DIGITAL CONTENT PROTECTION AND FAIR USE:
WHAT’S THE USE?

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ABSTRACT

It was October of 2010, on a Saturday afternoon. Tom and Kelly sat down and ordered a recently released blockbuster smash hit from their digital cable television pay-per-view system. Halfway through the movie, Tom’s text-enabled wireless phone alerted him of a problem at his office. “Looks like they’re going to need me at work for a few hours. I’m really sorry. I’ve got to go. How about we record this on our PVR and watch it together later?”

“No, Tom, we can’t do that. This is one of those ‘copy never’ movies, remember? It’s either watch it now, or pay for it all over again later.”

“What a rip off! Well, let’s just hook up our old VCR. It won’t be as crisp as the digital PVR, but at least we’ll get something for our money.”

“I hate to tell you this, Tom, but our VCR won’t work either. I tried the other day, but the television won’t allow ‘copy never’ digital programs to travel out of unprotected analog outputs. Looks like we just threw away our ten dollars.”

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1. PVR means personal video recorder.
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INTRODUCTION

Along with the transition from analog content distribution to digital content distribution comes a transition in the fair use doctrine of copyright law. As Tom experienced in the above example, many consumers of analog content have grown accustomed to having certain uses of content characterized as “fair uses.” But these “fair uses” of analog content should not and will not take root in the world of digital content
access control, because digital content owners, rather than consumers, will have the ability to decide who makes copies and when.

Put simply, in today’s world, Tom can record a program with his VCR because (a) the VCR is technically able to do so, (b) there is no way for the program’s copyright owner to know if Tom records it, and (c) the program’s copyright owner would encounter prohibitively high transaction costs to enforce its copyright against each program recorder. For these reasons, the law has granted Tom the right to make a recording. Due to such economic and practical effects, even if the copyright owner sued Tom, courts would likely find fair use (or noninfringement).

In the world of 2010, however, Tom cannot record the program because all three factors have changed: (a) the manufacturer of his receiving device built it so that it cannot physically record “copy never” content, (b) content protected with digital rights management reveals to its owner exactly who is using it, and (c) copyright enforcement is as simple as maintaining a usage rights database. Furthermore, the copyright owner would have no need to sue Tom because Tom (unless he is an electronics/computer expert) cannot figure out how to make his electronics “break the rules.” As soon as the latest “crack”2 for each digital content output trickles down to ordinary users, the content provider disables the particular output or fixes the protection technology.

The possible architectures of digital content distribution are changing the face of copyright law, specifically fair use. Ironically, both Congress and the Federal Communications Commission (FCC)3 continue to tell themselves that their efforts to regulate a transition from analog to digital have no impact on fair use. In enacting the Digital Millennium Copyright Act (DMCA), Congress stated, “Nothing in this section shall affect rights, remedies, limitations, or defenses to copyright infringement, including fair use . . . .”4 In its recent decision to mandate “plug and play” compatibility between consumer electronics devices and the cable system, including “encoding rules,” the FCC stated: “Our decision herein is not intended in any way to change or affect existing


3. The FCC “is an independent United States government agency, directly responsible to Congress. The FCC was established by the Communications Act of 1934 and is charged with regulating interstate and international communications by radio, television, wire, satellite and cable.” About the FCC, FEDERAL COMMUNICATIONS COMMISSION, at http://www.fcc.gov/aboutus.html (last updated Sept. 14, 2004).

Finally, in its recent decision regarding a broadcast flag for broadcast digital content, the FCC again stated: “Furthermore, the scope of our decision does not reach existing copyright law. . . . [T]he underlying rights and remedies available to copyright holders remain unchanged.”

These important statements seek to pre-empt a major upheaval in copyright law, but they have no relevant impact on their accompanying laws. Although technically true, these statements mislead. The statements signal a departure from traditional fair use thinking in an age of digital content. They tell only half of the story. Here is the other half: although these new digital rules do not change existing fair use defenses, consumers will have neither the ability nor the need to invoke such defenses because the decision about when, where, and how copies may be made will rest solely with the copyright owner.

This paper will explain why the analog fair use rubric need not and should not be applied to the digital content distribution arena. A consumer who cannot copy digitally protected content cannot invoke a fair use defense based on consumer copying. Economic models of fair use and consumer copying fail to bridge the gap between traditional analog content and digitally protected future content. A content owner’s ability to apply near-perfect control to digital content, through Digital Rights Management (DRM) or encoding rules, changes the very nature of the content goods. The market for digitally locked goods will no longer need a fair use doctrine, because the market failures and high transaction costs associated with non-protected content will disappear.

Section I will introduce copyright law, explain the different rights traditionally associated with the fair use doctrine, and set forth the economic rationale for allowing a fair use exception. Section II will describe the different ways digital content is protected through law and technology and will summarize the FCC’s encoding and broadcast flag rules. Section III will examine how, under DRM or encoding rules protection, the “uses” of digital content both resemble and differ from “fair uses” of analog content. Section V will conclude that the high level of control permitted by DRM and encoding technologies eliminates the need for as broad a fair use exception as is found in the current regime.


7. See infra Part II.B.
I. BACKGROUND OF THE FAIR USE DOCTRINE

An understanding of the fair use doctrine requires an understanding of the basic tenets of copyright law. After introducing copyright law in general, this section will elaborate on the first sale doctrine as well as some rights traditionally associated with fair use, such as: time-shifting, space-shifting, educational use, and critical use. The analysis does not describe every fair use, but only those most relevant to a discussion of digital content distribution. Finally, this section will present economic theories that justify the current fair use doctrine.

A. Introduction to Copyright Law

Copyright vests as soon as an author fixes a particular idea into a tangible medium of expression; therefore, it vests in a writer upon putting pen to paper, a singer upon writing the song, a filmmaker upon capturing the subject on film, and a photographer upon taking a picture. Registering the copyright with the U.S. Copyright Office may occur later, but is not required; an author owns a copyright without ever registering it. To be copyrighted, a work must “possess[] at least some minimal degree of creativity. . . . the requisite level of creativity is extremely low; even a slight amount will suffice.”

Pursuant to its constitutional mandate, Congress promotes creativity by granting an author an exclusive right over his work for a limited time after which the public may freely use the work. A copyright owner has six exclusive rights: the right to make copies, the right to make derivative works, the right to distribute copies to the public, the right to publicly perform the work, the right to publicly display the work, and the right to send a copyrighted song through a digital audio transmission.

If anyone but the copyright owner exercises one of the six exclusive rights, that person infringes the copyright. Copyright owners can sue the infringers to obtain an injunction, monetary damages, profits, and
To win a copyright infringement action, the copyright owner must prove that: (a) it owns the copyright to the work, (b) the work is original, (c) the alleged infringer has copied the work, and (d) a "substantial degree of similarity exists" between the two works.

Although the Copyright Act of 1976 only explicitly places liability with direct infringers, courts have recognized liability of both contributory infringers and vicarious infringers. To prove contributory infringement, a copyright owner must show that the defendant, "with knowledge of the infringing activity, induces, causes or materially contributes to the infringing conduct of another." To prove vicarious liability, a copyright owner must show that the defendant is responsible for the infringer's infringement under a theory of respondeat superior, where the "defendant has the right and ability to supervise the infringing activity and also has a direct financial interest in such activities." These two indirect theories of liability have become more important in digital distribution industries due to the difficulty of pursuing individual direct infringers. The U.S. Court of Appeals for the Ninth Circuit (Ninth Circuit) found Napster liable under these two theories of indirect copyright infringement.

Copyright law permits these causes of action. But due to the sometimes harsh application of copyright law, the equitable doctrine of fair use emerged in the common law.

B. Explanation of Selected Fair Use and First Sale Rights

"From its beginning, the law of copyright has developed in response to significant changes in technology." For instance, in 1908 the U.S. Supreme Court held that copying copyrighted music onto player piano rolls did not violate the copyright in the music itself. The next year, Congress passed the Copyright Act of 1909, which set up a license requirement for copying music onto player piano rolls. And so the

21. Id. §§ 504, 505.
23. Fonovisa, Inc. v. Cherry Auction, Inc., 76 F.3d 259, 261 (9th Cir. 1996).
25. Id. at 1022 (quoting Fonovisa, Inc., 76 F.3d at 262 (quoting Gershwin Publ’g Corp., 443 F.2d at 1162)).
26. Id. at 1022, 1024.
cycle goes: with each new technological breakthrough, Congress and the courts struggle to extend old copyright law to new uses of content.

Judges originally created the fair use doctrine at common law, and Congress attempted to codify it in 1976. When a copyright owner sues an alleged infringer for copyright infringement, the alleged infringer can assert fair use as an affirmative defense. If the court finds fair use, then the infringer is not liable for infringement. The statute delineates four factors for courts to use in considering whether a particular use is fair use:

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.

However, fair use “is an equitable rule of reason, no generally applicable definition is possible, and each case raising the question must be decided on its own facts.” The factors, “though in no case definitive or determinative, provide some gauge for balancing the equities.” This section will next look at selected applications of the fair use doctrine to consumer copying.

1. Time-Shifting

In one of the cases most relevant to this paper, the U.S. Supreme Court decided in Sony Corporation of America v. Universal City Studios, Inc. that home time-shifting (whether authorized or unauthorized) of television programs constituted fair use. “Time shifting” refers to “the practice of recording a program to view it once at a later time, and thereafter erasing it.” In that case, Universal Studios, the owner of a large percentage of copyrights covering television content,
sued Sony, the manufacturer of the Betamax video tape recorder, alleging contributory infringement.\textsuperscript{38}

The Court recognized that when the statute is silent about new uses of copyrighted content, it must weigh the incentive for authors to create against the benefit of augmenting the public domain. In that case, the Court adopted the following test: "[t]he sale of copying equipment, like the sale of other articles of commerce, does not constitute contributory infringement if the product is widely used for legitimate, unobjectionable purposes. Indeed, it need merely be capable of substantial noninfringing uses."\textsuperscript{39} In emphasizing the application of two fair use factors, the Court found that the use was private and noncommercial, and that Universal Studios failed to show how the market for its copyrighted works would be harmed by the Betamax.\textsuperscript{40} The Court held private time-shifting to be a "substantial noninfringing use," and even found that Universal benefited from a wider television audience due to time-shifting.\textsuperscript{41}

2. Space-Shifting

The concept of space-shifting addresses the right of a consumer to make copies of rightfully-acquired content for the sole purpose of watching or listening to the content in another physical place. For instance, a consumer space-shifts a program by recording it on his living room VCR and watching it across town on his parents' VCR. In \textit{Recording Industry Association of America v. Diamond Multimedia Systems},\textsuperscript{42} the Ninth Circuit held that the Diamond Rio MP3 player did not fall under the requirements of the Audio Home Recording Act of 1992 (AHRA), and thus did not need a Serial Copy Management System.\textsuperscript{43} How did the court's AHRA analysis relate to a copyright fair use analysis? Although the case did not technically consider a fair use defense, the court's conclusions regarding noncommercial use of digital home recording devices under the AHRA would, by analogy, lead to similar implications under the "purpose and character of the use" fair use factor of copyright law. The court looked to the statute and the legislative history of the AHRA, finding that Congress did not intend to prohibit "noncommercial use by a consumer of" a digital audio recording device.\textsuperscript{44} The court introduced the concept of "space-shifting": "The Rio

\textsuperscript{38} See \textit{id.} at 419-21.
\textsuperscript{39} \textit{Id.} at 442.
\textsuperscript{40} See \textit{id.} at 456.
\textsuperscript{41} \textit{Id.} at 421, 456.
\textsuperscript{42} 180 F.3d 1072 (9th Cir. 1999).
\textsuperscript{43} See \textit{id.} at 1075, 1081. A Serial Copy Management System "sends, receives, and acts upon information about the generation and copyright status of the files that it plays." \textit{Id.} at 1075 (citing 17 U.S.C. § 1002(a)(2)).
\textsuperscript{44} 17 U.S.C. § 1008 (emphasis added).
merely makes copies in order to render portable, or ‘space-shift,’ those files that already reside on a user’s hard drive. . . . Such copying is paradigmatic noncommercial personal use entirely consistent with the purposes of the Act.”\textsuperscript{45} A fair use analysis of space-shifting (especially of the “purpose and character of the use” factor) would by analogy lead to the same result: that space-shifting content remains a “noncommercial personal use.”\textsuperscript{46}

3. Educational Use

Teachers and schools that allegedly infringe a copyright have a bonus: Congress wrote the fair use statute in their favor. The first fair use factor looks at “whether such use . . . is for nonprofit educational purposes.”\textsuperscript{47} An infringing school’s nonprofit status also suggests that its infringing use will not overly harm the copyright owner’s market under the fourth fair use factor.\textsuperscript{48} However, one court held that a school district’s “highly organized and systematic practice of making off-the-air videotapes of plaintiffs’ copyrighted works for use in later years and the making of numerous derivative copies of plaintiffs’ copyrighted works does not constitute fair use under the copyright laws.”\textsuperscript{49} As with any other quasi-equitable doctrine, the doctrine of fair use has its limits.

4. Critical Use

Courts also recognize the right of reviewers and critics to quote portions of a copyrighted work. The fair use statute also characterizes criticism and comment as fair uses.\textsuperscript{50} In many cases, such quoting meets the approval of the four factors of fair use. Although the critics make money from their reviews, the reviews tend to be creative in and of themselves and the copying is usually confined to small bits of the original. However, a reviewer who substantially quotes the most important part of a misappropriated copy of an unreleased manuscript will not be given fair use protection.\textsuperscript{51} On the other hand, “[c]ourts have found fair use in cases where a reclusive billionaire acquired the

\begin{itemize}
\item \textsuperscript{45} Diamond Multimedia Sys., 180 F.3d at 1079.
\item \textsuperscript{46} Cf. id.; MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 8B.07[C][4] (2004).
\item \textsuperscript{47} 17 U.S.C. § 107(1).
\item \textsuperscript{48} See id. § 107(4).
\item \textsuperscript{49} Encyclopaedia Britannica Educ. Corp. v. Crooks, 542 F. Supp. 1156, 1185 (W.D.N.Y. 1982).
\item \textsuperscript{50} 17 U.S.C. § 107.
\end{itemize}
Copyrights in articles written about him and sued when a biographer sought to publish a book that borrowed from these articles.52

5. First Sale Doctrine

Although not legally a part of the fair use rights, the first sale doctrine works hand-in-hand with them. The first sale doctrine creates an exception to the copyright holder's exclusive right of distribution.53 Under the first sale doctrine, a copyright owner has no further control of a particular copy once it has left her hands.54 In other words, once a consumer buys a particular copy of a DVD, the copyright owner cannot use the exclusive right of distribution to prevent the consumer from reselling the DVD for whatever price, giving it away, or even throwing it away.55 However, the doctrine applies only to the particular copy, not to the copyright itself; therefore, buying a DVD does not give the buyer a right to copy it and then distribute the copies.

The fair use rights of time-shifting and space-shifting, along with the first sale doctrine, remain highly relevant to a discussion of digital content distribution. The fair use rights of educational use and critical use, though not directly related to digital content distribution, provide helpful illustrations of how things will be different in the discussion below. The economic theories underlying the fair use doctrine, addressed in the next subsection, are more important than the rights themselves.

C. Economic Rationale for the Fair Use Doctrine

A discussion about the economic rationale for the fair use doctrine merits a brief mention about the deceptive precision of the fair use factors. The four statutory fair use factors may seem objective and straightforward, but are highly subjective in reality. David Nimmer informally analyzed and summarized fair use cases between 1994 (when the Supreme Court decided Campbell v. Acuff-Rose Music, Inc.56) and 2003.57 He found that “judges who uphold fair use almost always find that three, if not four, of the factors incline in its favor; judges who deny

54. See id.
55. See id.
56. 510 U.S. 569 (1994) (last Supreme Court case discussing a fair use defense to copyright infringement).
the fair use defense almost always find that three, if not four, of the factors incline against it. According to Professor Nimmer, courts tend first to make a judgment that the ultimate disposition is fair use or unfair use, and then align the four factors to fit that result as best they can, and that “the four factors fail to drive the analysis, but rather serve as convenient pegs on which to hang antecedent conclusions.” If the four factors fail to drive the fair use analysis, then what drives it? One answer: economic considerations.

In 1982, Wendy Gordon wrote what would become one of the definitive frameworks for discussing consumer copying and the fair use doctrine in economic terms. Although written before the U.S. Supreme Court reversed the Ninth Circuit in the Betamax case, the article seeks to show “how a market approach can serve as a means for applying fair use to newly emerging uses of copyrighted works made possible by developing technologies.” Gordon’s model assumes that most copyrighted works are “public goods.” Public goods have two primary characteristics. First, one person’s use of the good does not diminish anyone else’s use of the same good; the good does not become depleted by additional users. Second, anyone can use the good whether or not they paid for access. Therefore, without an artificially-created right, a work of authorship would be freely distributed for the equal enjoyment of all as soon as the first copy was released, providing no return on the author’s investment of creativity. Thus, the problem that Congress addresses with the copyright laws: a constitutional balance between incentivizing authors’ creation and adding to the public domain. Gordon’s concept of fair use comes into play precisely when this congressionally-drafted structure fails in the marketplace.

Instead of the four part fair use test codified by Congress and applied by the courts, Gordon set forth a three part test focusing on market failure. Gordon stated that courts should find fair use when: “(1) market failure is present; (2) transfer of the use to defendant is socially desirable; and (3) an award of fair use would not cause substantial injury to the incentives of the plaintiff copyright owner.” As the threshold
first factor, market failure, Gordon would require that “the possibility of consensual bargain has broken down in some way.” For instance, the market could suffer from huge transaction costs: either the consumer does not have the necessary resources to find and contact the content owner to negotiate a license, or the content owner does not have the resources to track down and enforce its copyright against every infringer.

Even if market failure exists, the court must look to the second factor to “determine if the use is more valuable in the defendant’s hands or in the hands of the copyright owner.” “[F]air use implies the consent of the copyright owner by looking to whether the owner would have consented under ideal market conditions.” Courts may have trouble with the second factor because of the difficulties associated with pinning a value on intangible rights like copyrights.

Finally, even if market failure exists and the use serves society best in the hands of the defendant, courts should hesitate to find fair use if it would “cause substantial injury to the incentives of the plaintiff copyright owner.” This third factor ensures the maintenance of an incentive aspect of copyright law, compensates for courts’ imprecision in valuing copyright rights, and assuages copyright owners that fair use will not “put them at an intolerable disadvantage” if “their injury is substantial.” The inquiry into substantial harm should also look at smaller infringements that might cumulatively pose a problem to the copyright owner’s incentive. Gordon also recognized the different implications of total market failure and “intermediate market failure,” realizing that some cases may warrant additional time for market solutions to develop or for court intervention with a licensing scheme.

Gordon’s application of her test to the facts of the Betamax case foreshadowed the outcome of the Court’s decision. Gordon remarked that “[h]ome users might well find transaction costs prohibitively high if they were required to bargain individually with copyright owners over the right to tape each desired program” and that “prohibitions against home taping might be impossible to enforce.” Gordon also stated that if the Court resolved factors two and three in favor of the consumers (which it

68. See id. at 1628-29.
69. Id. at 1615.
70. Id. at 1616.
71. See id. at 1631.
72. Id. at 1614.
73. Gordon, supra note 61, at 1619.
74. See id. at 1620.
75. Id. at 1618, 1621.
76. Id. at 1655.
77. Id.
did implicitly – the Court found that the use was private, noncommercial and that the time-shifting did not hurt the copyright owner and thus the advertising\(^78\), then it should grant fair use.\(^79\)

More recently, another economic theorist named Raymond Shih Ray Ku has criticized Gordon’s model and proposed another model.\(^80\) Instead of Gordon’s market failure theory, Ku proposes a “creative destruction” theory of fair use, adapting Schumpeter’s theories.\(^81\) Ku points out that a “funny thing happens . . . as the costs of copying approach zero. Consumers begin to invest in distribution directly.”\(^82\) Instead of paying for distribution of copies, consumers begin to pay for the equipment necessary to do so, such as computers, broadband access, and video recorders.\(^83\) Ku therefore argues that courts should find fair use when two conditions are met: “1) the copy is made by the consumer of the work; and 2) the creative endeavor does not depend upon funding derived from the sale of copies.”\(^84\)

Applying his theory to the Betamax case, Ku points out that consumers were the ones making copies. Instead of buying the copies directly from the content broadcasters, they bought VCRs, cassette tapes, cable subscriptions and cords to make the copies themselves.\(^85\) Also, Ku points out that the content owners’ creative endeavor did not depend on selling copies of their transmissions; instead, their remuneration came from selling advertising and theater tickets.\(^86\)

Gordon’s and Ku’s theories help provide a framework for determining the role that digital rights management and encoding technologies will play in assessing the need for fair use in digital content distribution. However, applying each of these theories to a highly effective content control regime highlights the lack of economic necessity for a fair use doctrine in such situations.

\(^79\). See Gordon, supra note 61, at 1656.
\(^81\). Id. at 564. “Because copyright is largely irrelevant to the creation of music and is not necessary to ensure digital distribution, I have argued that the Internet and digital technology have creatively destroyed copyright as it pertains to the protection of music.” Id. at 567.
\(^82\). Id. at 565.
\(^83\). See id. at 565-66.
\(^84\). Id. at 567-68.
\(^85\). Id. at 568.
\(^86\). Id. at 570.
II. DIGITAL RIGHTS MANAGEMENT, ENCODING RULES, AND OTHER CONTENT PROTECTION MECHANISMS

Before applying different economic theories to content control technologies, it is important to understand how those technologies work. This section will first describe one way in which the law protects content. Then, this section will give a cursory overview of how content is protected through technology: digital rights management, encoding rules, and the broadcast flag.

A. Anticircumvention and the DMCA

Congress passed the DMCA in 1998. The DMCA creates both civil and criminal liability for those who engage in three kinds of circumvention activities. First, the DMCA prohibits the circumvention of “a technological measure that effectively controls access to a [copyrighted] work.” Second, the DMCA prohibits the trafficking of technology designed to circumvent an access control system. Finally, it also forbids the trafficking of technology designed to circumvent a copy control system.

A person need not actually infringe a copyright to violate the DMCA; the statute is concerned with circumvention, not infringement. The constitutionality of the DMCA has been upheld against Due Process Clause, Copyright Clause, and First Amendment challenges.

In a well-known application of the DMCA, members of a motion picture association obtained a preliminary injunction against a web site that distributed DeCSS software code. The motion picture industry used an encryption algorithm called CSS to encrypt the movie content on DVDs. In October of 1999, a Norwegian teenager broke the encryption and wrote the DeCSS algorithm to circumvent the DVD access control technology.

88. See id. § 1204(a).
89. Id. § 1201(a)(1)(A).
90. See id. § 1201(a)(2).
91. See id. § 1201(b)(1).
95. Id. at 214.
96. Id.
method anti-trafficking provision of the DMCA. In addition, the court held that the affirmative defense of fair use did not apply because the DMCA concerns *circumvention*, not copyright infringement; also, Congress did not explicitly provide a fair use exception for the DMCA.

**B. How Does Digital Rights Management Work?**

In addition to the legal content protection afforded by Congress through the DMCA, the technological measures themselves go to great lengths to protect content. One such technological measure is DRM. A common DRM system has three main components: a rights authority, a content player, and encrypted content. The content player usually a software application installed on a particular physical device. The content player utilizes an application-specific or device-specific identification. The content player needs a specific license (or digital certificate) from the rights authority to obtain the ability to play each piece of encrypted content. This license confers specific rights over the encrypted content, such as the right to play it a certain number of times within a certain time span, or the right to make a certain number of copies, or the right to play on certain devices.

Each time the user requests a license, the rights authority communicates with the content player to authenticate that the content player is a valid, compatible application and that the content player has authenticated its connection to a specific physical device. Then, at the time the user downloads content, the rights authority sends along a digital license specifying the rights to that content. Sometimes the license accompanies the content file, and sometimes it is obtained as a

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97. *Id.* at 217.
98. *Id.* at 219.
100. *See What is Windows Media DRM*, supra note 99, at ¶ 3.
102. *See What is Windows Media DRM*, supra note 99 at ¶ 3.
103. *See id.* at ¶¶ 1-3.
105. *See id.*
separate file in a location where the content player can find it.\textsuperscript{106} In this way, the content owner can “manage” the digital rights of each copy it distributes, through its rights authority.

The content owner does not care how many copies of the encrypted content are made or distributed, because each user must obtain a license from the rights authority in order to use the content.\textsuperscript{107} If a particular device is compromised, the rights authority can revoke that particular license.\textsuperscript{108} And although no encryption system is flawless, the inevitable security breaches caused by professional pirates who violate the DMCA fall beyond the scope of this paper. Similarly, the distribution of unencrypted, circumvented copies by these pirates also falls outside this paper’s scope. Due to the ease with which content owners will encrypt each piece of content with an asymmetric key,\textsuperscript{109} breaking the encryption on a large scale will become prohibitively expensive for most would-be pirates; completely effective content control will be the norm, not the exception.

\textbf{C. How Do the Encoding Rules Work?}\textsuperscript{2}

In October of 2003, the FCC, pursuant to its statutory mandate “to assure the commercial availability, to consumers of multichannel video programming . . . of converter boxes . . . not affiliated with any multichannel video programming distributor,”\textsuperscript{110} adopted much of a “Memorandum of Understanding . . . reached by representatives of the cable television and consumer electronics industries.”\textsuperscript{111} This decision, widely-known as the Plug and Play Agreement, essentially allowed for the manufacturers of TVs and set-top boxes to build in one-way digital compatibility with the cable system, eliminating the need to rent a digital set-top box directly from the cable company. The Plug and Play Agreement requires cable companies to “separate out conditional access or security functions from other functions and make available modular

\begin{itemize}
\item \textsuperscript{106} See id.
\item \textsuperscript{109} “An asymmetric encryption system uses two keys: one public and one private. The public key is not kept secret and allows anyone to encrypt a message, but the message can only be decrypted by the intended recipient who holds the private (secret) key.” Aaron Perkins, Comment, Encryption Use: Law and Anarchy on the Digital Frontier, 41 Hous. L. Rev. 1625, 1628 n.16 (2005).
\item \textsuperscript{110} 47 U.S.C. § 549(a) (2004).
\item \textsuperscript{111} \textit{Plug and Play Decision}, supra note 5, at ¶ 2.
\end{itemize}
security components, also called point of deployment (‘POD’) modules.112

Under this agreement, the coaxial cable cord would plug directly into a standardized POD, and the POD would plug into a standardized socket in a consumer electronics-manufactured TV or receiver. Cable customers would need to obtain PODs directly from their cable provider, because each POD is registered to a specific user and decrypts the digital cable signal from the cable plant. But when the signal leaves the POD unencrypted and enters the receiving device, what prevents the user from making perfect digital copies of the digital cable content? This is where the encoding rules come into play.

The encoding rules set caps on the levels of copy restriction based on currently defined business models.113 The devices built to accept PODs must recognize and comply with the encoding rules.114 Digitally encoded content can signal four different copy restriction states: (1) copy never, (2) copy once, (3) copy freely, and (4) copy no more.115 The currently defined business models, along with the FCC-imposed limits on copy restrictions, are:

1. Unencrypted broadcast television — no copy restrictions may be imposed;
2. Pay television, non-premium subscription television, and free conditional access delivery transmissions — one generation of copies is the most stringent restriction that may be imposed; and
3. [Video on Demand] VOD, [Pay-Per-View] PPV, or Subscription-on-Demand transmissions — no copies is the most stringent restriction that may be imposed, however, even when no copies are allowed, such content may be paused up to 90 minutes from its initial transmission.116

CableLabs, a consortium of cable operators, designed the POD interface and certifies all one-way digital receiving device designs (at least once) to determine if they meet the specification and comply with the encoding rules.117 And in each consumer home, every receiving device will be

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112. Id. at ¶ 5. PODs are also known as CableCARDS. Id. at ¶ 19 n.45. They are the same size and shape as a PCMCIA card.
113. 47 C.F.R. § 76.1904(b) (2004).
114. Plug and Play Decision, supra note 5, at ¶ 38.
117. Id. at ¶ 38.
authenticated by checking for a digital certificate that verifies that the device is approved.

A receiving device cannot record ‘copy never’ content, but it can pause it for up to 90 minutes. A receiving device can make one copy of ‘copy once’ content, and thereafter it can only send the content out of approved outputs after changing the copy restriction to ‘copy no more.’ Finally, ‘copy freely’ content may be copied without restriction. This combination of encryption, encoding, and device certification and authentication allows content owners to prevent unauthorized distribution of their content.

D. How Does the Broadcast Flag Work?

Because unencrypted broadcast content must be marked ‘copy freely’ under the encoding rules, the FCC also devised a method for preventing the widespread distribution of high-quality digital broadcast content through the Internet. “[R]edistribution control is a more appropriate form of content protection for digital broadcast television than copy restrictions.” For example, primetime news broadcasts must be unencrypted according to the encoding rules of the Plug and Play Agreement; this is the kind of content for which viewers need no special decryption setup to view. Although Tom or Kelly or any other information consumer may, by default, receive a free and unencrypted digital broadcast of ABC Nightly News from ABC, ABC may not want Tom and Kelly to have the ability to make a perfect digital copy of the ABC Nightly News and distribute it to everyone else on the Internet. The solution was to insert an ATSC standard flag, or “broadcast flag,” into such content. In principle, digital TV receivers would all be manufactured to recognize and effectuate the broadcast flag to prevent the content from being distributed over the Internet. The details of the broadcast flag implementation have yet to be decided.

119. Broadcast Flag Decision, supra note 6, at ¶ 5.
120. Plug and Play Decision, supra note 5, at ¶ 65.
122. Broadcast Flag Decision, supra note 6, at ¶¶ 12-21.
123. Id. at ¶ 39.
124. Id. at ¶¶ 53-55.
III. DIGITAL CONTENT CONTROL AND FAIR USE

This paper has described fair use in the analog world, and also how technology and law can protect content in the digital world. Now this paper will proceed to argue that the fair use doctrine is no longer necessary as applied to controlled digital content. First, DRM or encoded content no longer fits the definition of a pure public good. Applying either Gordon’s or Ku’s fair use tests weighs against a finding of fair use. And although a comparison of yesterday’s fair use rights with tomorrow’s reality highlights many differences, fair use remains an affirmative defense, not a direct cause of action. Therefore, there is rarely a need or ability to invoke fair use privilege for DRM or encoded content.

A. Encrypted or Encoded Copyrighted Digital Goods Will No Longer Be “Public Goods”

As mentioned above, a public good has two main characteristics: the good’s value does not diminish with each additional user of the good, and the good is available to all whether or not they help offset the costs associated with the good. However, DRM-protected or encoded digital content exhibits neither of these characteristics.

First, under a DRM regime, each copy of a particular piece of content works as a separate good. Whereas unencrypted digital content may be perfectly copied and freely enjoyed by many, each piece of DRM content can be enjoyed only by the original user. Any uses beyond the original use are eliminated by the need to acquire additional usage rights. Because each good is useless without a license, its value does diminish for each user beyond the original.

Second, DRM and encoding rules prevent the widespread availability of digital content. DRM can allow only those who pay for the content to use the content through licenses, no matter how many copies of the encrypted content are widely distributed. Complementarily, encoding rules prevent the copying and further distribution of the encoded content beyond the original user, accomplishing the same result. Even content as commonplace as unencrypted broadcast digital content will be protected from Internet distribution with the broadcast flag. In other words, technology solves the free-rider problems associated with public goods by transforming them into private or quasi-private goods.

125. See infra Part I.C.
B. Gordon’s Market Failure Fair Use Test Is Not Met

Applying Gordon’s market failure test suggests against finding a fair use right for digital content subject to access and copy control systems. Specifically, DRM and encoding greatly reduce the chance of market failure by placing the power (to allow or disallow the copying or sharing of content) in the hands of the copyright owner, instead of the content consumer. This significantly reduces transaction costs because the copyright owner can license and enforce its rights through an automated system. The copyright owner can obtain near-perfect information about the market for such digitally-locked works by tracking the monetary value of the rights granted in a database. And consumers will know that if they want to access certain content, they must do so through the content owner’s rights authority. Of course, this assertion makes one primary assumption: that these digital locks will work. If an experienced hacker wants free access to certain content, she will have it; it is only a matter of time. But given the fact that such locks are becoming more sophisticated and are being built into not only the content and applications, but also into the physical devices, they will likely work for most of the world. Again, this proposition rests on the plausible but broad assumption that digital locks will become so easy to use that they will deter not only technologically, but also economically, any would-be pirates.

Because DRM and encoding rules will pre-empt the market failure problem for digital content, the second and third factors need not be considered in order to conclude against recognizing fair use. But even if market failure were somehow to occur in the digital content distribution markets, the potential harm to the content producers weighs strongly against recognizing fair use for protected digital content. All it takes is one copy, free and clear both technologically and legally, to strip content owners of necessary revenue. The logic applied to content broadcasters and music producers does not apply in every area of copyright. For instance, in movie making, the creative endeavor rests with the copyright owners. If all movies become instantly free in perfect quality, then movie makers will not bother to put together the creative effort to hire actors, write a script, and film a movie. This is in contradistinction to the music industry where the artists (the creative entities) make very little from selling the copyright for their works to big studios, or the broadcast industry where revenues come from advertising. Even if the market failed, the copyright owners would only need a small amount of time to patch their protection methods or revoke the necessary certificates. This

127. See Ku, supra note 80, at 570.
makes any potential market failure only an intermediate market failure. This argues against court intervention and imposition of traditional analog fair use rights to digital content controlled by DRM or encoding.

C. Ku’s Creative Destruction Fair Use Test Is Not Met

Ku’s creative destruction test also comes out negative in the context of digital content access control. As with the market failure test, DRM and encoding rules prevent the realization of the creative destruction test’s first factor. Specifically, consumers have no independent ability to make copies of the content. Consumers cannot make additional copies of ‘copy never’ or ‘copy once’ encoded content, and cannot make additional copies of DRM-protected content without a license from the rights authority. Ku argues that the market for copying equipment and services has, in many instances, creatively destroyed the traditional market in copyrights; consumers buy the equipment instead of the content. But with content protected by DRM and encoding rules, the opposite occurs: consumers usually get the content player applications for free but pay for the content (or license) itself. Therefore, the Ku creative destruction test also fails to require the same set of traditional fair use rights for the world of digital content access and copy control as exist in the world of analog content.

D. Non-Economic Fair Use Rationale

Not only can digital content owners eliminate traditional fair use rights through the use of digital content protection, but they should be allowed to as well. This paper focuses primarily on fair use viewed through an economic lens. Fair use does not fit into the Gordon or Ku economic fair use models when applied to digital content protection, but some would argue that this analysis should view copyright law primarily through a democratic lens and only secondarily through an economic lens. In his article Copyright and a Democratic Civil Society, Neil Netanel advances a view that treats copyright as more than just an economic “allocative efficiency.”

Netanel would classify the views advanced in this paper, based on market failure theories such as those espoused by Gordon, as a neoclassicist economical approach that ignores important “democracy-
Copyright is a limited proprietary entitlement through which the state deliberately and selectively employs market institutions to support a democratic civil society. Copyright law provides this support in two fundamental ways. First, through its production function, copyright encourages creative expression on a wide array of political, social, and aesthetic issues. Second, through its structural function, copyright serves to further the democratic character of public discourse.

Netanel expressly disagrees with "Professor Gordon's adherence to neoclassicist economics," saying that it "leads her to treat fair use as an anomalous deviation from copyright's marketplace norm, available only in occasional cases of incurable market failure." Despite Netanel's assertion that neoclassicist "intellectual property scholars make a careful [yet 'ultimately unsuccessful'] attempt to cabin their analysis within a framework that recognizes copyright's democracy-enhancing goals," this paper's ultimate conclusion that digital content protection vitiates the need for fair use rights does not ignore "copyright's democracy-enhancing goals." The near-perfect control allowed by digital content protection will not stamp out the non-economic functions of copyright. This paper does not argue that all future content will digitally lock out fair use rights, but only that some digital content owners who choose to leave out fair use rights should not be burdened with the obsolete analytical fair use paradigms of the analog world.

As in the analog world, the digitally-protected content world will feature different kinds of content protected in different ways. A creative and opinionated citizen may exercise his democratic rights to share thoughts with the rest of the world by posting content to the Internet, free and clear of copy restrictions. On the other hand, the owner of a popular song may strike a different democratic bargain by sharing pieces of content only for a price. Just as any individual may freely choose between recording her communications in a personal diary or sharing them through a public newspaper column, a digital content owner's
decision about how much of his creation to share and at what price constitutes an exercise of democracy in and of itself.

Other commentators have raised non-economic issues with digital content protection mechanisms. For instance, the Center for Democracy and Technology (CDT) argues that mandated protections such as the broadcast flag “raise[] copyright policy and First Amendment concerns.” The CDT points out, consistently with this paper, that “it is extremely difficult to ‘code’ the legal principle of fair use comprehensively into any copy protection scheme,” and that to do so might stifle innovation in the field of fair use by “hard-wiring” it immutably into the content. But the CDT also expresses worry that broadcast content with educational or newsworthy value will be “flagged” in a way that might interfere with traditional fair use rights, such as by interfering with newsworthy content that loses most of its value upon initial publication or with public domain content: “concerns about fair use are acutely felt for news and public affairs.”

However, arguing that content owners should retain the ability to eliminate traditional fair use rights for specific digital content (as advocated by this paper) differs significantly from arguing for the abolishment of all fair use rights, including analog fair use rights. Furthermore, the CDT’s stance relies on the incorrect premise that “[f]air use’ is a specific legal category, protected under the First Amendment.” Contrary to the CDT, the United States Court of Appeals for the Second Circuit has recognized that “the Supreme Court has never held that fair use is constitutionally required, although some isolated statements in its opinions might arguably be enlisted for such a requirement.” Aside from a lack of constitutional basis, fair use remains an affirmative defense to infringement, not its own cause of action; the question of which uses (if any) should be classified as “fair” for content stripped of its digital locks falls outside the scope of this paper. This paper does not argue against traditional fair uses of content; instead, it merely argues that consumers must first get past private digital content protection before infringement (and eventually fair use) could occur, and that private parties should not be forbidden to set these locks.

141. Id.
142. See id.
143. Id.
144. Id.
146. See infra Part III.F.
E. Old vs. New: How the Old Fair Use Rights Will Look Under A New Content Control Regime

Old analog fair use rights do not necessarily correspond with the rights and possibilities of the digital content world. A closer look reveals, however, that analog fair use rights do not matter as much in that world because DRM and encoding rules change the very nature of the market.

1. Time-Shifting

In today’s analog world, a consumer who must leave the house or who receives a phone call halfway through an ordered pay-per-view movie can hit the “record” button on his VCR and watch it later. Time-shifting is commonplace and taken for granted; some recording devices even allow content modification by skipping commercials. However, time-shifting of DRM-protected or encoded content will not remain so easy.

Under the FCC’s encoding rules, pay-per-view content may, at most, be encoded as “copy never.”147 “[A]s a practical matter the negotiating power of content providers will force the marketplace adoption of the most restrictive treatment possible under each cap.”148 Therefore, pay-per-view content will likely be transmitted as “copy never.” To mitigate the harsh effects of copy never content, and as a “throwback” to current fair use rights, the FCC mandated that consumers be able to pause copy never content for at least 90 minutes.149 Unlike copy never content, neither copy once nor copy freely content will have a significant impact on time-shifting practices.

Under a DRM regime, the consumer’s ability to use the content at different times will depend entirely on the usage rights granted for the copy. These rights could range from “watch only once” to “watch any number of times within 7 days.” The most abrupt change? It will no longer be the consumer, but the copyright owner, who makes this decision (subject to the copyright owner’s economic considerations).

2. Space-Shifting

The rationale for space-shifting states that a consumer who rightfully acquires content should be able to privately, noncommercially use that content whether in the living room, the kitchen, the gym, or on the go. A consumer can tape the X-Files on the living room VCR and watch it later in the bedroom VCR or even the minivan VCR.

148. Plug and Play Decision, supra note 5, at ¶ 73.
149. 47 C.F.R. § 76.1904(b)(2).
Under the encoding rules, “copy never” content cannot be space-shifted for the same reasons that it cannot be time-shifted. Space-shifting requires making a copy, which cannot be done with “copy never” content. “Copy once” encoding also hinders space-shifting, because the output from the sole copy of the content from the original recording/receiving device will be marked “copy no more.” Even the broadcast flag protection for unencrypted “copy freely” content may hinder space-shifting, particularly for consumers who like to space-shift their content from one device to another over a Wi-Fi connection or the Internet. However, the FCC has solicited comments about how to make the broadcast flag work within a well-defined personal digital network environment.

Under a DRM regime, a consumer’s ability to space-shift will also depend on the rights license acquired from the content owner. Perhaps, when a consumer buys a content license from the rights authority, the consumer could pay an extra fee to list all consumer-owned devices and obtain a license to cover use of the content with each device.

3. Educational Use / Critical Use

Though not as directly affected, educational and critical uses may also differ under DRM and encoding rules. For instance, whether or not the use falls under educational fair use, a teacher has the ability to tape record a biology special on the Discovery Channel and show it to his students the next day. But under the encoding rules, the Discovery Channel could be encoded “copy once.” In that case, the teacher could record the program, but to show it to his students he would need to bring a really long output wire or unplug and bring in the recording device itself. Under a DRM regime, the teacher would be subject to the same prices and usage rights as non-teachers for the program, unless the rights authority were to authenticate noncommercial educational devices and offer discounted licenses for such uses.

Critical uses will probably not differ much under DRM and encoding rules. But it may be more difficult for the critic to obtain a copy of content to watch or listen to over and over again for evaluation purposes. And some DRM-type applications, such as eBook, have settings that do not allow the cutting and pasting of excerpted content.

4. First Sale Doctrine

In the analog world, content owners engage in many levels of price discrimination. In the movie context, the content owners first collect
from theater audiences. Then they charge a little less for the pay-per-view release. Then they charge a little less for the premium channel release. Finally, they reap their last profits through selling copies of the movie on DVD. Historically, this has been the last threshold of price discrimination, because at the point of sale of the DVD the first sale doctrine steps in to relieve the copyright owner of the right to further control the transfer of that copy. The buyer of the DVD can then resell it for more, less, or give it away for nothing.152

“Digital technologies offer an unprecedented means for perfecting the pricing of creative works.”153 Arguably, the first sale doctrine will not apply to future digital content because consumers will purchase a license to use the content instead of a copy of the content. Though copyright owners could preserve the first sale doctrine by making these licenses transferable, they may derive a greater benefit from requiring all potential content users to go through the central rights authority. The different prices charged for the content could vary as drastically as the different temporal and spatial usage rights that could be assigned. In fact, DRM could even reduce the cost of “buying” an unlimited use copy, because removing the buyer’s ability to resell the copy makes it less valuable to the buyer.154 But this could also raise the prices for old-fashioned unencumbered physical copies of the DVD.155 And “[i]f copyright owners make their works available solely by digital transmission, those who want to buy copies will simply be out of luck.”156

F. Why Carry Fair Use Forward? Fair Use as Affirmative Defense, Not Cause of Action

Some commentators argue that fair use rights should be embedded in any future DRM or encoding architectures.157 Although technologically feasible, why would content owners carry forward traditional fair use rights into a system that inherently prevents the market failures and creative destruction that would warrant applying a fair use doctrine in the first place? If embedding fair use rights into DRM or encoding rules would increase transaction costs, then content owners will likely leave them out. If Congress determines that the social benefits of “fair use” outweigh these saved transaction costs, then it

154. See Reese, supra note 153, at 620.
155. See id.
156. Id. at 621.
should require fair use rights for digital content copy and access control systems. However, these social and psychological considerations (such as the public being accustomed to a certain set of historical fixed use rights) remain distinct from economic considerations (the focal point of this paper). Labeling these extra rights “fair use” rights, when the relevant market exigencies no longer exist, serves as a euphemism for consumer pleas to maintain the free and unregulated copying status quo. In sum, “fair use” in the digital world will mean an artificially created set of rights, whereas the “fair use” of the analog world arose out of necessity.

That is why fair use remains an affirmative defense, not an independent cause of action. A consumer cannot sue a copyright owner for fair use. Thus, a licensee of DRM-protected content cannot sue the content owner under copyright law for failing to permit time-shifting of that particular content. The licensee could only assert a fair use defense if it copied the content and was sued for infringement by the content owner. But DRM does not allow the licensee to copy the content outside of the license, so the licensee will have neither the need nor the ability to invoke fair use against the content owner. In this way, digital content copy and access control methods eliminate the need for a fair use doctrine. “Indeed, the economic logic of the celestial jukebox, when superimposed on the text of the Copyright Act, might produce a law that contains no exemptions from liability at all.”

CONCLUSION

In the year 2010, Tom and Kelly disdain the abrupt transition between a “copy freely” analog content regime and a tightly controlled DRM and encoding rules regime. In the analog world, they could record their pay-per-view movie and watch it later or elsewhere. In the world of digital content locks and encoding, Tom and Kelly have no such right or ability. Evolving technological norms change social and legal norms. The economic and technological factors that gave rise to a fair use exception for analog consumer copying will no longer exist under a digital lock regime.

The high level of digital content control made possible through DRM and encoding rules transforms copyrighted works from public goods into private goods. Digitally controlling access to these goods eliminates the market failure that often necessitates application of the fair use doctrine. Content owners no longer face prohibitively high transaction costs in negotiating digital usage rights with consumers.

158. Goldstein, supra note 153, at 207. Goldstein describes the concept of a “celestial jukebox” as one “invok[ing] the image of a technology-packed satellite orbiting thousands of miles above earth, awaiting a subscriber’s order — like a nickel in the old jukebox, and the punch of a button — to connect him to a vast storehouse of entertainment.” Id. at 187.
because of the automation of this process. Consumers no longer possess the choice to make copies or not; instead, they must acquire a license to use content from the content owner. These qualities of DRM and encoding technologies render the doctrine of fair use less than necessary in the world of digitally-protected content.