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Copyright Basics: From Earliest Times to the Digital Age

Laura N. Gasaway

I. Introduction and the History of Copyright

This year marks a momentous time in the history of copyright law; 2010 is the 300th anniversary of the British Statute of Anne,\(^2\) the first modern copyright law that influenced our own Congress to enact the first U.S. copyright law just three years after ratification of the Constitution. It is also the 100th anniversary of the effective date of the Copyright Act of 1909,\(^3\) the statute that immediately preceded the current Act. This is also a time when there is tremendous strain on copyright law brought about by the digital environment. In my opinion, the strain also highlights the fact that the United States has moved away from a principled approach to copyright and has instead focused on solving particular problems for individual copyright industries. Thus, the statute itself lacks both coherence and a theoretical underpinning that makes sense to ordinary people. This has resulted in greater tensions between the users of copyrighted works and the owners of copyrights in unprecedented new ways, further complicated by the advent of the digital age and the Internet. Other papers in this symposium issue will explore some of these tensions and offer potential solutions.

As long as there have been artistic, literary, and musical works produced, there have been unscrupulous persons who copied others’ creative works and appropriated it as his or her own. Perhaps it was just admiration of the creativity of the artist or poet or perhaps a desire to gather acclaim for one’s own supposed genius. Or, in the case of the Great Library at Alexandria, founded in 290 B.C. by Ptolemy I, it was a desire to build a great library. Ptolemy asked other rulers

\(^{1}\) Associate Dean for Academic Affairs & Professor of Law, University of North Carolina-Chapel Hill.

\(^{2}\) Statute of Anne, 1710, 8 Ann., c. 19 (Eng.).

around the known world to lend him texts which scribes would then copy for the library. Additionally, when ships landed at the port of Alexandria, vessels were searched, not for contraband, but for books and maps. These were confiscated, copied, and then returned to their owners, and the copies were added to the library. There were complaints, however, that sometimes Ptolemy kept the original for his library and returned the copy to the owner,\(^4\) which puts a whole new spin on literary piracy!

In the ancient world, the copying of a book or some other work occurred through a scribe obtaining access to an original work and meticulously copying that work by hand. At the time, copyists felt at liberty to “improve” the text of the original author or to simply forge the text or a large part of it. This might include the addition of embellishments from the copyist or the omission of certain parts of the original author’s text as the copyist acted as a censor. As a result, the earliest copies of a work were the most accurate and therefore considered the most valuable. Provided that a person had both the time and the skill to copy a book, there was no legal prohibition on them doing so. In fact, the main restriction on the production of copies of a work likely was securing sufficient access to the physical original in order to complete the copy.\(^5\)

The earliest recorded violation of this nebulous property right is an often told but likely apocryphal tale of a tale of a quarrel between Saint Columba and his teacher Finnian of Moville. Legend says that in the year 567 Saint Columba, sitting up all night, furtively made a copy of Finnian’s Psalter,\(^6\) which Finnian had lent him. The Abbot protested and claimed not only the original, but also the copy, as his property. The dispute eventually went before King Diarmed, who issued judgment for the Abbot saying, “To every cow her calf, and accordingly, to every book, its copy.”\(^7\)

Prior to the invention of the printing press, thousands of copyists were employed in various monasteries to reproduce manuscripts. There was little need for copyright laws because the scale of copying was necessarily so small. Even had copyright law existed at that time, most of the religious texts, hymns, and other

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\(^6\) A psalter is a collection of psalms for liturgical use.

\(^7\) AUGUSTINE BIRRELL, *SEVEN LECTURES ON THE LAW AND HISTORY OF COPYRIGHT IN BOOKS* 42 (New York, G.P. Putnam’s Sons 1899).
works that were copied probably would not have qualified for copyright protection today, but would be considered to be public domain\(^8\) works due to their age. All of this copying did not amount to a hill of beans since one rogue monk could not make a dent in the market for such works.\(^9\) It took the invention of moveable type to make the reproduction of copies important enough to be controlled by law.\(^10\)

It was nearly 1,000 years later before the first authentic complaint of literary piracy in English law was recorded. Printer Wynkyn de Worde sued for the protection of his right to print a grammar treatise by Robert Witinton in 1553. De Worde obtained “a privilege” for the second edition, which prevented further misappropriation, but Peter Trevers had reprinted his version from the 1525 edition, so de Worde complained of piracy.\(^11\)

The advent of the printing press brought about many changes in society. Those early printers were highly literary persons who either wrote or translated from another language the books they printed. In England, with a small population of literate individuals at the beginning of the 16th century, the market became flooded with books, and foreign imports were banned. At the same time, books began to be printed, which challenged the authority of the church and king. As a form of censorship, Henry VIII began to grant licenses for printing purposes.\(^12\) The Stationer’s Company was chartered in 1556 by Phillip and Mary for the primary purpose of preventing the propagation of the Protestant Reformation. The Stationer’s Company enjoyed a monopoly since no author could publish his or her writing except through the Company. The Company also could control the price paid to authors. This is where the term “booksellers’ monopoly” originated.\(^13\) This licensing system flourished until 1694, after which time piracy and plagiarism abounded.\(^14\)

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\(^8\) Those works on which copyright has expired.
\(^9\) See Birrell, \textit{supra} note 7, at 47-48.
\(^11\) Id. at 21.
\(^12\) Historyofcopyright.org, Early Writings & the Beginning of Book Printing (2005), http://www.historyofcopyright.org/pb/wp_27fa9c0d0/wp_27fa9c0d0.html?0.22301878884365667.
The author owned the manuscript, but the true property interest belonged to the owner of the printing press. The important right was the right to make and sell copies.\textsuperscript{15} Authors and printers protested loudly, and during the reign of Queen Anne, in 1710, Parliament responded with the first copyright law.\textsuperscript{16} This Statute of Anne recognized authors as the fountainhead of copyright protection, a very revolutionary concept. Further, copyright would exist only for limited times and not be perpetual.\textsuperscript{17} So, Queen Anne could be hailed as the Queen of Copyright, although she clearly is better known for lace and furniture.

Prior to the adoption of the Constitution in 1787, all of the 13 colonies except Delaware had passed laws conferring the right to make and circulate copies publicly upon the authors for limited times after publication.\textsuperscript{18}

II. CONSTITUTIONAL PROVISIONS

Federal authority to regulate copyright is found in the U.S. Constitution, Article I, Section 8, Clause 8: “The Congress shall have power to promote the progress of science and the useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.”\textsuperscript{19} The primary purpose of copyright is not to reward the author, but to secure “the general benefits derived by the public from the labors of authors.”\textsuperscript{20} The grant of a limited monopoly to authors is predicated on the premise that the public benefits from the creative activities of the authors. The exclusive rights granted to the copyright owner are a necessary condition to the full realization of such creative activities.

To analyze the Constitutional clause requires an examination of each of its phrases. “To promote the progress of science and the useful arts,” basically means to promote learning, and among whom was Congress to promote learning but the public? “By securing for limited times...” The word “securing” recognizes congressional power to enact copyright legislation. The phrase “for limited times” actually serves to limit congressional power. Enacting perpetual copyright...
protection thus would be unconstitutional. The term of copyright under the original 1790 Act was fourteen years, and under the 1909 Act was twenty-eight years. At the end of the term, the copyright owner could apply for an additional twenty-eight year term, for a maximum of fifty-six years. Under the original Copyright Act of 1976 as originally passed, the term was life of the author plus fifty years and seventy-five years from the date of first publication for works of corporate authorship and for anonymous or pseudonymous works. In 1998, the term was extended to seventy years after the death of the author and ninety-five years for corporate, anonymous and pseudonymous works.

As to interpreting “to authors...”, the word “author” has been defined broadly as anyone who originates a work. In the case of works for hire, the employer or other person for whom the work was prepared is considered the author. “The exclusive right...” This phrase emphasizes the power of Congress under the Constitution to grant an exclusive right to authors. “To their respective writings...” is the phrase that loosely defines what may be protected. The term “writings” has been construed quite liberally by the courts, recognizing that in 1789 many types of works were not yet in existence; as new media is developed, works created in those forms also must be afforded protection. The Supreme Court has said that writings include any physical rendering of the fruits of creative, intellectual or aesthetic labor. Not everything qualifies as a writing, however. The following have been held to lack sufficient intellectual labor to constitute a writing: facts, ideas, processes, discovers, concepts, a trademark, blank charts, etc. Intellectual labor is not the same requirement as originality. The term suggests an absolute standard of creativity, albeit very slight.

In order for a work to qualify as a writing, it must be embodied in some tangible form; i.e., some material form capable of

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21 Copyright Act of 1790, ch. 15, 1 Stat. 124, § 1 (repealed 1831).
23 Id.
26 Burrow-Giles Lithographic Co. v. Sarony, 111 U.S. 53, 57-58 (1884) (“an author . . . is ‘he to whom anything owes its orig[i]n . . . ’.”).
28 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 1.07 (2009).
30 1 NIMMER, supra note 28, § 1.08 [C][1], [D], [F].
31 id. § 1.08 [C][1].
identification and having a more or less permanent endurance. Thus, a live television broadcast or the performance of a play or a musical composition is not per se a writing. Although an author has the right to control performance of his or her work, a performance does not make it a writing. To achieve tangibility, the performance must be recorded either earlier or simultaneously.

III. COPYRIGHT BASICS

A. COPYRIGHT DEFINED

Copyright is defined as the legally secured right to publish and sell both the substance and form of a literary, musical or artistic work. Copyright protects the form of expression and not the idea itself; it protects the literary work and not the idea for the plot. The essence of copyright is to prohibit copying of protected works.

The current statute is the Copyright Act of 1976, which became effective January 1, 1978, and is Title 17 of the United States Code. It has been amended several times, including once to comply with the terms of the major international copyright treaty, the Berne Convention, to which the United States became a signatory in 1989, almost a century after Berne was first negotiated and signed by European countries.

B. REQUIREMENTS

Registration of the work with the U.S. Copyright Office is optional, and may be done anytime during the life of the copyright. The work must be registered, however, if the copyright holder wants to sue infringers in order to enforce his or her rights. In a way, the opposite of copyrighted works are those in the public domain. The public domain includes works on which the term has expired and those which were never protected by copyright because of the failure to

32 1 id.
38 17 U.S.C. § 408.
39 Id. § 411.
comply with statutory requirements in existence at the time, such as notice of copyright.\textsuperscript{40} Normally, materials produced by the U.S. Government are not subject to copyright protection but may be freely copied by all.\textsuperscript{41} They are sometimes referred to as public domain works. State governments may claim copyright in their works, although, according to the U.S. Copyright Office, governments cannot claim copyright in "official documents."\textsuperscript{42} This typically means no claim of copyright applies to judicial opinions or the text of legislation.

To obtain a copyright, two things are required: originality and fixation.\textsuperscript{43} When an author creates an original, fixed work, copyright protection attaches automatically. Originality means only that the work owes its origin to the author, independently created, and was not copied from other works.\textsuperscript{44} Thus, a work will not be denied protection just because it is similar to a work previously produced.\textsuperscript{45} Included in the originality requirement is at least a smidgen of creativity. There must be some element of creativity, however minimal, but even a most banal effort may yield enough to qualify for copyright.\textsuperscript{46} Not every effort qualifies, however. For example, the Copyright Office denied copyright registration to items, such as a cardboard star covered in aluminum foil, as simply lacking enough creativity to qualify for copyright.\textsuperscript{47} It is difficult to determine the amount of originality required; frequently it necessitates judicial line drawing, but any distinguishable variation will meet the originality requirement.\textsuperscript{48}

The second requirement, fixation, requires that a work be fixed in a tangible medium of expression now known or later developed.\textsuperscript{49} This means it could be handwritten, recorded on DVD, painted on canvas, or stored on a server so that others may access it. Most works are fixed today. Even live television broadcasts may be fixed by simultaneous videotaping.\textsuperscript{50} Works that are not fixed include improvisational theater (which would have to be videotaped), extemporaneous speeches for which there is no written text, and sidewalk art that washes away with the rain.

\textsuperscript{40} For example, publication without notice under the 1909 Act resulted in the work entering the public domain.
\textsuperscript{41} 17 U.S.C. § 105.
\textsuperscript{42} 1 NIMMER, supra note 28, § 5.12[A].
\textsuperscript{43} 17 U.S.C. § 102(a).
\textsuperscript{44} 1 NIMMER, supra note 28, § 108[A].
\textsuperscript{45} 1 id.
\textsuperscript{46} 1 id. at § 2.01[B].
\textsuperscript{48} 1 NIMMER, supra note 28, § 2.01[B].
\textsuperscript{49} 17 U.S.C. § 102(a) (2008).
\textsuperscript{50} See id. § 101.
Notice of copyright is no longer mandatory, but it was under earlier statutes. This means that failure to include a notice on a work today does not result in a loss of copyright for the owner, nor does it mean that the owner does not claim copyright. It simply means that the owner has chosen not to include a notice. Most copyright owners still include a notice of copyright since it alerts the world that someone is claiming rights, and it also tells anyone interested in seeking permission to use the work whom to contact. Moreover, inclusion of the notice on the work deters those individuals who, in good faith, do not want to infringe the copyright by telling them that it is protected. It has an important legal benefit too: inclusion of notice on the work cuts off a defendant’s ability to mitigate damages by claiming innocent infringement. The elements of copyright notice include the copyright symbol, ©, the date of first publication, and the name of the copyright holder.

C. CATEGORIES OF PROTECTED WORKS

There are eight categories of copyrightable works. Some of the categories are self-explanatory, but others benefit from some explanation.

Literary works is the first category of copyrightable works. This includes all the works of fiction and nonfiction, compilations, such as electronic databases, and collective works, such as periodicals. Computer software is also considered a literary work for copyright purposes.

Musical works, including any accompanying words, are the second category of works for which copyright protection is available. This is the musical composition that may be expressed as sheet music, recorded on a phonorecord or stored digitally.

Dramatic works, including any accompanying music, also are subject to copyright protection. A dramatic work is a written work invented and set in order in which the narrative is told by dialogue and

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51 See id. § 401(a).
52 Id. § 405(b).
53 Id. § 401(b).
54 Id. § 102(a)(1).
57 1 NIMMER, supra note 28, § 2.05[A].
action, and the characters go through a series of events which tell a
connected story.\textsuperscript{59}

Similar to dramatic works, but occupying their own category,
are pantomimes and choreographic works,\textsuperscript{60} which were added to the
Copyright Act only in 1976. It took the advent of videotaping to fix
these works sufficiently to qualify for copyright protection.
Choreographic works are works primarily for the stage and do not
include social dance steps.\textsuperscript{61}

Pictorial, graphic and sculptural works\textsuperscript{62} are defined in the Act
to include two- and three-dimensional works of fine, graphic and
applied arts, photographs, prints and art reproductions, maps, globes,
charts, diagrams, and models.\textsuperscript{63} This represents the largest category of
works and perhaps has the greatest variety. First, the category
contains all of the works of fine art and photography, along with all
scientific drawings, models, and three-dimensional works such as
mechanical drawings, maps, globes, engineering diagrams, etc.\textsuperscript{64} But
still, this is not what makes it the largest category. Instead, it is all of
the consumer trade goods that have a design aspect that makes this
category so large: greeting cards, dolls, games, toys, prints, pictorial
illustrations, china patterns, silverware designs, etc.

Motion pictures and other audiovisual works\textsuperscript{65} represent an old
category of works with something new added. Motion pictures\textsuperscript{66} have
been protected by U.S. copyright law since the early part of the 20\textsuperscript{th}
century, but audiovisual works\textsuperscript{67} were not mentioned until the 1976
Act. Thus, educational films and videos were included for the first
time, which raised interesting issues about public performance since
works in this category, by their nature, are meant to be performed.

Sound recordings\textsuperscript{68} have been protected under U.S. copyright
law only since 1972.\textsuperscript{69} They include works that result from the

\textsuperscript{59} See 1 NIMMER, supra note 28, § 2.06[A] (citing Daly v. Palmer, 6 F. Cas. 1132
(S.D.N.Y. 1868); O’Neill v. Gen. Film Co., 152 N.Y.S. 599 (N.Y. Sup. Ct. 1915)).
\textsuperscript{60} 17 U.S.C. § 102(a)(4).
\textsuperscript{61} See 1 NIMMER, supra note 28, § 2.07[B].
\textsuperscript{62} 17 U.S.C. § 102(a)(5).
\textsuperscript{63} Id. § 101.
\textsuperscript{64} See id.
\textsuperscript{65} Id. § 102(a)(6).
\textsuperscript{66} Motion pictures are defined as “audiovisual works consisting of a series of related
images which, when shown in succession, impart an impression of motion, together
with any accompanying sounds, if any.” Id. § 101.
\textsuperscript{67} Audiovisual works are defined in the Act as: “. . . works that consist of a series of
related images which are intrinsically intended to be shown by the use of machines
or devices such as projectors, viewers, or electronic equipment, together with
accompanying sounds, if any, regardless of the nature of the material objects, such as
films or tapes, in which the works are embodied.” Id.
\textsuperscript{68} Id. § 102(a)(7).
fixation of musical, spoken or other sounds.  The usual format for these works has been vinyl records, audiotapes, CDs and now other digital formats.

Architectural works were added to the Act only in 1990 after the United States joined the Berne Convention. Architectural works are basically the designs for a building embodied as the building itself, architectural blueprints, etc.

D. EXCLUSIVE RIGHTS

When one creates a copyrightable work, copyright attaches automatically. Authors then get a bundle of rights, referred to as the exclusive rights even though they are not as exclusive as the term might imply. The author may retain the copyright, transfer it or license it. The rights are divisible, so the owner may also transfer one right and retain all others. Individual rights may be licensed to various entities, and the licensing of these rights is extremely important in copyright.

Reproduction is the most important right. It is the hallmark of copyright and often is referred to as copying. The most common manifestation of the reproduction right is when the author transfers the right to reproduce the literary work in book copies and distribute them to libraries and bookstores. Reproduction in any form, such as copying in longhand, photocopying or tracing, counts as reproduction. With technology, one can reproduce in a whole variety of ways from photocopying, to scanning, to downloading from an electronic database, to cutting and pasting something found on the web. Just because it is technologically possible to reproduce a work does not mean that it is not infringement. People often ask why a reproduction is infringement when reproduction equipment is openly made and

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71 Id. § 102(a)(8).
74 17 U.S.C. § 101. The definition of architectural works specifically includes the overall form, arrangement, position of spaces, etc., but excludes individual standard features. Id.
75 See id. § 201(a)
76 These include the rights of reproduction, distribution, adaptation, public performance and display, as well as the right of public performance for sound recordings transmitted by digital means. See id. § 106.
77 Id.
78 Id. § 106(1).
sold. The manufacturers of reproduction equipment typically do not own copyrights, and further, the reproduction equipment has substantial non-infringing uses.

Distribution is a corollary right to reproduction. The right to distribute the reproduced copies also belongs to the copyright holder. Although “distribution” is not defined in the statute, in the past it meant distributing physical copies of copyrighted works. Today, posting something on the web is a type of distribution.

Adaptation is the right to prepare derivative works, and is very important to the copyright holder. This includes the rights to prepare the motion picture script from the literary work, prepare new editions, translations, etc. Musical arrangements also are adaptations, as are condensations such as the old Reader’s Digest Condensed Books.

The public performance right also belongs to the copyright holder. A public performance is defined as one that takes place in a public place or outside the normal circle of family and friends. Transmissions of works such as movies and music are also public performances, even though receipt of the transmission may be by people who are not physically located in the same place and who receive the performance at different times.

The display right is the right to display the work publicly, i.e., to show a copy of it either directly or with the aid of a machine or device. One normally thinks of the display right as attaching to works of fine arts, but it applies to copies of any works. Whole new display issues have arisen because of digital copies and viewing them on a computer screen.

For sound recordings, there is a relatively new, very specific exclusive right of public performance by digital means. Sound recordings currently do not have performance rights, so when recordings are played on the radio, all performance royalties go to the composer. The Recording Industry Association of America (RIAA) recognized that protection for digital performance by transmission was needed. So, the statute was amended in 1995 and again in 1998 to

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79 Id. § 106(3).
80 Id. § 106(2).
81 See id. § 101.
82 Id. § 106(4).
83 Id. § 101.
84 See id. § 101.
85 Id. § 106(5).
86 Id. § 101.
87 Id. § 106(6).
create this right, which is the basis of the current webcasting controversy.\footnote{90} Now radio stations that webcast pay royalties both to the composer and to the record company.\footnote{91}

\section*{IV. INFRINGEMENT, EXCEPTIONS, AND DEFENSES}

\subsection*{A. INFRINGEMENT}

Generally, when anyone violates one of the exclusive rights of the copyright holder, he or she has infringed the copyright. In order to succeed in an infringement suit, a plaintiff has to prove ownership and copying.\footnote{92} The following are aspects of ownership: (1) originality with the author; (2) copyrightability of the subject matter; and (3) compliance with applicable statutory formalities for registration in order to bring suit in federal court.\footnote{93} The copyright registration certificate constitutes prima facie evidence of ownership if the work is registered within five years after its first publication.\footnote{94} There are other ways to prove ownership of the copyright, but the registration certificate is the easiest.

Unauthorized copying is the essence of copyright infringement. A plaintiff can establish copying by direct evidence or by proving access and substantial similarity.\footnote{95} Access may be defined as a reasonable opportunity to copy.\footnote{96} It is often difficult to prove access unless the alleged infringed work is a very popular one with wide distribution or airplay. Substantial similarity is the second element needed to prove copying absent direct evidence. Courts compare the two works to judge substantial similarity, and the


\footnote{92} 4 NIMMER, supra note 28, § 13.01[A]-[B].

\footnote{93} 4 id. § 13.01[A].

\footnote{94} 17 U.S.C. § 410(c).

\footnote{95} 4 NIMMER, supra note 28, §§ 13.01[A]-[B].

\footnote{96} See Murray Hill Pubs'ns, Inc. v. Twentieth Century Fox Film Corp., 361 F.3d 312, 316 (6th Cir. 2004).
An important question is how similar the two works have to be to prove copying. Courts have used a number of tests to judge substantial similarity, such as the existence of common errors in the two works, the ordinary observer test, and striking similarity, which looks for the existence of elements so idiosyncratic that it virtually precludes independent creation.

B. EXCEPTIONS, LIMITATIONS, AND DEFENSES

There are a number of exceptions, limitations, and defenses to copyright infringement, but only a few are relevant for this discussion. Independent creation is a significant defense. Copyright law recognizes that even without copying, it is possible (though unlikely) that two very similar or even identical works might be produced. A defendant claiming independent creation bears the burden of proving that he or she created the work independently. Courts look at factors, such as how quickly the work was created, the defendant’s past history in creating copyrighted works, and the like.

Section 106 of the Copyright Act gives all the rights to the copyright holder, but sections 107-122 take rights away from the copyright holder. The most important of these exceptions and limitations for users of copyrighted works is fair use. Section 107 basically says that activity which would normally be infringement is excused because of the existence of certain factors. It is called the “safety valve” of copyright. The section reads “...the fair use of a copyrighted work, including such use by reproduction in copies...for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright.” Courts have held that these uses are illustrative only and that not all uses for scholarship or for criticism are fair use. The statute then lists four factors that a court must apply to determine whether a use is fair use: (1) purpose and character of the use; (2) nature of the copyrighted work; (3) amount and substantiality used; and (4) effect on the potential market for or value of the work.

\[97\] 4 NIMMER, supra note 28, § 13.03.
\[98\] 4 id. § 13.02[B].
\[99\] 4 id. § 12.01[B][2][b].
\[100\] See Taylor Corp. v. Four Seasons Greetings, LLC, 403 F.3d 958, 967 (8th Cir. 2005).
\[101\] 4 NIMMER, supra note 28, § 13.01[B].
The fair use defense is under stress because users in the digital environment seek to extend and expand it, while copyright owners want to reduce its applicability to digital works. Technology makes it possible for both of these things to occur. Users can reproduce and distribute copyrighted works in ways that were previously impossible and at speeds that were unimaginable just a few years ago. While users are clamoring for greater fair use rights, copyright owners are resistant. Some of the same technologies that make it easier for users to make copies also make it possible for copyright owners to measure uses, identify users, and track and block their access. Owners have implemented stronger controls on their works and want to control both access and use even further.

Another important exception to the rights of the copyright holder is the first sale doctrine. Under the first sale doctrine, the owner of a copy of a copyrighted work can dispose of that copy however he or she chooses. No royalties are due to the owner for any subsequent sale or loan of that copy. So, when someone purchases a used book, no royalties based on that sale go to the copyright holder. It is the first sale doctrine, in fact, that permits libraries to lend books from their collections to users. Libraries acquire materials by purchase or gift and choose to lend them; they can even rent books to users.

A controversial issue is whether and to what extent the first sale doctrine applies to digital works since it was developed for the print environment. In other words, can one dispose of a digital copy just as one can dispose of a printed or analog copy? Clearly, in reality the answer is yes, if one does not also retain a copy on his or her computer. But licensing agreements may restrict one’s ability to dispose of a copy by giving or transferring it to someone else. Moreover, the Register of Copyrights says that the first sale doctrine for digital works is seriously limited since when one transfers a digital copy it is not the same copy that the user possessed, unlike a transfer of a physical copy of a printed book.

There are two important exceptions to the rights of the copyright holder for educational institutions. The first is the classroom exemption, found in section 110(1).

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105 Id. § 109(a).
106 Id.
108 The statute refers to section 110 as an exemption rather than an exception.
classroom, in the course of instruction and permits them to perform or display works without permission of the copyright owner. There is also an exemption for distance education and any transmitted performance, section 110(2). Called the TEACH Act, it provides that an accredited nonprofit educational institution may transmit performances of entire non-dramatic literary and musical works, but for other works, such as audiovisual works, only reasonable and limited portions may be transmitted without a license. There are a number of restrictions on the transmission of the performance and display of copyrighted works by these institutions that make it somewhat difficult for academic institutions to take advantage of the exemption.

Outside of the education arena, nonprofit performances may be excused if there is no payment of fees to promoters, organizers, or performers, if there is no admission fee, or if there is one, proceeds go back to charitable, religious, or educational purposes.

V. REMEDIES

A. INJUNCTIONS AND IMPOUNDMENT

The Copyright Act provides that both temporary and permanent injunctions may be ordered by a court in order to prevent or restrain infringement of a copyright. The injunction may be the sole remedy or it may be accompanied by a damage award. Impoundment and destruction of infringing articles may also be ordered by a court. At any time during the pendency of an infringement action, the court may order impoundment of all copies claimed to have been made or used in violation of the copyright owner's exclusive rights. As a part of a final judgment, a court may order destruction of all copies found to be infringing.

110 Id. § 110(2).
111 Id. § 110(2) (A)-(D). For example, the performance and display must be technologically limited to students enrolled in the course, apply technological measures that reasonably prevent retention of the work for longer than the class session and prohibit unauthorized dissemination in accessible form to others. Id. § 110(2)(D)(ii).
112 Id. § 110(4).
113 Id. § 502.
114 Id. § 503(a).
115 Id. § 503(b).
B. DAMAGES

An owner whose copyright has been infringed has two choices of damages: actual damages and profits or statutory damages. Damages are awarded to compensate the owner for losses incurred. The copyright owner selects the type of damages, although some damages are available only when the owner had registered the work prior to the occurrence of the act of infringement. A copyright owner can recover actual damages suffered as a result of the infringement. An owner also may recover profits of the infringer that are attributable to the infringement.

At any time before the final judgment is rendered, a copyright owner may elect statutory damages rather than actual damages and profits. Statutory damages are available, however, only if the work was registered at the time the infringement occurred. The current limits for statutory damages are not less than $750 or more than $30,000 per work infringed. The damage award may be increased to $150,000 per act of infringement if the infringement was committed willfully. The copyright owner has the burden of proving willful infringement, and the court must actually find willfulness in order to award the higher amount. Likewise, in the case of "innocent infringement" the award may be lowered to $200 per act of infringement if an infringer can prove to the court that he or she was not aware and had no reason to believe that the acts constituted infringement. If the work infringed contains a notice of copyright, however, then the defendant cannot claim to be an innocent infringer.

Costs and attorneys' fees may be recovered except against the United States as a party. Reasonable attorneys' fees may be awarded to the prevailing party. If the work was not registered prior to the time the infringement occurred, no attorneys’ fees may be awarded. Both costs and attorneys’ fees are in the court’s discretion.

116 Id. § 504(a).
117 Id. § 412.
118 Id. § 504(b).
119 Id. § 504(c)(1).
120 Id. § 412.
121 Id. § 504(c)(1).
122 Id. § 504(c)(2).
123 Id.
124 Id.
125 Id. § 402(d).
126 Id. § 505.
127 Id. § 412.
128 Id. § 505.
VI. INTERNET-RELATED ISSUES

A. WHY COPYRIGHT AND THE INTERNET ARE SO INTERTWINED

The process of digitization allows the conversion of such materials into binary form, which can be transmitted across the Internet, and then redistributed, copied, and stored, in perfect digital form. To the owner, copyright is about controlling the reproduction and distribution of works, and the Internet has been described as the world’s biggest copy machine. On the Internet, one can make an unlimited number of copies, virtually instantaneously, without any perceptible degradation in quality. Further, the copies can then be transmitted around the world in a matter of minutes. These challenges face the copyright industries at a time when the share of copyright in national economies is reaching unprecedented levels. In the United States, this is estimated at nearly $890 billion annually which accounts for over six percent of the gross domestic product, growing twice as fast as the rest of the economy.\textsuperscript{129}

This leads one to question what role fair use plays in copyright infringement on the web. The answer could be easy: the same as in the analog world. However, it may be somewhat more difficult to apply fair use, especially if the copyright holder restricts access to the work. How can one even claim fair use if he or she is unable to get access to the work? Access clearly has become an important issue, but it was not so much of an issue in the print world. Anyone could obtain access through a library. If that library did not have the work in its collection, one could almost always obtain a copy through interlibrary loan. In fact, in more recent years, libraries often provided photocopies in lieu of lending the original. Now, publishers and other copyright holders may decide to make works available digitally via the web. So, only a user who has paid for it may be able to obtain access. Thus, access is the first step even before one can make a fair use of the work. But the copyright holder may further restrict use of the work by putting a time restriction on that access and could prevent copying and downloading.

B. DIGITAL CONSUMERS BILL OF RIGHTS

Because of this, a group has produced what it calls the Digital Consumers Bill of Rights.\footnote{See DigitalConsumer.org, The Consumer Technology Bill of Rights, http://www.digitalconsumer.org/bill.html (last visited June 6, 2010).} (1) Users have the right to "time-shift" content that they have legally acquired. This gives one the right to record video or audio for later viewing or listening; for example, to use a DVR to record a television show and view it later. (2) Users have the right to "space-shift" content that they have legally acquired. This gives one the right to use lawfully acquired content in different places (as long as each use is personal and non-commercial). For example, one could copy a CD to a portable music player so that he or she could listen to the songs while jogging. (3) Users have the right to make backup copies of their content. This gives users the right to make archival copies to be used in the event that original copies are destroyed. (4) Users have the right to use legally acquired content on the platform of their choice. This gives users the right to listen to music on an iPod, to watch television on an iPod, and to view DVDs on any portable device with that capability. (5) Users have the right to translate legally acquired content into comparable formats. This is an important right that gives users the right to modify content in order to make it more usable. For example, a visually impaired person could modify an electronic book so that the content could be read out loud. (6) Users have the right to use technology in order to achieve the rights previously mentioned. This guarantees the ability of users to exercise the other rights in this list. It focuses on problems caused by the anti-circumvention provision\footnote{See supra text accompanying notes 131-40.} that paradoxically claimed to grant certain rights, but then criminalized all technologies that would allow users to exercise those rights. In contrast, this Bill of Rights states that, use rights.\footnote{DigitalConsumer.org, supra note 122.}

C. ONLINE SERVICE PROVIDER LIABILITY

The Digital Millennium Copyright Act\footnote{Digital Millennium Copyright Act, Pub. L. No. 105-304, 112 Stat. 2860 (1998).} (DMCA) was signed into law on October 28, 1998. As an amendment to the Copyright Act of 1976, its purpose was to update the copyright law and better adapt it to the digital environment.\footnote{S.Rep. No. 105-190, 105th Cong. 1-2 (1998).} Some of its provisions, however, also cover print and analog as well as digital works.
For a couple of years prior to passage, Congress considered whether and under what conditions online service providers (OSPs) should be liable for copyright infringement committed by someone using the OSP’s network to infringe.\textsuperscript{135} Certainly, the individual would be liable for infringement, but the issue is whether the OSP is secondarily liable. This is why universities and other OSPs are so concerned about issues such as peer-to-peer file sharing by the users of their systems.

The section recognizes that there are two types of service providers: those that serve merely as passive conduits and those that provide online services such as hosting content.\textsuperscript{136} Passive conduits have fewer responsibilities in order to avoid liability than do those that host content for users such as web pages. In order to escape liability, a passive conduit may not: (1) initiate or direct material; (2) select material (it must be just automatic response by the OSP); (3) select recipients (automatic response only by OSP); (4) copy material or keep for longer than necessary; or (5) modify content of material transmitted.\textsuperscript{137} For OSPs that host contents, the requirements to void liability for the infringing behavior of users are more stringent. The OSP must: (1) have no actual knowledge that the material or activity infringes copyright; (2) not receive any financial benefit from the alleged infringement; (3) have no awareness of facts or circumstances from which infringing activity is apparent; (4) receive no financial benefit attributable to infringing material; and (5) act expeditiously to remove material that a copyright owner claims is infringing if the OSP obtains actual knowledge or awareness of the circumstances that point toward infringement or if the OSP receives actual notice of such claimed infringement.\textsuperscript{138} This last requirement is the so-called “notice and take down provision.” The OSP must designate an agent to receive complaints and post the name and address on its website.\textsuperscript{139} Moreover, the OSP may not repost the material, absent an investigation showing that the posting of material was not infringing and a counter notification to the copyright owner.\textsuperscript{140}

\begin{itemize}
\item \textsuperscript{135} Id. 5-7 (1998).
\item \textsuperscript{136} See 17 U.S.C. § 512(c)(1).
\item \textsuperscript{137} Id. § 512(a)(1)-(5).
\item \textsuperscript{138} Id. § 512(c)(1).
\item \textsuperscript{139} Id. § 512(c)(2).
\item \textsuperscript{140} Id. § 512(g).
\end{itemize}
D. ANTI-CIRCUMVENTION

The second provision added by the DMCA addresses anti-circumvention.\textsuperscript{141} It says that, “No person shall circumvent a technological measure that effectively controls access to a work protected under this title.”\textsuperscript{142} The provision was immediately applicable to the manufacturing and importing of anti-circumvention devices and systems\textsuperscript{143} and three years later to individual uses of anti-circumvention tools.\textsuperscript{144} The second anti-circumvention provision provides:

No person shall manufacture, import, offer to the public, provide or otherwise traffic in any technology product or service, device component or part thereof that –
(A) is primarily designed or produced for the purpose of circumventing a technological measure that effectively controls access to a work under this title;
(B) has only limited commercially significant purpose or use other than to circumvent a technological measure that effectively controls access to a work protected under this title; or
(C) is marketed by that person or another acting in concert with that person with that person’s knowledge for use in circumventing a technological measure that effectively controls access to a work protected under this title.\textsuperscript{145}

There are some recognized exemptions to these prohibitions, such as legitimate encryption research,\textsuperscript{146} reverse engineering to determine system interoperability,\textsuperscript{147} security testing,\textsuperscript{148} law enforcement,\textsuperscript{149} and for nonprofit libraries that gain access in order to determine whether to acquire a work, but it cannot commercially exploit the work.\textsuperscript{150}

VII. UNANSWERED QUESTIONS IN THE DIGITAL WORLD

With the rapid development of technology, the growth of use of the Internet and the development of Web 2.0 for interactive content,
it is natural that new copyright issues will arise. Courts and policy makers are beginning to address some of the issues, but often there is no uniformity. Others are so new that the legal system has not yet begun to grapple to any significant extent with the questions they present. This article highlights but does not attempt to answer the ten questions raised below.

1. **Peer-to-peer (P2P) file sharing** – The unanswered question with P2P file sharing is whether there is any way to permit the sharing of copyrighted information and still provide fair compensation to copyright holders. Owners say that they cannot compete with free copies downloaded through file sharing, but putting a ceiling on technology has not worked in the past, and it is unlikely to work successfully now. Fear of P2P is particularly acute in the recording industry, but it is beginning to be felt in the motion picture industry as well, with individuals sharing infringing copies of copyrighted movies.

2. **Use of thumbnail images of digital photographs** – Federal courts in California ruled favorably in *Kelly v. Arriba Soft Corp.*[^151] on the use of thumbnail images in order to create a visual image search engine.[^152] Although the *Perfect 10[^153]* case was decided similarly to *Kelly*, it raised an issue, in addition to the use for image search engines, of when a thumbnail image itself has economic value and can be licensed, i.e., for its use on cell phones. It is likely that other issues will be found in the future that could challenge future uses beyond the approved search engine use and perhaps even that use itself.

3. **Caching as reproduction** – OSPs use caching to avoid tying up the systems with repeat searches over a short period of time. The cached copies could be stored for a few hours or a few days depending on the individual search engine. Certainly, caching makes a copy of copyrighted works, but should this reproduction be viewed as infringement or is it so central to use of the Internet that it must be ignored or tacitly approved?

4. **The Google Books settlement** – The Google Books Project, which will ultimately scan twenty million books and make them searchable through the Google database[^154] will be the subject of scholarly debate far into the future. It is already the subject of litigation, and the proposed settlement agreement is of such magnitude that it is almost unimaginable. The settlement concerns matters

[^151]: See 280 F.3d 934 (9th Cir. 2002).
[^152]: Id.
[^153]: Perfect 10, Inc. v. Amazon.com, Inc., 508 F.3d 1146 (9th Cir. 2007).
ranging from antitrust, to class actions, to orphan works, to reproducing copyright books in full in order to be able to display “snippets” of them. At this writing, the Southern District of New York has not approved the Google Books settlement 2.0.\textsuperscript{155} Regardless of whether it is rejected, approved in part or wholly approved, it will produce much uncertainty for years to come.

5. \textit{Orphan works} – An orphan work is one for which the copyright owner cannot be identified or cannot be located. Thus, a party who wants to obtain a license to use the work cannot do so. This issue was not created solely by the digital environment, but it certainly has been exacerbated by it. The U.S. Copyright Office proposed legislation\textsuperscript{156} to provide indemnity for parties who make a good faith effort to locate the copyright holder, but when they are unable to do so, go ahead and use the orphan work. Under that proposed legislation, if that copyright owner later comes forward, then the user of the work must negotiate a license for continued uses.\textsuperscript{157}

6. \textit{Mashups} – A new form of creativity is found in the mashups of songs, videos, etc. The works created are eligible for copyright protection as a new work, but the mashups use existing copyrighted works and reproduce portions of them to create the new work. The equivalent in the art world would be a collage. Copyright owners often object to the use of their works in this fashion even though the resulting mashups often are comments on society, satire, etc., and clearly reflect today’s culture.

7. \textit{New business models for copyright owners} – Content owners are challenged by the digital environment just as users of their works are challenged. This has resulted in uncertainty on the part of copyright owners about what business models they need to develop to accommodate this changing environment so they can continue to produce copyrighted works. This has made owners hesitant to liberalize the access to their works without having copyright management systems in place. Further, owners have recognized the “long tail” for books and other publications long out of print, and that the digital environment will enable them to print copies on demand and make additional sales since the value no longer drops to zero when a work is out of print. Because of this uncertainty about new business


\textsuperscript{157} Id.
models, copyright owners have been hesitant to relax controls on their works or to support enhanced fair use claims by users.

8. **User generated content (UGC)** – Whole new copyright issues have been raised by user generated content along with the changing expectations of users for this content. The complaints of copyright owners surrounding YouTube.com and especially the use of music recordings with the videos are examples of the changing expectations of users for this new type of content and the problems copyright owners face. It is unlikely, however, that UGC will be reduced; in fact, it is more likely that the amount and types of UGC will increase along with the number of participants in creating it. So, these problems will continue to grow.

9. **Personal use** – The whole notion of private copying was never settled in the print environment, and it is even more important today. The question is whether users of copyrighted works have the right to make copies for their own personal use. Many copyright scholars believe that copies for personal use are fair use while others posit that there is simply a personal use right that is so basic that it exists outside of fair use and requires no mention in the Act. Copyright holders point out that with the variety of entertainment works aimed at the consumer market such as movies on DVD and computer games, making a copy for personal use equates with a lost sale for the copyright owner. Therefore, owners believe there is no personal use right.

10. **Digital preservation** – In order to preserve both print and analog works, libraries and archives are turning to digital means for preservation. As these institutions increasingly acquire works in digital format, these works need to be preserved also. Digital preservation requires making not just one copy of a work but making many copies over time to refresh the copies and upgrade them for newer platforms. Reproduction typically is infringement, but in order to preserve the cultural record of society, reproduction is required. Should an exception be created to permit cultural institutions such as libraries, archives, and museums to preserve works digitally? There have been recommendations to amend the Act to enhance the ability of cultural institutions to engage in digital preservation activities.\(^\text{158}\)

VIII. CONCLUSION

One last word: If the public does not understand copyright law or if it makes no sense to them, the public will ignore the law. Clearly, this has already happened with P2P sharing of music and is beginning to happen with downloading movies. The Copyright statute lacks a theoretical base, is too complicated for ordinary people to read and understand, and contains a series of special provisions championed by the various copyright industries designed to benefit them. Users of copyrighted works believe that they have been left out of the legislative process, and they are demanding changes that reflect the way they use and access information and copyrighted works today. Copyright law is likely to remain unsettled as new issues arise and technology continues to advance.
THE MORAL OF THE STORY... MUSICAL ARTISTS MUST PROTECT THEIR OWN RIGHTS IN DIGITAL MUSIC

Kimberlianne Podlas

INTRODUCTION

The advent of digital music did more than provide a new means for distributing, listening to, and stealing music. It also paved the way for new players to enter the music business, ushered in new consumptive trends, and ended the reign of the CD. Notwithstanding the variety of rights and economic interests implicated, discourse about digital music tends to focus on one issue, piracy, and one set of interests, those of Business. This institutionalizes pro-business frames, while minimizing competing interests and facts that undermine them.

Guided by this Symposium’s consideration of the rights of musical artists, this article asserts that the piracy story privileges Business at the expense of the artist. Indeed, the story marginalizes

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2 See JESSICA LITMAN, DIGITAL COPYRIGHT: PROTECTING INTELLECTUAL PROPERTY ON THE INTERNET 137 (1st ed. 2001) (stating that policies and laws regarding digital copyright generally include only some interests, and privilege those of business and copyright holders); cf. id. at 194 (questioning whether the interests of business adequately protect the “derivative” interests of third parties).
3 This article uses the term “Business” broadly to refer to the institutional entity comprised of the music industry, record labels, distributors, and others similarly situated.
5 See generally LITMAN, supra note 2, at 193-94 (stating that solutions require that all interests be understood and considered).
their interests and may even impede the development of a sustainable
digital music mart that would lead to increased revenues.

Accordingly, this article identifies areas in which the interests
of musical artists are distinct from or at odds with those of Business
(such as free distribution of music, DRM, and pricing of digital tracks)
and emphasizes neglected information that helps produce a fuller
picture of the issues involved in digital music. From this foundation,
the article argues that artists should neither surrender to Business’s
desires nor believe that it will protect them: simply, Business is not a
white knight duty-bound to protect artists, but sometimes a wolf in
sheep’s clothing.

STORIES

Empirical research has shown that the framing of an issue\(^6\)
or the story told about it can impact the way that people understand that
issue.\(^7\) For instance, when the media consistently frames an issue in a
particular way—such as depicting excessive alcohol use as the disease
of “alcoholism”—the public tends to adopt that framework in thinking
through the issue.\(^8\) Although the frame does not tell us what
to think (i.e., what conclusion to draw), it guides the way we think or provides
the lens through which we examine a given issue.\(^9\) By guiding our

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\(^6\) Kathryn Stanchi, *Persuasion: An Annotated Bibliography*, 6 J. ALWD 75, 82
Social Problems: The Influences of Media Use*, 53 J. COMM. 122, 132 (2003); Yariv
Tsfati, *Does Audience Skepticism of the Media Matter in Agenda Setting?*, 47 J.

\(^7\) Because we think in terms of narratives, they are a natural mode of understanding.
JAMES SHANAHAN & MICHAEL MORGAN, *TELEVISION AND ITS VIEWERS,
CULTIVATION THEORY AND RESEARCH* 192-93 (1999); NORMAN J. FINKEL, *COMMON

\(^8\) See MEDIA EFFECTS: ADVANCES IN THEORY AND RESEARCH 11-13 (Jennings
Bryant & Dolf Zillman eds., 1994) (explaining the framing and agenda-setting
control of media by newspapers and reporting); Kimberlianne Podlas, *Respect My
Authority!: South Park’s Expression Of Legal Ideology and Contribution To Legal
Park*]; Sotirovic, supra note 6, at 133-34. See generally Fuyuan Shen, *Chronic
Accessibility and Individual Cognitions: Examining the Effects of Message Frames

\(^9\) Jodi Baumgartner, *The Daily Show Effect: Candidate Evaluations, Efficacy, and
American Youth*, 34 AM. POL. RES. 341, 341-43 (2006); Young Mie Kim & John
Vishak, *Just Laugh! You Don’t Need To Remember*, 58 J. COMM. 338, 338-42
(2008); see also Stuart Levine, *Peabody Awards Announce Winners*, DAILY
categoryid=1985&cs=1 (showing the impact of *Saturday Night Live*’s political
parodies on the 2004 election).
analytical process, the frame can then impact the opinions we form about those issues.10

This also applies to the law.11 As exemplified by the litigation adage “[t]he best story wins,”12 the framing of a legal dispute often impacts its outcome.13 Studies reveal that stories are central to juror decision-making; they help juries make sense of the evidence,14 adopt


12 See Clark D. Cunningham, But What Is Their Story? 52 EMORY L.J. 1147, 1151 (2003); Stanchi, Persuasion, supra note 6, at 75.


some notions\textsuperscript{15} over others,\textsuperscript{16} determine causality,\textsuperscript{17} and assign blame.\textsuperscript{18}

Stories even influence the decision-making of courts\textsuperscript{19} and the way that those decisions are communicated to lawyers and laypeople.\textsuperscript{20} Particularly, in the field of intellectual property and technology, courts regularly reach out for stories and analogies to simplify and explain complicated issues.\textsuperscript{21} These can impact the outcome of a case or the public’s acceptance of legal principles.\textsuperscript{22} For example, framing a copyright or technology issue as “piracy”\textsuperscript{23} can impact the way that a court understands secondary infringement or the scope of a statutory exemption under the Digital Millennium Copyright Act.\textsuperscript{24} Of course, the story chosen can also obscure issues,\textsuperscript{25} eliminate important nuances,\textsuperscript{26} and privilege certain interests.

\textsuperscript{15} See generally Litman, supra note 2, at 193-94 (explaining that solutions to digital copyright require that all interests be understood and considered).


\textsuperscript{17} Pennington & Hastie, supra note 13, at 521; Pennington & Hastie, Tests, supra note 14, at 189 (demonstrating that individuals construct a causal model to explain available facts). Ultimately, the story that the jurors adopt must be able to explain what happened. Pennington & Hastie, Tests, supra note 14, at 189; Finkel, supra note 6, at 65; Pennington & Hastie, Evidence Evaluation, supra note 14, at 242.


\textsuperscript{19} Timothy E. Lin, Social Norms and Judicial Decision-Making: Examining the Role of Narratives in Same-Sex Adoption Cases, 99 Colum. L. Rev. 739, 759 (1999); Podlas, Power of Stories, supra note 18, at 33, 35; see also Stanchi, Persuasion, supra note 6, at 76 (explaining that the persuasiveness of the story is critical in legal advocacy).


\textsuperscript{22} Riley, supra note 4, at 503.

\textsuperscript{23} The term “piracy” evokes both notions of stealing and uncontrollable lawlessness.

\textsuperscript{24} Riley, supra note 4, at 503; see also Mark F. Schultz, Reconciling Social Norms and Copyright Law: Strategies for Persuading People to Pay for Recorded Music,
ONCE UPON A TIME, PIRACY DESTROYED THE MUSIC INDUSTRY…

Stories and frames play a part in the legal and cultural discourse regarding rights and interests in digital music. Generally, the issue is framed as “piracy” and the story is about how piracy has caused music sales to plummet, and threatens the continued existence of the music industry.

Like most stories, this tale sets up a two-sided fight. Here, the battle is the innocent music industry versus the pirate-consumer. The story also tells us who the good guys are (Business) and who the bad guys are, as well as who is to blame for the musical artist’s predicament (the pirate). Moreover, the story characterizes Business
not only as a victim of copyright theft but also as the morally and legally appropriate protector and enforcer of copyright law.  

THE MORAL OF THE STORY

This story cultivates certain understandings about the rights and interests involved, as well as their relative importance and the threats to them. The story teaches the musical artist that the consumer-pirate is the primary threat and that they need protecting from us. It also instructs that Business is the entity best able and obligated to protect them. Furthermore, the story treats Business’s interests (as expressed through litigation strategy, contracts with ISPs and digital music sites, and legislation) as aligned with those of the musical artist. Ultimately, the moral of this story to the musical artist is twofold: (1) her failure to obtain a fair share of the revenue from digital music is due entirely to piracy, and (2) if she leaves Business to pursue its interests, musical artists will receive their fair share and live happily ever after.

HERO OR VILLAIN?

The moral of the story and the facts supporting it reveal a fairytale more than reality. Indeed, there are several problems with this tale. Setting up the issue as a two-party, two-sided battle of Business against the Pirate marginalizes the musical artist. In fact, the musical artist is not even a main character. Protecting artist and copyright holder rights, distributing economic benefits, and building a viable way to monetize digital music is not restricted to two parties. Rather, it includes at least three parties and three sets of interests. Additionally, despite the binary framing of the dispute, the issues involved do not exist on a single continuum. Often they exist on wholly different planes or without identifiable counterpoints.

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32 See Riley, supra note 4, at 505 (“[T]o call an individual who makes an illegal copy . . . a ‘pirate’ . . . is to import a sense of stealing and uncontrollable lawlessness . . . into the world of the Internet—even if the legal and factual circumstances are considerably different.”); id. at 507 (“[P]iracy . . . casts individuals as wrongdoers”).

33 See id. at 507 (defining the piracy frame as a “pro-industry” frame).

34 That is, that they need to be protected from the consumer or fan, as opposed to the business.

35 It should not be a radical proposal that the discussion of musical artist rights should at least acknowledge the existence of the musical artist and their interests.

36 See Burkart & McCourt, supra note 29, at 4 (noting the multiple interests involved in digital music).
Moreover, equating the interests of the musical artist with those of Business subjugates the artist’s interests to those of Business, if not eliminating them from the equation altogether. Inherent in the story is that Business is protecting all of the interests of the musical artist. There is also a presumption that the interests of Business and musical artist are aligned. Thus, whatever Business does in pursuit of its interests or benefit is thought to serve the interests of the musical artist. The interests of these parties, however, are not the same.

**CONFLICTING INTERESTS**

The interests of the musical artist and the music industry are not the same. Although both want us to buy more music, purchase CDs rather than single tracks, and not download music without paying for it, the strategies and priorities for achieving these goals differ. Sometimes the interests and priorities of Business run counter to those of the musical artist. This is hardly surprising: the record label is not the guardian ad litem of the musical artist, and the music industry is not a public arts organization established on behalf of artists. To the contrary, there is a long history of record companies taking advantage of musical artists. Business is not, nor should it be, a prince who will ride in on a white horse to rescue the musical artist from the oppressive forces of capitalism, copyright theft, or their own ignorance.

The piracy story obscures or downplays interests that are incongruent with those of Business. Nonetheless, they are important in protecting the rights of musical artists. Hence, to the extent that musical artists abide by this story, they contribute to their victimization and maintain a system that both minimizes their participation in the digital music revenue stream and hampers the development of a more rational, sustainable digital music mart.

The following sections outline these conflicting interests and identify additional facts and perspectives that reframe the prevailing story of piracy.

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I. DIGITAL RIGHTS MANAGEMENT

Musical artists and Business possess different perspectives on digital rights management (DRM). DRM refers to using technology to control the use of (and hence rights in) digital content.\(^{38}\) In terms of music, it encompasses the panoply of technological means to alter a music file so that it expires,\(^{39}\) cannot be copied excessively,\(^{40}\) cannot be played on certain devices,\(^{41}\) or lowers the sound quality of the track\(^{42}\) so as deter file sharing.\(^{43}\) For example, some DRM-wrapped tracks render music purchased through subscription unplayable after the subscription lapses.\(^{44}\) Other times, DRM prevents interoperability, so that music purchased online can be replayed only on that computer or device.\(^{45}\) One example is FairPlay: in iTunes’s early years, the music industry insisted that iTunes install FairPlay on tracks so that iTunes-purchased tracks could be played only on iPods.\(^{46}\)

For the most part, musical artists have not been on board with the use of DRM, believing instead that consumers should be able to access purchased music without undue technological restrictions.\(^{47}\) Indeed, limiting how and when music consumers can enjoy their music hurts the ability of that music to become popular. Furthermore, it often lowers the sound quality of a recording, thereby reducing the quality of the artist’s music. None of this is what a musical artist, even an economically-driven one, favors.

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40 Id.
41 Id.; Rosenblatt, et al., supra note 38, at 28-29.
42 Krasilovsky & Shemel, supra note 39, at 438; Rosenblatt et al., supra note 38, at 98-102. One example is dithering, where a low-level noise is inserted into the recording. Burkart & McCourt, supra note 29, at 102-03; Rosenblatt et al., supra note 38, at 98-102, 142-44.
43 Rosenblatt et al., supra note 38, at 5-6.
44 Burkart & McCourt, supra note 29, at 102; Antony Bruno, Subscription Renewal, Billboard, Oct. 31, 2009, at 8.
45 Krasilovsky & Shemel, supra note 39, at 430; cf. Knopper, supra note 37, at 251 (advocating that DRM be abandoned).
46 Knopper, supra note 37, at 180, 232 (describing how Apple was forced into using FairPlay DRM); cf. id. at 229 (claiming that fans want interoperability in digital music).
By contrast, the music industry christened DRM its savior, believing that it would end piracy and even develop new revenue streams (since consumers would have to re-purchase tracks).\textsuperscript{48} DRM, however, failed to live up to these expectations and backfired.\textsuperscript{49}

The most well-known and ill-fated use of DRM was by Sony BMG. Sony BMG released 52 titles (approximately 5 million CDs in all) containing rootkits\textsuperscript{50} to prevent consumers from pirating or making excessive copies of CDs.\textsuperscript{51} A rootkit is a type of software that installs spyware on a computer or provides third party (often a hacker who might to install malicious programs and viruses) access to the hard drive.\textsuperscript{52} The rootkits were included in the CDs without the knowledge of consumers. Worse than that, they caused consumers’ computers to crash, destroyed their CD drives, and exposed their computers to viruses. This led to significant consumer backlash.\textsuperscript{53} The company ultimately recalled 4.7 million CDs, lost millions of dollars\textsuperscript{54} and paid an estimated $50 million in class action settlements.\textsuperscript{55}

\textsuperscript{48}See generally Burkart & McCourt, supra note 29, at 5-6, 102-04 (outlining the benefits of DRM to the music industry to the detriment of consumers); Knopper, supra note 37, at 231; Rosenblatt, et al., supra note 38, at viii-x, 19-35. The DRM movement is exemplified by the Secure Digital Music Initiative, a think-tank, [and/that a] glorified committee formed in 1998 which suggested specifications for SDMI-compliant devices, a copyright encryption standard, plans to inject watermarks into online tracks requiring an electronic device to detect them in order to play the music, and other various plans to thwart music piracy. SDMI was, however, plagued by conflicting interests, aspirations that were impossible to fulfill, and unworkable devices. Knopper, supra note 37, at 150-55. It disbanded in 2002. Id. at 156.

\textsuperscript{49}DRM has been abandoned by many record labels, and Apple—originally forced into a DRM scheme in order to negotiate contracts for music content when it started —has been able to convince labels to stop. Knopper, supra note 37, at 232.

\textsuperscript{50}Id. at 223.

\textsuperscript{51}Id. See generally Rosenblatt, et al., supra note 38, at 83-88 (describing DRM technologies).

\textsuperscript{52}Knopper, supra note 37, at 222-24. See generally Burkart & McCourt, supra note 29, at 117-18 (describing the impact of DRM on unknowing consumers).


\textsuperscript{54}Knopper, supra note 37, at 227; Ethan Smith, Sony BMG Pulls Millions of CDs Amid Antipiracy-Software Flap, Wall Street J., Nov. 17, 2005, at D5.

\textsuperscript{55}Smith, supra note 54, at A14.
II. PRICE

Although both business and musical artists seek to replace the action of illegal downloading with the norm of legal purchasing, their methods and patience in doing so differ. Their economic priorities, as well as the economic outcomes of various responses, are also sometimes opposed.

Consumers downloaded music from Napster and similar services for a variety of reasons. Some simply did not want to pay for music (free downloaders).\(^{56}\) Others did not think that the behavior was wrong (ignorant downloaders).\(^{57}\) Still others liked the ease of finding music and single tracks, instead of entire CDs (convenience downloaders).\(^{58}\) These various motivations necessitated a menu of strategies for preventing illegal music downloading. Whereas deterrence and punitive sanctions might work best with the free downloaders, and education and normative formation would work best with the ignorant downloaders, a substitute service would work best with the convenience downloaders. Indeed, this segment of music consumers was the most likely to be converted into purchasers.

Thus, for the convenience downloader, the solution was to make digital music easy and available: In other words, to replace illegal Napster with a legal version of Napster. Provided downloading digital tracks was easy enough,\(^{59}\) cheap enough, and at a sufficient sound quality, a convenience downloader would buy them.\(^{60}\) As purchasing behavior replaced file-sharing behavior, not only would digital music generate revenue it had not before, but also this would become a norm for this segment of consumers.\(^{61}\)

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\(^{56}\) See Dave Tianen, Downloads Continue to Erode CD Sales and Hurt Retailers, MILWAUKEE J. SENTINEL, Mar. 19, 2009, at E Cue, 1.

\(^{57}\) When Napster emerged, most file-sharers saw nothing wrong with their behavior. Over the past decade, however, that understanding gradually changed. See Riley, supra note 4, at 509-11.

\(^{58}\) Burkart & McCourt, supra note 29, at 56, 72-73 (recognizing some research that even suggested fans sampled music on Napster and then purchased it, or spurred CD sales).

\(^{59}\) Rosenblatt et al., supra note 38, at 20-21 (noting that inconvenience is a bar to purchasing, and free is easier).

\(^{60}\) See Wagman, supra note 47, at 96-97 (describing FMC’s position that the antidote to Napster was a similar legal, for payment, service).

\(^{61}\) See Zac Locke, How to Save the Recording Industry? Charge Less, 16 UCLA ENT. L. REV. 79, 83 (2009). It is difficult to convince a generation that grew up with free trading and downloading to adopt new behaviors. In part, this is due to the pure economics of the situation, i.e., why pay for music if you can get it for free. In part, it is due to the norm and trying to replace the initial norm of file sharing with one.
would-be-pirates have less of an incentive to download music illegally.\textsuperscript{62} This could eventually displace illegal downloading,\textsuperscript{63} permeate other segments of music consumers, and establish a normative belief (among the ignorant downloaders) that file-sharing was wrong.\textsuperscript{64}

Embracing this model, pay services began selling individual tracks.\textsuperscript{65} iTunes, using a $0.99 price point for individual tracks, established itself as the leader in (and one of the only successful) internet music sites.\textsuperscript{66} Consistent with this premise, a 2004 Pew Internet Project Report reported that 14\% of individuals had stopped illegal downloading;\textsuperscript{67} at the same time, digital sales rose.\textsuperscript{68}

Yet, just as this model of monetizing digital music is beginning to work, and a norm of purchasing is emerging, Business changed a key variable in the formula for converting illegal downloading into sales: selling at a price that the market will bear,\textsuperscript{69} and that encourages

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\textsuperscript{62} Locke, \textit{supra} note 61, at 82-83.

\textsuperscript{63} Studies show that norms are powerful mechanisms for compliance with the law. \textit{See} Schultz, \textit{supra} note 24, at 64-65.

\textsuperscript{64} \textit{See} Riley, \textit{supra} note 4, at 509-10. When Napster emerged, most file-sharers saw nothing wrong with their behavior. Over the past decade, however, that understanding gradually changed.

\textsuperscript{65} In some instances, musical artists and Business differ on the sale of individual tracks. Although a greater profit is realized from the sale of a CD (largely because of the price differential) than a single, businesses recognize that selling something is better than selling nothing. Musical artists are not merely selling units of a product, but are, after all, artists. Some believe that the songs on a CD are not simply twelve separate tracks arranged in order of radio-friendliness. Rather, to a musical artist, the CD works as a whole, where songs tell a story or follow a progression. Tianen, \textit{supra} note 55. To some of these artist-creators, maintaining the integrity of the work as a whole can rival the value of the sales of a digital track. Ben Sisario, \textit{Music Sales Fell In 2008}, \textit{N.Y. Times}, Jan. 1, 2009, at C1 (noting performing artists’ complaints that selling individual tracks breaks up the continuity of the full album); \textit{see also} Knopper, \textit{supra} note 37, at 245 (observing performing artists’ opinion that music is devalued when thought of as merely a computer file).


\textsuperscript{68} See chart \textit{infra.} at 16.

\textsuperscript{69} Indeed, digital music services that have lowered prices have increased music sales. Barlas, \textit{supra} note 66. When Rhapsody reduced prices to $0.49 per song, sales
consumers to buy. Businesses suddenly increased the price of digital tracks. Recently, iTunes and other digital music marts such as Rhapsody bowed to music industry pressure and raised the price of individual downloads. On iTunes, prices of popular songs increased by 30%, from $0.99 to $1.29. It appears that Business lost its patience and became willing to gamble away the long-term strategy of building a viable pay model in favor of recouping CD losses as quickly as possible.

The gamble of increasing prices may or may not pay off for Business. It might (1) reduce sales (because tracks are more expensive, so fewer are purchased); (2) reduce sales but maintain profit (because the higher price makes up for the sales lost); or (3) increase profit by selling the same number of tracks at a higher price. On balance, the risk of the price increase may be relatively low to Business.

This is not true for the musical artist. A price increase cannot increase the artist’s profit because the price increase does not go to the musical artist. A musical artist does not receive a percentage of the consumer retail price, but is paid royalties. Royalties, typically 7-15% for a newer recording artist, are calculated on the wholesale price of the CD to the dealer, not the retail cost to the consumer. Therefore, increasing the retail price can have no positive economic effect on the musical artist. A price increase can, however, have a negative economic impact: Increasing the price could decrease sales, thereby, reducing royalties. Hence, increasing price is a gamble that can only maintain the status quo or harm the musical artist.


70 Locke, supra note 61, at 82-83.
71 Barlas, supra note 66.
72 Id.
73 Id.
74 In fact, iTunes’ previous $0.99 per-song price might even be too high. The ceiling on iTunes’ growth suggests that that price point is inflated beyond long-term market viability. A sustainable price for digital tracks might be closer to $0.25 per digital single. Locke, supra note 61, at 81, 82.
75 Id.
77 HALLORAN, supra note 76, at 308, 355; Welsh, supra note 76, at 1507 (showing that this is referred to as PPD, i.e., the published price to the dealer).
III. INTERNET MARKETING AND FREE MUSIC

A number of musical artists have come to embrace the internet as a marketing tool. In a way, the online environment is an extension of the physical environment: whereas musical artists have always toured to promote an album, today, they supplement this with “tours” in cyberspace. Making music available online can get their music heard and develop a fan base. This fan base can translate into music purchases and concert ticket sales.

Using free digital distribution as a platform for commercial sales can be quite effective. Indeed, it is an established marketing tool of rap and hip-hop artists. Rather than fearing the internet, these artists recognized it as a cheap way to widely disseminate music. Consequently, free, self-produced mixtapes are a popular, promotional model. Last year, two songs that originated on mixtapes, Kid Cudi’s “Day N’ Night” and Drake’s “Best I Ever Had,” were subsequently released as CDs by major labels. Moreover, free distribution does not necessarily supplant sales, but can spur them. Lil Wayne’s mixtapes in 2007 and 2008 built tremendous hype for his 2008 major label release “Tha Carter III” — and helped it sell nearly 3 million copies. In 2007, Radiohead took this approach of internet marketing to the next level, self-distributing a “pay-what-you-will” CD “In Rainbows.” Furthermore, the publicity surrounding this strategy translated into ticket sales for the band’s 2008 tour.

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78 BURKART & MCCOURT, supra note 29, at 131-32; Tianen, supra note 55 (Nielsen Sound scan number).
79 BURKART & MCCOURT, supra note 29, at 130-31. As artists become more successful in this realm/this method, it will reduce their dependency on major labels for financing, manufacturing, and marketing, the very factors that keep musical artists in these bad relationships.
80 Sisario, supra note 65, at C1 (concert ticket sales are up).
82 Id.
83 Id. (both were also nominated for 2010/09 Grammys).  
84 Id.; Evan Serpick, How Lil Wayne Became a Superstar, ROLLING STONE, June 26, 2008, at 15 (reporting how the label was concerned about making mixtapes available on-line).
85 Barker, supra note 81; Ayala Ben-Yehuda, '08 Music Sales Hit Record High, HOLLYWOOD REPORTER.COM, Jan. 4, 2009, Music Index.
86 Welsh, supra note 76, at 1495-96; Barker, supra note 81.
87 KNOPPER, supra note 37, at 244-45. Not every artist is as critically acclaimed and beloved as Radiohead, thus not every artist can market their own music without the financial support of a label. Welsh, supra note 76, at 1495-96.
Until recently, most labels did not understand the value of internet marketing, and did not favor unmitigated internet distribution. Although they have adopted some aspects of internet marketing, such as providing music on social networking sites to publicize new bands, major labels have not been able to replicate the success of this model.

IV. LAWSUITS

In 1997, the Recording Industry Association of America (the “RIAA”) (the trade and lobbying group that represents 90% of the recording industry) was the first to notice on-line music file sharing. Its initial response was to send a cease-and-desist letter. When that strategy worked, it became the foundation for future litigation. By July 2002, the RIAA had shifted its litigation resources away from suing software companies and peer-to-peer services, to suing the individuals who downloaded music. This “John Doe” litigation involved sending a letter threatening a downloader with a lawsuit, while also proposing a $2,000-3,000 settlement. In addition to the monetary settlement, these lawsuits also sought to deter individuals from file sharing.

88 KNOPPER, supra note 37, at 198-99.  
89 Id. at 196 (stating that Radiohead intentionally leaked 2000 Kid A to fan-operated websites. Most labels believe this thwarts an album’s sales potential); id. at 198 (noting that in 2000, Columbia Records prevented the Offspring from doing a free release in MP3 format as part of an MTV promotion).  
90 Id. at 201-02.  
91 See Barker, supra note 81. Moreover, the internet is not some magic charm that will work for every group.  
92 See BURKART & MCCOURT, supra note 28, at 69.  
93 See Dines, supra note 29, at 167; see also Steve Knopper, What Happens When the Record Biz Sues You, ROLLING STONE, June 16, 2005, at 26. See generally LITMAN, supra note 2, at 195 (illustrating the glut of lawsuits by music industry).  
94 See Dines, supra note 29, at 167. Closely related to this was the RIAA’s poorly-received amnesty program that would spare suspected pirates of lawsuits who would admit and agree to have their names entered into a database. See BURKART &
Although musical artists initially endorsed the RIAA litigation, many have changed their tune. They criticize this self-help enforcement as overly punitive, if not counterproductive, and intruding on the privacy of consumers. Thus, recently, several musical artists have asked labels to stop suing their fans.

**Rewriting the Story: Other Factors**

To follow the piracy story as the authoritative narrative and comply with its lessons ignores alternative perspectives and the insight and solutions they offer for better protecting artist rights and building a viable digital music mart.

Moreover, framing the decline of CD sales and collapse of the music industry as resulting entirely from piracy, causes commentators to craft solutions to piracy, with the hopes of correcting problems unrelated to piracy. Though piracy is a factor in the decline of CD sales, it is not the only factor, and not the only issue that needs to be addressed.

In fact, despite apocalyptic pronouncements about the downfall of the industry, the numbers tell a different story. Music sales are not down; they are up. According to Nielsen Soundscan, overall music sales in 2009 exceeded ten billion.

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McCOURT, *supra* note 29, at 69-70. By September 2004, RIAA had settled 1,024 suits for an average of $5,000. *Id.* at 71.


100 Penalties so harsh that they are out of line with society’s sense of fairness can be counterproductive. *Id.* at 72; see Knopper, *supra* note 97.

101 See Burkart & McCourt, *supra* note 29, at 8-9; Schultz, *supra* note 24, at 68-69.

102 Cf. Knopper, *supra* note 37, at 251 (advocating that consumer lawsuits cease). The RIAA has also revealed that its interests in legal change are sometimes opposed to musical artists’. Krasilovsky & Shemel, *supra* note 39, at 29 (suggesting RIAA’s position that bankruptcy law prevent artists from filing bankruptcy where doing so might alter record contract).

103 See Burkart & McCourt, *supra* note 29, at 72-73.


The decline that the story continues to publicize refers to the decline in physical CD sales. Since hitting their peak in 2000, CD sales have fallen 45%. CD sales, however, do not provide a full picture of the complex new economics of music. Nevertheless, the story implies that all music sales have declined, and they have declined because of piracy. Neither assertion is accurate.

It is not that all consumers steal all of their music instead of buying it, but that consumptive trends changed. Napster did more than make music available for free and facilitate theft; it taught consumers that they did not have to pay $15 for a bloated CD just to get the two or three songs they wanted. Rather, digital music services enabled them to get just those good songs. In doing so, it forever changed the sales paradigm of the music industry.

Today, many people purchase music on-line rather than physical CDs or buy individual digital tracks instead of full CDs. Indeed, as CD sales have declined, and CD prices increased, digital

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109 Sisario, supra note 65, at C1.
110 See Burkart & McCourt, supra note 29, at 72.
111 Cf. Wagman, supra note 47, at 96 (describing Napster making music available for free).
112 See Tianen, supra note 56, at E1.
113 Richard Schulenberg, Legal Aspects of the Music Industry 484 (2005) (cherry-picking songs); Barlas, supra note 66 (reporting that digital music allows consumers to purchase individual songs without the whole album); Tianen, supra note 56, at E1.
114 See Wagman, supra note 47, at 96.
116 See Halloran, supra note 76, at 312; Barlas, supra note 66.
117 See Locke, supra note 61, at 79; Sisario, supra note 65.
music purchases have consistently and incrementally increased. In 2008-09, digital sales accounted for 40% of music purchases.

To substantiate this trend, the following chart parses together some of the CD and digital track sales statistics from the height of the CD to present day.

<table>
<thead>
<tr>
<th></th>
<th>CD/album sold</th>
<th>Percentage change (+/-)</th>
<th>Digital tracks sold</th>
<th>Percentage change (+/-)</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2009</strong></td>
<td>374 million</td>
<td>declined 12.7%</td>
<td>1.15 billion</td>
<td>increased 8.3% from 2008</td>
<td>2008-09 digital accounted for 40% of music purchases</td>
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<tr>
<td><strong>2008</strong></td>
<td>428.4 million</td>
<td>declined 14% from 2007</td>
<td>1,070,000,000</td>
<td>increased 27% from 2007</td>
<td>2007-08 digital accounted for 32% of music purchases</td>
</tr>
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</table>

119 Morris, supra note 118.
120 Id.
121 Id.
122 Barlas, supra note 66.
123 Id.
124 Id.
125 Barlas, supra note 66; Shelly Freierman, Popular Demand, N.Y. TIMES, Jan. 11, 2010, at B11.
126 Id.
127 Id.
128 Ben-Yehuda, supra note 85.
129 Id.
130 Chancellor, supra note 106.
### ADDITIONAL FACTORS

Some of the CD’s decline can be attributed to shrinking retail space. In the 1990s, record labels and distributors began shifting their marketing efforts to Big Box stores, causing many of the smaller music stores to close. This reduced the total floor space available across all retail establishments to display and sell CDs.

<table>
<thead>
<tr>
<th>Year</th>
<th>Physical Album Sales</th>
<th>Digital Sales</th>
<th>Initial Increase</th>
<th>Change from Previous Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>500.5 131</td>
<td>844.2 133</td>
<td>45% from 2006 134</td>
<td>15% 132</td>
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<tr>
<td>2006</td>
<td></td>
<td></td>
<td></td>
<td>increased 65% from 2005 136</td>
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<tr>
<td>2004</td>
<td>666.7 million 137</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td>19 million 138</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>785 million 139</td>
<td></td>
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<td></td>
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</tbody>
</table>

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131 Ben-Yehuda, supra note 85.
132 PASSMAN, supra note 107, at 1522.
133 Barnes, supra note 105.
134 Barlas, supra note 66.
135 KNOPPER, supra note 37, at 231 (data provided by Nielsen SoundScan).
136 Id. at 231.
137 Tianen, supra note 56.
138 Sisario, supra note 65.
139 BURKART & McCOURT, supra note 29, at 72.
140 Id.; Sisario, supra note 65.
141 Along with this were discounts to Big Box stores for purchasing in “bulk.”
142 KNOPPER, supra note 37, at 198. Within those stores, they often marketed select CDs by adapting the “pay-to-play” strategy to a “pay-for-position” strategy. Id. at 202. Record distributors would pay to get the records that they were promoting closest to the door or best highlighted in displays. Id. at 109-10.
143 Id. at 112; Tianen, supra note 56.
144 Tianen, supra note 56. Often this meant that stores did not have the room for niche or less popular genres; therefore, those CDs were not stocked. In turn, the music available in bricks and mortar was homogenized. See generally BURKART & McCOURT, supra note 29, at 72.
When the Big Box stores then reduced floor space devoted to CDs, it further reduced the number of and types CDs that could be sold. Additionally, from an economic standpoint, the market may no longer support the CD, at least not at its current price. Because digital music services and their alternative pricing model are viable substitutes for the $15 CD, the market value of the CD has declined. (Yet, as digital music was exploding, the average price of a CD increased 7.2%.) Some authors and economists believe that for the CD to survive, it must adjust its price point downward to approximately $10.

DIVERSION

The piracy story also diverts attention from the business tactics and missteps that contributed to the situation—such as Business’s inability to modernize, infatuation with obsolete business models, and inflated CD prices that the market can no longer bear.

Several problems in creating a workable digital music model stem from Business’s inability to adapt to technology, or refusal to recognize that its old business models are inapt. When business was first confronted with the internet and piracy, Business did not change

145 Much of this space was taken by DVDs which have a much higher profit margin for the store. Tianen, supra note 56.
147 Id.
148 See id.; see also Locke, supra note 61, at 80-81; cf. KNOPPER, supra note 37, at 251 (advocating that businesses abandon old business models and replace them with high-tech content houses, drastically reducing prices for digital music).
149 BURKART & MCCOURT, supra note 29, at 72.
150 Locke, supra note 61, at 80-81; see KNOPPER, supra note 37, at 251.
151 Locke, supra note 61, at 80.
152 It also obscures the fact that some of the music industry’s response to “piracy” is actually a justification to recover lost profits rather than an attempt to build a viable digital music model.
153 KRAZLOVSKY & SHEMEL, supra note 39, at 426; Dines, supra note 29, at 157; Welsh, supra note 76, at 1496-97. Business has always been resistant to embrace new technologies. BURKART & McCOURT, supra note 29, at 127. Furthermore, business’s monopolistic characteristics render it inefficient and inflexible when it comes to adapting to technological change. Welsh, supra note 76, at 1497, 1521.
154 See generally BURKART & McCOURT, supra note 28, at 8-9 (showing the music industry initially saw technology as only a threat, rather than as new means of distribution); Wagman, supra note 47, at 97 (showing the failure of new models to break with the past and respond directly to internet environment).
its sales models or marketing strategies, but clung to existing models of CD sales. Indeed, it continues to look for new ways to recover revenue from the dying CD breed. Yet, the existing structure of the music industry cannot survive.

Monetizing digital music has been difficult, and Business has not made it any easier. Web services (such as Rhapsody) attempting to comply with copyright complain that the music industry’s anachronistic models of commerce and desire to maximize short-term profits at the expense of long term solutions have hamstrung the establishment of viable pay-for-music models. For instance, Rhapsody spent eight years negotiating publisher royalty rates for digital downloads. During that time, Rhapsody had to keep millions of dollars in escrow pending an agreement. Negotiations by other pay services (and music industry threats of legal action, should negotiations fail) took so long that some services were forced to shut down or reduce their catalogues of songs.

LOOK AT THE PIRATE! NO – THE OTHER PIRATE!

It is true that piracy denies musical artists revenue for their recordings: if music is not paid for, there is no sale on which to pay royalties. Business, however, while not a pirate, in some respects resembles a privateer who also plunders the revenues of musical artists. Inasmuch as piracy is portrayed as the reason musical artists

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155 See generally BURKART & MCCOURT, supra note 29, at 8-9 (noting the music industry initially saw technology as only a threat, rather than as a new means of distribution); KNOPPER, supra note 37, at 118-23 (describing lack of awareness of the music industry); Welsh, supra note 76, at 1522.
156 See KNOPPER, supra note 37, at 144 (noting the industry managed and responded to the situation entirely wrong). Some individuals in the music business later confessed that because this was wrapped up in a technology issue they felt incompetent to deal with it. Id. at 113; KRASILOVSKY & SHEMEL, supra note 39, at 426.
157 Welsh, supra note 76, at 1521.
158 See Wagman, supra note 47, at 97 (noting several models have attempted to monetize digital music, but few have succeeded); id. at 102 (stating that Business has impeded development of pay models).
159 KNOPPER, supra note 37, at 119-120; Wagman, supra note 47, at 102.
160 Wagman, supra note 47, at 102.
161 See id. at 102-03. Pandora, for instance, had to block overseas access and reduce its catalogue. Id. at 103.
are cheated out of digital music royalties, it diverts attention from the privateering of Business.\textsuperscript{162}

Record labels do not pay musical artists full royalties on digital music sales. For a CD sold wholesale (PPD) for $15, a new musical artist with a 12\% royalty rate will be paid $1.32 (12\% \times \$15). If one hundred CDs are sold, the musical artist will be paid $132 (100 \times \$1.32). Royalties on digital sales, assuming they are even paid,\textsuperscript{163} are much less. Industry practice excludes digital sales from the “normal retail channels” on which royalties are based, and reduces them 50-75\%, as “new media.”\textsuperscript{164} Hence, the royalty of $1.32 is reduced to $0.39 (or $39 per 100 sales) because the music is sold on-line. Obviously, if 100 songs are illegally downloaded, the musical artist would lose $132. But in the digital sale scenario, where consumers are paying for music, the musical artist loses $93 ($132-\$39 = \$93). This is not stolen by the music pirate but kept by the record label and enabled by the standardized contract’s reduced royalty clause.\textsuperscript{165}

Importantly, royalty rates and revenue flow are not dictated by law, but by the industry contracts.\textsuperscript{166} Although these contracts give legal legitimacy to the disparate power relationship between the musical artist and Business,\textsuperscript{167} it is the artist who agrees to sign. She may do so because she does not have the initial capital investment, is unwilling to accept the financial risk, is ill-equipped to market her music, or because she simply does not know any better. Nonetheless, it seems that a number of artists, especially newer ones, are not making a cost-benefit analysis, but are ignorant of contract ramifications or do not realize how the math diminishes earnings.\textsuperscript{168}

\textsuperscript{162} Musical artists may believe that the reason they receive so little in royalty payments from digital sales is because of piracy, which thereby diminishes royalty payments.
\textsuperscript{163} See Krasilovsky & Shemel, supra note 39, at 429 (noting some contracts exclude digital music as “promotional” media); Neil Strauss, Behind the Grammys, Revolt in the Industry, N.Y. TIMES, Feb. 24, 2002, § 4 (reporting that 99.99\% of artists were underpaid by Business).
\textsuperscript{164} See Halloran, supra note 76, at 313 (showing reduced royalties of 75\% or more for “new technology formats”); Welsh, supra note 76, at 1510-11 (noting royalties are based on sales from “normal retail channels,” which excludes digital sales).
\textsuperscript{166} Welsh, supra note 76, at 1503, 1505.
\textsuperscript{167} Burkart & McCourt, supra note 29, at 17. Of course, the parties also bear a disparate amount of risk. The record label carries the financial risk of the record-making venture—only 10\% of recordings break even, and record companies recoup investments on only 5\% of artists. Id. at 21.
\textsuperscript{168} Byrne, supra note 166, at 124-29. Napster also instigated some musical artists to read and question their contracts. Knopper, supra note 37, at 132-33. Established
Additionally, labels have continued to deduct from royalties the costs of packaging, shipping, warehousing, and even breakage,\textsuperscript{169} though digital music does not have these costs.\textsuperscript{170} This unfairly benefits Business\textsuperscript{171} and allows it to increase its proportion of profit.\textsuperscript{172} As Mr. Monath, a participant in this Symposium panel noted, the music industry has begun modernizing contracts to more accurately account for digital sales and eliminate these irrelevant, obsolete discounts. This is a significant step in modernizing these contracts and creating a more equitable distribution of digital revenues.

**TELLING THEIR OWN STORY**

This article does not argue that the interests of record labels and the music industry are subservient to those of the musical artist, or that the artist should be endowed with new property rights.\textsuperscript{173} Rather,

\begin{itemize}
\item artists such as the Dixie Chicks have also warned about the new 360 degree deals taking additional revenue streams from musical artists and giving it to the music business. \textit{Id.} at 241-43.
\item “Breakage” originally accounted for the percentage of shellac record albums that would break during shipping.\textsuperscript{170} Locke, supra note 61, at 80-81.
\item It is unfair because there are no associated costs, but the business still deducts them from the royalties paid to the artist. Halloran, supra note 76, at 392-93.
\end{itemize}

\textsuperscript{169} Knopper, supra note 37, at 132; Passman, supra note 106, at 77. “Breakage” originally accounted for the percentage of shellac record albums that would break during shipping.

\textsuperscript{170} Id.

\textsuperscript{171} Id.

\textsuperscript{172} Id.

\textsuperscript{173} It is important to clarify the rights of the musical artist under copyright law and the standard recording contract. A record/digital recording involves multiple rights. First, there is the song or composition. The song-writer possesses the panoply of rights granted under § 106 of the Copyright Act, including the right to publicly perform the song. Typically, the song-writer transfers her rights to a music publisher. Performing rights societies then contract with the publisher to license its song catalog and administer (and divide the fees for) performances of the song. Welsh, supra note 76, at 1500-01, 1504-05. Second, there is the sound recording of the song, or what the consumer knows as the CD. \textit{Id.} at 1500-01. The record label licenses the song from the publisher, \textit{id.} at 1504, hires the musical artist to perform it, Krasilovsky & Shemel, supra note 39, at 27, and records it on a CD. Under §114(a), the record label possesses the rights in the sound-recording only, and (pursuant to §114(b)) has only the rights to reproduce, distribute, and make derivative works of that sound recording. The Digital Performance Rights in Sound Recording Act (1995) gives the record label the exclusive right to control the digital performance of the sound recording over cable and satellite. The DMCA grants it that same right with regard to internet (webcasting) and wireless broadcasts. The rights of the musical artist come from the employment contract with the record company. That contract pays the artist royalties for sales of CDs. Krasilovsky & Shemel, supra note 39, at 27. (These contracts typically deal only with the sound recording and the rights associated with it. Welsh, supra note 76, at 1506.) The musical artist, however, has no copyright in the song or CD. Rather, the only rights
it urges musical artists that the pro-business story is neither accurate nor beneficial to their interests in digital music and that they cannot rely on Business to protect their interests. Consequently, artists must accept the responsibility for telling their own story and advocating for their own interests.

To that end, groups such as the Featured Artist Coalition, the Future of Music Coalition, and the Recording Artists Coalition are adding their perspectives to the debates regarding digital music. UK’s Featured Artist Coalition (which includes Robbie Williams and members of Radiohead and Travis) is attempting to increase awareness among musical artists and the public about business tactics and contracts with internet music providers that deny artists revenue from digital music sales and licensing. Similarly, the FMC wants to ensure that artists are fairly compensated for their creations, while acknowledging that both market factors and technology impact the economic value of music. Indeed, as the internet facilitates the distribution of music, the economic value of a distributor (and justification for Business receiving its present proportion of profits) declines.

These groups, along with other artist rights advocates, have proposed alternative methods of artist compensation, shifting to artist-controlled digital distribution, and adjusting royalties for digital downloads. With regard to the latter, royalty rates could simply be made the same regardless of musical form. Another possibility would be a standardized three-tier royalty contract: the musical artist would possess under the DPRSA, which gives the musical artist an interest in (and royalties for) a digitally-transmitted broadcast of the sound recording. This right is usually assigned (as part of the recording contract) to the record label. Id. at 1506-07.


175 See generally Dan Sabbagh, Top Musicians Unite to Form Copyright Lobby Group, TIMES ONLINE, Mar. 10, 2009, http://entertainment.timesonline.co.uk/tol/arts_and_entertainment/music/article5883885.ece.

176 Id.

177 Wagman, supra note 47, at 96.

178 Id. at 96-97.

179 Dines, supra note 29, at 175.

opt for the traditional royalty payment, an equal royalty payment\textsuperscript{181} or a sliding scale where the artist would choose a higher digital royalty rate but a lower traditional rate. This would keep money in the pocket of Business,\textsuperscript{182} while allowing a musical artist to assert her own interest—and bear the risk for doing so—where her interests conflict with those of Business. Other proposals might require legislation.\textsuperscript{183} For instance, a copyright protection for the musical artist as an interested party providing that, if the business sues and settles, the musical artist will receive a proportion of that settlement.

Adjusting to the digital music marketplace requires integrating and valuing a variety of interests and models of commerce; otherwise its full commercial potential is suffocated.\textsuperscript{184} Hence, some new players, (such as pay-music and subscription services) have entered the game, and should be rightful players,\textsuperscript{185} some established players and business modes should be retired, and those who have been on the sidelines, such as musical artists, must step up to the plate. More importantly, however, musical artists must become aware and be active advocates, rather than merely accepting whatever role Business decides they will play and then waiting to be rescued.

\textsuperscript{181} This might lead to reduced rates for traditional sales, in order to account for the increased rate for digital sales.
\textsuperscript{182} It may behoove business to recalculate compensation for musical artists. Giving up some short-term revenue is better than allowing artists to form a collective, skip the middle-man of the label, and sell music online themselves.
\textsuperscript{183} Burkart & McCourt, supra note 29, at 17.
\textsuperscript{184} Welsh, supra note 76, at 1521.
\textsuperscript{185} Business might also wish to rethink its negotiation stance (in terms of royalty payments, licensing, and DRM) with digital music services, lest these attempts to monetize digital music collapse.
Navigating the Open Source Minefield: What’s a Business to Do?

T. Robert Rehm, Jr.

It goes without saying that computers and the software programs that run on them permeate virtually every aspect of our professional and personal lives. For many years, software developers licensed their software products pursuant to a regime designed to vigorously protect the developers’ proprietary intellectual property rights in those products. Licensing software only in object code form and contractually prohibiting access to and use of the source code of


2 A “computer program” is a “sequence of instructions written to perform a specified task for a computer,” RALPH M. STAIR ET AL., PRINCIPLES OF INFORMATION SYSTEMS 132 (2nd ed., Thomson Learning, Inc. 2003), while “computer software” is a computer program stored in digital format. “Computer software”, available at http://dictionary.reference.com/browse/computer%20program (last visited May 25, 2010). Because the manner in which source code is stored is not germane to the discussion herein of source code as copyrightable subject matter, the terms “computer software,” “software,” “computer program,” and “program” will be used interchangeably in this article.

3 Ownership of copyright in computer software provides certain exclusive rights to the owner in connection with that software. See discussion supra Parts I.B. and I.C. and accompanying footnotes. Within a software “license” agreement, the owner of copyright in software (i.e., the “licensor”) typically relinquishes, via a grant of license, some or all of the licensor’s exclusive copyright rights to another party (i.e., the “licensee”), subject to certain limitations and restrictions on the licensee’s exercise of such rights. H. WARD CLASSEN, A PRACTICAL GUIDE TO SOFTWARE LICENSING FOR LICENSEES AND LICENSORS 11, 18-19, 21-38 (3d ed. 2008) [hereinafter CLASSEN ON LICENSING]. Typically, the scope of a license grant to use software is broad enough to permit the licensee to use the software in the manner intended by the parties but narrow enough to enable the licensor to rely on copyright law and the terms on the license agreement to prevent unauthorized, infringing uses of the software by the licensee and others. Id. at 18.
such products — *i.e.*, a “closed” source licensing approach — have been and continue to be hallmarks of that regime.  

In recent years some software developers have adopted a different approach to licensing software, which permits licensees to not only access the software source code but also reproduce, distribute, and even modify the source code with a view to providing more opportunities for enhancing the software’s capabilities and correcting its shortcomings. This new approach has caused a good bit of confusion, and resulting consternation, among organizations that rely in any way on software in conducting their businesses. The most often asked questions are: Does (or should) the organization use any open source software in its business? If the organization does use (or plans to use) such software, what steps, if any, should be adopted and implemented to maximize the benefit, while managing the risk, associated with such software? 

These rather open-ended questions hopefully will come into sharper focus by the time we reach Part III of this article, at which time we will address them head-on. With that objective in mind, this article sets out to (1) explain, from both legal and business perspectives, the traditional (*i.e.*, “closed” source) model of licensing computer software and the “open” source licensing model, (2) identify the common ground and highlight some of the more important differences in the two models, (3) comment on the ongoing viability of the open source model as a licensing methodology, and (4) provide

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4 *CLASSEN ON LICENSING*, *supra* note 3, at 34-35 (“[M]ost licensors refuse to sell source code licenses[,]” which provide licensees access to the source code of the licensed software, because such licenses (1) undermine the objectives of enforcing trade secret protection for source code and, thereby, increase the risk of its misappropriation by licensees; (2) make it easier for licensees to create unauthorized derivative works of the licensed software; and (3) increase the likelihood that the licensee will use the licensed source code to compete with the licensor or will disclose the licensed source code to a competitor of the licensor.). Such unauthorized derivative works presumably go into the public domain by operation of Section 103(a) of the Copyright Act. See *infra* note 36. In order to maintain (*i.e.*, correct bugs and other errors) and support (*i.e.*, update, upgrade, and enhance) computer software, it is necessary to access and modify the software source code. *CLASSEN ON LICENSING*, *supra* note 3, at 34. Therefore, when a software licensor is no longer willing or able to maintain and support licensed software (*e.g.*, due to the licensor’s bankruptcy or insolvency or refusal to provide maintenance and support services for any reason), even a software licensee under a closed source licensing model needs access to software source code so that it can provide such services itself or through a third-party vendor. *Id.* at 181. Such access is typically provided via a source code escrow arrangement, wherein a source code escrow agent is responsible for releasing the source code of the licensed software to the licensee upon the occurrence of certain events, such as those described in the preceding sentence. *Id.* at 181-84.
information that a business can use to assess whether open source software meshes well with the business’s goals and objectives.

I. Just How Different Are the Closed Source and Open Source Licensing Models?

As a threshold matter, it is important to note at the outset that the fundamental principles giving rise to the differences between the closed source and open source models for licensing software are rooted neither in the software itself nor in the intellectual property protection available for such software\(^5\) but, rather, in the manner in which that software is licensed or otherwise distributed to users. Therefore, in order to narrow the scope of issues that businesses ultimately must address in deciding whether and how to utilize open source software, it is helpful to identify and describe the following

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\(^5\) Computer software is subject to protection under copyright law as a work of authorship and also may be subject to protection under patent law to the extent of any patentable business methods included therein or under trade secret law to the extent of any information embodied in the software that derives independent economic value from being maintained in secret and is subject to efforts reasonable under the circumstances to maintain such secrecy. CLASSEN ON LICENSING, supra note 3, at 12-16. Patent protection of software-based business methods first came on the scene in 1998 via the decision of the United States Court of Appeal for the Federal Circuit (“CAFC”) in State Street Bank & Trust Co. v. Signature Fin. Group, Inc., 149 F.3d 1368 (Fed. Cir. 1998), which “open[ed] the floodgates on software patents.” CLASSEN ON LICENSING, supra note 3, at 11-12. The ongoing viability of patent protection for software-based business methods rooted in the “useful, concrete, and tangible” result test espoused in State Street Bank was thought to be in imminent jeopardy, because, in its decision in In re Bilski, 545 F.3d 943 (Fed. Cir. 2008) (en banc), cert. granted, 129 S. Ct. 2735 (2009) , the CAFC states that “the ‘useful, concrete, and tangible result’ inquiry is inadequate” and “those portions of our opinion[] in State Street [Bank] . . . relying solely on a ‘useful, concrete, and tangible result’ inquiry should no longer be relied on.” Bilski at 960, n.19. The Supreme Court rejected the new “machine-or-transformation” test for process patentability articulated by the CAFC in Bilski as the “sole test for deciding whether an invention is a patent-eligible ‘process’” and characterized that test as “a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under § 101.” Bilski v. Kappos, No. 08-964, slip op. at 8 (U.S. June 28, 2010). Due to the somewhat uncertain status of patent protection for software, this article does not discuss such protection as it relates to the closed source and open source licensing models. Pursuing protection for software under trade secret law is a potentially risky proposition, because such protection immediately may be lost upon any intentional or inadvertent disclosure of the applicable trade secret information (e.g., by reverse engineering software to ascertain its source code). CLASSEN ON LICENSING, supra note 3, at 13. Because none of the differences in the closed source and open source licensing models appears to have a basis in trade secret law, this article does not further address trade secret protection for computer software.
items, all of which apply with equal force and in identical fashion to both the closed source and open source licensing models: (1) copyrightable subject matter included in computer software; (2) how ownership of copyright rights in such subject matter initially vests and some of the principles governing transfers of such rights; and (3) rights reserved exclusively to the owner of copyright rights in computer software. An understanding of and appreciation for these concepts may help to reinforce the notion that, when taking account of all relevant aspects of a software licensing model – *i.e.*, the software, its applicable intellectual property protections and rights arising out of such protections -- the closed source and open source licensing models actually have quite a bit in common.

**A. Copyrightable Subject Matter in Computer Software.**

Computer software source code comprises the set of human-readable instructions developed by a computer programmer to specify actions that the computer must take to achieve the objectives of the program. Computer software object code, on the other hand, is source code that has been compiled into a machine-readable format for execution by a computer.

The U.S. Copyright Act of 1976 ("Copyright Act") provides protection for "original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device. Works of authorship include . . . literary works . . ." In addition, the Copyright Act defines a "computer program" as "a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result."

Although the Copyright Act does not expressly provide that computer programs constitute original works of authorship susceptible to protection under the Act, it is well established that computer programs constitute original works of authorship susceptible to protection under the Act.
programs do indeed constitute copyrightable subject matter in the form of literary works.\textsuperscript{11} Both the source code and the object code underlying a computer program are protectable under U.S. copyright law.\textsuperscript{12}

B. Ownership of Copyright Rights in Computer Software.

Ownership of copyright rights in a work protected under the Copyright Act initially vests in the author (or authors) of the work.\textsuperscript{13} Such vesting and protection\textsuperscript{14} occur immediately upon fixation of the work in a tangible medium of expression,\textsuperscript{15} and such copyright rights are separate and distinct from rights in the material object in which the copyrighted work is embodied.\textsuperscript{16} Generally, the “author” of any work that is subject to copyright protection is the work’s creator – i.e., the person, who translates the idea underlying the work into a fixed, tangible expression embodying the work.\textsuperscript{17} A “work made for hire”\textsuperscript{18}

\begin{footnotesize}
\begin{enumerate}[\textsuperscript{11}]
\item\textit{Apple Computer}, 714 F.2d at 1247 (citing legislative history of the 1976 Copyright Act, which states that the term “literary works” as used in that statute “includes . . . computer programs”); Williams Elecs., Inc. v. Arctic Int'l, Inc., 685 F.2d 870, 875-77, nn.4-8 (3d Cir. 1982) (holding that “the copyrightability of computer programs is firmly established after the 1980 amendment to the Copyright Act [of 1976]”).
\item\textit{Apple Computer}, 714 F.2d at 1249 (stating that “a computer program, whether in object code or source code, is a ‘literary work’ and is protected from unauthorized copying, whether in its object or source code version”); ROSEN ON OPEN SOURCE, supra note 6, at 20 (“The source code that defines a computer program is copyrightable, as is the translated object code that actually executes on the computer.”). The expressive elements of computer databases also constitute copyrightable subject matter. 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 2.04[C][1], at 2-49 & 2-50 (80th rel. 2009) (citing relevant legislative history, which states that the definition of “literary works” in the Copyright Act “includes computer data bases”). Because the copyrightable aspects of computer databases are not germane to the ultimate inquiry here, this article does not otherwise address the copyright-related or other aspects of such databases.
\item Although registration of copyright rights in a work is not required in order for the work to be protected under the Copyright Act, 17 U.S.C. § 408 (2010) (“[R]egistration is not a condition of copyright protection.”), such registration is a prerequisite to instituting, and seeking statutory damages and attorney fees in connection with, any action for infringement of such copyright rights, id. §§ 411(a), 412; CLASSEN ON LICENSING, supra note 3, at 33, and under certain circumstances constitutes prima facie evidence in any such action of the validity of such rights and of the facts stated in the corresponding registration certificate. 17 U.S.C. § 412 (2010); CLASSEN ON LICENSING, supra note 3, at 33.
\item ROSEN ON OPEN SOURCE, supra note 6, at 17-18.
\item A “work made for hire” under the Copyright Act comes in the following forms:
\end{enumerate}
\end{footnotesize}
is an exception to this general rule in that, by operation of law and absent a written agreement to the contrary, the author of such a work for copyright purposes is the employer or other party, as the case may be, for whom the work is created.\textsuperscript{19}

For example, absent a written agreement to the contrary, a computer programmer, who, in other than a “work made for hire” context,\textsuperscript{20} writes down software source code on a piece of paper owned by another, is the author of, and therefore owner of copyright rights in, such source code. However, the programmer does not take title to the paper merely because the source code is written on it.\textsuperscript{21} The same holds true for computer object code compiled from source code and fixed in a computer diskette – ownership of copyright rights in such object code is separate and distinct from ownership rights in the diskette on which that code is fixed.\textsuperscript{22} Thus, absent a written agreement to the contrary, transfer of ownership rights in the material object in which (or on which) copyrightable subject matter, such as computer source code or object code, is fixed, does not, in and of itself, constitute a transfer of copyright rights in such subject matter.\textsuperscript{23}

\textsuperscript{19}Reid, 490 U.S. at 737 (citing 17 U.S.C. § 201(b)).
\textsuperscript{20}In some cases software developers are independent contractors (not employees) vis-à-vis the individual or entity for which the software is developed – i.e., the software recipient. In such cases, absent a written agreement to the contrary, ownership of copyright rights in software source code created by the independent contractor for the software recipient vests, by operation of law, in the independent contractor, not the software recipient. 17 U.S.C. § 201(a) (2010). This is true even if the software recipient pays, or provides other consideration to, the independent contractor for the software. See id. § 202. Such payment or other consideration merely serves to pass title, from the independent contractor to the software recipient, in the material object (e.g., computer diskette) in which the copyrightable software is fixed. Id. In order to also transfer ownership of copyright rights in the software from the independent contractor to the software recipient, those parties must execute a written agreement or other document evidencing such a transfer. Id. § 204(a) (“A transfer of copyright ownership, other than by operation of law, is not valid unless an instrument of conveyance, or a note or memorandum of the transfer, is in writing and signed by the owner of the rights conveyed or such owner’s duly authorized agent.”). Transfers of ownership in patentable subject matter and in federally registered marks and marks that are the subject of pending use-based registration applications are subject to similar requirements. See 35 U.S.C. § 261 (2010) (patents); 15 U.S.C. § 1060(a)(3) (2010) (marks).
\textsuperscript{22}See id.
\textsuperscript{23}Id.
C. Exclusive Copyright Rights in Computer Software.

Subject to certain statutory limitations,24 the owner of copyright in an original work of authorship has the exclusive right (1) to reproduce the copyrighted work in copies; (2) to distribute such copies to the public by sale or other transfer of ownership or by lease, rent, or lending; (3) to prepare derivative works25 based on the copyrighted work; (4) in the case of certain works to perform and display the copyrighted work publicly; and (5) the exclusive right to authorize others to do any of the foregoing in (1)-(4).26 In the computer software context, especially as it relates to licensing of copyright rights in software, the exclusive rights described in foregoing clauses (1)-(3) and (5) most often come into play.

1. The Reproduction Right.

The “reproduction” right described in clause (1) above (“Reproduction Right”) is probably best understood by examining the following definitions of “copies,” “device,” and “machine” in Section 101 of the Copyright Act:

“Copies” are material objects, other than phonorecords, in which a work is fixed by any method now known or later developed, and from which the work can be perceived, reproduced, or otherwise communicated, either directly or indirectly with the aid of a machine or device. The term “copies” includes the material object, other than a phonorecord, in which the work is first fixed.

....

A “device”, “machine”, or “process” is one now known or later developed.27

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24 See 17 U.S.C. §§ 107-122 (2010). Worthy of particular mention in the software context are the limitations on the “reproduction” right set forth in Section 117 of the Copyright Act, which are discussed in more detail below. See also infra note 28.
25 A “derivative work” is a work based upon one or more preexisting works, such as a translation, musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgement, condensation, or any other form in which a work may be recast, transformed, or adapted. A work consisting of editorial revisions, annotations, elaborations, or other modifications which, as a whole, represent an original work of authorship, is a derivative work.” 17 U.S.C. § 101 (2010) (emphasis added).
26 Id. § 106.
27 Id. § 101.
Thus, virtually any method in which copyrightable subject matter in computer software is duplicated, whether in photocopies, CD-ROM, binary images fixed in computer memory, or otherwise, constitutes a reproduction of such subject matter in copies and, therefore, is reserved exclusively to the owner of copyright in that subject matter and such owner’s authorized designees.28 Of the exclusive rights of copyright identified above, which bear most significantly on the licensing of computer software, the Reproduction Right likely is the least important of those rights for purposes of examining the differences between the closed source and open source licensing models and the impact on businesses resulting from such differences.29

2. The Distribution Right.

The “distribution” right described in clause (2) above ("Distribution Right") encompasses virtually every mode and means by which copies of the copyrighted work can be passed from one individual or entity to another, as long as the work is disseminated “to

28 ROSEN ON OPEN SOURCE, supra note 6, at 25 ("Every instance of computer software, as long as it is fixed in some tangible form, is a copy."). Certain limitations on a copyright owner’s exclusive right to reproduce the copyrighted work in copies, which are set forth in Section 117 of the Copyright Act, permit those in lawful possession of an authorized copy of a computer program to further copy the program (1) “as an essential step in the utilization of the computer program” in conjunction with the computer or other device on which the program is executed; (2) to make an archival copy of the program, but only to the extent that any and all such copies are destroyed in the event that continued possession of the program is no longer authorized; and (3) in connection with certain maintenance and repair activities involving the computer or other device on which the copyrighted program is executed, but only to the extent that any and all such copies are destroyed immediately after completion of such maintenance or repair. 17 U.S.C. § 117 (2010); see ROSEN ON OPEN SOURCE, supra note 6, at 25-26.

29 In the closed source licensing model, reproduction of the licensed software typically is permitted, if at all, only for copies in object code form and only as necessary for archival purposes and to permit the licensee to use the licensed software solely as permitted in the underlying license agreement. On the other hand, the open source licensing model permits licensees to copy the licensed software in source code form without restriction. Compare CLASSEN ON LICENSING, supra note 3, at 25 with ROSEN ON OPEN SOURCE, supra note 6, at 9. Thus, the more liberal approach of the open source licensing model with respect to copies of the licensed software arising out of a licensee’s exercise of the Reproduction Right would not appear to directly impact that licensee’s business operations unless and until the business exercised the Adaptation Right (i.e., by creating derivative works of the licensed open source software) and/or the Distribution Right (i.e., by distributing such software or derivative works outside the business) in connection with such copies. See infra text accompanying notes 30-36.
the public.”\textsuperscript{30} The Distribution Right’s public dissemination aspect is often cited as the basis for re-characterizing that right as a “publication” right.\textsuperscript{31} As discussed in Sections I.D. and I.E. below, the nature of the control that a software licensor exerts over its licensees with respect to the Distribution Right is one of the most important distinctions between the closed source and open source licensing models.\textsuperscript{32}

\textsuperscript{30} See Hotaling v. Church of Jesus Christ of Latter-Day Saints, 118 F.3d 199, 203 (4th Cir. 1997) (“In order to establish ‘distribution’ of a copyrighted work, a party must show that [a] . . . copy was disseminated ‘to the public.’”); 2 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 8.11[A], at 8-148 (2009) (citing Litecubes, LLC v. N. Light Prods., Inc., 523 F.3d 1353, 1371 (Fed. Cir.), cert. denied, 129 S. Ct. 578 (2008)).

\textsuperscript{31} 2 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 8.11[A], at 8-148 n.1.2 (2009) (citing 17 U.S.C. § 101 (2010) (“‘Publication’ is the distribution of copies or phonorecords of a work to the public by sale or other transfer of ownership, or by rental, lease or lending.”); § 8.12[B][1], at 8-159 (2009) (“‘[D]istribution’ is the equivalent of ‘publication’ . . . .”).

\textsuperscript{32} Similar to the statutory limitations on the Reproduction Right, see supra note 28, the Distribution Right has its own statutory limitations, the foremost of which arises out of the “first sale” doctrine. Under the first sale doctrine, the unconditional, authorized first sale or other transfer of ownership of a material object embodying an authorized copy of a copyrighted work exhausts the copyright owner’s exclusive distribution right as to that particular copy as embodied in the material object. 17 U.S.C. § 109(a); see 2 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 8.12[B][1], at 8-156 to 18-157 & n.13 (2009) (“Once the copyright owner consents to the sale of particular copies of his work, he may not thereafter exercise the distribution right with respect to those copies.” (citing Omega S.A. v. Costco Wholesale Corp., 541 F.3d 982, 985 (9th Cir. 2008)). With respect to any copy of a copyrighted work, the first sale doctrine (1) is wholly inapplicable to a mere transfer of possession of such a copy that does not also include a transfer of ownership of such copy (e.g., a transfer of possession in a licensing context), 2 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 8.12[B][1][a], at 8-157 (2009); CLASSEN ON LICENSING, supra note 3, at 16-17 (“Software developers, in order to avoid application of the First Sale Doctrine and retain control over redistribution of their programs, have typically distributed even mass market software under license, rather than through an outright sale, in order to prevent the First Sale Doctrine from severing control over redistribution.” (citing various cases)), and (2) does not apply to (i) any other copies of the copyrighted work that do not otherwise meet the requirements of the first sale doctrine or (ii) to any of the exclusive rights of copyright set forth in 17 U.S.C. § 106 other than the Distribution Right. See CLASSEN ON LICENSING, supra note 3, at 16-17 (citing various cases). Moreover, in recognition of the distinction between ownership of copyright rights in a work and ownership of the tangible object embodying such rights, see 17 U.S.C. § 202 (2010), which often comes into play in a software context, Section 109(b) of the Copyright Act, which was added via the Computer Software Rental Amendments Act of 1990, curtails application of the first sale doctrine to copyrightable subject matter in computer software by requiring that “the owner of a copy of computer software cannot lend or rent that copy to third parties without permission from the copyright owner.” CLASSEN ON LICENSING, supra note 3, at 17-18 (citing various
3. The Adaptation Right.

The right to prepare derivative works described in clause (3) above, which is sometimes referred to as an “adaptation” right33 ("Adaptation Right"), reserves solely to the copyright owner of a pre-existing work (and its authorized designees) the right to prepare another copyrightable work that is based, in whole or in part, on that pre-existing work.34 In order to qualify as a derivative work under the Copyright Act, a work (1) must be substantially copied from (i.e., “based on”) a pre-existing work; (2) must constitute an original work of authorship in its own right (i.e., must include copyrightable subject matter that differs sufficiently from copyrightable subject matter contained in the pre-existing work to satisfy the “originality” requirement for protection under the Copyright Act); and (3) must arise out some modification of the pre-existing work.35 Furthermore, copyright in the derivative work exists separate and distinct from copyright in the pre-existing work on which that derivative work is based, and ownership of copyright rights in a derivative work, in and of itself, does not provide a basis for asserting ownership of copyright rights in the pre-existing work on which that derivative work is based.36 Finally, copyright protection does not extend to any portion of a derivative work that is created by “unlawfully” using the pre-existing work on which such derivative work is based.37 As discussed

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33 2 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 8.09[A], at 8-142.8(13) (2009).
34 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 3.01, at 3-2, 3-3 (2009) (citing various cases).
35 CLASSEN ON LICENSING, supra note 3, at 29-30 (citing various cases); see 17 U.S.C. § 101 (2010) (definition of “derivative work”).
36 17 U.S.C. § 103(b) (2010); CLASSEN ON LICENSING, supra note 3, at 29.
37 17 U.S.C. § 103(a) (2010); CLASSEN ON LICENSING, supra note 3, at 29. The district court in Pickett v. Prince held that plaintiff’s creation of a derivative work without consent of the defendant-owner of copyright in the preexisting work on which that derivative work is based constitutes an “unlawful” use of that pre-existing work for purposes of Section 103(a) of the Copyright Act and invalidated plaintiff’s copyright in the derivative work. 52 F. Supp. 2d 893, 904-09 & nn.17, 18 (N.D. Ill. 1999), aff’d, 207 F.3d 402 (2nd Cir. 2000). Section 103(a)’s unqualified denial of copyright protection for any part of a derivative work that is created via unlawful use of the pre-existing work on which that derivative work is based would appear to inject that part of the derivative work into the public domain, see United States Copyright Office Web Site, http://www.copyright.gov/help/faq/faq-definitions.html (last visited Apr. 30, 2010) ("A work of authorship is in the ‘public domain’ if it is no longer under copyright protection or if it failed to meet the requirements for copyright protection.").
in Sections I.D. and I.E. below, the scope of the control that a software licensor exerts over its licensees with respect to the Adaptation Right is one of the most important distinctions between the closed source and open source licensing models.

D. The Closed Source Licensing Model.

Denying licensees access to and the right to use the source code of licensed software is the linchpin of the closed source licensing model. Implementing this approach manifests itself in a number of different ways within the underlying license agreement, some of the more important of which are as follows:

(1) the licensor grants the licensee the right to use the licensed software, and is obligated to distribute the licensed software to the licensee, only in object code form;

pre-existing work. The author questions whether such a result is reasonable or otherwise is fair to the owner of copyright in the applicable pre-existing work. For example, if the underlying license agreement requires a licensee to assign to the owner of a pre-existing work all copyright rights in any unauthorized derivative works that are created by the licensee and based on that pre-existing work, why shouldn’t such a requirement and assignment be given legal effect, notwithstanding the provisions of Section 103(a)? Or, for that matter, why shouldn’t ownership of copyright in the derivative work in this situation vest by operation of law in the owner of the pre-existing work, similar to the vesting process associated with the “work made for hire” doctrine? The software licensor could attempt to “trick the system” by authorizing the licensee to make derivative works in the license agreement (even though the licensor really does not want that to occur) and require the licensee to assign all copyright rights in such works to the licensor. However, in order to facilitate such an approach, the licensor would need to provide the source code of the licensed software to the licensee, which the licensor also really does not want to do, because the right to make derivative works would carry with it an implied right to have access to such source code (even if the license agreement expressly provided otherwise). In any event, this conundrum creates a “Catch-22” situation that the software licensor should not have to confront. For an informative discussion of the foregoing issues, see 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 3.06 (2009).

38 See generally CLASSEN ON LICENSING, supra note 3.

39 CLASSEN ON LICENSING, supra note 3, at 34-35. Although the principal reason for prohibiting licensees’ access to software source code in the closed source licensing model is financial (i.e., closed source licensors apparently find it difficult to arrive at a source code license fee that is low enough to attract interested licensees but high enough to reasonably cover the additional risk exposure attendant to such a license), a closed source licensor may also insist on such prohibitions in an attempt to reduce the possibility of its source code falling into the hands of a competitor, see id. at 25, or to prevent unauthorized derivative works from passing into the public domain, see supra note 37.
(2) the licensee expressly is prohibited from reverse engineering, decompiling, reverse compiling, or performing any other act designed to obtain or gain access to the software source code;\textsuperscript{40}

(3) the licensee expressly is prohibited from modifying or otherwise creating derivative works of the licensed software;\textsuperscript{41}

(4) the licensee is obligated to assign to the licensor all right, title, and interest, including all copyright and other intellectual property rights, in and to all derivative works of the licensed software created by or on behalf of the licensee;\textsuperscript{42}

(5) the licensee is obligated to secure all maintenance and support for the licensed software from the licensor or its authorized third-party vendor;\textsuperscript{43}

(6) in the event that the licensee is granted the right to further distribute or sublicense the licensed software, all such distributions and sublicenses cannot exceed the scope of the software license granted to the licensee – i.e., the licensed software can be distributed and sublicensed in object code form only and subject to restrictions and limitations on use of the licensed software that are at least as stringent as those imposed on the licensee; and\textsuperscript{44}

(7) the licensee is obligated to prevent disclosure of and access to, and restrict the use of, the licensed software, except to the extent otherwise expressly permitted by the licensor in writing.\textsuperscript{45}

All the foregoing characteristics of the closed source licensing model (collectively, the “Closed Source Characteristics”) implicate, either directly or indirectly, the manner in which the closed source software licensor (1) relinquishes to its licensee, at least temporarily, the licensor’s exclusive dominion over the Distribution Right and Adaptation Right\textsuperscript{46} with respect to the licensed software, but (2)

\textsuperscript{40} \textit{Id.} at 30-33 (citing Bowers v. Baystate Tech., Inc., 320 F.3d 1317 (Fed. Cir. 2003) for the propositions that (1) software license agreement prohibitions on reverse engineering of licensed software are valid and (2) “the Copyright Act does not narrow or preempt such contractual provisions”). Some federal appellate courts, most prominently the United States Court of Appeals for the Ninth Circuit, have held that reverse engineering prohibitions in software license agreements are unenforceable in certain circumstances based on copyright “fair use” principles. For an informative discussion of some of those decisions, see \textit{CLASSEN ON LICENSING}, supra note 3, at 31-33.

\textsuperscript{41} \textit{CLASSEN ON LICENSING}, supra note 3, at 29-30.

\textsuperscript{42} See \textit{id.} at 30.

\textsuperscript{43} See \textit{id.} at 34-35.

\textsuperscript{44} See \textit{id.} at 25-29.

\textsuperscript{45} See \textit{id.} at 185-92.

\textsuperscript{46} In actuality, a closed source software licensor typically cedes nothing to its licensees in the way of Adaptation Rights, except, possibly, in the event of a release of source code to a licensee pursuant to a source code escrow arrangement. See \textit{supra} note 4.
nevertheless, maintains close control over how the licensee exercises those rights. The nature of the licensor’s control in this model is quite restrictive; prohibitions abound and the licensee’s obligations are directed to limiting, if not entirely abrogating, the general availability of the licensed software and any modifications thereof. For example, distribution of the licensed software is permitted only when expressly authorized in the license agreement, and, any and all such distributions must be in object code form only. Similarly, in virtually every case, the licensee is completely foreclosed from exercising the Adaptation Right.

E. The Open Source Licensing Model.

Not surprisingly, providing licensees access to and the right to use, modify, and distribute the source code of licensed software, all of which radically depart from the closed source model, are the linchpins of the open source licensing model. Open source software supporters contend that such an approach more effectively furthers the objectives of software development, because (1) more individuals providing more and varied ways of analyzing and modifying software and distributing such modifications so that further modifications can occur (i.e., in source code form) brings a collective brain trust to bear on software development that is absent in the closed source licensing model; (2) the responsibility for maintaining and supporting open source software is spread over many more individuals, who not only are more motivated but also have more time and resources to devote to those activities, all of which yield a more reliable software product; and (3) a more widespread and motivated community of users of a software product with access to the tools (i.e., source code) required to maintain and support the product is more likely to ensure the ongoing vitality and vibrancy of that product (in order to meet the ever-increasing expectations of those who rely on the product) for a much longer duration.

In stark contrast to the Closed Source Characteristics, the corresponding characteristics of the open source licensing model, as reflected in the provisions of the underlying agreement under which such software is licensed, are as follows (collectively, “Open Source Characteristics”):

See discussion supra Parts I.C.2 and I.C.3 and accompanying notes.

See ROSEN ON OPEN SOURCE, supra note 6, at 8-11.


Open source license agreements vary in type, depending primarily on the affirmative obligations imposed on the licensee for distributing any derivative works
the licensor provides the licensee, and grants the licensee the right to use, the licensed software in source code form;  

(2) in view of the first Open Source Characteristic, prohibitions against obtaining the source code of the licensed software are unnecessary and otherwise not permitted;  

(3) the licensee may freely create derivative works of the licensed software;  

(4) in view of the third Open Source Characteristic, by operation of law the licensee owns all right, title, and interest, including all copyright and other intellectual property rights, in and to all derivative works of the licensed software created by or on behalf of the licensee;  

(5) in view of the first and third Open Source Characteristics, the licensee may freely modify the source code of the licensed open source software in order to maintain (i.e., correct bugs and other errors) and support (i.e., update, upgrade, enhance, and further develop) that software;  

(6) the licensee may freely distribute the licensed open source software and any derivative works thereof created by such licensee; however, depending upon the applicable open source code license agreement, the licensor may require any such distributions to be in source code form;  

(7) in view of all the foregoing Open Source Characteristics, prohibitions against and restrictions on disclosing, accessing, and using the licensed open source software are unnecessary and otherwise not permitted; and  

(8) the licensee may combine open source software and closed source software on the same storage media or in computer memory and may distribute open source software along with closed source software.

of the licensed open source software that are created by such licensee. See discussion infra Parts I.E.1, I.E.2 and accompanying notes.

51 Depending on the type of open source license agreement, the licensor may require any distributions by the licensee of the licensed source code and derivative works thereof created by the licensee to be in source code form. See discussion infra Part I.E.2 and accompanying notes.

52 The author submits that the open source licensing model appears to resolve the closed source licensing model conundrum, which arises out of licensees’ “unlawful” creation of derivative works of licensed software resulting in such works apparently passing into the public domain, see supra note 37, by authorizing licensees to create such derivative works, thereby foreclosing application of Section 103(a) of the Copyright Act, and having copyright rights in such works vest in such licensees by operation of law, see id.

53 See ROSEN ON OPEN SOURCE, supra note 6, at 8-11. “Freely” as used in the third, fifth, and sixth Open Source Characteristics means “without any conditions that would impede” the applicable activity. Id. at 9.
As with the closed source licensing model, all the Open Source Characteristics involve relinquishment of the licensor’s exclusivity over the Distribution Right and Adaptation Right with respect to the licensed open source software. Without a doubt, the Open Source Characteristics reflect a much broader relinquishment of such exclusivity than do the Closed Source Characteristics. Nonetheless, although open source software sometimes is referred to as “free” software, such software is anything but free, primarily because open source software licensors still wield some degree of control over their licensees.54 However, rather than emphasizing the prohibitions and restrictions typical of the closed source licensing model, such control manifests itself in the imposition on licensees of affirmative obligations designed to ensure that any exercise by such licensees of the Distribution Right and Adaptation Right maintains and, in fact, proliferates the open source nature of the licensed software.55

License agreements under the open source licensing model often are categorized based on the type and scope of such affirmative obligations included within the agreement. Two of the most prominent of those categories for purposes of software licensed to and owned by businesses are the Academic License and the Reciprocal License, which are discussed in more detail below.

1. Academic License.

The Academic License originated with the desire of academic institutions to distribute their software to the public without the restrictions and prohibitions typical of the closed source licensing model.56 The Academic License, which has a number of variations,57

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54 See id. at 1-13. Understanding why open source software is not “free” is aided by distinguishing between the notions of “free software” and “software freedom.” Compare id. at 13 (“Software isn’t free, as in the expression ‘the birds are free to fly.’ Software is someone’s property, and you can’t use another person’s property – to fly or to do anything else – without that owner’s permission.”) with id. at 3 (“Open source code is an essential requirement for software freedom, a technical prerequisite. Software freedom is the goal; open source is the means to that goal.”). Software more legitimately may be thought of as “free” if it is in the public domain and thereby “[g]enerally free of all property claims” and available for unconditional, unlimited, and unrestricted use by anyone for any purpose. See Denise M. Everett, Copleft© Copyright©, Some Rights Reserved, BENCH & B. MAG. OF THE KY. B. ASS’N, Sept. 2009, at 16-20 (emphasis added) (citing U.S. Copyright Office definition of “public domain”) [hereinafter Everett].

55 ROSEN ON OPEN SOURCE, supra note 6, at 8-11.

56 Id. at 69-70.

57 The Berkeley Software Distribution (“BSD”) License, MIT (or X) License, Apache License (version 1.1), and Artistic License 2.0 are prominent examples of Academic Licenses. Id. at 73-102. Copies of templates of the foregoing licenses can
sets forth the licensor’s notice of copyright with respect to the licensed software along with provisions by which the licensor permits licensees to unconditionally create derivative works of the software and to use the software and such derivative works in both source code form and object code form.\textsuperscript{58} As a result, the licensor under an Academic License relinquishes exclusivity of its Adaptation Right with respect to the licensed software unconditionally – \textit{i.e.}, without imposing on the licensee any affirmative obligations in connection with any derivative works arising out of the licensee’s exercise of that right.\textsuperscript{59} In addition, the Academic License also includes provisions that disclaim most, if not all, warranties as to, and damages arising in connection with, the licensed open source software and derivative works thereof created by the licensee.\textsuperscript{60} Finally, most variations of the Academic License include a provision stating that the licensor does not endorse or promote any product that is derived from the licensed open source software without the licensor’s prior written approval.\textsuperscript{61}

In addition to the foregoing provisions, the Academic License includes a provision permitting licensees to distribute copies of the licensed software and related derivative works in either source code or object code form.\textsuperscript{62} However, unlike with the Adaptation Right, the licensor relinquishes exclusivity of its Distribution Right with respect to the licensed software conditionally – \textit{i.e.}, the licensor obligates the licensee to include in such copies any and all copyright notices specified in the Academic License and to reiterate in such copies all the provisions of the Academic License.\textsuperscript{63} By permitting further distribution of the licensed software and related derivative works in object code form, albeit conditionally, the Academic License opens the door for inclusion of the licensed open source software in closed source software and proprietary commercialization of such derivative works pursuant to the closed source licensing model.\textsuperscript{64}

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\textsuperscript{58} \textit{St. Laurent on Open Source, supra} note 49, at 15.
\textsuperscript{59} \textit{See id.} at 14-18.
\textsuperscript{60} \textit{See id.} at 15-18.
\textsuperscript{61} \textit{See id.} The MIT (or X) license does not include such a provision. \textit{Id.} at 14-15.
\textsuperscript{62} \textit{See id.} at 14-18.
\textsuperscript{63} \textit{See Rosen on Open Source, supra} note 6, at 80-85.
\textsuperscript{64} \textit{St. Laurent on Open Source, supra} note 49, at 14; \textit{Everett, supra} note 54, at 18 & n.20.
2. Reciprocal License.

The Reciprocal License,\(^\text{65}\) which also has a number of variations,\(^\text{66}\) takes the rights provided to, and affirmative obligations imposed on, licensees under the Academic License a compelling step further by (i) eliminating the licensee’s right to distribute copies of derivative works of the licensed software in both source code form and object code form and (ii) obligating licensees to make any such distributions in source code form only without remuneration or restriction on use.\(^\text{67}\) As with the Academic License, the licensor’s relinquishment of its Adaptation Right with respect to the licensed software under a Reciprocal License is unconditional. However, under the Reciprocal License, the conditional nature of the licensor’s relinquishment of its Distribution Right with respect to the licensed software under the Academic License is reinforced by requiring that any distribution of copies of derivative works be in source code form only. This approach forecloses proprietary commercialization of any such derivative works pursuant to the closed source licensing model.\(^\text{68}\)

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\(^\text{65}\) The “reciprocal” moniker derives, at least in part, from the following paraphrased description of the bargain between an open source software licensor and its licensees, which is attributed to developers of one of the most influential Reciprocal Licenses, the GNU General Public License (v.2/v.3) (“GPL”): “You may have this free software on condition that any derivative works that you create from it and distribute must be licensed to all under the same license.” ROSEN ON OPEN SOURCE, supra note 6, at 103. The Reciprocal License is also referred to as a “copyleft” license (to underscore its “liberal” departure from the copy “right” norms of the closed source licensing model) and as a “viral” license (in scornful recognition of “transmitting” the reciprocity aspect of the open source licensing model to downstream licensees). ROSEN ON OPEN SOURCE, supra note 6, at 105; ST. LAURENT ON OPEN SOURCE, supra note 49, at 38, 39; Everett, supra note 54, at 18 & n.23.

\(^\text{66}\) Along with the GPL, the Mozilla Public License 1.1 (“MPL”) is an example of another influential Reciprocal License. See ROSEN ON OPEN SOURCE, supra note 6, at 141-59; ST. LAURENT ON OPEN SOURCE, supra note 49, at 62-81. Copies of templates of the GPL and MPL can be found on the web site of the OSI at www.opensource.org.

\(^\text{67}\) ST. LAURENT ON OPEN SOURCE, supra note 49, at 34; see ROSEN ON OPEN SOURCE, supra note 6, at 103-07.

\(^\text{68}\) See ROSEN ON OPEN SOURCE, supra note 6, at 10 (“Under th[e] open source principle, a licensor cannot charge a royalty for the privilege to create and distribute derivative works, or require a licensee to pay a royalty for copies of a derivative work that are distributed, or impose any restriction on the type or character of those derivative works.”).
F. So, What’s The Real Difference?

Simply stated, the different consequences (compared to the closed source licensing model) arising when an open source software licensor relinquishes exclusivity of its Distribution Right with respect to that software and related derivative works is at the very heart of any copyright-related concern that a business might have with using open source code software in connection with its business. In the worst case scenario – i.e., in a Reciprocal License context – a business needs to carefully plan ahead to ensure that any derivative works of software that the business desires to own on a proprietary basis and distribute outside the business are not created based on software that is subject to such a license.

II. Is the Open Source Licensing Model Here to Stay?

A party’s chronic failure to enforce its copyright rights against infringers, including a software licensee whose use of such software exceeds the scope of the underlying license, can result in loss of such rights.69 Similarly, a party’s unreasonable delay in enforcing its copyright rights against an infringer, which either (1) prejudices the infringer’s ability to reasonably defend itself against any infringement claims asserted by the dilatory party (i.e., “evidentiary prejudice”) or (2) upsets the infringer’s reasonable expectations arising out of reliance on such delay (i.e., “expectations-based prejudice”) can render such copyright rights unenforceable against that infringer.70 Thus, reliable indicators of the ongoing viability of the open source licensing model may very well be (1) the regularity, dispatch, and vigor with which open source licensors attempt to enforce the affirmative obligations and other conditions imposed on their licensees, all of which are directed to sustaining and building on the open source nature of the licensed software, and (2) even more importantly, the courts’ willingness to give legal effect to such enforcement efforts.

Although the open source licensing model has been on the scene for over thirty years, efforts to enforce open source license agreements did not gain significant traction in the United States until 2007. In September of that year, the Software Freedom Law Center, an organization that provides legal services to non-profit developers of open source software (“SFLC”), filed a copyright infringement action in the United States District Court for the Southern District of New York on behalf of two developers of the software application, BusyBox (collectively, the “BusyBox Developers”), which was licensed to the defendant re-distributor, Monsoon Multimedia, Inc. (“Monsoon”), under the GPL (the “Monsoon Action”). The complaint in the Monsoon Action alleged, among other things, that Monsoon failed to re-distribute the BusyBox product and related

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71 See Everett, supra note 54, at 17 & n.16 (stating that origin of the term “copyleft” dates back to 1976).

72 An organization known as “FSF France” was involved in open source software enforcement activities in France at least as early as 2002. See infra note 78. In addition, such activities in Germany spearheaded by an organization known as “gpl-violations.org” (“GPL-Violations”) and directed to alleged violations of the GPL apparently have been underway since at least as early as 2004. See GPL-Violations Web Site, http://www.gpl-violations.org/about.html#whois (last visited Apr. 30, 2010). GPL-Violations has received a number of German court rulings upholding the terms of the GPL, specifically the requirement for licensees to re-distribute licensed software and related derivative works in source code form, in the context of granting injunctions against further infringing activity. See id. and links thereon to case summaries under “News” (last visited Apr. 30, 2010). Moreover, in the case against D-Link Germany GmbH, GPL-Violations requested, and the court awarded, reimbursement of GPL-Violations’ legal expenses and other costs incurred in connection with suing D-Link. See GPL-Violations Web Site, http://www.gpl-violations.org/news/20060922-dlink-judgement_frankfurt.html (last visited Apr. 30, 2010). The action filed by GPL-Violations in a French court in late 2007 against Iliad, a French telecom company, for violating the GPL marked GPL-Violations’ first foray into a court outside of Germany (“Iliad Action”). See GPL-Violations Web Site, http://www.gpl-violations.org/news/20071120-freebox.html (last visited Apr. 30, 2010). GPL-Violations states that the Iliad Action was filed in “cooperation with . . . FSF France and the busybox authors,” see id., which suggests that open source software enforcement entities in the United States and Europe may be coordinating their efforts on an international scale. As of June 2006, GPL-Violations claimed to have enforced the terms and conditions of the GPL against one hundred alleged infringers with a one-hundred percent success rate. See GPL-Violations Web Site, http://www.gpl-violations.org/about.html (“Every GPL infringement that we started to enforce was resolved in a legal success, either in-court or out of court.”) (last visited Apr. 30, 2010).

derivative works to end users in source code form as required by the GPL.\textsuperscript{74}

In addition, later in 2007 and in 2008, SFLC filed additional copyright actions in the Southern District of New York on behalf of the BusyBox Developers, each of which (1) alleged copyright infringement of the BusyBox software product on the same grounds asserted in the Monsoon Action and (2) settled out of court.\textsuperscript{75}

Finally, in December 2009, SFLC sued fourteen consumer electronics companies in the Southern District of New York on behalf of one of the BusyBox Developers and the Software Freedom Conservancy, an organization composed of free and open source software developers including BusyBox,\textsuperscript{76} complaining of the same GPL violation alleged in the Monsoon Action.\textsuperscript{77}

Despite this flurry of enforcement activity and resulting lawsuits in the United States in 2007 and 2008, all directed to

\textsuperscript{74} See Monsoon Action complaint, a copy of which is available at http://www.softwarefreedom.org/news/2007/sep/20/busybox/complaint.pdf, at ¶¶ 8-16 (last visited Apr., 30, 2010). A little over a month after the Monsoon Action was filed, the parties settled the case, and Monsoon agreed to comply with the terms of the GPL (v.2) that it allegedly violated and to pay damages to the BusyBox Developers. See SFLC Web Site, http://www.softwarefreedom.org/news/2007/oct/30/busybox-monsoon-settlement/ (last visited Apr. 30, 2010).


\textsuperscript{77} See Best Buy Complaint, supra note 76, at ¶ 27.
recognizing and validating an open source licensor’s right to relinquish its Distribution Right with respect to licensed open source software and related derivative works and at the same time require its licensees to provide any such distributions in source code form, a string of settlements in these lawsuits deprived United States courts of assessing and ruling on the legitimacy of the open source licensing model. That all changed, however, in August 2008 with the CAFC’s decision in *Jacobsen v. Katzer*.

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*In 2002 AFPA, a French education organization, sued Edu4, a French computer equipment provider, for allegedly violating the GPL by (1) not redistributing to AFPA in source code form certain GPL-licensed open source software used by AFPA to secure remote desktop access to equipment provided by Edu4 to AFPA and (2) removing copyright and license notices from copies of the licensed software. FSF France, *Paris Court of Appeals Condemns Edu4 for Violating the GNU General Public License*, Sept. 22, 2009, http://fsffrance.org/news/article2009-09-22.en.html.*

In September 2009, the Paris Court of Appeals ruled in AFPA’s favor in this case. Id. In an interesting contrast with the lawsuits involving the BusyBox software product, *see supra* notes 72-76 and accompanying text, the plaintiff in the French case, AFPA, is neither the owner of copyright rights in the licensed open source software nor the owner’s exclusive licensee but, rather, is a non-exclusive end user sublicensee of that software. U.S. law typically permits only the owner of copyright rights, or its exclusive licensee (in the role of a licensor of such rights) or third-party beneficiary, to file suit to enforce such rights. See 17 U.S.C. § 501(a)-(b) (2010); Random House, Inc. v. Rosetta Books LLC, 150 F. Supp. 2d 613, 617 (S.D.N.Y. 2001), **aff’d per curiam**, 283 F.3d 490 (2d Cir. 2002). On the other hand, French law apparently permits non-exclusive end user sublicensees, such as AFPA, to enforce against its licensor the terms of the license agreement between its licensor and the owners of copyright in the licensed software upon any failure by the licensor to distribute the licensed software in accordance with that license agreement, so long as the licensor grants to the sublicensee rights that were granted to the licensor by those copyright owners. See FSF France, *Paris Court of Appeals Condemns Edu4 for Violating the GNU General Public License*, Sept. 22, 2009, http://fsffrance.org/news/article2009-09-22.en.html.

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*Jacobsen v. Katzer, 535 F.3d 1373 (Fed. Cir. 2008). This copyright infringement action, which was brought in the United States District Court for the Northern District of California, *id.* at 1374, normally would be heard on appeal by the United States Court of Appeals for the Ninth Circuit (“Ninth Circuit”), *id.* at 1377-78. However, certain patent-related claims also were asserted by the plaintiff in the district court action, thereby giving the CAFC jurisdiction over the appeal, *id.* at 1377 (stating that, as long as a district court’s subject matter jurisdiction over an action is based in any way on 28 U.S.C. § 1338(a), the CAFC has appellate jurisdiction over the action, even if no patent-related issues are appealed), subject to the CAFC looking to Ninth Circuit interpretive law on any issues not falling under the CAFC’s exclusive jurisdiction, such as whether a preliminary injunction should issue, *id.* at 1377-78. Under Ninth Circuit law, when a copyright owner pursuing a preliminary injunction against copyright infringement, as opposed to a mere breach of contact claim, shows that it is likely to prevail on the merits of its infringement claim, irreparable harm is presumed. *Id.* at 1378 (citing Perfect 10, Inc. v. Amazon.com, Inc., 487 F.3d 701, 713-14 (9th Cir. 2007)).*
In *Jacobsen*, a developer of open source software, Jacobsen, used for controlling model trains sued for copyright infringement and moved for a preliminary injunction to prevent its licensee, Katzer, from distributing copies of the licensed software without affixing to them certain notices, descriptions, and references required by the underlying Artistic License.\(^8^0\) The District Court denied Jacobsen’s request for a preliminary injunction, ruling that Katzer’s violation of the Artistic License requirements did not constitute copyright infringement, and Jacobsen appealed.\(^8^1\)

On appeal the CAFC commented at some length on the benefits of open source software, including that the software is “a widely used method of creative collaboration that serves to advance the arts and sciences in a manner and at a pace that few could have imagined just a few decades ago.”\(^8^2\) The CAFC went on to examine the Artistic License requirements at issue and determined that “the heart of the argument on appeal concerns whether the terms of the Artistic License are conditions of, or merely covenants to, the copyright license.”\(^8^3\)

After analyzing the conditional nature of the license grant in the Artistic License, relevant copyright infringement decisions from the Ninth Circuit and the United States Court of Appeals of the Second Circuit (“Second Circuit”), and contract interpretation decisions under California contract law, the CAFC concluded that the requirements violated by Katzer are conditions to that license grant, thereby giving rise to infringement of Jacobsen’s copyright rights in the licensed software.\(^8^4\)

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80 Id. at 1375-76.
81 Id. at 1377. The district court concluded that, at most, Katzer’s failure to comply with the Artistic License requirements amounted to a breach of contract, which, in and of itself, does not provide a basis for presumed irreparable harm under Ninth Circuit law. Id.
82 Id. at 1378-79. The court also states that “[t]here are substantial benefits, including economic benefits, to the creation and distribution of copyrighted works under public licenses that range far beyond traditional license royalties.” Id. at 1379 (emphasis added).
83 Id. at 1379-80.
84 Id. at 1380-83. In reaching its conclusion, the CAFC, among other things, (1) rejected Katzer’s argument that copyright infringement cannot be premised on violation of a license grant for which consideration is exacted, not in monetary form, but, rather, in the form of conditions imposed on the exercise of the licensed rights and (2) noted that the Artistic License conditions violated by Katzer “were both clear and necessary to accomplish the objectives of the open source collaboration, including economic benefit.” Id. at 1380-82. The CAFC vacated the district court’s decision and remanded, id. at 1382, however, upon further consideration, the district court again denied Jacobsen’s request for an injunction for failure to show irreparable harm, see Jason Haishmaier, *Practical Strategies for Developing Open*
Although the CAFC’s ruling in *Jacobsen* is in the admittedly narrow context of a preliminary injunction determination involving violations of an Artistic License, several comments by the court suggest that the impact of this decision likely will be heavily relied upon and used to significant advantage by the open source community in cases whose facts and context fall well outside the confines of *Jacobsen*. For example, the CAFC states that “[c]opyright holders who engage in open source licensing have the right to control the modification and distribution of copyrighted material.”

Coming on the heels of the court’s decidedly favorable perspective on the open source movement, such a broad-sweeping statement regarding the rights of owners of copyright in open source software not only speaks volumes about at least one appellate court’s inclinations toward enforcing such rights but also appears to legitimize perhaps the most important (and controversial) aspect of the Reciprocal License – *i.e.*, an open source software licensor’s right to relinquish exclusivity of its Distribution Right with respect to the licensed software, while at the same time controlling licensees’ distribution of the licensed software by requiring such distribution to be in source code form only.

The CAFC’s decision in *Jacobsen* is also important from a remedies perspective, because the Copyright Act provides certain remedies for copyright infringement (*e.g.*, statutory damages, injunctive relief, and other remedies) that are not (or may not be) available in connection with a mere breach of contract claim. With

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86 See supra note 84 and accompanying text.

87 17 U.S.C. §§ 502, 504(c) (2010). Statutory damages typically range from $750 to $30,000 per infringed work, as determined by the court or jury, as the case may be, to be just; however, the court or jury, as the case may be, has discretion to award statutory damages ranging from $250 to $150,000 per infringed work, depending on its determination as to the relative innocence (or willfulness) of the infringement. *Id.*

Actual damages incurred by a copyright infringement plaintiff, which are measured by the extent to which the infringement has injured or destroyed the market value of the infringed work as of the time of the infringement, *In-Design v. K-Mart Apparel Corp.*, 13 F.3d 559, 563 (2d Cir. 1994); 4 *Melville B. Nimmer & David Nimmer, Nimmer on Copyright § 14.02[A] (80th rel. 2009)*, often are difficult to prove, see 4 *Melville B. Nimmer & David Nimmer, Nimmer on Copyright § 14.02[A][1] (80th rel. 2009)*. Therefore, because statutory damages can be recovered by a prevailing copyright infringement plaintiff without proving the actual damages incurred by the plaintiff resulting from the infringement, *see Columbia Pictures Television, Inc. v. Krypton Broad. of Birmingham, Inc.*, 259 F.3d 1186, 1194 (9th Cir. 2001); 4 *Melville B. Nimmer & David Nimmer, Nimmer on Copyright § 14.04[A] (80th rel. 2009)*, statutory damages many times are the preferred monetary remedy for such plaintiffs that have registered the infringed work. *See supra* note 13 (registration is a prerequisite for pursuing statutory damages). In addition, in certain
this more compelling arsenal of potential remedies available under copyright law, aggrieved owners of copyright rights in open source software should be much less reluctant to enforce such rights against infringers. 88

There seems little doubt that the ever-burgeoning development and use of open source software, 89 the vigorous and seemingly well-coordinated enforcement efforts undertaken by SFLC, FSF, GPL-Violations.org, and others, and the CAFC’s pivotal decision in Jacobsen all bode well for the ongoing vibrancy and vitality, as well as the longevity, of the open source licensing model.

III. What Should A Business Do About Open Source Software?

So far we have learned that the open source licensing model is a lot like the closed source licensing model, except in one very important respect relating to distribution of the licensed software. Unlike closed source software, which virtually never is distributed in source code form, open source software can (and sometimes must) be distributed in source code form. In addition, when licensed under an Academic License, any distribution to others of copies of licensed open source software and/or related derivative works typically must include on such copies the terms of the Academic License and certain attributions and copyright notices. Similarly, when licensed under a Reciprocal License, any distribution to others of copies of derivative works of the licensed software typically must be in source code form. Lest the temptation arise to give short shrift to the seemingly less restrictive requirements of the Academic License, one need only be reminded that violation of the requirements of an Academic License, not a Reciprocal License, formed the basis for the plaintiff’s copyright infringement claim in Jacobsen.
We have also determined that the open source licensing model is not a “flash in the pan” approach to licensing software that is not likely to stand the test of time. On the contrary, the open source licensing model is here to stay, and organizations that either ignore or refuse to educate themselves on, and ultimately take steps to comply with, the requirements of that model, likely do so at their peril. Thus, organizations that embrace open source software from an educated perspective – *i.e.*, by identifying and assessing the potential benefits of such software in view of the potential risks to the organization arising from use of the software – are likely to make the most prudent and uneventful transitions to the open source licensing model.

Informed by these determinations, we can now address the questions asked at the beginning of this article. It is important at the outset to highlight two significant factors likely to shape an organization’s overall approach to open source software: (1) the organization’s need to own (rather than license from others) and distribute its software-related assets and (2) the organization’s stage of development.

Clearly, any organization that needs to own and distribute its software-related assets in order to achieve its business objectives would not be a likely candidate for transitioning to the open source licensing model. For example, a software development organization, whose internally developed software is a core asset that is licensed or otherwise distributed to customers, and from which derivative works are developed, on a regular basis, likely will require a very thorough, detailed, and comprehensive plan for any transition to the open source licensing model, so as to preserve the ongoing value of that asset. For that matter, such an organization’s use of open source software could be entirely out of the question. The same would hold true for any entity whose value proposition is based in any way on obtaining and maintaining ownership of copyright rights in software-related assets.

At the other end of the spectrum, an organization that owns no software, does not plan to ever own any software and is perfectly happy to license all its software from other entities, and has no need to distribute the software it uses outside the organization should be able to transition to the open source licensing model with relative ease.

Similarly, the often compelling financial, “time to market,” and other unique challenges facing earlier stage organizations likely would make the low cost, flexibility, and enhanced availability of open source software hard for such a company to resist, notwithstanding any adverse consequences to the organization that might arise out of using such software.\(^\text{90}\) In the event that the organization has no

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\(^{90}\) This is not to say that open source software would not have appeal to mid-stage
overriding business need to own and externally distribute, and is content licensing from others, its software-related assets, it should be able to hop on the open source bandwagon without ever looking back. However, for a startup software developer, for example, whose proprietary software is its lifeblood, giving into the temptation to cut cost and time to market by incorporating open source software into its product could be the worst business decision that it ever makes.

A. Does (or Should) the Organization Use Open Source Software in its Business?

An organization should consider taking the following initial steps in formulating an approach for addressing open source software issues: (1) review and revamp the organization’s strategy on how software-related assets are used, and will be used for the foreseeable future, within the organization to take account of the unique issues associated with open source software and (2) audit the organization’s existing software-related assets to (i) determine whether and to what extent open source software is being used in connection with the organization’s business activities; (ii) identify the purposes for which such software is used; (iii) assess whether such uses are compatible with the organization’s revamped software utilization strategy; and (iv) make adjustments as needed to bring about the desired level of compatibility.


Knocking the dust off the organization’s software utilization strategy and breathing new life into it by looking for sensible and beneficial ways to incorporate open source software into achievement of the organization’s business objectives is essential to successfully transitioning to the open source model. All business units within the organization should take part in this process in order to draw from as broad an experiential base as possible and to ensure that all necessary expertise is brought to bear on this important undertaking. In some cases, it may be necessary to bring in outside consultants having specialized expertise that may be lacking within the organization.

Tapping into expertise in at least the following areas is a must: (1) technical – i.e., individuals having in-depth understanding of (i) the operational aspects and functional capabilities of the organization’s and late stage companies as well. For example, such companies may find open source software useful in maintaining a competitive advantage in really tight markets or introducing a level of efficiency and effectiveness in the organization’s business operations that cannot be achieved any other way.
software-related assets (typically, the organization’s information technology (“IT”) department) and (ii) whether and to what extent the organization’s use of open source software will enhance its business operations; (2) risk management – i.e., individuals who can determine the scope of additional potential liability to which the organization will be exposed by transitioning to open source software; (3) product/service development – i.e., individuals who can assess the potential impact of an open source transition on the demand for the organization’s product and service offerings; (4) financial – i.e., individuals who can evaluate how an open source transition likely will affect the organization’s bottom line; (5) human resources – i.e., individuals who can determine whether and to what extent an open source transition (i) will be embraced by the organization’s employees and (ii) will impact the organization’s culture; and (6) contract administration – i.e., individuals who can identify and develop methods for addressing contract administration issues that may arise out of an open source transition. In the event that the organization’s contract administrators or other personnel do not possess appropriate expertise in copyright law and the intricacies of intellectual property license agreements, it may be necessary to engage intellectual property counsel to assist in those areas.

Some of the more important points to consider in connection with revamping the organization’s software utilization strategy to accommodate open source software are as follows:

1. Which software-related assets are owned (or licensed) and likely will remain owned (or licensed) by the organization for the foreseeable future?

2. What factors does the organization take into account in deciding whether to own or license a software-related asset?

3. How frequently, if at all, does the organization prepare or have prepared derivative works of any of the software-related assets that it owns?

4. How important to achieving the organization’s business objectives is developing and maintaining ownership of such derivative works?

5. How frequently, if at all, does the organization distribute to third parties (i) any software-related assets that it owns or (ii) derivative works of any such assets?

6. How important to achieving the organization’s business objectives is distributing and maintaining ownership of such assets and derivative works?

7. Is the software distributed by the organization self-contained, imbedded in other software, or both?
(8) What are the perceived benefits, if any, of transitioning to open source software?

(9) What are the perceived risks, if any, of transitioning to open source software?

(10) Which aspects of the organization’s business operations will be impacted by transitioning to open source software and how significant is the impact in each case?

(11) Is the organization positioning itself, or is there a reasonable possibility that the organization will position itself in the foreseeable future, to be acquired? If so, what aspects of the organization’s revamped software utilization strategy need special attention in order to enhance the organization’s appeal as a target?

(12) Is the organization considering changing its business model or any other significant characteristic of its business, and, if so, what aspects of the organization’s revamped software utilization strategy need special attention in order to facilitate that change?

(13) Does the organization’s existing software utilization strategy lend itself to being revamped to accommodate open source software or should an entirely new plan be developed?

(14) What steps should the organization take presently in order to minimize any adverse consequences relating to open source software in the future?

The questions posed in clauses (5) and (6) above implicate perhaps the most important activity within an organization for purposes of determining the advisability of transitioning to open source software – i.e., “distribution” of software-related assets. Prior to OSI’s approval of the GNU Affero General Public License v.3 (“AGPL”)\(^1\) as an open source license in March 2008,\(^2\) the term “distribute,” as used with respect to a party providing open source code software to another party, generally was understood to mean nothing more than delivery (i.e., via transfer of possession) of a copy of the source code of the software fixed in any medium (e.g., on disc).\(^3\) Thus, a licensor of open source software to which users were

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\(^3\) Affero General Public License – Wikipedia, the free encyclopedia, http://en.wikipedia.org/wiki/Affero_General_Public_License (last visited Apr. 30, 2010). The provision requiring that SaaS governed by the AGPL be provided in source code form is referred to as the “Affero clause,” “Affero requirement,” and “Affero provision.” Id. The FSF recommends that developers use the AGPL for any software provided over a network. Various Licenses and Comments about Them –
provided access pursuant to an Application Service Provider (“ASP”) model over a computer network, sometimes called “Software as a Service” (“Saas”),\(^94\) typically was not obligated to provide such users the licensed open source software and related derivative works in source code form, because such software was not “distributed” in the manner required to trigger such an obligation.\(^95\)

However, with the advent of the AGPL, which “close[d] a perceived application service provider ‘loophole’ . . . in the ordinary GPL,” a licensor of open source SaaS governed by the AGPL must provide its end users with copies of the SaaS and related derivative works in source code form.\(^96\) Consequently, in examining the questions posed in clause (5) and (6) above, an organization that provides SaaS in connection with its business should remain particularly mindful of the requirements for using open source software governed by the AGPL.

2. Open Source Software Audit.

Regardless of whether the organization revamps its software utilization strategy to accommodate open source software, the organization should audit its software-related assets to determine whether and to what extent open source software is used in its business operations. This is important for at least two reasons:

First, even if the organization’s revamped software utilization strategy abstains from, or significantly limits, the use of open source software, there are no guarantees that open source software has not already found its way onto the organization’s computer system. Thus, identifying any such open source software and promptly locating and installing closed source replacement software as needed to reconcile with the revamped strategy will provide the organization peace of mind going forward.

Second, if the revamped strategy embraces the use of open source software in a significant way, it will be necessary to determine whether and to what extent any open source software presently used by the organization is compatible with that strategy.

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\(^96\) Id.
There are a number of vendors that provide services for auditing open source software. In cases where cost is a concern or an outsider’s access to the organization’s software and underlying code presents too much potential risk, even with a confidentiality agreement in place, an organization may elect to use its own IT department to conduct the audit. In any event, the organization should undertake appropriate due diligence and planning with respect to the entities and individuals that will conduct the audit to ensure that (1) they possess the requisite expertise; (2) their products are capable of auditing the organization’s software in a manner designed to achieve the organization’s objectives for the audit; and (3) they are subject to appropriate written confidentiality and restricted use obligations. Following are some of the more important objectives that an organization may want to consider in this context:

(1) Audit scope should include all software (i.e., system, application, and programming software) on the organization’s computer system.

(2) Audit results should identify the precise origin (i.e., licensor(s)) of each item of open source software and the license agreement governing use of that item.

(3) Audit results should identify all software governed by an open source license agreement, even if that software resides on the organization’s computer system in object code form only.\(^\text{97}\)

(4) Audit results should identify all open source software that is electronically distributed\(^\text{98}\) outside the organization.

(5) Audit results should separately identify open source software that is linked to or incorporated within any of the organization’s closed source software.

(6) In the event that the audit reveals any open source software that is not compatible with the organization’s revamped software utilization strategy, the vendor should be able to recommend functionally-equivalent closed source software with which to replace the incompatible open source software.

B. Planning for the Future with Open Source Software.

Once the organization revamps its software utilization strategy to take account of open source software, audits its software to establish

\(^{97}\) Software governed by an Academic License may be distributed in either source code or object code form. See supra note 58 and accompanying text.

\(^{98}\) For software governed by the AGPL, it is important to remember that “distribution” encompasses provision of network access to licensed software via SaaS as well as other, more conventional distribution methods. See supra notes 91-95 and accompanying text.
a baseline for current usage of open source software within the organization, and reconciles the results of the audit with the objectives of the strategy, it’s time to plan for the future. The goal here is to allow the organization to reap as many benefits as possible from using open source software without exposing itself to an undesirable scope of potential liability in the process. Following are some steps that the organization should consider in connection with its planning activities:

(1) All proposed uses of open source software throughout the organization should funnel through a person or persons, who are tasked with assessing whether such use is compatible with the organization’s software utilization strategy. This assessment team should comprise individuals, or at a minimum solicit input, from the same constituencies involved in reviewing and revamping the organization’s software utilization strategy. The assessment, which should be conducted according to a protocol made available to all the organization’s employees, would serve as a filter but not be so rigid as to reject proposed uses of open source software that may be of significant benefit to the organization at the expense of incurring a bearable amount of additional risk. It is important that some degree of flexibility be permitted, not only with the organization’s software utilization strategy but also with this assessment process.

(2) The organization should consider auditing all its software-related assets periodically (perhaps, once a year) along the lines described above in order to determine the level of compliance with the organization’s software utilization strategy with respect to open source software. Uses of open source software that have not been approved by the assessment team or otherwise deviate from the organization’s software utilization strategy promptly should be investigated to identify and address the circumstances surrounding such use – e.g., who are the users, when did such use commence, where did the open source software originate, was the open source software modified or distributed outside the organization, why wasn’t the use approved in advance? In addition, remedial measures should be undertaken to reconcile the results of each audit with the objectives of the software utilization strategy.

(3) Contract administration or other appropriate personnel within the organization should be required to maintain a file containing current copies of all license and other agreements governing open source software used within the organization. Each such agreement should be closely examined to determine the organization’s duties and obligations thereunder, especially as relates to modifications to, and distribution outside the organization of, the licensed software and related derivative works. In the event of any uncertainty or confusion about the provisions of any such agreement,
the organization should consider consulting an intellectual property attorney familiar with open source software license agreements. Two items are of particular concern here:

(i) The applicable license agreement may include a provision allowing the licensor to modify the terms and conditions of the agreement without notice to the licensee, with such modifications taking effect upon the licensee’s first use of the software after the modifications are made. For any agreement having such a provision, the organization should consider ceasing use of the corresponding software or replacing it with other software that is not subject to such a provision.

(ii) Much open source software, and the license agreements governing its use, are made available, accessed, and downloaded via the internet. While quite convenient, this creates a trap for the unwary by making it too easy to start using the software without (a) downloading a copy of the applicable license agreement or (b) securing the assessment team’s pre-approval for such use. Therefore, the assessment protocol described above should highlight this point and emphasize the need for deliberation and restraint when encountering open source software on the internet.

(4) Each and every software-related agreement that the organization negotiates – whether for incoming or outgoing software – should take into account that the software at issue may include open source software. For example, agreements for bringing software into an organization whose software utilization strategy precludes the use of open source software should require the software provider to represent and warrant that such software does not and will not contain open source software. Similarly, agreements for bringing software into an organization whose software utilization strategy limits use of open source software in some way (e.g., only software subject to an Academic License) should include representations and warranties by the software provider to that effect. In cases where the software recipient has to be absolutely sure that the incoming software either contains no, or only certain types of, open source software, the applicable agreement should require an audit of the software along the lines described above and certification by the software provider that it meets the software recipient’s expectations in this regard. For outgoing software, the roles will be reversed, and the organization, in

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99 For example, software license agreements, software development agreements, and agreements, such as an asset purchase agreement, pursuant to which an organization acquires software-related assets.
the position of a software distributor, likely will be expected to make such representations and warranties and provide for such an audit. Moreover, to the extent of any open source included in the outgoing software, the organization’s distribution of that software could trigger affirmative obligations of the type described in Part I.E. above. Thus, it is in the organization’s best interest to know exactly what, if any, open source software is contained in the outgoing software, which can be accomplished by subjecting the software to an open source audit.

(5) The organization’s approach to planning for the future with open source software should include a forward-looking dimension. Each decision that the organization makes about open source should, among many other things, ask and answer the following questions: How will this decision impact the organization’s stature as an acquisition target – i.e., the organization’s “marketability” so to speak? How will this decision affect the marketability of the organization’s goods and services? For example, charting a vast open source software course for an organization whose most likely acquirers eschew the open source licensing model could have disastrous consequences in the event that the organization is positioning, or reasonably could position, itself to be acquired. Similarly, it may not be prudent to make a significant transition to open source software in connection with an organization’s software-related product and service offerings when an attractive potential market for those products and services is occupied by end users that would resist further distributing those items and related derivative works in source code form.

IV. Conclusion

Two adages quickly should come to mind as an organization contemplates life with open source software:

(1) Knowledge is power.

(2) What you do not know may hurt you.

Any organization that utilizes software in connection with its business should devote the time and resources to educating itself about the potential benefits and risks of using open source software. At the end of the day, open source software might not be a good fit. On the other hand, an organization’s well-thought-out, methodical approach to investigating the advisability of using open source software may uncover a valuable asset, which, with proper oversight, could enhance the organization’s performance for years to come.
INSTALLED BASE OPPORTUNISM AND THE SCOPE OF INTELLECTUAL PROPERTY RIGHTS IN SOFTWARE PRODUCTS

Andrew Chin

In its *Microsoft* decision almost nine years ago, the U.S. Court of Appeals for the District of Columbia made clear that the possession of a copyright does not confer immunity from monopolization liability on acts involving the restrictive licensing of the copyrighted work. Employing a memorable analogy, the court stated:

Microsoft's primary copyright argument borders upon the frivolous. The company claims an absolute and unfettered right to use its intellectual property as it wishes: “[I]f intellectual property rights have been lawfully acquired,” it says, then “their subsequent exercise cannot give rise to antitrust liability.” That is no more correct than the proposition that use of one's personal property, such as a baseball bat, cannot give rise to tort liability.

In interpreting the anti-monopolization provisions (Section 2) of the Sherman Act, the courts have been less clear about the potential for liability that may arise from the refusal to license a patented product. A monopolist can sometimes harm competition by refusing patent licenses to would-be customers who do business with the monopolist’s competitors. Nevertheless, some courts have gone so

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1 Associate Professor, University of North Carolina School of Law. The author wishes to thank Michael Carrier and Hanno Kaiser for helpful comments on an earlier version. Portions of this article were supported by the American Antitrust Institute. Some contributors to the AAI may have an interest in the issues discussed in this paper. A list of contributors to the AAI is available upon request.


3 *Id.* at 63 (citation omitted). The court did allow one exception, concluding that Microsoft was allowed to prohibit PC manufacturers from altering Windows so drastically as to “automatically prevent[] the Windows desktop from ever being seen by the user....” *Id.*

far as to suggest that unilateral refusals to license a patent are always legal, except where there is a separate basis for legal liability.\(^5\)

The legal ambiguity over patent licensing poses obvious difficulties for antitrust enforcers tasked with prosecuting companies that monopolize markets in high-tech industries. Until recently, however, the Justice Department manifested little interest in pursuing cases that might clarify the law in this area. The agency under Bush brought no monopolization cases, as then-Sen. Barack Obama critically observed during his presidential run.\(^6\)

The Justice Department in 2008 also issued a report, *Competition and Monopoly: Single-Firm Conduct Under Section 2 of the Sherman Act*, which expressed the agency’s policy approach of allowing monopolists to engage in unilateral, unconditional refusals to deal, including refusals to license intellectual property, without facing meaningful antitrust scrutiny.\(^7\) The Obama administration’s first Assistant Attorney General for the Justice Department’s Antitrust Division, Christine A. Varney, signaled a major shift in enforcement policy when she ordered the withdrawal of the agency’s Section 2 report on May 11, 2009,\(^8\) barely three weeks into her term of office.\(^9\)

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\(^5\) *See infra* text accompanying note 79.

\(^6\) *See* Senator Barack Obama, Statement to the American Antitrust Institute (Sept. 27, 2007) (transcript available in the American Antitrust Institute Archives) (noting that in the last “seven years, the Bush Justice Department has not brought a single monopolization case”).


Regarding intellectual property licensing, the report states:

> If a monopolist has something that a rival wants to use to make more, different, or better products, it can appear that consumers would be better off if the monopolist were forced to deal with its rival. But if the monopolist is forced to deal with the rival, the monopolist’s incentives to spend the necessary time and resources to innovate may be diminished. Moreover, the incentives of other firms to invest and innovate, considering the potential future returns on their investments, may be diminished if they believe they will be forced to share a successful innovation. If the incentives to innovate are diminished, consumers are likely harmed in the long run.


\(^9\) *Press Release, U.S. Dep’t of Justice, Attorney General Eric Holder Welcomes*
The Antitrust Division’s recently reported opening of an investigation into IBM’s conduct in the mainframe computer industry\textsuperscript{10} appears to confirm this shift in Section 2 enforcement, and raises the possibility that the agency will seek clarification from the courts as to whether and when the restrictive licensing of patented technology can give rise to monopolization liability. The investigation appears to arise from complaints that IBM has blocked competitors from building IBM-compatible mainframes by refusing to license patents needed to achieve compatibility,\textsuperscript{11} but may extend to a wider range of conduct.

Should the investigation lead to an enforcement action, the courts will have a further opportunity to clarify the antitrust obligations and intellectual property rights of a monopolist who relies primarily on patents, rather than copyrights, to protect its technology. Given IBM’s importance to the information technology industry as the owner of the world’s largest patent portfolio,\textsuperscript{12} such a case could be accurately described as the patent-oriented sequel to the Microsoft litigation, which itself had been cut short in 2001 by a regime change at the Justice Department.\textsuperscript{13}

In contrast to the D.C. Circuit’s dismissal of Microsoft’s copyright counterclaims, antitrust challenges to IBM’s current mainframe licensing practices thus far have encountered broad judicial deference to IBM’s patent rights. The purpose of this Article is to analyze and critique these contrasting approaches and to situate the current litigation and investigation involving IBM in the still-unsettled doctrinal context at the intersection of intellectual property and antitrust law. The remainder of this Article is organized as follows.

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Section I outlines a doctrinal analysis of the Microsoft tying claim that bolsters the D.C. Circuit’s broad pronouncement that the challenged conduct exceeded the scope of Microsoft’s rights under copyright law. Section II draws parallels between Microsoft’s and IBM’s conduct as examples of alleged opportunism by operating system vendors who enjoy monopoly power and a locked-in installed base. Section III describes the changed circumstances that allegedly provided IBM in 2001 with a new opportunity to exploit its installed base of mainframe users. Section IV describes the pending antitrust case arising from that alleged exploitation brought by T3 Technologies, a system integrator that markets compatible alternatives to IBM’s mainframe platform. Section V situates the T3 litigation in the relevant case law and discusses issues left unresolved by the leading precedents. Section VI concludes.

I. ANTITRUST AND THE SCOPE OF MICROSOFT’S COPYRIGHT

As Microsoft learned, software licensing is a contracting activity that can constitute an exclusionary practice subject to antitrust scrutiny. When a licensing practice is challenged, antitrust liability can turn on whether the practice is deemed to be a legitimate exercise of rights that were lawfully acquired under the federal copyright laws.  

Increasingly, software products are marketed to consumers under terms and conditions that purport to extend the vendor’s rights beyond the scope defined by the Copyright Act.  

Of particular concern in the antitrust

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14 See, e.g., United States v. Loew’s, Inc., 371 U.S. 38, 47-48 (1962) (condemning the block booking of separately copyrighted motion pictures for television exhibition as a tying arrangement under § 1 of the Sherman Act); CSU, L.L.C. v. Xerox Corp. (In re Independent Serv. Orgs. Antitrust Litig.), 203 F.3d 1322, 1327 (Fed. Cir. 2000) (rejecting unilateral refusal to license claim for lack of evidence that copyrights were obtained by unlawful means or were used to gain monopoly power beyond the statutory copyright granted by Congress).

15 See, e.g., Bowers v. Baystate Techs., Inc., 320 F.3d 1317 (Fed. Cir. 2003), cert. denied, 123 S.Ct. 2588 (2003) (holding that a “shrinkwrap” license agreement that overrode limitations on the copyright owner’s rights under the Copyright Act was enforceable under state contract law); ProCD, Inc. v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996) (same).

16 There is an extensive literature on the preemption of state contract law by federal copyright law, and the enforceability of shrinkwrap and clickwrap license agreements (i.e., standard form license agreements that assert that the act of opening a box, or downloading files, containing software signifies the consumer’s assent to the license terms). For commentary on preemption, see, e.g., Maureen A. O’Rourke,
context is the balance between the constitutional purpose to “promote the progress of science . . . by securing for limited times to authors . . . the exclusive right to their respective writings”\textsuperscript{17} and the Sherman Act’s “general prohibition on unreasonable restraints of trade.”\textsuperscript{18}

In addressing this balance, antitrust doctrine draws a fundamental distinction between trade restraints that inhere in the rights conferred by the intellectual property laws, and trade restraints that result from the contractual or technological exploitation of those rights. While intellectual property rights themselves may restrain competition by subjecting competing suppliers to civil liability for certain kinds of productive activities (i.e., those involving infringement), the legitimate acquisition and enforcement of rights under the intellectual property laws are generally not subject to antitrust scrutiny.\textsuperscript{19} Transactions involving intellectual property rights, however, may be subject to antitrust challenges based on the owner’s conduct in exploiting those rights through contractual or technological means.\textsuperscript{20}

As I argued more fully in a 2005 treatise-length article in the *Wake Forest Law Review*,\textsuperscript{21} Microsoft’s Windows operating system,


\textsuperscript{17} U.S. CONST. art. I, § 8, cl. 8.


\textsuperscript{19} \textit{See generally} HERBERT HOVENKAMP ET AL., IP AND ANTITRUST: AN ANALYSIS OF ANTITRUST PRINCIPLES APPLIED TO INTELLECTUAL PROPERTY LAW § 13.3, at 13-10 (2003) (stating that antitrust law generally imposes a duty to license intellectual property only in cases where “an intellectual property owner has sought to expand the scope of its right beyond what the intellectual property laws grant it”).

\textsuperscript{20} \textit{See}, e.g., Interstate Circuit, Inc. v. U.S., 306 U.S. 208, 230 (1939) (“An agreement illegal because it suppresses competition is not any less so because the competitive article is copyrighted.”); Data Gen. Corp. v. Grumman Sys. Supp. Corp., 36 F.3d 1147, 1185 n.63 (1st Cir. 1994) (“It is in any event well settled that concerted and contractual behavior that threatens competition is not immune from antitrust inquiry simply because it involves the exercise of copyright privileges.”); \textit{cf.} Eastman Kodak Co. v. Image Technical Servs., Inc., 504 U.S. 451, 479 n.29 (1992) (citations omitted) (“The Court has held many times that power gained through some natural and legal advantage such as a patent, copyright, or business acumen can give rise to liability if ‘a seller exploits his dominant position in one market to expand his empire into the next.’”).

its Internet Explorer Web browser, and most other software products
distributed under mass-market copyright licenses are properly
understood as bundles of legal rights and technological capabilities
that confer the ability to use software for specified purposes, but do
not include any software per se.22 (Thus, it is inaccurate to refer to
Internet Explorer as “integrated” into Windows 98,23 because the fact
that some of the same Windows 98 code is used to support both
operating system and browsing functionalities, while arguably
innovative, is irrelevant to the question of whether Windows and
Internet Explorer are separate products.24)

Microsoft’s inclusion of a Web browser software product in
Windows 98 involved at least four understood tying conditions25
implemented through contractual or technological means.26 First,
Microsoft offered Windows 98 to end users only under form license
agreements that granted sufficient legal rights to install and run the
Windows 98 software on a system according to the documentation for
both operating system and Web browsing purposes.27 Second, Microsoft refused to allow its OEM licensee-distributors to alter the
Windows 98 software or remove the desktop icons that were the
principal documented means by which end users of Windows 98 could
obtain technological access to Microsoft’s Web browser software
product.28 Third, Microsoft excluded its Web browser software
product from the Add/Remove Programs facility that was the principal
documented means by which end users of Windows 98 could remove
 technological access to software products.29 Finally, when a retail
consumer chose to use a non-Microsoft Web browser software product
as the default, “Windows 98 nevertheless require[d] the user to
employ Internet Explorer in numerous situations that, from the user’s
perspective, [we]re entirely unexpected.”30

22 see id. at 5.
23 see id. at 7-8 n.24.
24 see id. at 102-05.
25 An understood tying condition may include any conduct by the seller that leads
reasonable buyers to understand that they cannot get the tying product unless they
also take the tied product. 10 PHILLIP E. AREEDA, EINER ELHAUGE & HERBERT
HOVENKAMP, ANTITRUST LAW ¶ 1754c, at 303-04 (1996).
26 see Chin, supra note 21, at 112-13.
27 see End User License Agreement for Microsoft Windows 98,
http://www.teammacer.co.cc/siteglobalinlinux/eula98.html (annotating license
agreement with critical comments) (last visited May 18, 2010); see also United
States v. Microsoft Corp., 253 F.3d at 84 (restating district court finding that
“Microsoft required licensees of Windows 95 and 98 also to license IE as a bundle
at a single price”).
29 see id. at 52, ¶ 170.
30 see id. at 52-53, ¶¶ 171-72.
Such conditions on the use of software products that functionally override consumer choice frustrate the Copyright Act’s scheme for guaranteeing consumers the right to use every software product for the purpose “for which it was both sold and purchased.” As I have argued more fully elsewhere, sections 102(b) and 117 of the Copyright Act have been interpreted to ensure a well-functioning software product market, inasmuch as a consumer of a software product is entitled to the benefit of the bargain — i.e., the ability to link, load and execute the same code that the vendor chose to implement the product’s intended purposes. There is no warrant in the Copyright Act for restraints that impede competing software developers from determining which code is to be executed when consumers choose to use their products.

Accordingly, the practices challenged under the *Microsoft* tying claim cannot be characterized as a legitimate exercise of software copyrights. Even though the government did not pursue this argument, and ultimately dropped its tying claim, *Microsoft* should be noted as a case where software copyright protection failed to confer antitrust immunity on the arguably innovative but exclusionary conduct of an operating system monopolist. With this background, we now consider IBM’s position as an operating system monopolist accused of exclusionary practices involving its patented software technologies.

II. OPERATING SYSTEM LOCK-IN AND INSTALLED BASE OPPORTUNISM

In the same way that PC users tend to find themselves dependent on Microsoft’s Windows, businesses and organizations that use mainframe computers can get locked in to IBM’s operating system. IBM has enjoyed a monopoly in the worldwide market for mainframe computers for most of its history as a company. Mainframes are a class of computer characterized by an extremely high level of reliability, availability and serviceability. They are used

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31 See NAT’L COMM’N ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS, FINAL REPORT 31-33 (1978).  
33 Id. at 72 (citations omitted).  
34 In other words, the conduct challenged under the *Microsoft* tying claim amounted to a use of Microsoft’s copyright to gain monopoly power beyond the statutory copyright granted by Congress. See In re Indep. Serv. Orgs. Antitrust Litig., 203 F.3d 1322, 1329 (Fed. Cir. 2000).  
35 See First & Gavil, supra note 13.  
36 See Microsoft, 84 F. Supp. 2d at 15.
primarily by large businesses and government agencies to process data in their ongoing operations.\textsuperscript{37}

Lock-in results from the fact that most applications software products are designed and sold to run on a specific operating system and will not work on any other.\textsuperscript{38} Over time, computer users tend not only to become accustomed to the applications they use, but also to generate large volumes of data and other auxiliary files that are specific to those applications. This reliance on specific applications is especially strong in the case of mainframe-based applications, which are often highly customized and mission critical.\textsuperscript{39} The prospect of losing these operating system-specific investments of money and time can deter computer users from switching to a different operating system.\textsuperscript{40} In this way, high switching costs lead to consumer lock-in.

An operating system monopolist can take advantage of consumer lock-in by imposing increasingly onerous conditions on its installed base of existing customers. The monopolist may introduce newer, more expensive versions of the operating system while discontinuing older, less expensive versions. While newer versions of an operating system may include beneficial innovations, existing customers may end up paying a higher price for new features they do not need. The monopolist may also try to require its customers to purchase another of its products, or forbid them from purchasing a competitor’s product.\textsuperscript{41}

Monopolists who exploit their ability to extract such concessions from a locked-in installed base are said to be engaging in \textit{installed base opportunism}.\textsuperscript{42} Installed base opportunism may not be a profitable strategy if large numbers of consumers come to recognize the long-term burdens of ownership and become discouraged from buying the monopolist’s product in the first place.\textsuperscript{43} In the Microsoft case, however, the courts found that Microsoft was able to exploit its installed base because dissatisfied consumers did not have an alternative to Windows that could support a comparable range of software applications.\textsuperscript{44}

\textsuperscript{38} See id. at 606 (citing United States v. Microsoft Corp., 84 F. Supp. 2d 9, 12 (D.D.C. 1999)).
\textsuperscript{39} See T3 Complaint, supra note 10, at ¶ 22-23.
\textsuperscript{40} See Microsoft, 84 F. Supp. 2d at 15.
\textsuperscript{41} See id. at 48.
\textsuperscript{42} See Carl Shapiro, \textit{Aftermarkets and Consumer Welfare: Making Sense of Kodak}, 63 \textsc{Antitrust} L.J. 483, 488 (1995); \textit{Post-Chicago Analysis After Kodak: Interview with Professor Steven C. Salop}, \textsc{Antitrust}, Fall/Winter 1992, at 20, 21.
Similarly, according to the complaints now before the Justice Department, IBM has little to fear from the loss of sales to consumers who might object to the company’s treatment of its installed base of mainframe users. This is because recent initial purchasers of high-end computer systems tend instead to choose more scalable and affordable solutions, such as PC server clusters (“server-based computing”) and cloud computing services. The vast majority of the potential users of mainframe computers were already locked into IBM’s operating system long ago.

Even though relatively few new customers are joining their ranks, mainframe computer users do constitute a significant and growing market for data processing power. Over $1 trillion worth of corporate application software currently relies on IBM mainframes, and the volume of transactions processed by IBM’s mainframe customers will “easily double” between 2006 and 2010. Many other computer companies are interested in offering competing and complementary products to these mainframe customers. The complaints before the Justice Department allege that since 2001, IBM has engaged in several forms of installed-base opportunism with the purpose and effect of blocking competition from these companies and reinforcing consumer lock-in.

III. IBM’S NEW-FOUND FREEDOM

IBM’s alleged aggressiveness since 2001 can be traced to the company’s release from the terms of a 1956 antitrust settlement agreement. The settlement was the result of a 1952 monopolization case against IBM, in which the Justice Department alleged that IBM had obtained and maintained monopoly power in the market for tabulating machines and cards and had used exclusionary leasing agreements to restrain the development of competing computer manufacturers and maintenance and repair companies.

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While some of the restrictions expired within the first ten years,\(^{48}\) most of the consent decree provisions were still in force in 1994, when IBM moved to terminate the decree.\(^{49}\) Those provisions included:

1. a requirement that IBM sell its computers at prices that have a commercially reasonable relationship to the lease charges for the same computers;\(^{50}\)

2. a restriction on IBM’s ability to re-acquire previously sold IBM computers;\(^{51}\)

3. a requirement that IBM offer to sell used IBM computers acquired as trade-ins;\(^{52}\)

4. a requirement that IBM provide the same services to computer owners as to lessees, and at reasonable and nondiscriminatory prices;\(^{53}\)

5. a requirement that IBM allow third-party maintenance, experimentation with, alterations in, and attachments to purchased IBM computers;\(^{54}\)

6. a requirement that IBM operate its service bureau business under a subsidiary;\(^{55}\)

7. a requirement that IBM furnish to IBM computer owners the same service documentation used by IBM’s repair and maintenance organization;\(^{56}\)

8. a prohibition against certain agreements to allocate markets or to restrain U.S. imports or exports;\(^{57}\) and

9. a prohibition against conditioning the sale or lease of a computer upon the purchase or lease of any other computer.\(^{58}\)

In 1995, the Justice Department tentatively agreed to terminate the portions of the decree concerning requirements (3) and (5), and all other provisions as they applied to IBM’s personal computers and

\(^{48}\) *See* Memorandum of Law in Support of IBM’s Motion to Terminate the 1956 Consent Decree, United States v. Int’l Bus. Machines Corp., 1994 WL 16188213, at *3 n.1.


\(^{51}\) Id. § V.

\(^{52}\) Id.

\(^{53}\) Id. § VI.

\(^{54}\) *See* id. § VII.

\(^{55}\) Id. § VIII.

\(^{56}\) Id. § IX.

\(^{57}\) *See* id. § XV.

\(^{58}\) Id.
workstations. Following a public comment period, Judge Thomas P. Griesa of the U.S. District Court for the Southern District of New York ordered termination of these portions of the decree in January 1996.

The Justice Department subsequently joined IBM in filing a July 1996 motion to phase out the remaining portions of the decree by July 2001. These provisions related to IBM’s System/390 mainframe and AS/400 mid-range computer systems. Accepting expert reports that IBM’s AS/400 already faced a competitive market and IBM’s System/390 enjoyed only “limited and diminishing” market power, the government found that neither of the markets in which these systems competed presented serious long-term competitive concerns. In its briefs supporting the joint motion, the government concluded that “IBM is unlikely to be able to exercise market power against any significant category of equipment customers in 2001,” and that “[t]ermination of the decree is also unlikely to increase the possibility that IBM could exercise market power in hardware maintenance aftermarkets.”

Judge Griesa agreed to the phase-out plan. In a May 1997 opinion, he found that “[t]here is an active competitive market in computers today, the nature and extent makes obsolete this 40-year-old decree.” Judge Griesa specifically addressed the concerns of independent computer maintenance companies that the phase-out would allow IBM to restrict the supply of spare parts for its computers. He noted that “the heart of IBM’s business is selling and leasing computers,” and IBM would not want to discourage customers from buying and leasing IBM mainframes by impairing “their ability to obtain maintenance and repair services where they desire to do so.” Judge Griesa reasoned that IBM would be unlikely to engage in installed base opportunism because of the ability of consumers to switch to non-IBM computers:

IBM’s customers are generally well informed about the lifetime cost of a computer (including service) and there are

60 See id.
61 See id.
62 Id.
63 See id.
64 See id.
66 Id. at *3.
strong indications that they are quite willing to purchase non-IBM computers if the lifetime costs of IBM machines should become excessive. Realistically, the market as it exists today is a powerful deterrent against IBM engaging in monopolistic tactics designed to shut off the supply of parts to independent repair companies. By the same token, IBM has every incentive to compete in the repair market by offering better services and lower costs.\footnote{Id.}

In December 1998, the U.S. Court of Appeals for the Second Circuit agreed with Judge Griesa’s reasoning, and affirmed the order to phase out the decree.\footnote{United States v. Int’l Bus. Machines Corp., 163 F.3d 742 (2d Cir. 1998).}

Soon after these court decisions, the mainframe computer industry underwent some unforeseen changes. In 2000, two major IBM-compatible mainframe manufacturers, Amdahl and Hitachi, abandoned the market, leaving IBM as the sole manufacturer of mainframe computer equipment. Also, around the same time, PC server clusters emerged as an economically viable, and increasingly preferred, alternative to mainframes among new buyers as a high-end computing solution. These developments left locked-in mainframe users with no alternative equipment supplier, and left relatively few new buyers in the market to deter IBM from engaging in installed base opportunism. Thus, IBM’s decision in 1999 to discontinue its smaller, slower mainframes (i.e., those capable of performing fewer than 60 million instructions per second) raised concerns that the company was trying to force its locked-in customers to spend substantial sums to upgrade to IBM’s more-expensive machines which offered more power than they needed.\footnote{See T3 Complaint, supra note 10 at ¶¶ 7, 92.}

In focusing on maintenance and repair services, Judge Griesa’s analysis also did not foresee the group of competitors who would allegedly be targeted by IBM’s opportunistic strategies. Since the mid-1990s, various companies have been working to develop alternative technologies that allow mainframe software applications to run on less expensive non-IBM computer systems (also known as alternative “mainframe platforms”). These alternative approaches have relied in part on IBM’s patented technology and proprietary information relating to its mainframe operating system. According to the complaints before the Justice Department, since 2001 IBM has harmed competition in the mainframe platform market by refusing to license its operating system technology to the developers, providers and users of these mainframe platform alternatives.

In short, consumers are no longer protected by the “active
competitive market in computers” that spurred the district court’s decision to terminate the 1956 consent decree, and IBM’s post-termination conduct has raised installed base opportunism concerns that were not contemplated at any point by the Justice Department or by Judge Griesa.

IV. T3’s Antitrust Complaint Against IBM

IBM’s alleged refusals to license its operating system technology stand in contrast to the company’s historic policy of licensing patents to third parties under reasonable and nondiscriminatory terms, including to some of the companies that were developing and marketing alternatives to the IBM mainframe platform. IBM initially granted one such company, Platform Solutions, Inc. (“PSI”), a license to use IBM’s 31-bit mainframe operating system (“OS/390”), but subsequently withdrew the license. When PSI continued to develop and market its alternative mainframe platforms, IBM sued PSI for breach of its software licenses and infringement of patents covering various platform features implemented in or accessed through OS/390 and its new 64-bit operating system (“z/OS”). IBM subsequently mooted the dispute by acquiring PSI, but not before another company, T3 Technologies, intervened in the \( IBM \ v. \ PSI \) case complaining of antitrust violations by IBM.

T3 is a system integrator: it combines software and hardware components from various suppliers into ready-to-use computer systems. T3 has historically focused on serving small and medium businesses and organizations that use mainframe software but do not require massive computing power.

T3’s “tServer” product served these small customers’ needs when IBM discontinued its smaller mainframes in 2000. The tServer used software developed by Fundamental Software, Inc. (“FSI”) to support IBM’s 31-bit mainframe instruction set on an Intel-based server. FSI had obtained patent licenses from IBM under reasonable and nondiscriminatory terms for the technologies that FSI’s software

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71 See T3 Complaint, supra note 10.
needed to interoperate with OS/390. According to T3’s complaint, in 2003, after IBM introduced z/OS and discontinued OS/390, IBM refused to sell FSI a license so that FSI could make its software compatible with z/OS, and refused to license z/OS to FSI for sale to commercial end-users. As a result, T3 was unable to produce a version of the tServer for use with z/OS, the only mainframe operating system IBM continues to support.\footnote{336}

T3 subsequently sought to offer a “Liberty Server” product, which used software from PSI to support IBM’s 64-bit mainframe instruction set on a Hewlett-Packard server. According to T3’s complaint, IBM has not only refused to license its OS/390- and z/OS-related patents and product interface information to PSI, but has refused to license z/OS to customers unless they purchased or continued using an IBM mainframe. T3 also alleges that IBM has falsely informed T3’s customers that using a Liberty Server would cause a loss of reliability, availability, and serviceability.\footnote{337}

T3’s complaint alleges that IBM’s actions constitute monopolization and attempted monopolization in violation of Section 2 of the Sherman Act and tying in violation of Section 1 of the Sherman Act and Section 3 of the Clayton Act, as well as violations of various state antitrust, contract, and deceptive practice laws.\footnote{338}

On September 30, Judge Griesa’s colleague, Judge Lewis A. Kaplan, dismissed T3’s complaint on the grounds that T3 had not shown that it had been directly injured by any of the alleged antitrust violations and therefore lacked standing to bring the lawsuit.\footnote{339} Judge Kaplan also held that IBM was free to refuse to deal with FSI and PSI. Citing the Supreme Court’s 2004 \textit{Verizon v. Trinko} decision, Judge Kaplan held that a unilateral termination of a course of dealing cannot violate the antitrust laws unless the defendant has “foregone short term profits by refusing to license its patents ‘to achieve an anticompetitive end.’”\footnote{340} In support of his conclusion that IBM’s refusal to license its operating system technology did not fall into this “limited exception,” he reasoned as follows:

\begin{quote}
IBM invested billions of dollars to develop its sixty-four bit operating systems, which contain numerous technical improvements over its thirty-one bit technology. It introduced them to make its operating systems more functional and competitive with distributed systems [e.g.,
\end{quote}

\footnote{336} See T3 Complaint, \textit{supra} note 10, at ¶ 8.
\footnote{337} See \textit{id.} at ¶ 11.
\footnote{338} See \textit{id.} at ¶¶ 104-58.
\footnote{339} See \textit{IBM v. Platform Solutions}, 658 F. Supp. 2d at 609.
\footnote{340} See \textit{id.} at 614 (quoting \textit{Verizon Commc'ns v. Law Offices of Curtis V. Trinko}, LLP, 540 U.S. 398, 407 (2004)).
Notably, Judge Kaplan’s decision did not review any of the claims of the asserted patents, and therefore did not treat the scope of IBM’s patent protection as a relevant consideration in conferring antitrust immunity on IBM’s exclusionary conduct. On their face, the five patents in suit appear to be narrowly directed to specific features of the OS/390 and z/OS platforms, but a careful determination of their scope and implications for monopoly power would necessitate a more developed factual record. T3 is appealing Judge Kaplan’s decision. In the meantime, the Justice Department is reviewing the merits of T3’s allegations.

V. ANTITRUST TREATMENT OF REFUSALS TO LICENSE PATENTS

In Verizon, the Supreme Court found that an incumbent local exchange carrier did not have a duty under Section 2 of the Sherman Act to provide rivals with access to its telephone network. By relying solely on Verizon as precedent, Judge Kaplan’s decision misses an important distinction between the physical telephone network (in which Verizon has property rights) and “thirty-one bit technology” (which is recognized as IBM’s property only to the extent


79 See generally Phillips v. AWH Corp., 415 F.3d 1303, 1311-19 (Fed. Cir. 2005) (describing the range of intrinsic and extrinsic evidence that may bear on claim construction).


81 See Foley, supra note 10 (noting IBM’s understanding that the Department of Justice had requested litigation documents from T3).

82 Verizon, 540 U.S. at 410-11.
provided by the intellectual property laws). Patent law does not award to IBM plenary rights in “its thirty-one bit technology,” but only limited rights of exclusion over the subject matter of its valid and enforceable claims.

There are two leading precedents that specifically address antitrust treatment of unilateral refusals to license patents. Both take into account the limited scope of the patent grant, but with different conclusions. In Xerox (2000), the Federal Circuit held that a patentee’s right to refuse to license a patent is limited only in circumstances where there is “illegal tying, fraud in the Patent and Trademark Office, or sham litigation . . . so long as [any] anticompetitive effect is not illegally extended beyond the statutory patent grant.”

This holding suggests that unilateral refusals to license a patent are always legal, except where there is a separate basis for legal liability.

The Ninth Circuit in Image Technical (1997), however, held that the validity of a patentee’s desire to exclude others as a legitimate business justification was only a “rebuttable presumption.” In Image Technical, Kodak had instituted a new policy of refusing to sell parts for its photocopiers to independent service companies and their customers. Kodak argued that the policy was intended to protect its intellectual property. The Ninth Circuit found sufficient evidence to rebut this argument in the facts that only sixty-five of Kodak’s thousands of parts were patented and that Kodak’s intellectual property argument was made only belatedly. The court also emphasized that a refusal to license a patent may not be used to “extend a lawful monopoly beyond the grant” of the patent.

Given that patents grant exclusionary rights over inventions, not products, it is not clear when the refusal to license a patent may be said to cause an anticompetitive effect beyond the patent grant. The Patent Act itself does not provide adequate guidance on this point. The Federal Circuit in Xerox cited section 271(d) of the patent statute in support of its permissive approach to unilateral refusals to license. This provision, added by Congress in 1988, states in relevant part:

No patent owner otherwise entitled to relief for infringement . . . of a patent shall be denied relief or deemed guilty of misuse or illegal extension of the patent right by reason of

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84 Image Technical Servs., Inc., v. Eastman Kodak, 125 F.3d 1195, 1218 (9th Cir. 1997).
85 Id. at 1218-20.
86 Id. at 1216 (citing Mercoid Corp. v. Mid-Continent Inv. Co., 320 U.S. 661, 665 (1944)).
his having . . . (4) refused to license or use any rights to the patent. 87

The legislative history accompanying this amendment, however, only cites cases involving complete refusals to license patents. 88 In contrast, T3’s complaint does not allege a complete refusal to license, but a selective refusal to license to FSI and PSI with the purpose and effect of restraining competition in the mainframe platform market.

Antitrust is concerned with competition in markets defined to include products having reasonable interchangeability of use. 89 By permitting complete refusals to license, section 271(d) contemplates that a patent owner may exercise market power by restricting output and thwarting demand for the use of its intellectual property: i.e., the ability to make, use, sell or import the patented invention. 90 A selective refusal to license, however, may allow a patent owner to exercise market power against parties who derive no benefit from practicing the patented invention. As one commentator has explained in connection with the Xerox case, such an exercise of market power may accurately be described as exceeding the scope of the patent grant:

In Xerox the reason why the ISOs needed Xerox’s parts was not because these parts were patented, but because they were the only parts available to service Xerox’s copiers. In using them to service Xerox’s copiers’ end-users, the ISOs did not appropriate Xerox’s legal reward, because the ISOs did not benefit from the invention, the end-users did. In refusing to deal with anyone but the end-users, Xerox necessarily imposed itself as the only service provider, since the ISOs had no access to parts. Thus, Xerox foreclosed and monopolized a market unrelated to its intellectual property, using means that had nothing to do with the reward it was

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89 See Brown Shoe Co. v. United States, 370 U.S. 294, 325 (1962) (“The outer boundaries of a product market are determined by the reasonable interchangeability of use or the cross-elasticity of demand between the product itself and substitutes for it.”); United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377, 404 (1956) (“The ‘market’ which one must study to determine when a producer has monopoly power will vary with the part of commerce under consideration. The tests are constant. That market is composed of products that have reasonable interchangeability for the purposes for which they are produced — price, use and qualities considered.”).
Similarly, according to T3’s complaint, FSI’s and PSI’s only interest in using IBM’s patented technology was for providing a platform that would correctly support the specifications required by IBM’s mainframe operating system. To the extent that the users of IBM-compatible mainframes derived a benefit from the use of IBM’s patented inventions, IBM could have fully captured this value through end-user royalties for its mainframe operating systems. Instead, according to T3, IBM selectively refused to license its patents to FSI and PSI, imposed itself as the only mainframe hardware provider, and restrained competition and innovation in the mainframe platform market beyond the scope of IBM’s patent rights.

T3’s appeal stands at a legal crossroads. The Federal Circuit’s Xerox decision and the Ninth Circuit’s Kodak decision express very different views on the scope of a patent owner’s right to refuse to license its intellectual property. Neither precedent is binding on the Second Circuit Court of Appeals, but the court may look to them for guidance as persuasive authorities in T3’s case.

91 Simon Genevaz, Against Immunity for Unilateral Refusals to Deal in Intellectual Property: Why Antitrust Law Should Not Distinguish Between IP and Other Property Rights, 19 BERKELEY TECH. L.J. 741, 767-68 (2004); see also Seungwoo Son, Selective Refusals to Sell Patented Goods: The Relationship Between Patent Rights and Antitrust Law, 2002 U. Ill. J.L. TECH. & POL’Y 109, 163 (2002) (arguing that a selective refusal to license “may harm competition in complementary or relevant markets because it excludes competitors in a circumstance where they have no alternative except to access the patentee’s property”).

92 See also A. Douglas Melamed & Ali M. Stoeppelwerth, The CSU Case: Facts, Formalism and the Intersection of Antitrust and Intellectual Property Law, 10 GEO. MASON L. REV. 407, 424 (2002) (“Antitrust counsel would advise an AT&T of today . . . that it could immunize its anticompetitive refusal to deal from the antitrust laws by contriving to design its system so that firms like MCI that need access to its network would have to use patented or copyrighted interfaces that, under [Xerox], it may refuse to license. In that event, competition would be injured, and network design and innovation would be distorted and presumably diminished.”); cf. Joseph P. Bauer, Refusals to Deal With Competitors by Owners of Patents and Copyrights: Reflections on the Image Technical and Xerox Decisions, 55 DEPAUL L. REV. 1211, 1225 (2006) (“[T]he holding in Xerox led to a form of over-incentivizing the creation of patentable machines or machine parts.”).

93 For example, one of the patents IBM asserted against PSI serves as “a processor mechanism that provides a direct resumption of an earlier interrupted program” without the need for state transitions and other “performance negatives” that would apply to the approach of implementing such a feature in an operating system. See U.S. Patent No. 5,987,495, cols. 3-4. For a skeptical view of the incremental value of patented inventions to software products in a refusal-to-deal context, see Michael A. Carrier, Unraveling the Patent-Antitrust Paradox, 150 U. PA. L. REV. 761, 823 (2002).

Despite the divergence between the two approaches, both Xerox and Kodak recognize the limiting role of patent scope in defining the right of a patentee unilaterally to refuse to license a patent under the antitrust laws. The failure of Judge Kaplan’s opinion in IBM v. PSI to acknowledge this limitation leaves the scope of a patent owner’s “right to use its intellectual property as it wishes” unclear. It remains to be seen whether either the appellate proceedings or the Justice Department’s investigation of the world’s leading patent owner will produce the necessary vehicle for resolving this ambiguity at the intersection of antitrust and intellectual property law.

VI. Conclusion

While Microsoft involves copyrights and T3 v. IBM involves patents, the proper adjudication of the antitrust claims in each case requires a careful delineation of the legitimate scope of monopoly power contemplated within the statutory intellectual property grant. Such an analysis was absent from both the D.C. Circuit’s categorical rejection of Microsoft’s primary copyright counterclaims and Judge Kaplan’s equally summary dismissal of T3’s antitrust claims. With the benefit of a complete trial record in Microsoft, it was eventually possible to determine that Microsoft’s exclusionary conduct indeed exceeded the scope of its copyright grant. The Second Circuit should recognize in T3 v. IBM an important opportunity to clarify the boundary between antitrust and the legitimate exercise of rights within the scope of a patent grant.

Circulation Sys., Inc., 535 U.S. 826, 834 (2002), however, the Supreme Court held that this exclusive jurisdiction applies only in cases where the plaintiff’s initial complaint properly states a patent law claim. Since the patent issues in Xerox were raised only by the defendant as counterclaims, the Federal Circuit’s opinion in that case is not binding on other circuits and carries only persuasive authority. See Telecom Technical Servs., Inc., v. Rolm Co., 388 F.3d 820, 826 (11th Cir. 2004).

95 See also Mercoid, 320 U.S. at 665-66 (noting that the patent system “denies to the patentee after issuance the power to use [the patent] in such a way as to acquire a monopoly which is not plainly within the terms of the grant.”).

96 Cf. Michael Carrier, Refusals to License Intellectual Property After Trinko, 55 DePAUL L. REV. 1191, 1209 (2006) (noting the lack of a Supreme Court opinion directly addressing refusals to license intellectual property, but predicting that Verizon v. Trinko “likely will make it more difficult to challenge such activity”).

97 In connection with receiving Judge Jackson’s permission to comment on the Microsoft case, see Chin, supra note 20, at 1 n.*, the author agreed to delay publication of his commentary until the conclusion of the remedies proceedings on remand.