point in the future, take this case under review as a means of defining, or re-defining, how the staple article doctrine fits into modern copyright law. Therefore, this case could either be the death knell for the importance of the staple article of commerce doctrine within copyright law, or it could turn out to be its savior.

C. Implications to All PVRs

The court's determination on whether the seeking, recording, sorting and storage features as a whole allow for infringement will have implications for all PVRs currently on the market. PVRs as a whole record a program not by time slot or by a unique number, like VCRs, but instead by the show's name or program description. Further,
like the 4000, all PVRs allow for users to make digital collections of recorded programs on their hard drives. Thus, if the court determines that the “Keyword,” “Show Organizer,” and storage features of the 4000 combine to cause, induce or facilitate infringement of copyrighted material, serious implications for all PVRs with similar capabilities could result. It could mean that all PVRs, not just the 4000, will have to be altered as to limit the ability to store recorded programs or to eliminate the ability to use keywords to initiate the recording of a program.

D. Implications to the Overall Balancing of Rights within Copyright Law

As stated earlier, inherent within copyright law and precedent is a constant balancing of the rights of copyright holders against the public’s right of free expression and society’s benefit from the free flow of ideas and commerce. As shown in Napster, situations will occur where the court will balance these inherent rights and come to a decision that allows copyright law to stifle the introduction or use of a new technology. As an overall proposition, the case against ReplayTV provides the courts with yet another opportunity to continue the delicate balancing act so as to decide whether the threat posed by an emerging technology on the effectiveness of copyrights is so severe that the technology cannot be allowed to enter the free market. If the courts decide to again allow copyright law to act as to stifle the introduction of a new technology — a decision that will heavily depend on the treatment given to the staple article of commerce doctrine — this may demonstrate that the delicate balance between the rights of copyright holders versus the rights of the public and society as a whole are now tipped in favor of the copyright holders.

E. How Encryption Technologies Can Alter the Impact of this Case

As mentioned earlier, because the television programming at the center of this suit is generally distributed without being protected by an encryption technology, this case does not fall under the provisions of the DMCA. However, as soon as the studios create and implement digital rights management schemes that rely on encryption to control access to distributed programs and to protect the studios’ rights as copyright holders, the strong protections provided by the DMCA will become implicated. If, and when, this happens, the issues and arguments made under the common law for copyright will be superceded by arguments related to the DMCA. Thus, the overall impact of the case against ReplayTV may dissipate over time as the studios implement digital rights management schemes to protect their copyrighted material.

VII. CONCLUSION

After years of sitting on the sidelines, the major television and movie studios are now at the forefront of the fight faced by copyright holders in the digital age. The case against ReplayTV seems likely to become the seminal case for PVRs, just as the Betamax decision did for VCRs. Just as importantly, this case provides the courts an opportunity to analyze the doctrine of “fair use” and the staple article of commerce doctrine in the digital world. By forcing the courts to once again perform the ever-difficult task of balancing the rights and expectations of copyright holders against the rights of the public and the competing value of allowing the emergence of new technologies into the market, the ReplayTV case is poised to become a landmark case surrounding copyright law in the digital age.

\[212\] See id.

\[213\] This could also have a major impact on other new devices that enable users to make digital libraries of television or movie programming such as DVD recorders that allow users to copy programs onto a DVD disc.

\[214\] See generally Napster, 239 F.3d 1004.