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PROTECTING FREE AND OPEN SOURCE SOFTWARE: SOLUTIONS IN THE DIGITAL MILLENNIUM COPYRIGHT ACT

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Since the development of the General Public License, Free and Open Source Software (FOSS) developers have used copyright law to protect their software even while the goals of legally protecting FOSS often run contradictory to the policies behind the Copyright Act. Fundamental to FOSS licenses is the requirement that source code remains accessible, under the notion that this openness promotes greater progress in FOSS development and results in more robust software. However, because of the prevalent distribution of source code, FOSS is particularly vulnerable to copyright infringement. FOSS developers have preemptively protected their works by inventively licensing their work to the public. However, enforcing FOSS licenses through traditional litigation under the Copyright Act has proven challenging.

The Digital Millennium Copyright Act provides legal protection that arises along with the exclusive rights traditionally provided to authors, including protection for technological measures that control access, protection for technological measures that protect exclusive rights of a copyright owner, and protection for the integrity of copyright management information (CMI). However, these extra protections are seemingly counterintuitive to the fundamentals of FOSS licenses, which seek to make their copyrighted works more accessible and less restricted.

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This article focuses on the provisions of the DMCA covering CMI. These provisions have rarely been litigated or otherwise analyzed. However, a review of court decisions regarding the CMI provisions of the DMCA suggest that they may prove to be particularly beneficial in protecting FOSS projects because of the emphasis by FOSS camps in managing FOSS licenses. Just as FOSS camps have traditionally utilized copyright protection that is seemingly in opposition to FOSS goals to created legal safeguards for their works, similar results can, and should, be achieved using the CMI provisions of the DMCA.

I. INTRODUCTION

"Implicit within the [General Public License]'s preamble was a profound message: instead of viewing copyright law with suspicion, hackers should view it as yet another system begging to be hacked."[2] Traditionally, Free and Open Source Software (FOSS) is used as a means for developing software such that the source code remains open and available to the public.[3] However, the public availability of source code and the massively communal development methods that are inherent to FOSS projects often run askew from the typical goals of software copyright protection embedded in intellectual property law. United States copyright law as it pertains to software provides authors of original works the exclusive rights to copy the work, distribute the work, and create derivative works.[4] An infringement claim arises when a party breaches any of these exclusive rights reserved for the copyright owner.[5] The Digital Millennium Copyright Act (DMCA) created several more causes of action that may arise in addition to the traditional exclusive rights provided to a copyright owner under the copyright statute.[6] Generally, FOSS camps have advocated against enforcement of the DMCA, most often because of the anti-circumvention provisions it provides.[7] However, the DMCA provides other provisions, including those regarding copyright management

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[2] Sam Williams, Free as in Freedom: Richard Stallman's Crusade for Free Software 123 (2002), *available at* http://www.oreilly.com/openbook/freedom (describing Richard Stallman reluctantly accepting copyright law and developing the GNU General Public License).

[3] *See, e.g.*, Richard Stallman, *Why "Open Source" Misses the Point of Free Software*, Comm. ACM, June 2009, at 31-33 (discussing that Free Software and Open Source Software both provide users and developers with source code, though for different ideological reasons); Daniel B. Ravicher, *Facilitating Collaborative Software Development: The Enforceability of Mass-Market Public Software Licenses*, 5 Va. J.L. & Tech 11, 71-72 (2000) (noting that both camps emphasize the importance of the availability of the source code in software development, while the differences in the two camps lies in the terms allowed in software licenses).

[4] *See* Raymond T. Nimmer, The Law of Computer Technology § 1:16 (2009) (describing the exclusive rights granted under copyright law for software).

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

[6] *See* 17 U.S.C. § 1201 (2006) (providing causes of action for anti-circumvention); 17 U.S.C. § 1202 (2006) (providing causes of action related to protection of copyright management information); *see also* Julie E. Cohen, *Some Reflections on Copyright Management Systems and Laws Designed to Protect Them*, 12 Berkeley Tech. L.J. 161, 163-65 (1997) (discussing copyright protection under the DMCA).

[7] *See, e.g.*, Richard Stallman, *Misinterpreting Copyright - A Series of Errors*, *in* Free Software, Free Society: Selected Essays of Richard M. Stallman, 79, 84 (2002) (warning of the overly restrictive nature of the DMCA, specifically in providing anti-circumvention protection).

information (CMI) protection. This article proposes that a review of court decisions regarding the CMI provisions of the DMCA suggest that those provisions may prove to be beneficial in protecting FOSS projects because of the emphasis by FOSS communities in managing FOSS licenses.

Section II of this article discusses in greater detail how software is intended to be protected under the copyright law and, more specifically, how FOSS is generally protected using the copyright statute. Further, Section II describes the difficulties in protecting FOSS in an infringement suit. FOSS developers have found creative ways to make copyright law work in their favor, even though the goals of copyright law are not necessarily aligned with the goals of FOSS camps. Most FOSS licenses dictate that a user may do with the author's source code what would be otherwise restricted under copyright law, as long as the license is maintained, along with the source code.[8] An example if this is the GNU General Public License 3.0.[9]

Protecting FOSS through litigation, however, has proven more challenging than the licensing process, and many questions remain about the efficacy of FOSS licenses because FOSS projects tend to be massively communal and proliferate frequently. For example, a cause of action for infringement may only be brought by the copyright owner.[10] Unless these issues are considered from the inception of a FOSS project, identifying the owner in FOSS projects is often difficult due to their highly collaborative nature. Further, uncertainties remain regarding the enforceability of FOSS licenses.[11] In reviewing the prospects of legally protecting FOSS, these issues are not easily resolved, and the legal implications of each are significant.

Section III of this article describes the anti-circumvention and CMI protection provisions of the DMCA, and how these two sets of provisions are intertwined. The anti-circumvention provisions provide a cause of action against persons circumventing a technological measure "that effectively controls access to a work" protected under the DMCA.[12] Further, the anti-circumvention provisions include terms that protect against

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[8] *See, e.g.*, Greg R. Vetter, *Exit and Voice in Free and Open Source Softeare Licensing: Moderating the Rein over Software Users*, 85 Or. L. Rev. 183, 185-86 (2006) (discussing the focus of open source distribution in FOSS licensing); Greg R. Vetter, *"Infectious" Open Source Software: Spreading Incentives or Promoting Resistance?*, 36 Rutgers L.J., 53, 71-73 (2004) (discussing open source software licenses generally).

[9] *See* The GNU Project, GNU General Public License v3.0, http://www.gnu.org/licenses/gpl-3.0.html (June 29, 2007) (allowing the licensee to copy, modify, and distribute works licensed under GPL 3.0.).

[10] *See* 17 U.S.C. § 501(b) (2006) (entitling the owner of a copyright to bring an infringement action).

[11] *See* Nimmer, *supra* note 3, at § 10:15 (discussing whether the terms of Free and Open Source Software licenses are enforceable under contract law).

[12] 17 U.S.C. § 1201(a)(1), (2) (2006) (providing legal protection against the act of circumventing a technological measure that controls access to a work, as well as providing legal protection against technologies whose purpose is to circumvent a technological measure that controls access to a work).

technology whose primary purpose is to circumvent a technological measure that effectively controls access to a work,[13] and technological measures whose primary purpose is to circumvent a technological measure that "protects a right of a copyright owner."[14] These provisions have received significant criticism for overstepping the bounds of copyright law and seemingly providing a new right to control access to authors' works.[15]

The anti-circumvention provisions in the DMCA have generally been given more attention in the legal community and in the media, and have more often been litigated than the CMI provisions. However, it is the CMI provisions of the DMCA that may prove to be most beneficial to FOSS camps in litigation. Section IV of this article discusses in greater detail why this holds true. Although these provisions have rarely been litigated, when they have, the outcomes have generally been such that FOSS would have been favored. While the DMCA has not often been viewed favorably by FOSS camps, the CMI provisions may be used to protect exactly that which FOSS camps value: that the licensing terms and conditions for use of the work remain intact.[16]

This article suggests that solutions to some of the problems that arise in litigating a FOSS copyright infringement case may found in the CMI protection provisions of the DMCA. The DMCA provides causes of action that, when applied in conjunction with a traditional cause of action for copyright infringement, and even perhaps outside of a copyright infringement claim, may prove to be beneficial. The nature of FOSS often results in difficulty in determining the copyright owner in a particular project. While a copyright infringement cause of action requires that the owner bring the action, sections 1201 and 1202 of the DMCA do not. Further, courts have interpreted the CMI provisions of the DMCA as applying only to technological measures put in place to control copyright management information.[17] The outcome of litigation regarding the CMI provisions in cases that do not involve software provide guidelines that show a FOSS infringement case may benefit from these decisions. Specifically, the CMI provisions are suitable because of the way FOSS source code is created and managed. Because FOSS licenses include the terms and conditions for use of a copyrighted work, they may

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[13] *Id.*

[14] *Id.* § 1201(b)(1) (providing legal protection against technologies whose purpose is to circumvent a technological measure that protects exclusive rights of authors).

[15] *See* Dan L. Burk, *Anticircumvention Misuse*, 50 UCLA L. Rev. 1095, 1106-07 (2003) (discussing that the right to access is a new right made available under the DMCA, and the implications of a right to access).

[16] *See* 17 U.S.C. § 1202 (2006) (generally covering the protection of copyright management information, including the notice of copyright and terms and conditions for use of the work).

[17] *See IQ Group, Ltd. v. Wiesner Publ'g, LLC*, 409 F. Supp. 2d 587, 596-97 (D.N.J. 2006) (holding that a watermark logo did not meet the requirements of a technological measure covering CMI); *Textile Secrets Int'l, Inc. v. Ya-Ya Brand Inc.*, 524 F. Supp. 2d 1184, 1201-02 (C.D. Cal. 2007) (holding a printed pattern on fabric to not be a technological measure covering CMI).

constitute CMI under the DMCA.[18] This allows a plaintiff bringing a cause of action to potentially avoid proving the enforceability of the conditions in the FOSS license.

Accepting and adapting to a legal system that is not built for FOSS is not an innovative idea within the FOSS community. For example, the GNU General Public License ("GPL"), often considered the cornerstone license of the FOSS community, came about for the specific reason of using what were viewed as restrictive copyright laws to achieve free software goals.[19] Since then, the GPL has continued to evolve along with intellectual property law. Just as FOSS camps previously used copyright law to protect their mode of software development, FOSS camps should similarly recognize and adapt to the CMI provisions of the DMCA in order to enhance licensing and litigation of FOSS.

II. FREE AND OPEN SOURCE SOFTWARE IN COPYRIGHT LAW

United States copyright law provides authors of original expressions with certain enumerated exclusive rights in their original works.[20] Within the copyright statute, software is considered a literary work.[21] Because of this categorization, software copyright owners are granted exclusive rights in their source code and object code, to copy the work, distribute the work, and create other derivative works.[22] Although copyright law conveys exclusive rights to copy, distribute, and make derivative works of computer programs, those in the field have not universally accepted the value in this type of protection. Certain camps of software developers, particularly FOSS camps, find that the software industry is best served not by providing developers with exclusive rights, but by allowing the source code of computer programs to remain accessible, so that anyone

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[18] *See* 17 U.S.C. § 1202(c)(6) (defining copyright management information, in part, as the terms and conditions for use of a work).

[19] *See* John Tsai, *For Better or Worse: Introducing the GNU General Public License Version 3*, 23 Berkeley Tech. L.J. 547, 550 (2008) ("Although Stallman was initially weary [sic] of copyright licenses, he eventually recognized that he could use licenses to preserve the freedoms of his software by ensuring that other who modified or distributed his source code would be bound by the licenses' terms." (citing Sam Williams, Free as in Freedom: Richard Stallman's Crusade for Free Software 1-12 (2002)).

[20] *See* 17 U.S.C. § 106 (2006) (enumerating the exclusive rights given to owners of copyrighted works).

[21] 17 U.S.C. § 102(a)(1) (2006); 17 U.S.C. § 101 (2006) (defining "literary works" as "works, other than audiovisual works, expressed in words, numbers, or other verbal or numerical symbols or indicia, regardless of the nature of the material objects, such as books, periodicals, manuscripts, phonorecords, film, tables, disks, or cards, in which they are embodied").

[22] While these are the three works most significant in software copyright cases, authors are also provided with the exclusive rights of public performance and public display. *See* 17 U.S.C. § 106 (enumerating the exclusive rights provided to copyright owners).

may copy, distribute, and make derivative works of the computer program.[23] Instead of shunning copyright law, these FOSS camps have developed licensing methods to use copyright law to support their methods of software development.

A. Free and Open Source Software in Copyright Law

FOSS is developed and licensed with the goal of ensuring the source code of the software remains open and transparent. The means behind fostering FOSS differ between the two prominent camps in FOSS, including the free software camp and the open source camp. Though their methods of software development are substantially the same, their motivations for sharing source code differ. While these two camps may disagree on their fundamental motives for openly providing their source code, the methods used in the way the two camps develop software is essentially the same.

1. Free and Open Source Software

Free software and free software licenses are largely managed by the Free Software Foundation (FSF), a prominent organization among the free software camp. The FSF is responsible for maintaining the free software definition, which defines the requirements for a software license to be considered a free software license. [24] The FSF also maintains a catalogue of licenses that meets the requirements of the free software definition.[25] Generally, the free software definition includes four kinds of freedom that the free software camp believes should be inherent in using software, including the freedom to run the software for any reason, study how it works, redistribute copies of the software, and improve upon the software.[26] Often, the free software camp identifies

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[23] *See* Richard Stallman, *Why Software Should Not Have Owners*, *in* Free Software Free Society: Select Essays of Richard M. Stallman, 47, 47-51 (2002) (discussing why software should not be covered under copyright law); Glyn Moody, Rebel Code: Linux and the Open Source Revolution, 58-59 (2002) (discussing the importance in open source of allowing source code to be freely copied, distributed, and freely allowing others to make derivative works).

[24] The GNU Project, The Free Software Definition, http://www.gnu.org/philosophy/free-sw.html (last visited Feb. 19, 2011) (enumerating the requirements of free software).

[25] *See* The GNU Project, Various Licenses and Comments about Them, http://www.gnu.org/licenses/license-list.html (last visited Feb. 19, 2011) (provides a list of covered licenses).

[26] *See* The GNU Project, The Free Software Definition, http://www.gnu.org/philosophy/free-sw.html (last visited Feb. 19, 2011) (listing the "four kinds of freedom for users of software" as 1) "The freedom to run a program for any purpose;" 2) "The freedom to study how the program works, and change it to make it do what you wish;" 3) "The freedom to redistribute copies so you can help your neighbor;" and 4) "The freedom to improve the program, and release your improvements (and modified versions in general) to the public, so that the whole community benefits.").

these reasons as moral and ethical grounds for developing software under free software licenses.[27]

By contrast, the Open Source camp generally focuses on the idea that keeping source code open results in "better quality, higher reliability, more flexibility, lower cost, and an end to predatory vendor lock-in."[28] As such, the open source camp often cites more pragmatic motivations for sharing source code. The Open Source Initiative is the open source camp's United States counterpart to the Free Software Foundation. Similar to the FSF, the Open Source Initiative manages the standards that comprise the open source definition.[29] Many software licenses that are considered free software licenses are also considered open source licenses, though the two licensing types are neither mutually exclusive, nor are they completely overlapping. The open source definition includes a list of ten parameters required in order for a software license to be considered an open source license. Some of the requirements are similar to those found in the free software definition, such as freedom for distribution and creation of derivative works, and a focus on the availability of the source code.[30] Others vary from the free software definition. For example, the open source definition allows authors to restrict modification of source code so long as the license allows for the distribution of "patch files" to supplement the source code at run time.[31]

2. The General Public License

The seminal example of a license that falls within the free software definition as well as the open source definition is the GNU General Public License ("GPL"). Originally developed by Richard Stallman, a leader of the free software camp and the FSF, the General Public License was created to use copyright law to protect the public

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[27] Although the differences in Free Software and Open Source Software camps may be negligible in practice, their motivations for that practice may have implications in how they protect their software.

[28] *See* Open Source Initiative, http://www.opensource.org/ (last visited Feb. 19, 2011) (describing the benefits of using Open Source as a development method).

[29] *See id.*

[30] The Open Source Initiative, The Open Source Definition, http://www.opensource.org/docs/osd (last visited Feb. 19, 2011).

[31] *Id.* ("The license may restrict source-code from being distributed in modified form *only* if the license allows the distribution of "patch files" with the source code for the purpose of modifying the program at build time. The license must explicitly permit distribution of software built from modified source code. The license may require derived works to carry a different name or version number from the original software.")

availability of source code.[32] In an interview with *Byte* Magazine, Stallman described to readers that, regarding the GPL, they should "see it as a form of intellectual jujitsu, using the legal system that software hoarders have set up against them."[33] Later, in describing the process of developing the GPL, Stallman stated "I had to try to do what could be sustained by the legal system that we're in. In spirit, the job was that of legislating the basis for a new society, but since I wasn't a government, I couldn't actually change any laws. I had to try to do this by building on top of the existing legal system, which had not been designed for anything like this."[34]

The GPL has evolved over time, and with each subsequent version, every new version of the license is more aligned with developments in copyright law, and United States intellectual property law generally. For example, the original GPL, published in 1989, was somewhat basic. Generally, it required that a person may copy, distribute, and modify the covered program as long as source code was made available, and the GPL remained with any future version of the program.[35] Version 2.0 of the GPL becomes slightly more detailed. For example, version 2.0 includes provisions which distinguish between modifying the work as a whole, which requires the entire work to be licensed under the GPL,[36] and merely aggregating the GPL-covered work with another non-GPL work, which does not require that the non-GPL work be licensed under GPL.[37] The latest

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[32] *See* Williams, *supra* note 1, at 123 (2002), *available at* http://www.oreilly.com/openbook/freedom (describing Richard Stallman's objectives in developing the GPL).

[33] Interview by David Betz and Jon Edwards with Richard Stallman (July, 1986), *available at* http://www.gnu.org/gnu/byte-interview.html.

[34] Williams, *supra* note 1, at 127-128 (2002) (describing Richard Stallman's objectives in developing the GPL).

[35] *See* The GNU Project, GNU General Public License v1.0, http://www.gnu.org/licenses/old-licenses/gpl-1.0.html (Feb., 1989).

[36] *See* The GNU Project, GNU General Public License v2.0, http://www.gnu.org/licenses/old-licenses/gpl-2.0.html (June, 1991) ("If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.").

[37] *See* Williams, *supra* note 1, at 123 ("In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.")

version of the GPL, version 3.0, continues to evolve along with copyright law, for example, by including a patent license for patented works licensed under GPL.[38]

B. A Typical Software Copyright Infringement Case

Computer programs may be protected under copyright law in a variety of ways. For example, a screen display is generally protected as a visual work, while the source code that creates the interface displayed on a computer screen is generally protected as a literary work.[39] Because it is the openness of FOSS source code that makes FOSS programs unique from proprietary software, this article will focus on the implications of copyright law on the source code in FOSS.

As described above, source code is protected under copyright law as a literary work.[40] United States copyright law gives authors of literary works an exclusive right to 1) copy the copyrighted work; 2) prepare derivative works based on the copyrighted work; 3) distribute copies of the copyrighted work; 4) perform the copyrighted work; and 5) to display the copyrighted work publicly.[41] Copyright owners of literary works are allowed to bring a cause of action for infringement against any party who violates any of these exclusive rights.[42]

A complaint for infringement requires that a plaintiff plead (1) a specific copyrighted work that is at issue; (2) that the plaintiff is the owner of the copyright; (3) that registration requirements have been met; and (4) the acts that violated the plaintiff's

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[38] *See* The GNU Project, A Quick Guide to GPLv3, http://www.gnu.org/licenses/quick-guide-gplv3.html (last visited Feb. 19, 2011) (discussing the differences between GPL v. 2.0 and 3.0).

[39] *See* John W. Hazard, Jr., Copyright Law in Business and Practice § 3:17 (2007) ("Source code and object code are protected as literary works. The screen display can, in some cases, be protected as an audiovisual work. The overall character of the program—the sequence, structure and organization—can be protected within the underlying copyright of the program."); *Atari Games Corp. v. Nintendo of Am., Inc.,* 975 F.2d 832, 838 (Fed. Cir. 1992) (describing that computer programs qualify as literary works under copyright law); *Johnson Controls, Inc. v. Phoenix Control Sys., Inc.*, 886 F.2d 1173, 1175 (9th Cir. 1989) ("Source and object code, the literal components of a program, are consistently held protected by a copyright on the program."); *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240, 1247-49 (3d Cir. 1983) (noting that legislative history suggests that programs are considered copyrightable as literary works).

[40] Hazard, *supra* note 38, at § 3:17.

[41] *See* 17 U.S.C. § 106(1)-(5) (2006) (enumerating exclusive rights provided to authors under copyright law).

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

rights.[43] Regarding software, a plaintiff must be able to show: (1) the specific original work that is at issue; (2) that the plaintiff owns the copyright in the original work; (3) that the work has been registered; and (4) that one of the plaintiff's exclusive rights has been infringed. In cases involving only one developer who has properly registered the work, these requirements might not be so difficult to meet. However, challenges arise when considering non-traditional development methods.

C. Difficulties in Proving Infringement in FOSS

The terms of FOSS licenses often are often contradictory to the terms of proprietary software licensing schemes, which are more often litigated in courts. Because of the distinction in the terms of the license, protecting FOSS in litigation can prove challenging for a number of reasons. For example, a traditional copyright infringement action may only be brought by a copyright owner.[44] However, a copyright owner is defined as the author or authors of the work.[45] A typical FOSS project may have many contributors and, thus, the evolution of a particular project may cause difficulty in identifying the owner of the copyright. Additionally, the efficacy of the terms of FOSS licenses is still not fully settled by the courts. One complexity in asserting the terms of a FOSS license is determining whether they create a valid contract. In the same manner, identifying damages is problematic because the economic value of FOSS projects is difficult to calculate.

1. Determining the Copyright Owner

The ability to bring a claim of copyright infringement against an allegedly infringing party lies solely with the legal or beneficial owner of the right being infringed.[46] Typically, ownership lies with the author, or authors, of the work.[47] If more

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[43] 6 William F. Patry, Patry on Copyright § 19:3 (2009) (discussing the minimum elements required in an infringement complaint, but noting that an ideal complaint include "(1) that defendant had access to an original work of authorship; (2) that defendant violated specific exclusive rights granted in section 106 or section 106A, owned by plaintiff at the time of the infringement; (3) that the alleged acts of infringement occurred within the statute of limitations period; and (4) that the statutory requirements of registration had been fulfilled.").

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

[45] *See* 17 U.S.C. § 201 (2006).

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

[47] *See* 17 U.S.C. § 201(a)-(b) (describing ownership under copyright law).

than one author contributes to a joint work, the authors become joint-owners of the copyright.[48] For example, Some FOSS projects may be managed more centrally, where a core group of developers monitor alterations to a project, and have third party developers grant back ownership of the copyright.[49] However, others FOSS projects are less centric and, in these cases, ownership is more difficult to distinguish. In massively collaborative FOSS projects where ownership is not explicitly defined, it becomes necessary to characterize the development of the FOSS work to determine ownership rights. Generally, works that are created by multiple authors may be characterized as joint works, derivative works, or collective works.

a. Joint Works

A work is considered a joint work if each of the authors intended to collaborate with the others, or if the authors created their work with the intent it would be merged with other works to create a single inseparable work.[50] Generally, the difference lies in the intent of the authors. In the case of FOSS projects, it is mostly likely that the author intends that their work will be used in collaboration with other authors to create one indivisible work.[51] In a joint work, all the co-authors have equal ability to bring a cause of action for infringement for the entire work.[52] Accordingly, in massively collaborative works, as is common with FOSS projects, intending the work to be a joint work may be beneficial. However, when FOSS becomes massively collaborative, providing joint ownership to minority contributors might be detrimental.

The Second, Seventh, and Ninth Circuits have developed a two-pronged test for joint authorship, called the "intent to be co-authors" standard.[53] The test requires that to show joint authorship, each of the co-authors must establish that they: "(1) made independently copyrightable contributions to the work, and (2) fully intended to be co-

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[48] *See Id.* § 201(a) ("The authors of a joint work are co-owners of copyrights in the work.").

[49] *See* Nimmer, *supra* note 3, at § 10:22 (explaining the difficulty in determining the owner in a FOSS project).

[50] *See* 17 U.S.C. § 201 ("[A] work is 'joint' if the authors collaborated with each other, or if each of the authors prepared his or her contribution with the knowledge and intention that it would be merged with the contributions of other authors as 'inseparable or interdependent parts of a unitary whole.'").

[51] And maybe FOSS licenses should state explicitly that a work is a joint work, or, alternatively, set up a system for ownership to resolve standing issues.

[52] *See* Nimmer, *supra* note 3, at § 10:23 (2009) (describing the differences in ownership between joint works, collective works, and derivative works).

[53] Roberta Rosenthal Kwall, *"Author-Stories:" Narrative's Implications for Moral Rights and Copyright's Joint Authorship Doctrine,* 75 S. Cal. L. Rev. 1, 48-49 (2001) (discussing the development of the two-pronged test).

authors."[54] In FOSS projects, authors building on FOSS expect that their original work will be merged with the original work of the original author. However, two issues remain. The first issue is that the original author must have intended for the work to be part of a collaborative work at the time of authorship.[55] The second issue is that both authors must intend at the time of their original authorships that all authors are joint authors.[56]

The consequences of co-ownership in a joint work are even less clear, as the governing law is found in case law rather than statutory law.[57] Some of these consequences include "(1) the minimal contribution to a work required for joint authorship; (2) the percentage of ownership interest amongst joint authors; (3) which co-owners can grant licenses and what licenses can be granted by a co-owner; (4) how co-owners must account to each other for profits; and (5) restrictions on co-owners' rights to exploit a copyright."[58] For all these reasons, joint authorship is often not optimal for FOSS projects, especially in massively collaborative cases.[59]

b. Derivative Works

Another possibility for characterizing FOSS collaborative projects is that a second author building on the work of a first author in a FOSS project may create a derivative work, rather than a joint work. This is the case when the second author creates a "new, separate work, owned by the new author but incorporating elements from the earlier work with permission of the first author."[60] Considering a case where the first author

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[54] *Id.* (citing *Childress v. Taylor*, 945 F.2d 500, 507-08 (2d Cir. 1991)).

[55] *See* Raymond T. Nimmer, *Legal Issues in Open Source and Free Software Distribution*, 885 PLI/Pat 33, 77 (2006) ("[I]n copyright law, the idea of joint authorship does not per se require that coauthors work at the same time on the work. It is sufficient that they both intend at the time that they create their expression that their "contributions [will] be merged into inseparable or interdependent parts of a unitary whole.").

[56] *Id.*

[57] *See* Peter H. Karlen, *Joint Ownership of Moral Rights*, 38 J. Copyright Soc'y U.S.A. 242, 247 (1991) ("Unfortunately, the Act does not spell out all the consequences of co-ownership; rather, decades of litigation have refined the rules governing joint authorship and co-ownership.).

[58] *Id.*

[59] *See* Greg R. Vetter, *The Collaborative Integrity of Open-Source Software*, 2004 Utah L. Rev. 563, 624 n.176 (2004) ("While a determination of joint ownership among the contributors to an open-source project would upset the open-source licensing scheme, this risk explains in part the need for a license that asserts ownership in the original author for her contribution, and then grants conditional rights to others.").

[60] Nimmer, *supra* note 3, at § 10:23 (2009) (describing the differences in ownership between joint works, collective works, and derivative works).

developed the work under GPL 3.0, the first author would have clearly granted permission for the second author to create a derivative work.[61] Upon developing a derivative work, ownership of the copyright would lie with the first author to the extent the original work is part of the derivative work, and to the second author to the extent the second author has added new original authorship to the original work.[62]

Thus, to bring a cause of action for infringement of the entire derivative work, it must be brought both by the original author, as well as the second author. Problems arise when FOSS projects become massively collaborative because each contributor has exclusive ownership of the copyright in that specific part of the work. For extensive FOSS projects, such as the Linux operating system, this becomes problematic. "Given the growing expanse of users working collaboratively, today's Linux is less a seamless piece of coding than a tapestry of hundreds of hackers' contributions."[63]

c. Compilations

The third potential characterization of a FOSS project would be a collective work, or compilation.[64] This would occur in a centrally managed FOSS project, where developers might each develop an independent portion of the project. In these cases, each developer would have exclusive rights in the section he or she authored. Accordingly, in this type of project, bringing an infringement action against an infringing party would require all of the individual authors.

2. FOSS Licenses and Contract Law

Because the objectives of developers using FOSS licensing methods run askew from those generally targeted by copyright law, FOSS licenses provide unique legal challenges in litigation. One of these challenges involves determining how, exactly, to enforce FOSS licenses. Specifically, one important legal issue that arises is whether the terms of FOSS licenses create enforceable contract provisions.[65]

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[61] *See* The GNU Project, GNU General Public License 3.0, http://www.gnu.org/licenses/gpl-3.0.html (June 29, 2007) ("Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License.").

[62] *See* Nimmer, *supra* note 3, at § 10:23 (2009) (describing the differences in ownership between joint works, collective works, and derivative works).

[63] Nimmer, *supra* note 3, at § 10:22 (2009) (explaining the difficulty in determining the owner in a FOSS project).

[64] *See* Nimmer, *supra* note 3, at § 10:23 (2009) (describing the differences in ownership between joint works, collective works, and derivative works).

[65] Nimmer, *supra* note 3, at § 10:15 (2009) (discussing whether the use of FOSS licenses creates an enforceable contract).

In *Jacobsen v. Katzer*, the plaintiff, Jacobsen, brought a cause of action against defendant Katzer under both copyright infringement and contract law.[66] The Federal Circuit held that the terms of the Artistic License established not merely enforceable contract provisions, but also enforceable licensing conditions that govern the rights to modify and distribute the software.[67] The Federal Circuit found this distinction important because "a 'copyright owner who grants a nonexclusive license to use his copyrighted material waives his right to sue the licensee for copyright infringement' and can sue only for breach of contract."[68] Specifically, because FOSS is often distributed freely, or for minimal cost, the economic damages traditionally provided under copyright law are often not as valuable to FOSS developers as an injunction, which is provided under copyright law.

Although the Federal Circuit has determined that FOSS licenses can create enforceable contracts, and within that, enforceable copyright licensing conditions, some questions remain. Specifically, "[t]o what extent can license drafters choose whether a particular license provision is a pure covenant or a license condition?"[69] An example where this arises is in the digital rights management ("DRM") provisions within GPL 3.0.[70] Specifically, the provision that allows for the removal of DRM.[71] For a provision

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[66] *See Jacobsen v. Katzer*, 535 F.3d 1373, 1377 (Fed. Cir. 2008).

[67] *Id.* at 1382 ("The clear language of the Artistic License creates conditions to protect the economic rights at issue in the granting of a public license. These conditions govern the rights to modify and distribute the computer programs and files included in the downloadable software package.").

[68] *Id.* at 1380 (citing *Sun Microsystems, Inc. v. Microsoft Corp.*, 188 F.3d 1115, 1121 (9th Cir. 1999); *Graham v. James*, 144 F.3d 229, 236 (2d Cir. 1998)).

[69] Robert W. Gomulkiewicz, *Conditions and Covenants in License Contracts: Tales from a Test of the Artistic License*, 17 Tex. Intell. Prop L.J. 335, 351 (2009) (identifying this as the most important question remaining after the *Jacobsen* decision).

[70] *Id.* at 352 ("The DRM Section, though situated in the midst of licenses, is not connected to the licenses in any obvious way. It does not, on the face of it, look to be a condition on any of the surrounding license grants. It appears to be a standalone contractual provision; in other words, a pure covenant").

[71] The GNU Project, GNU General Public License v3.0, http://www.gnu.org/licenses/gpl-3.0.html (June 29, 2007) ("When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures."); *see also* Richard Stallman, Why Upgrade to GPL 3.0, http://www.gnu.org/licenses/rms-why-gplv3.html (last visited Feb. 19, 2011) ("GPLv3 ensures you are free to remove the handcuffs. It doesn't forbid DRM, or any kind of feature. It places no limits on the substantive functionality you can add to a program, or remove from it. Rather, it

in a license to be considered not merely a covenant but a licensing condition, breach of the provision must result in copyright infringement.[72] Thus, although categorizing the DRM provision in GPL 3.0 as a licensing condition would allow for more "optimal" damages in the form of an injunction, the question remains whether breach of a provision that is not related to copyright infringement allows a plaintiff to obtain an injunction against the breaching party, or whether damages would be limited to traditional economic damages.

III. THE DIGITAL MILLENNIUM COPYRIGHT ACT

The Digital Millennium Copyright Act (DMCA) was enacted in 1999 to further align copyright law in the United States with the international community. Specifically, the DMCA was enacted in response to the World Intellectual Property Organization Copyright Treaty that required participating states to provide legal protection against circumvention of technological controls in copyrighted works.[73] The result is that the DMCA provides protection for technologies used to control access to copyrighted material, copyright infringement, and copyright management information.[74]

The DMCA is comprised of five sections directed to alternative copyright protection. This article focuses on the first two sections of the DCMA. Within those two sections, this article focuses on two specific sets of provisions: the anti-circumvention provisions; and the CMI protection provisions. The first section of the DMCA, 17 U.S.C. § 1201, includes a set of provisions directed to anti-circumvention measures. This section of the DMCA prohibits circumvention of technological measures whose purpose is to protect a copyrighted work.[75] Section 1201 also includes other legal protection related to anti-circumvention measures, such as encryption research[76] and protection of personally

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makes sure that you are just as free to remove nasty features as the distributor of your copy was to add them.").

[72] *See* Gomulkiewicz, *supra* note 68, at 344 ("As such, breach of a license condition covenant can trigger copyright infringement, not merely breach of contract. Pure contractual covenants, as previously mentioned, only can trigger breach of contract.").

[73] *See* Burk, *supra* note 14, at 1103 (discussing the history of the anti-circumvention provisions in the DMCA); Cohen, *supra* note 5, at 166-169 (1997) (discussing the requirements for legal protection under the WIPO Treaty).

[74] *See* Nimmer, *supra* note 3, at § 1:40 (2009) ("Digital works are uniquely susceptible to rapid and perfect copying, but digital technology also can limit use and establish notice of copyright claims. These limiting technologies may be important to shape the market for works, while protecting against infringement. The [DMCA] creates a protective legal structure associated with these limiting technologies. The statute provides for civil and criminal sanctions against persons who disable or circumvent technological restrictions on access to or infringement of rights in the work.").

[75] 17 U.S.C. § 1201(a) (2006).

[76] *Id.* § 1201(g).

identifying information,[77] but for purposes of this article, the anti-circumvention provisions refer to the provisions under Section 1201 that provide a cause of action against parties circumventing technological measures put in place to control access to a copyrighted work.[78] The second set of provisions that this article will address, and which are the focus of this article, are found under 17 U.S.C. § 1202. These provisions provide legal protection for the integrity of copyright management information, including identifying information about the work, and terms and conditions for use of the work.[79]

Some commentators have suggested that these provisions grant new rights to copyright holders outside of the traditional exclusive rights granted to owners of copyright. In fact, some have named these provisions as providing "paracopyrights."[80] However, other commentators have insisted that the DMCA does not provide any new "rights," but merely provides new causes of action for copyright owners to employ in protecting their works.[81] What is commonly agreed on is that the DMCA provides protection for works that arise along side a traditional copyright infringement claim. Because legal protections provided under the DMCA are separate and independent from infringement claims, there may be causes of action brought under traditional copyright infringement statutes that have no DMCA causes of action. Similarly, there are causes of action available under the DMCA that are available to a plaintiff where the plaintiff may not be able to bring a cause of action for copyright infringement.

Some courts have construed section 1201 and section 1202 to be symbiotic in protecting against circumvention of technological measures used to protect copyrighted works, and have used this relationship in construing the terms of the two sets of provisions.[82] However, despite their relationship the two sets of provisions are often utilized individually in litigation to bring separate, independent causes of action.

Similarly to the relationship between infringement and DMCA actions, there may be situations which allow a plaintiff to bring a cause of action under the anti-circumvention provisions as well as the CMI protection provisions of the DMCA. Additionally, there may be situations in which a plaintiff may bring a cause of action under the anti-circumvention provisions, where a cause of action may not be available

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[77] *Id.* § 1201(i).

[78] *Id.* § 1201(a)-(b).

[79] 17 U.S.C. § 1202(a), (c) (2006).

[80] *See* Burk, *supra* note 14, at 1096 (2003) ("Paracopyright as conferred by the DMCA constitutes a separate set of rights, quite distinct form any copyright in the underlying content.").

[81] *See Chamberlain Group, Inc. v. Skylink Techs., Inc.*, 381 F.3d 1178, 1192 (Fed. Cir. 2004) (noting that 17 U.S.C. § 1201(a) and (b) establish a cause of action for liability, but not a new property right).

[82] *See IQ Group, Ltd. v. Wiesner Publ., LLC*, 409 F. Supp. 2d 587, 596-597 (D. N.J. 2006) (interpreting § 1202 by analyzing the relationship between § 1201 and § 1202 using legislative history suggesting that "Congress viewed §§ 1201 and 1202 together as preventing circumvention of the 'technological measures' referred to in § 1201").

under the CMI protection provisions. In the same manner, a plaintiff may bring a cause of action under the CMI protection provisions but not be able to bring a cause of action under the anti-circumvention provisions.

A. Prohibiting Circumvention of Protection Measures for Copyrighted Works

Section 1201 of the DMCA provides legal protection for technological measures used to control access to a copyrighted work and to control a copyright owner's exclusive rights in the work.[83] In addition, the anti-circumvention provisions provide legal protection against products or services that are "primarily designed or produced for the purpose of circumventing protection afforded by a technological measure."[84] Discussions of these provisions are more prevalent in legal journals and have been more widely reviewed in courts than their CMI protection sister provisions. Accordingly, courts and legal scholars have provided substantially more guidance on the construction and proper use of these provisions. Because the anti-circumvention provisions provide copyright owners with measures for relief outside of the exclusive rights traditionally provided under copyright law, the provisions are often considered overly restrictive and the most controversial provisions of the DMCA.[85]

FOSS camps, particularly the free software camp, have been vocal about the dangers of accepting the anti-circumvention measures of the DMCA.[86] Open source communities have advocated against the DMCA to some extent, but not to the same degree as free software camp.[87] However, in both camps, there largely remains

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[83] *See* 17 U.S.C. § 1201(a); *see also Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437, 458 (2007) (noting in dicta that Congress is aware of the ease at which software is copied and identifying 17 U.S.C. § 1201 as a result backed by "the efforts of copyright owners to protect their works from piracy behind digital walls such as encryption codes or password protections." (citing *Universal City Studios, Inc. v. Corley*, 273 F.3d 429, 435 (2d Cir. 2001)).

[84] 17 U.S.C. § 1201(b)(1)(A).

[85] *See* Nimmer, *supra* note 3, at § 1:42 (2009) ("The most controversial portions of the DMCA create rights with respect to technology used by copyright owners to prevent access to copyrighted works or to prevent copying, distribution, or other uses of the works in violation of the copyright owner's rights. These DMCA provisions deal with preventing circumvention of technology controls and with trafficking in technology that enables such circumvention.").

[86] *See*, David Turner, Reaction to the DRM clause in GPL v3 (May 17, 2010), http://www.fsf.org/blogs/licensing/gplv3-drm (detailing reactions to DRM measures in GPL 3.0). *See generally* Defective by Design, http://www.defectivebydesign.org/, (last visited Feb. 19, 2011) (dedicated to the campaign by the Free Software Foundation to avoid access restricting technological measures).

[87] *See*, Linus Torvalds, Just for Fun: The Story of an Accidental Revolution 207-208 (2002) (acknowledging the benefits of copyrights, and that copyright law in general remains "mild and well behaved," but asserting that the DMCA takes authors' rights too far) (notably Torvlads does

skepticism of the far reaching implications of the DMCA, and especially the anti-circumvention provisions of the DMCA.

There are three major provisions in the anti-circumvention provisions of the DMCA.[88] The first provides legal protection against circumvention of a technological measure that affects ability to access a covered work.[89] The second provision also involves control of access to a copyrighted work. Specifically, it involves "any technology, product, service, device, component, or part thereof" whose primary purpose is to circumvent technological measures meant to control access to the work.[90] The third provision, found under 17 U.S.C. § 1201(b) provides similar protection against any technology, product, service, device, component, or part thereof" whose primary purpose is to "circumvent protection afforded by a technological measure that effectively protects a right of a copyright owner."[91] Accordingly, while the first and second provisions are directed to the protection of access to a copyrighted work, the third provision is directed to the protection of the copyright owner's rights.

1. Protecting Access

Some argue that the anti-circumvention provisions of the DMCA provide a new exclusive right: access.[92] Whether or not this is the case, it is clear that the DMCA provides, at the least, new causes of action regarding access that are outside the traditional exclusive rights provided to copyright owners. In comparing the two anti-trafficking provisions that fall within the anti-circumvention provisions, 17 U.S.C. § 1201(a)(2) and 17 U.S.C. § 1201(b)(1), this becomes apparent. Specifically, these two sections are nearly identical except that section 1201(a)(2) includes the phrase "technological measure that effectively controls access of a work protected under this title,"[93] whereas section 1201(b)(1) includes the term "technological measure that effectively protects a right of a copyright owner under this title."[94] Accordingly, while it

not distinguish between the anti-circumvention measures and the CMI provisions, as Richard Stallman and Professor Eben Moglen are more apt to do).

[88] Again, I remind the reader that when I refer to the anti-circumvention provisions in the DMCA, I am referring to 17 U.S.C. § 1201(a) and 17 U.S.C.§ 1201(b).

[89] *See* 17 U.S.C. § 1201(a).

[90] *Id.* § 1201(a)(2).

[91] *Id.* § 1201(b).

[92] *See* Burk, *supra* note 14, at 1106-07 (discussing the new "right of access" made available under the DMCA, and the implications of a right of access); *Chamberlain Group, Inc. v. Skylink Techs., Inc.*, 381 F.3d 1178, 1192 (Fed. Cir. 2004) (noting that 17 U.S.C. § 1201 establishes a cause of action for liability, but not a new property right).

[93] 17 U.S.C. § 1201(a)(2) (emphasis added).

[94] *Id.* § 1201(b)(1) (emphasis added).

is clear that the DMCA is not intended to provide a new right to copyright owners, it does provide legal protection not previously available for technological measures that control access to copyrighted works.

Determining whether there is a technological measure that controls access is an issue that has not been fully resolved in the courts. In *Davidson & Associates v. Jung*, the Eighth Circuit provided an analysis in a case where the plaintiff had controlled access to its copyrighted games using a CD key.[95] The defendant had developed an "emulator" that effectively allowed access to features of the plaintiff's software that would not normally be available without the CD key.[96] The defendant (the appellant in this case) asserted that the controlled features are "a strictly functional process that lacks creative expression, and thus DMCA protection does not apply."[97] The Eighth Circuit disagreed, finding that the literal elements of the code for the features were not strictly functional, and were not freely available outside of using the key. Thus, the court found that summary judgment was proper and the DMCA was applicable.[98]

In *Davidson*, the Appellants relied on the case *Lexmark International, Inc. v. Static Control Components, Inc.*, as showing that the features were not covered by the DMCA.[99] In *Lexmark*, Lexmark was the owner of a toner loading program, which measured the amount of toner remaining in an ink cartridge and is stored on a microchip in the cartridges.[100] Lexmark transferred an authentication sequence between the chip and the printer to ensure that the user was only using Lexmark cartridges for the printer. Each Lexmark printer included a second program, the Printer Engine Program, which controlled the functionality of the printer. If the authentication sequence failed, the printer would not function properly.[101] Static Control Components ("SCC") developed the SMARTEK chip, which it implemented and distributed on refurbished cartridges in order to circumvent the authentication sequence.[102] The SMARTEK chip also contained an exact copy of Lexmark's toner loading program.[103] Lexmark brought an action

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[95] *See Davidson & Assoc. v. Jung*, 422 F.3d 630, 640-641 (8th Cir. 2005) (affirming the district court's decision that anti-circumvention is applicable because the secret handshake CD key was more than strictly a functional process, and that appellants violated DMCA by circumventing the secret handshake CD key).

[96] *Id.* at 640.

[97] *Id.* at 640.

[98] *Id.* at 641.

[99] *Id.* at 640.

[100] *See Lexmark Intern., Inc. v. Static Control Components, Inc.*, 387 F.3d 522, 529-30 (6th Cir. 2004).

[101] *Id.* at 530.

[102] *Id.*

[103] *Id.* at 530-531.

against SCC, citing the anti-trafficking provision under 17 U.S.C. § 1201(a)(2).[104] The Sixth Circuit disagreed, finding that "[i]t is not Lexmark's authentication sequence that 'controls access' to the Printer Engine Program. *See* 17 U.S.C. § 1201(a)(2). It is the purchase of a Lexmark printer that allows "access" to the program."[105]

An important question in determining whether a technological measure controls access is: What, exactly, is the subject of the controlled access. Under the DMCA, the control must be over access to a copyrighted work. In both of these cases, the technological measure used to control access was a key to be used in a three-way handshake in order to authenticate a connection. The difference is that the three-way handshake used to control access in *Davidson* was used to authenticate source code,[106] whereas the three way handshake in *Lexmark* was merely used to render the code operable.[107] The code was available to anyone who had access to the Lexmark printer.[108] Conversely, the code in *Davidson* was only accessible after using the three-way handshake.[109]

2. Protecting the Rights of the Copyright Owner

As described above, the anti-circumvention provisions of the DMCA provide for the legal protection of technological measures to ensure access to a copyrighted work.[110] Similarly, the DMCA provides legal protection for technological measures meant to protect the rights of the copyright owner.[111] In *Chamberlain*, the Federal Circuit identified and explained the symbiotic relationship between these two provisions; specifically, because controlling access was not previously protected under copyright law, the additional device limitations had to be created for both copyright protection as well as access.[112]

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[104] *Id.* at 545-546.

[105] *Id.* at 546

[106] *Davidson & Assoc. v. Jung*, 422 F.3d 630, 640-41 (8th Cir. 2005).

[107] *Lexmark Intern., Inc.*, 387 F.3d at 529-30.

[108] *See Id.* at 546 ("Anyone who buys a Lexmark printer may read the literal code of the Printer Engine Program directly from the printer memory, with our without the benefit of the authentication sequence.").

[109] *Davidson & Assoc.*, 422 F.3d at 640-41 (8th Cir. 2005).

[110] *See* 17 U.S.C. § 1201(a)(2)(A) (2006).

[111] *See id.* § 1202(b)(1).

[112] *See Chamberlain Group, Inc. v. Skylink Techs, Inc.* 381 F.3d 1178, 1195-96 (Fed. Cir. 2004) ("The prohibition in 1201(a)(1) [was] necessary because prior to [the DMCA], the conduct of circumvention was never before made unlawful. The device limitation in 1201(a)(2) enforces

In *Coupons, Inc. v. Slottlemire*, the plaintiff offered printable coupons to consumers online. [113] When a consumer attempted to print a coupon, plaintiff's software stored a registry key on the user's computer, such that the user was prevented from printing coupons after a pre-set limit was reached.[114] The plaintiff alleged that the defendant "created software that removed the key" and "provided the method and the software to others" in violation of 17 U.S.C. § 1201(a) and (b).[115] The court denied a motion to dismiss the claim, finding that these allegations were sufficient for a cause of action under §1201(b).[116]

In *Coupons*, the district court relied on plaintiff's argument that the key simultaneously prevented access, as well as prevented the consumer to make copies or distribute the coupon. Similarly, in *Ticketmaster L.L.C. v. RMG Technologies, Inc.*, the district court, in determining whether to grant a preliminary injunction, found that a plaintiff would be likely to prevail where the technological measure to prevent access would inherently protect rights of a copyright owner by controlling access to the work.[117] This was also the case in *321 Studios v. Metro Goldwyn Mayer Studios, Inc.*, where the court disagreed with the defendant's assertion that the technological measure was configured to control access and not copying.[118]

For these reasons, it appears that the anti-circumvention section regarding protection of rights of the copyright owner is not as strong as that which protects against circumvention regarding access control. When one can find circumvention of measures taken to control access, it seems to almost always be the case that the same measure could be found to circumvent technological measures meant to protect rights of the copyright owner.

The importance of the anti-circumvention provisions of the DMCA lies in the technological aspects that control access to the covered work and what exactly is being

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this new prohibition in conduct. The copyright law has long forbidden copyright infringements, so no new prohibition was necessary. The device limitation in 1201(b) enforces the longstanding prohibitions on infringements.") (quoting S.Rep. No. 105-90 at 12 (1998)).

[113] *Coupons, Inc. v. Stottlemire*, 588 F. Supp. 2d 1069, 1072 (N.D. Cal. 2008).

[114] *Id.*

[115] *Id.*

[116] *Id.* at 1074-1075.

[117] *See Ticketmaster L.L.C. v. RMG Tech's, Inc*., 507 F. Supp. 2d 1096, 1112 (C.D. Cal. 2007) ("Here, CAPTCHA both *controls access* to a protected work because a user cannot proceed to copyright protected webpages without solving CAPTCHA, and *protects rights* of a copyright owner because, by preventing automated access to the ticket purchase webpage, CAPTCHA prevents users from copying those pages." (emphasis in original)).

[118] *See 321 Studios v. Metro Goldwyn Mayer Studios, Inc.*, 307 F. Supp. 2d 1085, 1096 (N.D. Cal. 2004) ("While 321 is technically correct that CSS controls access to encrypted DVDs, the purpose of this access control is to control copying of those DVDs, since encrypted DVDs cannot be copied unless they are accessed.").

protected by that technological measure.[119] Accordingly, a cause of action under 17 U.S.C. § 1201 will fail unless a plaintiff can show a viable infringement count. [120]

B. Preserving the Integrity of Copyright Management Information

Similarly to the anti-circumvention provisions, the CMI protection provisions under section 1202 provide causes of action that will often arise alongside traditional copyright infringement actions. Generally, copyright management information covers "information conveyed in connection with copies or phonorecords of a work or performances or displays of a work, including digital form."[121] There are two main provisions that cover CMI protection in the DMCA. First, 17 U.S.C. § 1202(a) protects against false copyright management information. Second, 17 U.S.C. § 1202(b) protects against removal or alteration of CMI. Within the two main provisions, there are two common elements. The two provisions both include a mental element requirement.[122] The other major element found in both major provisions involves identifying what actually comprises CMI.

1. Mens Rea

Whereas copyright infringement may occur without the infringer knowing or having a reason to know that his or her acts constituted infringement, [123] actions brought under the anti-circumvention provisions and CMI protection provisions of the DMCA require a specific mens rea.[124] Thus, establishing the mental element may, in some cases,

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[119] *See Lexmark Intern., Inc. v. Static Control Components, Inc.*, 387 F.3d 522, 549-550 (6th Cir. 2004) (stating "it is not the SCC chip that permits access to the Printer Engineer Program but the consumer's purchase of the printer").

[120] *Chamberlain Group, Inc. v. Skylink Tech's, Inc.*, 381 F.3d 1178, 1203-1204 (Fed. Cir. 2004) (holding that infringement must exist in some form).

[121] *See* 17 U.S.C. § 1202(c) (2006) (listing eight examples of copyright management information, including information identifying the work, terms and conditions for use of the work).

[122] *See, e.g.*, Melville B. Nimmer & David Nimmer, Nimmer on Copyright, § 12A.10[A][1]; § 12A.10[B][1][b] (2009) (discussing the mental element requirement of the two main CMI provisions of the DMCA).

[123] *See* 17 U.S.C. § 504(c)(2) (2006) (stipulating that a court may find infringement "[i]n a case where the infringer sustains the burden of proving , and the court finds that such infringer was not aware and had no reason to believe that his or her acts constituted an infringement of copyright.").

[124] *See* Melville B. Nimmer & David Nimmer, *supra* note 121, at §§ 12A.10[A][1], [B][1][b] (discussing the mental element of the two main CMI provisions of the DMCA).

prove to be challenging in developing a DMCA claim. However, in other cases, establishing the mental element may not be a substantial obstacle.

Regarding disseminating false CMI, the actor must act knowingly, and with the intent to induce, enable, facilitate, or conceal infringement.[125] The mens rea requirement for actions brought because of removal or alteration of CMI is more elaborate, but also requires that the actor act knowingly or intentionally.[126] The first subsection provides a cause of action for CMI that has been altered or removed intentionally.[127] Accordingly, the intent lies in the action of altering or removing CMI. In the second subsection, a cause of action is provided for distributing or importing for distribution CMI "knowing that the [CMI] has been removed or altered without authority of the copyright owner or the law."[128] Accordingly, in the second subject, the intent element lies in the precondition that upon distributing the CMI, the actor knew that it had been removed or altered. Finally, in the third subsection, a cause of action is provided for distribution or importation for distribution, or public performance of works, copies of works, or phonorecords "knowing that the CMI has been removed or altered without authority of the copyright owner or the law."[129] Thus, bringing a cause of action for removal or alteration of CMI requires that the removal or alteration was intentional, while distribution or importation does not require intent to alter or remove CMI. Rather, the latter two subsections require knowledge that the CMI was removed or altered.

The mental elements of the CMI protection provisions of the DMCA have been reviewed in a few cases throughout the country. The case *Kelly v. Arriba* identifies the significant dichotomy in the subsections involving removal or alteration of CMI.[130] In *Kelly*, a district court in the Central District of California reviewed a case where the defendant provided a web search engine which stored and indexed photos in a database, and displayed a thumbnail version of the image when it was searched.[131] The plaintiff brought a cause of action against the defendant for displaying the thumbnail images

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[125] 17 U.S.C. § 1202(a) (2006).

[126] *See Kelly v. Arriba Soft Corp.*, 77 F. Supp. 2d. 1116, 1122 (C.D. Cal. 1999) (finding no DMCA violation in part because the plaintiff had not shown requisite intent); *see also Gordon v. Nextel Commc'ns*, 345 F.3d 922, 927 (6th Cir. 2003) (affirming the district court's grant of summary judgment for the defendant because the plaintiff had not shown that "the copyright information was removed with reasonable grounds to know that it would 'induce, enable, facilitate, or conceal an infringement.'").

[127] 17 U.S.C. § 1202(b)(1).

[128] *Id.* at § 1202(b)(2).

[129] *Id.* at § 1202(b)(3).

[130] *Kelly*, 77 F. Supp. 2d. at 1122 (finding no DMCA violation in part because the plaintiff had not shown requisite intent);

[131] *Id.* at 1117.

without their corresponding copyright information.[132] The court noted that the plaintiff had erroneously brought a cause of action under 17 U.S.C. § 1202(b)(1), rather than 17 U.S.C. § 1202(b)(3).[133] Section 1202(b)(1) requires that the defendant acted intentionally in removing or altering CMI.[134] The plaintiff should have brought a cause of action under 17 U.S.C. § 1202(b)(3) because the plaintiff was not alleging that the CMI was removed from the original work, but from a copy (i.e., the thumbnail).[135] Under section 1202(b)(3) it is a violation of the DMCA to distribute a work knowing that the CMI was removed or altered unlawfully, and knowing or having reasonable grounds to know that it will "induce, enable, facilitate, or conceal an infringement."[136]

Another example of the courts reviewing the mental element is in *Gordon v. Nextel Communications*.[137] In that case, the Sixth Circuit reviewed a motion for summary judgment in a case in which original artwork by Gordon was visible in a Nextel television commercial with its copyright information removed.[138] The Nextel commercial was produced by Mullen Advertising, who worked with Crossroads, a production company.[139] Gordon sued Nextel, along with Mullen Advertising, under 17 U.S.C. § 1202.[140] The defendants argued that they received Gordon's artwork from a prop company with the CMI already removed, and thought that it had been cleared for use in the television commercial.[141] The Sixth Circuit sided with the defendants, granting summary judgment and finding that there was no evidence to show that the CMI was removed with reasonable grounds to know that it would "induce, enable, facilitate, or conceal an infringement."[142]

These two cases show that the mental element of section 1202 can provide somewhat of a barrier in bringing a DMCA claim. However, the requirement may not be

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[132] *Id.* at 1121.

[133] *Id.* at 1122.

[134] *Id.*

[135] *Id.*

[136] 17 U.S.C. § 1202(b)(3) (2006).

[137] *Gordon v. Nextel Commc'ns, 345 F.3d 922*, 927 (6th Cir. 2003)

[138] *Id.* at 923.

[139] *Id.* at 926. (The Sixth Circuit found naming Crossroads a party in the suit unnecessary because Mullen Advertising could still be found to be vicariously liable. "[T]he case law suggests that it is permissible for a plaintiff to name as a defendant one who is liable only as a vicarious infringer without also naming the 'direct' infringer as a defendant.").

[140] *Id.* at 923.

[141] *Id.* at 927.

[142] *Id.* at 927.

a complete bar. For example, in *Gordon*, the Sixth Circuit determined that no evidence was provided to show that Crossroads had any reason to know that the removal would facilitate infringement because they were relying on another party to have cleared the work for use in the commercial.[143] The outcome may have been different if the party who actually took the work and removed the CMI would enable or conceal infringement.

2. Identifying CMI

The other major element found in both major provisions involves identifying what actually qualifies as copyright management information. The DMCA defines CMI as information conveyed on connection with a work, including:

> "(1) The title and other information identifying the work, including the information set forth on a notice of copyright.
> (2) The name of, and other identifying information about, the author of the work.
> (3) The name of, and other identifying information about, the copyright owner of the work, including the information set forth in a notice of copyright.
> (4) With the exception of public performances of works by radio and television broadcast stations, the name of, and other identifying information about, a performer whose performances is fixed in a work other than an audiovisual work.
> (5) With the exception of public performances of works by radio and television broadcast stations, in the case of an audiovisual work, the name of, and other identifying information about, a writer, performer, or director who is credited in the audiovisual work.
> (6) Terms and conditions for use of the work.
> (7) Identifying numbers or symbols referring to such information or links to such information.
> (8) Such other information as the Register of Copyrights may prescribe by regulation, except that the Register of Copyrights may not require the provision of any information concerning the user of a copyrighted work."[144]

The courts first interpreted what is covered by CMI in *IQ Group, Ltd. v. Wiesner Pub., LLC.* [145] The New Jersey district court reviewed a motion for summary judgment by the defendant. IQ Group was hired by NSAC and Capital Care to create

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[143] *Id.* at 927.

[144] *See* 17 U.S.C. § 1202(c) (2006) (providing a list of information that comprises copyright management information).

[145] *IQ Group, Ltd. v. Wiesner Publ., LLC,* 409 F. Supp. 2d 587 (D. N.J. 2006).

advertisements and distribute them via e-mail to insurance agents.[146] The advertisements included IQ Group's logo, which was configured to direct a user to IQ Group's website upon clicking on the logo.[147] After IQ Group distributed the advertisement, NSAC and Capital Care hired Wiesner, a rival of IQ Group, to distribute the advertisements via e-mail.[148] Wiesner removed the IQ Group logo and hyperlink, added new contact information for NSAC and Capital Care, and distributed the advertisements.[149] IQ Group applied for, and received, copyright registration in the advertisement, and subsequently filed suit against Wiesner, alleging in part a violation of the DMCA under 17 U.S.C. § 1202.[150] Wiesner moved for summary judgment that the DMCA claim should be dismissed as a matter of law, asking the court to rule that a logo does not constitute CMI under 17 U.S.C. § 1202(c).[151]

The district court determined that the legislative history shows that sections 1201 and 1202 were intended to be used together "as preventing circumvention of the 'technological measures' referred to in 1201."[152] The court found that because 1201 and 1202 should be construed together, CMI must be in the form of a technological measure.[153] Further, the court warned of "blurring the boundaries between trademark law and copyright law."[154] The court found that "[t]o come within § 1202, the information removed must function as a component of an automated copyright protection or management system," and because IQ Group's logo "did not function as a component of an automated copyright protection or management system, it does not fall within the definition of [CMI]."[155]

Although this interpretation of CMI is rather limiting, this holding has not been consistent with other court decisions. In *Textile Secrets International, Inv. V. Ya-Ya Brand, Inc.*, a California district court considered a case where the plaintiff, Textile Secrets International ("TSI") owned a copy in a fabric design, and the copyright

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146 *Id.* at 589.

147 *Id.*

148 *Id.*

149 *Id.*

150 *Id.*

151 *Id.* at 591.

152 *Id.* at 596-97 (citing H.R. Rep. No. 105-551 (1998); and S. Rep. No. 105-190 (1998)).

153 *Id.* at 596 ("Furthermore, the reports show that Congress viewed §§ 1201 and 1202 together as preventing circumvention of the "technological measures" referred to in § 1201.").

154 *See id.* at 592 (citing *Dastar Corp. v. Twentieth Century Fox Film Corp.*, 539 U.S. 23 (2003)).

155 *IQ Group, Ltd.*, 409 F. Supp. 2d at 597-98.

information was printed on the selvage of the fabric.[156] TSI argued that Ya-Ya Brand violated 17 U.S.C. § 1202 by removing the copyright information listed on the selvage, and proceeding to copy the fabric design. The district court evaluated the scope of CMI, and determined that it applied only when technological measures are required for removal or distribution of the copyrighted work.[157] Thus, unlike *IQ Group*, the court in *Textile Secrets International* did not go so far as to limit CMI to being a technological measure, but found that a technological process must be used either to place the copyright information on the fabric, or remove it from the fabric.[158]

One other case that exemplifies the diverse analysis of the scope of CMI is *McClatchey v. Associated Press*.[159] In this case, the district court in Pennsylvania reviewed a case where McClatchey had taken a photograph of the crash of United Flight 93 on September 11, 2001, for which she received federal copyright protection.[160] McClatchey alleged that a reporter for the Associated Press had taken a photograph of her photograph and cropped her CMI out of the picture.[161]

The defendants moved for summary judgment, arguing that the copyright information did not qualify as CMI under the DMCA because it was not digital.[162] McClatchey argued that she used a software program to generate the copyright information on each of the printouts of the photograph.[163] The court found that the terms of the definition for CMI under 17 U.S.C. § 1202(c) read broadly define CMI as including "any of the information set forth in the eight categories, 'including in digital

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[156] *See Textile Secrets Intern., Inc. v. Ya-Ya Brand Inc.*, 524 F. Supp. 2d 1184, 1192 (C.D. Cal. 2007) ("The sample yardage had markings on their selvage that listed plaintiff's name and the copyright symbol.").

[157] *See Id.* at 1201-02 ("The Court nevertheless cannot find that the provision was intended to apply to circumstances that have no relation to the Internet, electronic commerce, automated copyright protections or management systems, public registers, or other technological measures or processes as contemplated in the DMCA as a whole.").

[158] *Id.* ("[A]lthough the parties do not dispute that the [fabric] contained TSI's copyright information, there are no facts to show that any technological process as contemplated in the DMCA was utilized by plaintiff in placing the copyright information onto the [fabric], or that defendants employed any technological process in either their removal of the copyright information from the design or in their alleged distribution of the design.").

[159] *McClatchey v. Associated Press*, No. 05-cv-145, 2007 WL 776103 (W.D. Pa. March 9, 2007).

[160] *Id.* at *1.

[161] *Id.* at *2.

[162] *Id.* at *2.

[163] *Id.* at *5.

form.'"[164] Thus, by applying the facts of the case most favorably to the plaintiff, the court found that the facts of the case did not arise to the level required to grant summary judgment to the defendant.

C. Interplay between Anti-Circumvention and CMI Provisions

Together, sections 1201 and 1202 are two branches of copyright law that work along side traditional rights granted under the Copyright Act to protect authors. Commonly, a case is brought under both sets of provisions of the DMCA.[165] However, the two sets of provisions do not always arise together. Some cases are brought solely under the anti-circumvention provisions .[166] Other cases are brought as a CMI action, without an anti-circumvention action.[167] This article acknowledges that in some situations a case may be brought under only 17 U.S.C. § 1201, or under both 17 U.S.C. § 1201 and 17 U.S.C. § 1202. However, these cases will be set aside for purposes of this article. Rather, this article focuses on those cases that are brought under 17 U.S.C. § 1202, as well as traditional copyright infringement actions.

IV. THE CASE FOR USING THE CMI PROVISIONS OF THE DMCA TO PROTECT FOSS

The DMCA is often viewed as overly restrictive, inhibiting creativity rather than encouraging it.[168] This is especially true in FOSS camps.[169] Because of the backlash

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[164] *Id.* at *5.

[165] *See Stockwire Research Group, Inc. v. Lebed*, 577 F. Supp. 2d 1262, 1267 (S.D. Fla. 2008) (causes of action brought under 17 U.S.C. § 106, 17 U.S.C. § 1201, and 17 U.S.C. § 1202).

[166] *See Chamberlain Group, Inc. v. Skylink Techs., Inc.*, 381 F.3d 1178, 1182 (2d Cir. 2004).

[167] *See Rosenthal v. MPC Computers, LLC*, 493 F. Supp. 2d 182, 184 (D. Mass. 2007) (causes of action brought under 17 U.S.C. § 501 and 17 U.S.C. § 1202); *Gordon v. Nextel Commc'ns.*, 345 F.3d 922, 923 (6th Cir. 2003) (causes of action brought under 17 U.S.C. § 106 and 17 U.S.C. § 1202); *Polar Bear Products., Inc. v. Timex Corp.*, 384 F.3d 700, 704 (9th Cir. 2004) (causes of action brought under 17 U.S.C. § 101 and 17 U.S.C. § 1202).

[168] *See* John Y. Kim, *The Great Kaleidescape: New Hope in the Digital Rights Debate*, 27 Temp. J. Sci. Tech. & Envtl. L. 339, 355 (2008) (noting that *DVD Copy Control Ass'n v. Kaleidescape, Inc.* highlights the DMCA as "overly restrictive").

[169] *See* Torvalds, *supra* note 86, at 207-208 (acknowledging the benefits of copyrights, but acknowledging that the DMCA takes authors' rights too far); *see also* The GNU Project, GNU General Public License v3.0, http://www.gnu.org/licenses/gpl-3.0.html (June 29, 2007) ("When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.").

from FOSS camps after the enactment of the DMCA, it is not surprising that these camps have not often utilized copyright management information provisions in protecting their works.[170] However, since the inception of the GNU General Public License, FOSS has thrived on using copyright law to its advantage, even when copyright laws seemingly fly in the face of FOSS objectives.[171] While protecting FOSS using traditional copyright infringement actions may prove challenging in some respects, the CMI provisions of the DMCA provide causes of action that have become uniquely suited for FOSS.

Developers in FOSS camps are not strangers to employing copyright laws to create a sustainable software development method suited to their particular objectives. The GPL exemplifies the ability of FOSS communities to work with copyright law for its own benefit.[172] The development of the GPL was an ingenious way to take copyright law that was seen as restrictive and develop a method for protecting an ideology that software should be free. With each release of the GPL, modifications have been made to keep up with innovations both in the technology and in the law.[173]

The CMI provisions of the DMCA have rarely been litigated and there remains little guidance in using these provisions. Even more infrequently have the courts reviewed the CMI in view of software, the cases that have been litigated provide some guidance on how the CMI provisions of the DMCA provisions should be litigated in the future. By reviewing even those cases that do not touch software issues, some guidance can be found as to how future cases may be decided.

In reviewing case law that is directed to the CMI provisions, as well as what is found in treatises, it becomes clear that the CMI provisions of the DMCA may be especially valuable in protecting FOSS along with a traditional claim for infringement. Because an act of infringement of software will often involve removing or amending an appended license, it will often be the case that both actions may be brought. For the

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[170] *See* Turner, *supra* note 85 (detailing reactions to DRM measures in GPL 3.0). *See, generally*, Defective by Design, http://www.defectivebydesign.org/, (last visited Feb. 19, 2011) (dedicated to the campaign by the Free Software Foundation to avoid access restricting technological measures).

[171] *See* Williams, *supra* note 1, at 127 ("As hacks go, the GPL stands as one of Stallman's best. It created a system of communal ownership within the normally proprietary confines of copyright law. More importantly, it demonstrated the intellectual similarity between legal code and software code.").

[172] Two other examples are the Creative Commons and Science Commons licenses. Creative Commons, http://creativecommons.org (last visited Feb. 19, 2011). Here, the Free Software Foundation created a license inspired by the GPL to allow authors to easily license their works for free to the public. Creative Commons, History, http://creativecommons.org/about/history/(last visited Feb. 19, 2011).

[173] *Compare* The GNU Project, GNU General Public License, version 1 (Feb. 1989), http://www.gnu.org/licenses/old-licenses/gpl-1.0.html; *with*, The GNU Project, GNU General Public License, version 2 (June 1991), http://www.gnu.org/licenses/old-licenses/gpl-2.0.html. *See also* Tsai, *supra* note 18, at 564-572 (identifying the two major differences in GPL 3 from GPL 2 as the clarification of the scope of the license and the inclusion of an express patent license).

purposes of this article, I have identified two specific challenges that arise in FOSS litigation which might be advantaged by bringing a cause of action under the CMI protection provisions of the DMCA. First, a cause of action brought under the CMI provisions would circumvent the need to identify the copyright owner in FOSS, which can be challenging because of the communal, and often highly collaborative, development practices in FOSS projects. Second, the CMI provisions do not require the plaintiff to prove the enforceability of FOSS license terms, as copyright management information covers not only licenses but modification or removal of terms of service.

A. Standing

One of the first challenges that a litigant must overcome in bringing any suit is to demonstrate proper standing. As described above, only the legal or beneficial owner of a copyright is permitted to bring an action for infringement.[174] Further, the owner must have registered the copyright prior to bringing a cause of action.[175]

The collaborative nature of FOSS means that the owner or owners of the copyright of the work may be difficult to identify. For example, different licensing schemes within FOSS may or may not require that each author for every part of the source code. Some projects may have centralized management, such as a core group or organization that regulates contributions from others in the community. In these cases, contributors will grant back their copyright ownership to the core group or organization.[176] The Free Software Foundation often uses this type of management to create one "official" version of a project, although other unofficial versions of the project would not be illegal.[177] In these cases, because ownership is granted back to a core group, owners of the copyright are easy to identify.

In massively collaborative works, issues in identifying copyright owners arise when there is not a central manager for the project. As described in section two, when multiple authors contribute original works of authorship covered under copyright law, there are various ownership schemes into which the common project could fall, including

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

[175] *See* 17 U.S.C. § 411(a) (2006) ("Except for an action brought for violation of the rights of the author under section 106A(a), and subject to the provisions of subsection (b), no action for infringement of the copyright in any United States work shall be instituted until preregistration or registration of the copyright claim has been made in accordance with this title.").

[176] *See* Nimmer, *supra* note 3, at § 10:22 (2008) (discussing centrally managed projects requiring contributors to grant back ownership, or provide a license to the core organizers).

[177] *Id.* § 10:22 n. 2 ("A licensee that desires its code to become part of the "official" version must submit it to that supervisory group. The FSF, for example, in such cases typically requires a written transfer of the copyright to it.").

joint ownership, derivative works, and compilations.[178] Further, as described above, each of these types of ownership may prove to be problematic in an infringement suit because identifying the correct owners of the copyright to have proper standing becomes increasingly difficult the larger and more collaborative the project becomes.

One way in which the CMI provisions of the DMCA are favorable to a FOSS plaintiff is that many courts have construed the DMCA as not limiting standing to the copyright owner.[179] In *Echostar Satellite, L.L.C. v. Viewtech, Inc.*, a district court in the Southern District of California found that plaintiff Echostar had standing to bring a DMCA claim even though it was not the copyright owner because Ecostar contracted for distribution rights from the copyright owner.[180] The court found that the DMCA offers standing to "any person allegedly injured by a violation of sections 1201 and 1202 of the DMCA."[181]

In *RealNetworks, Inc. v. Streambox, Inc.*, a district court in the Western District of Washington found similarly.[182] The plaintiff, RealNetworks brought a DMCA under 17 U.S.C. § 1201 against Streambox, Inc.[183] RealNetworks had a product that allowed users to stream audio and video content over the Internet. The streamed content was secured against unauthorized access or copying in part by using a "secret handshake" to create a secure connection.[184] Streambox, Inc. allegedly circumvented the secret handshake in order to allow users to download the streamed content.[185] Accordingly, the copyright owner was not RealNetworks, Inc., but a third party author. The court found that RealNetworks, Inc. was permitted to bring a cause of action because 17 U.S.C. § 1203 "affords standing to 'any person' allegedly inured by a violation of sections 1201 and 1202 of the DMCA."[186]

Unfortunately, the idea that standing in a DMCA claim does not require the copyright owner is not held everywhere. In *Chamberlain Group*, the Federal Circuit

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[178] *See id.* § 10:22 (2009) (explaining the difficulty in determining the owner in a FOSS project).

[179] *See Echostar Satellite, LLC v. Viewtech, Inc.*, 543 F. Supp. 2d 1201, 1205 (S.D. Cal. 2008) ("Nothing in the DMCA limits standing to the copyright owner. Instead, the statute states that any person injured by a violation of section 1201 or 1202 may bring a civil action in an appropriate United States district court for such violation.").

[180] *Id.*

[181] *Id.* at 1205.

[182] *RealNetworks, Inc. v. Streambox, Inc.*, No. 99-cv-02070, 2000 WL 127311, at *6 (W. D. Wash. Jan. 18, 2000) (finding the plaintiff has standing under 17 U.S.C. § 1201).

[183] *Id.* at *1.

[184] *Id.* at *2.

[185] *Id.* at *4.

[186] *Id.* at *6.

reviewed the provisions of the DMCA.[187] The Federal Circuit determined that the DMCA does not create new rights in copyright law, but instead provides new causes of action for copyright owners.[188] Because of this, the Federal Circuit held that one of the requirements to prove a violation under section 1201(a)(2) is "ownership of a valid *copyright* on a work."[189]

B. FOSS Licenses as CMI

Much of the litigation arising from the CMI provisions of the DCMA surround the issue of pinning down exactly what is covered by CMI. Further, as described above, a major issue in protecting FOSS is determining how to categorize the terms of FOSS licenses as either licensing conditions or contractual covenants. One potential solution is to categorize the FOSS license as CMI.

A review of the case law as analyzed above reveals that most courts agree that CMI must be related to some technological measure. In *Textile Secrets*, the court found that in order for copyright information to be CMI, it must relate to some technological measure, such as public registers or automated copyright systems.[190] In *McClatchey*, the court found even less of a relationship was necessary between the copyright information and the technological measure, finding it sufficient that the plaintiff's use of a software program to generate CMI on prints of her work.[191]

Similarly to the outcome in *McClatchey*, in *Jacobsen v. Katzer*, the plaintiff contended that he "used a software script to automate adding copyright notices and information regarding the license and uploaded the files on the internet through SourceForge.net, an open source incubator website."[192] The court chose to follow *IQ Group* and found that there had been "some" technological process involved in protecting the copyright management information and did not dismiss the DMCA claims on a Rule 12(b)(6) motion.[193]

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[187] *See Chamberlain Group, Inc. v. Skylink Tech., Inc.*, 381 F.3d 1178, 1203 (Fed. Cir. 2004) (providing a six element test for a claim under section 1201).

[188] *Id.*

[189] *Id.* at 1203.

[190] *See Textile Secrets Int'l., Inc. v. Ya-Ya Brand Inc.*, 524 F. Supp. 2d 1184, 1201-02 (C.D. Cal. 2007) ("[T]he Court nevertheless cannot find that the provision was intended to apply to circumstances that have no relation to the Internet, electronic commerce, automated copyright protections or management systems, public registers, or other technological measures or processes as contemplated in the DMCA as a whole.").

[191] *McClatchey v. Associated Press*, No. 05-cv-145, 2007 WL 776103, at *5 (W.D. Pa. March 9, 2007).

[192] *Jacobsen v. Katzer*, 609 F. Supp. 2d 925, 934 (N. D. Cal. 2009).

[193] *Id.* at 934.

FOSS projects are often created using development tools that inherently have an automated copyright system such that as the software is created, the license is automatically proliferated through the project. Further, as was the case in Jacobsen, many developers use automated methods for adding copyright notices to the work, and use public registers, such as SourceForge.net for the development of FOSS.[194] Further, the FOSS license itself provides the terms and conditions for use of the covered work, and as such fall into the CMI definition in the DMCA.[195] Because FOSS licenses are often associated with public registers, such as SourceForge.net, and software licenses are often automatically added to source code during development, FOSS licenses meet the general standards of the technological measure required by most courts to be considered CMI.

One potential hurdle in considering FOSS licenses to be CMI is found in GPL 3.0. Specifically, GPL 3.0 includes a provision directed to the DMCA, which states "No covered work shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures."[196] The provision is clearly directed toward the anticircumvention provisions found under 17 U.S.C. § 1201. However, the concern arises from the many courts who read sections 1201 and 1202 as a single unit.[197] If a court is to consider copyright information to be a technological measure in order to be valid CMI, as in *IQ Group*,[198] then there is potential that a court might find the GPL 3.0 to have waived any causes of action available based on technological measures. However, one might argue that the license itself is not considered a covered work under its own language. Because of the ambiguity that exists in determining the scope of CMI under the DMCA, it might be advisable to amend the GPL to express that while the software covered by the license is not to be considered a technological measure, the license itself is a technological measure for the purposes of section 1202.

C. Remedies

As described above, one of the most important reasons in an infringement action for the terms of FOSS licenses to be considered licensing conditions rather than

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[194] *Geeknet*, http://geek.net/our-network/sourceforge (last visited Feb. 19, 2011).

[195] 17 U.S.C. § 1202(c) (2006).

[196] The GNU Project, GNU General Public License v3.0, http://www.gnu.org/licenses/gpl-3.0.html (June 29, 2007).

[197] *See, e.g., IQ Group, Ltd. v. Wiesner Publ'g, LLC*, 409 F. Supp. 2d 587, 596 (D. N.J. 2006) ("Furthermore, the reports show that Congress viewed §§ 1201 and 1202 together as preventing circumvention of the 'technological measures' referred to in § 1201").

[198] *Id.* at 596 (finding that CMI must be in the form of a technological measure as required by the DMCA).

contractual covenants is to be able to obtain an injunction against an infringing party. If the terms were to be construed as contractual language, then the plaintiff would be likely to receive monetary damages, which is the traditional form of relief in a contract claim. However, if the court construes the claims to be licensing conditions, then the plaintiff may obtain an injunction, which is more common under copyright law.

If the FOSS plaintiff were to bring a cause of action under the CMI provisions of the DMCA, and be successful, the plaintiff would be awarded remedies as discussed under the DMCA.[199] These remedies include not only awarding of statutory or actual damages,[200] but also provide the court with the power to grant temporary and permanent injunctions "on such terms as it deems reasonable to prevent or restrain a violation."[201] Accordingly, bringing a cause of action for violation of the DMCA along with an infringement claim would provide a second chance to reach the end goal of an injunction.

V. CONCLUSION

Because the objectives of software development in FOSS projects requires unique forms of protection, FOSS camps have found methods to use copyright law that is seemingly restrictive and use it to protect their own highly unrestricted works. Although the DMCA is seen as especially restrictive, FOSS camps should view it as providing a new set of tools that FOSS developers may hack to preserve their unique objectives. When bringing a claim of infringement against an infringing party, there are situations in which bringing a claim for violation of the DMCA is not available, or not feasible. However, in the situations where it is feasible, bringing a claim for violation of the DMCA may provide an extra route for litigants to be able to obtain an injunction against infringing parties.

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199 *See* 17 U.S.C. § 1203 (2006).

200 *See id.* § 1203(c).

201 *See id.* § 1203(b).