Michigan Telecommunications and Technology Law Review

Volume 14 | Issue 2

2008

The General Public License Version 3.0: Making or Breaking the FOSS Movement

Clark D. Asay

THE GENERAL PUBLIC LICENSE VERSION 3.0: MAKING OR BREAKING THE FOSS MOVEMENT?

*Clark D. Asay**

Cite as: Clark D. Asay, *The General Public License Version 3.0: Making or Breaking the Foss Movement?* 14 MICH. TELECOMM. TECH. L. REV. 265 (2008), *available at* http://www.mttlr.org/volfourteen/asay.pdf

* Associate, Wilson Sonsini Goodrich & Rosati. J.D. 2007, Stanford Law School. M.Phil 2002, University of Cambridge. B.A. 2001, Political Science, Brigham Young University. 650 Page Mill Road / Palo Alto, CA 94304. (650) 493-9300. casay@wsgr.com.

I. INTRODUCTION

Free and open source software (FOSS) is a big deal.[1] FOSS has become an undeniably important element for businesses and the global economy in general, as companies increasingly use it internally and attempt to monetize it.[2] Governments have even gotten into the act, as a recent study notes that FOSS plays a critical role in the US Department of Defense's systems.[3] Others have pushed for the adoption of FOSS to help third-world countries develop.[4] Given many of its technological and developmental advantages, FOSS's use, adoption, and development are only projected to grow.[5]

The GNU General Public License (GPL), created by the Free Software Foundation (FSF) to govern the use of many FOSS projects, is also a big deal.[6] Though the dispersed development of FOSS makes calculating the percentage of FOSS projects licensed under GPL difficult, some accounts suggest that the percentage is quite high.[7] It is certainly the

1. The term FOSS will be used throughout this Article. The term refers to both free software and open source software, which are usually the same thing. *See infra* Part II.C. FOSS is software whose license, at a minimum, requires that subsequent users have access to the software's source code free of charge once the software is distributed, and also have the ability to modify, use, and distribute the software free of charge. As there are over fifty different FOSS licenses, it is difficult in one footnote to summarize all the licensing terms that may attach to a particular FOSS project. For introductory information on FOSS in general and on specific topic areas, see UNDP-APDIP International Open Source Network, FOSS Primers, http://www.iosn.net/foss-primers (last visited Mar. 2, 2008).

2. Red Hat, for instance, is just one example of a multi-million dollar company that generates its revenues by selling FOSS and related services. *See* redhat.com, *Why Subscriptions?*, http://www.redhat.com/about/whysubscriptions/ (last visited Jan. 8, 2008). *See also* Steven J. Vaughan-Nichols, *Google Opens Up About Open Source*, EWEEK.COM, Oct. 26, 2005, http://www.eweek.com/c/a/Linux-and-Open-Source/Google-Opens-Up-About-Open-Source/ (discussing Google's increasing reliance on FOSS, both internally and in its consumer products).

3. *See generally* The Mitre Corporation, *Use of Free and Open Source Software (FOSS) in the U.S. Department of Defense*, version 1.2.04 (2003), http://www.microcross.com/dodfoss.pdf.

4. Katim S. Touray, *Promoting the Adoption and Use of FOSS in Developing Countries*, LINUX.COM, Mar. 25, 2004, http://www.linux.com/articles/35077.

5. *See, e.g.*, Luc Hatlestad, *LinuxWorld Showcases Open-Source Growth, Expansion*, INFORMATIONWEEK, Aug. 9, 2005, http://www.informationweek.com/showArticle.jhtml;?articleID=168600351.

6. For a copy of the GPL, see Free Software Foundation, The GNU General Public License, http://www.gnu.org/copyleft/gpl.html (last visited Feb. 10, 2008).

7. Press Release, Free Software Foundation, FSF Releases Guidelines for Revising the GPL, Nov. 30, 2005, http://gplv3.fsf.org/press/press20051130.html (indicating that GPL governs 75% of all FOSS projects); *see, e.g.*, freshmeat.net: Statistics and Top 20, http://freshmeat.net/stats/ (last visited Mar. 2, 2008) (showing approximately 64% of FOSS licenses governed by GPL). *Compare* SourceForge.net: Software Map, http://sourceforge.net/softwaremap/trove_list.php?form_cat=14 (last visited Apr. 8, 2008) (listing all licensed FOSS projects at SourceForge), *with* SourceForge.net: Software Map, http://sourceforge.net/softwaremap/trove_list.php?form_cat=15 (last visited Apr. 8, 2008) (listing GNU GPL pro-

most well-known and most frequently used FOSS license.[8] Like FOSS, the GPL is here to stay.

But in what form? The FSF created the most popular version of the GPL, GPL Version 2.0 (GPLv2), in 1991, but since then many technological changes have occurred that, according to the FSF, have rendered GPLv2 outdated.[9] Consequently, the FSF recently underwent a process to revise GPLv2. Version 3 of the GPL (GPLv3), published on June 29, 2007, is the final product of that process.[10]

GPLv3 contemplates a number of important changes, including internationalizing the license by eliminating terminology generally associated with US copyright law and adding new language that makes GPLv3 more compatible with other FOSS licenses.[11] Two of the most important new provisions, however, address Digital Rights Management (DRM) and software patents. In essence, the DRM provisions effectively make using DRM with GPLv3-licensed software almost legally impossible, unless the user also has the ability to unlock the DRM (which in many cases negates the DRM's purpose in the first place). Furthermore, the new patent provisions prevent patent holders who convey (a term newly defined in GPLv3) GPLv3-licensed works from suing and asserting their patent rights against third parties for rights exercised under GPLv3.

What effect will these changes have? Although responses have been varied, two camps within the FOSS world have emerged to articulate their stances on GPLv3. These two camps are the same two groups that have been at odds over FOSS development since at least 1998: the Free Software Foundation (FSF) on the one hand, and those more closely aligned with the Open Source Initiative's (OSI) approach to FOSS development on the other. The FSF maintains an almost religious adherence to certain ethical tenets of free software doctrine, while OSI adherents are more "pragmatic" about their approach to FOSS development. GPLv3, and especially the DRM and patent provisions, highlights some of these two groups' differences in philosophy. Some also fret that GPLv3 may ultimately foreshadow the dissolution of their uneasy compromise.[12]

---

jects only) (showing as of April 8, 2008, that 69% of all FOSS projects on SourceForge.net are licensed under the GPL).

8. *Id.*

9. Free Software Foundation, *supra* note 7.

10. Free Software Foundation, GNU General Public License Version 3, June 29, 2007, http://www.gnu.org/licenses/gpl-3.0.html [hereinafter GPLv3].

11. *See* Press Release, Free Software Foundation, FSF Releases the GNU General Public License, Version 3, June 29, 2007, http://www.fsf.org/news/gplv3_launched.

12. Jonathan Zuck, *Which Way, Open-Sourcers?*, CNET NEWS.COM, Sept. 12, 2006, http://www.news.com/2010-7344_3-6114507.html.

This Article proceeds as follows. Section II details the philosophical differences between the FSF and OSI and what these differences have meant to FOSS licensing, and FOSS development in general, until now. Section III details the DRM and patent changes provided in GPLv3 and discusses both sides' reactions to those changes. It then examines what these GPLv3 changes, and the reactions from both parties, could mean for FOSS licensing and development in the future. Section IV concludes by recapping some of the main findings of this study.

This Article's thesis is that the two parties' differences pale in comparison to their commonalities, and that GPLv3, despite its possible problem areas, will be an effective means for dealing with two growing problems that threaten the FOSS world. GPvL3 may add new social and legal complications to FOSS development, but, as with GPLv2, GPLv3's unifying potential is greater than its possible "balkanizing" effects. In the end, GPLv3 is a calculated risk worth taking.

II. FREE SOFTWARE V. OPEN SOURCE

A. *The FSF's Vision of Free Software*

The OSI and FSF started off as the same camp but, as the FSF notes on its website, in 1998 some members of the free software movement began using the term "open source" instead of "free software" to describe the movement.[13] That term, according to the FSF, soon "became associated with a different approach, a different philosophy, different values, and even a different criterion for which licenses are acceptable."[14] The FSF thus describes the two camps as "separate movements with different views and goals . . . like two political camps within the free software community."[15]

What are the FSF's main ideological tenets? For the FSF, whether software should be "free" is an ethical question, not a practical problem; the group states that "non-free software is a social problem and free software is the solution."[16]

As the FSF defines it, free software is "a matter of liberty, not price."[17] To more clearly understand this distinction, the FSF urges con-

13. Richard M. Stallman, *Why "Free Software" Is Better Than "Open Source"*, *in* FREE SOFTWARE, FREE SOCIETY: SELECTED ESSAYS OF RICHARD M. STALLMAN 57, 57 (Joshua Gay ed., 2002), *available at* http://www.gnu.org/philosophy/fsfs/rms-essays.pdf.

14. *Id.*

15. *Id.*

16. *Id.*

17. Free Software Foundation, The Free Software Definition, http://www.fsf.org/licensing/essays/free-sw.html (last visited Feb. 15, 2008).

sumers to "think of 'free' in terms of 'free speech,' not 'free beer.'"[18] Users of free software should enjoy four specific freedoms; otherwise the software is not "free." These freedoms are:

- The freedom to run the program, for any purpose (freedom 0).
- The freedom to study how the program works, and adapt it to your needs (freedom 1). Access to the source code is a precondition for this.
- The freedom to redistribute copies so you can help your neighbor (freedom 2).
- The freedom to improve the program, and release your improvements to the public ... (freedom 3). Access to the source code is a precondition for this.[19]

Copyleft is also an important proviso of most free software (although not an absolute requirement), including and especially for GPLv2-licensed FOSS. Copyleft means that all redistributions of works based upon the software must be licensed under the same license terms under which they were originally received.[20] Hence, if a user receives a GPLv2'ed work, modifies it, and then distributes the modified work, she must do so under GPLv2's terms. Although the FSF notes that non-copylefted free software also exists, most free software, as the FSF defines it, is licensed under GPLv2 and is thus copylefted.[21]

However, free software does not mean "non-commercial." Persons distributing free software can charge a fee for such distribution, although they cannot charge license royalties for redistribution following the initial distribution (which would deny users the freedom to redistribute copies).[22]

But while the FSF recognizes the possibilities and importance of free software's commercialization in some cases,[23] its essential focus remains on ensuring the software's freedoms, as defined above. Hence, the FSF refuses to cater to businesses' unease with the FSF's mission by restricting the freedoms in any way, or by calling the movement anything other than "free software": "[T]alking about freedom, about ethical issues, about responsibilities as well as convenience, is asking people to

18. *Id.*
19. *Id.*
20. Free Software Foundation, *What is Copyleft?*, http://www.fsf.org/licensing/essays/copyleft.html (last visited Feb. 15, 2008).
21. *Id.*
22. Free Software Foundation, *supra* note 17.
23. *Id.*

think about things they might rather ignore. This can trigger discomfort .... It does not follow that society would be better off [if the FSF stopped stressing freedom]."[24] The FSF believes that users must learn to value the freedom free software provides "for its own sake," rather than "talking only about the immediate practical benefits of certain free software ...."[25] Becoming "more acceptable to business" and "keep[ing] quiet" about software freedom in order to cater to businesses are not the FSF's goals; instead, cultivating and entrenching a new set of free software ethics are its primary objectives.[26]

B. *The OSI's Vision: A Different Movement?*

The OSI's philosophy of software development has earned a variety of labels: pragmatic, practical, and business friendly are some of the more positive denominations.[27] Alternatively, caving to business, fear of freedom, and keeping quiet about freedom are some of the more pejorative accusations the FSF has leveled against the OSI's approach.[28]

As noted above, the OSI officially began in 1998 when some members of the FSF camp "realized it was time to dump the confrontational attitude that has been associated with 'free software' in the past and sell the idea strictly on ... pragmatic, business-case grounds."[29] Consequently, the OSI adopted the term "open source software" to replace the increasingly confrontational "free software" label. Contrary to the FSF's approach, the OSI seeks compromise with the commercial software community, believing that business support and involvement are vital to the FOSS movement's ultimate success.[30] As the OSI explains its position:

> The Open Source Initiative is a marketing program for free software. It's a pitch for 'free software' because it works, not because it's the only right thing to do. We're selling freedom on its merits .... Many users learn to appreciate freedom through their own experience, rather than being told about it.[31]

---

24. Stallman, *supra* note 13, at 59.
25. *Id.*
26. *Id.*
27. *See* Open Source Initiative, *History of the OSI*, http://www.opensource.org/history (last visited Apr. 8, 2008) (listing a number of these terms).
28. Stallman, *supra* note 13, at 59.
29. *See* Open Source Initiative, *supra* note 27.
30. KENNETH WONG & PHET SAYO, FREE/OPEN SOURCE SOFTWARE: A GENERAL INTRODUCTION 7, (UNDP-APDIP 2004), *available at* http://www.apdip.net/publications/fosseprimers/foss-intro-nocover.pdf.
31. Open Source Initiative, Frequently Asked Questions, http://opensource.linux-mirror.org/advocacy/faq.php (last visited Mar. 3, 2008).

For software licensing, this means the OSI also provides a definition (the OSD) of what constitutes open source software. Despite the group's name, the OSI makes clear that open source software does not "just mean access to the source code."[32] Instead, for software to be open source and for the software license to be OSI-certified, the software's distribution terms must comply with the following ten conditions: 1) the license must allow for free distribution of the software, 2) the software's source code must be available and distributable, 3) "[t]he license must allow modifications and derived works," 4) users must maintain the integrity of the author's source by allowing for modified versions to be distinguished from the original source code, 5) the license may not discriminate against persons or groups, 6) the license may not discriminate against specific fields of endeavor, 7) the license rights of the program "must apply to all to whom the program is redistributed without need for . . . an additional license," 8) the "license must not be specific to a [particular] product," 9) "the license must not restrict other software," and 10) "the license must be technology-neutral."[33] Software licenses that meet these conditions can earn OSI certification.

C. *Practical Differences?*

What have been the practical differences in FOSS development and licensing resulting from these two different philosophical approaches and licensing schemes? In reality, not many. As the FSF notes, "[t]he Open Source Definition is clear enough, and it is quite clear that the typical non-free program does not qualify [under it]."[34] The FSF further states, "[t]he official definition of 'open source software' . . . is very close to [the FSF's] definition of free software," although the FSF does note that the OSI's definition "is a little looser in some respects, and [the OSI has] accepted a few licenses that [the FSF considers] unacceptably restrictive of the users."[35] Although close, the definitions are "not identical."[36]

Nonetheless, as other commentators have noted, "the software, the technology, the developers, and even the licenses are essentially the same. The only thing that differs is the attitude and the propaganda."[37] Indeed, rather than to propose a radical new set of terms to govern FOSS

32. Open Source Initiative, The Open Source Definition (Annotated), Version 1.9, http://www.opensource.org/docs/definition.php, (last visited Mar. 3, 2008).

33. *Id.*

34. Stallman, *supra* note 13, at 60.

35. *Id.* at 58.

36. Free Software Foundation, *supra* note 17.

37. Adam Engel, *Free as in Freedom—Part Two: New Linux*, PRESS ACTION, Dec. 12, 2004, http://www.pressaction.com/news/weblog/full_article/engel12122004.

development, the OSI created the OSD in contrast to the FSF's definition largely as a means to clarify a few issues and rhetorically emphasize a different ideological bent. To expect major differences in licensing terms is thus unwarranted.

Although the OSI definition has ten conditions for OSI certification compared to the FSF's four freedoms for free software, much overlap exists between the two definitions. The FSF's freedom 2 (freedom to redistribute) covers condition 1 of the OSI's definition. Condition 2 of the OSI's definition, access to source code, is a precondition for two of the FSF's freedoms. Freedom 3 of the FSF's definition (freedom to improve the program and release to public) is essentially equivalent to condition 3 of the OSI's definition. Condition 4 in the OSI's definition relating to protecting authors' integrity, while not explicitly delineated as one of the FSF's freedoms, is explicitly allowed for in the FSF's definition document if such a condition does not substantively block users' freedom to release modified versions.[38]

And while the FSF does not explicitly discuss the OSI's conditions 5 and 6 (no discrimination against persons or groups or against fields of endeavor), such conditions seem implicit in the FSF's very definition of freedom. Other conditions of the OSI definition, including 7, 8, and 9, have proven to be of little practical importance in terms of licensing and FOSS development.[39] Condition 10 of the OSD, requiring that the license be technology-neutral, has also spawned little controversy until now.

Indeed, the similarities between the two camps further manifest themselves in terms of the licenses both groups approve. Both groups' websites provide lists of approved licenses; the FSF further provides a list of specifically disapproved licenses that do not qualify as free software. Only three of the FSF's disapproved licenses appear in the OSI's list of approved licenses: the Original Artistic License, the Apple Public Source License v. 1.2, and the Reciprocal Public License.[40] Hence, while all free software qualifies as open source software and not vice-versa,

38. Free Software Foundation, *supra* note 17.

39. LAWRENCE ROSEN, OPEN SOURCE LICENSING: SOFTWARE FREEDOM AND INTELLECTUAL PROPERTY LAW 8 (Noreen Regina ed., 2004), *available at* http://www.rosenlaw.com/Rosen_Ch01.pdf.

40. The FSF disapproves of the Original Artistic License because it is too vague, and therefore provides some leeway for developers to restrict users' freedom. It disapproves of v. 1.2 of the Apple Public Source License because any modified version of the software "deployed" within an organization must be published, which restricts the user's freedom to privately use the software. The FSF disapproves of the Reciprocal Public License because "1) [i]t puts limits on prices charged for an initial copy[,] 2) [i]t requires notification of the original developer for publication of a modified version[, and] 3) [i]t requires publication of any modified version that an organization uses, even privately." Free Software Foundation, Licenses and Comments, http://www.fsf.org/licensing/licenses/index_html (last visited Mar. 3, 2008).

only three open source licenses with OSI approval do not also qualify as free software.

Furthermore, though these three licenses may highlight some minor differences between the two groups, they remain minority licenses; both groups approve of the more important software licenses, such as the Berkeley Software Distribution license (BSD), increasingly the Mozilla Public License (MPL), and, importantly, GPLv2. The GPL is by far the most important and widely used FOSS license in the world, and both camps heavily rely on it and work together on projects governed by its terms. Both groups also approve of more updated versions of two of the three FSF-disfavored licenses that have removed the restrictive clauses the previous versions contained. Despite their philosophical differences then, until now the two groups approve of and rely on primarily the same set of software licenses to support their movements.

Thus, as the former top lawyer for the FSF, Eben Moglen, notes, the main differences between the two groups remain ideological: adherents of the FSF are committed to a more communitarian approach to software development, whereas the OSI ideology remains more libertarian in nature.[41] The practical differences in outcome, however, have been negligible.

Will this ideological rift remain benign? Moglen and the FSF believe so:

> So is the dialog between "open source" and "free software" a threat to free software's future? Not at all. The free software idea is irreversibly embedded in the fabric of the Internet Society. As it grows larger, the movement behind that idea will go through many transformations, and its meaning will remain contested. But those of us who are committed to its success don't all have to be pushing in exactly the same direction in order to help it along. Whatever the names we use, we know what we're talking about, and we know why Free Software matters.[42]

The differences between the two groups thus seemingly lie in semantics. But with GPLv3, these semantics have proven more important than in previous squabbles. More than any encounter yet, GPLv3 generally highlights the two groups' differences and embodies, in licensing terms, several of those differences. GPLv3 represents a possible breaking point for these two camps' uneasy compromise. What this may mean for FOSS development is the next Section's topic.

---

41. Eben Moglen, *Free Software Matters: Free Software or Open Source?*, Dec. 3, 2000, http://emoglen.law.columbia.edu/publications/lu-07.html.

42. *Id.*

III. GPLv3: Its Terms

GPLv2 had been in use, without revision, since 1991. In mid-2005, Richard Stallman and the FSF announced that they would revise GPLv2 and create GPLv3 to address a myriad of technological changes that had engulfed the computing and software communities in the intervening years.[43] The FSF later began a one-year revision process in which it produced several drafts of GPLv3 and conducted worldwide conferences to solicit feedback on those drafts. Given the GPL's significance, participation across the globe was intense.

GPLv3 is the final product of that process. Released June 29th, 2007, GPLv3 includes a number of new sections as well as significant changes to preexisting ones. Among the changes, GPLv3 includes new definitions that more effectively "internationalize" the license by replacing terms typically associated with US copyright law with more neutral terms, a new section for "Additional Terms" that allows the copyright holder to attach certain additional permissions to GPLv3'ed software, explicit recognition of "fair use" or the equivalent provided by copyright law, a new section that explains GPLv3's use with the GNU Affero General Public License, a revised method for terminating the GPLv3 license, and new language governing source code licenses in merger and acquisition transactions.[44]

Not coincidentally, however, two of the most significant and hotly contested changes in GPLv3 happen to be provisions that touch upon some of the core differences between the FSF and the OSI vision of FOSS development: a new section 3 titled "Protecting Users' Legal Rights From Anti-Circumvention Law" ("Anti-DRM Section") and new patent provisions, including a new Section 11 titled "Patents" ("Patent Section") and Section 10's automatic patent licensing of "Downstream Recipients." This Article now examines these provisions, the FSF, the OSI, and other major players' reactions to them, and their likely social and legal results for FOSS development.

A. *GPLv3's Anti-DRM Section*

1. Its Contents

From its small size, GPLv3's new section 3 might seem rather benign. In its brevity, however, the section's sweeping language imposes significant requirements upon FOSS developers using GPLv3'ed FOSS.

---

43. Free Software Foundation, *supra* note 7.

44. For a copy of GPLv3 and these new terms, see Free Software Foundation, Welcome to GPLv3, http://gplv3.fsf.org/ (last visited Feb. 18, 2008).

Indeed, of all the changes GPLv3 introduces, the Anti-DRM Section has spawned some of the most intense controversy during the process leading up to GPLv3's adoption.

Section 3 starts by explicitly addressing "para-copyright"[45] measures adopted throughout the world. It states: "No covered work [under GPLv3] shall be deemed part of an effective technological measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty[46] . . . or similar laws prohibiting or restricting circumvention of such measures."[47] With one fell swoop, GPLv3 declares GPLv3'ed works outside the coverage of para-copyright measures worldwide, adopted pursuant to the WIPO Copyright Treaty or otherwise.

Section 3's next paragraph broadens GPLv3's assault on para-copyright measures by imposing disclaimers on conveyers of GPLv3'ed works. Under GPLv3, conveying parties expressly waive the power to forbid circumvention if the user needs to do so in order to enjoy GPLv3's freedoms. Conveying parties also disclaim any intention to limit the design or use of a covered work in order to enforce any legal rights arising under anti-circumvention law.[48]

GPLv3 also includes language in other sections aimed at combating the purported vices of DRM. Section 1 includes a definition of "Corresponding Source" to ensure that when persons or entities convey GPLv3'ed works, the source code necessary to generate, install, operate, and modify the software is also available.[49] Section 6, "Conveying Non-Source Forms," adds to this requirement by ensuring that users can use modified versions of GPLv3'ed software on devices specifically designed to prevent such use of modified forms (e.g., TiVo). For instance, the section includes definitions for "User Product" and "Installation Information," and essentially requires that for any such products (i.e., consumer products or anything designed to be used in homes), any encryption

45. "Para-copyright" is often used to mean technological measures granted to copyright holders that actually extend their rights beyond what copyright law has traditionally granted. *See* Letter from Wendy Seltzer & Bryan W. Taylor, Berkman Center for Internet & Society, to David O. Carson, General Counsel, Copyright CG/I&R, http://www.copyright.gov/1201/comments/reply/109selzer_bcis.pdf (commenting on 64 Fed. Reg. 66139, 66139–41 (Nov. 24, 1999)).

46. Article 11 of the World Intellectual Property Organization [WIPO] Copyright Treaty requires that all member states provide authors of copyrighted works with the protection of technical measures to ensure that violation of copyright owners' rights does not occur. WIPO Copyright Treaty art. 11, Dec. 20, 1996, S. TREATY DOC. No. 105-17, 36 I.L.M. 65, *available at* http://www.wipo.int/treaties/en/ip/wct/trtdocs_wo033.html.

47. GPLv3, *supra* note 10, § 3.

48. *Id. See also* FREE SOFTWARE FOUNDATION, GPLv3 THIRD DISCUSSION DRAFT RATIONALE 14 (2007), *available at* http://gplv3.fsf.org/gpl3-dd3-rationale.pdf.

49. GPLv3, *supra* note 10, § 1.

keys or other information necessary to operate modified GPLv3'ed software on such products (i.e., the Installation Information) must be provided as part of the Corresponding Source.[50]

2. FSF's Position on DRM

As the GPLv3's author, Richard Stallman and the FSF strongly believe that these anti-DRM provisions are absolutely crucial to ensure free software's continuing vitality and to thwart the growing threat of "para-copyright."[51] Otherwise, as Stallman argues, the increasing "Tivoization" of free software, as well as "treacherous computing," could increasingly erode free software's freedoms.[52]

"Tivoization" describes what TiVo has done with GPL'ed software used in conjunction with its popular digital video recorder (DVR): utilizing GPLv2 licensed software, but then including digital keys in the software and hardware to restrict how users can use modified versions of that software. The software is under the GPL so users have access and the ability to modify TiVo's source code, but the modified version of the software will not work properly on the TiVo hardware because once a user modifies the source code, the digital key included in the software will not match the digital key in the hardware.[53] The use of DRM in this manner applies not only to TiVo, but potentially to many other software programs licensed under the GPL as well. Indeed, the FSF notes on its website that increasingly more embedded device manufacturers are locking down their devices in this way, ranging from wireless routers to personal media players.[54]

"Treacherous computing" is similar. In such scenarios, computers are equipped with encryption keys that communicate with and verify the software applications, as well as websites, interacting with the computer.[55] The software or hardware will not allow unauthorized applications or programs to interact with them. Altering the software or

---

50. *Id.* § 6.

51. *See* Free Software Foundation, *Opinion on Digital Restrictions Management* 1, http://gplv3.fsf.org/drm-dd2.pdf (last visited Feb. 11, 2008) (calling DRM a para-copyright system of "technical means to turn the system of copyright law, where the powers of the copyright holder are limited exceptions to general freedom, into a prison, where everything not specifically permitted is utterly forbidden, and . . . technically impossible").

52. Free Software Foundation Europe, Transcript of Richard Stallman at the 5th International GPLv3 Conference (Nov. 21, 2006), http://www.fsfeurope.org/projects/gplv3/tokyo-rms-transcript.en.html.

53. Shashank Sharma, *Stallman, Torvalds, Moglen Share Views on DRM and GPLv3*, Aug. 9, 2006, LINUX.COM, http://www.linux.com/articles/56171.

54. Free Software Foundation, It's Not Just TIVO Locking Down Their Hardware, http://www.fsf.org/blogs/licensing/gplv3-lockdown (Oct. 11, 2006).

55. *See* Ross Anderson, 'Trusted Computing' Frequently Asked Questions, Version 1.1 (Aug. 2003), http://www.cl.cam.ac.uk/~rja14/tcpa-faq.html.

hardware in any manner, therefore, would potentially prevent users from using the computer or programs; FOSS programs could be entirely blocked if not authorized by the hardware, software, or operating system.

According to Stallman and the FSF, such restrictions on a user's freedoms have "no legitimate social purpose."[56] Such technical restrictions that allow third parties to control users' ability to modify and run a GPL'ed work make the FSF's freedom 1 a sham. Hence, while the software may technically comply with the letter of GPLv2, Tivo and other similar programs completely evade the GPL's spirit.[57]

GPLv3 addresses this problem by requiring access to the digital keys (i.e., Installation Information) when necessary to run the modified versions on User Products. As Stallman indicated at a June 2006 conference in Barcelona, "[t]hey must give you whatever it takes to authorize your version so that it will run."[58] According to the FSF, however, GPLv3 does not prohibit developers and programmers from implementing DRM; instead, the new license simply "prevents [DRM features] from being imposed on users in a way that they cannot remove."[59] If a manufacturer elects to nullify warranties and service support for modified versions of the software, doing so is perfectly legitimate under GPLv3, according to the FSF's former top lawyer.[60]

3. The Other Side of the Coin? OSI Sympathizers

Although the OSI has not issued a specific position on GPLv3 or its provisions, many of those who share its development philosophy have voiced their opinions. For instance, Linus Torvalds, the Linux kernel's original creator and a general supporter of the OSI's approach to FOSS, was one of GPLv3's most outspoken critics during the revision process, though his initial stance has softened.[61] He remains particularly concerned, however, with GPLv3's anti-DRM section, citing it as a clear example of a choice being made on the "religious" tenets of the FSF rather than the appropriate technical grounds.[62]

Torvalds and others see the DRM provision as a clear encroachment into the hardware manufacturer's prerogatives because the provision seeks

---

56. Free Software Foundation, *supra* note 51, at 1–2.
57. *Id.*
58. Sharma, *supra* note 53.
59. *Id.*
60. *Id.*
61. Stephen Shankland, *Torvalds 'Pretty Pleased' about new GPL 3 Draft*, CNET NEWS.COM, Mar. 28, 2007, http://www.news.com/8301-10784_3-6171300-7.html.
62. Steven J. Vaughan-Nichols, *Is GPL 3 Dead on Arrival?*, LINUX-WATCH, Aug. 3, 2006, http://www.linux-watch.com/news/NS7031382827.html.

to control the hardware through the software's licensing provisions.[63] He sees as legitimate, for instance, a hardware manufacturer's desire to restrict use of hardware to one version of GPL'ed software, since that may be the only version that the hardware manufacturer has tested and validated for use with the hardware.[64] This concern may be particularly relevant when government regulators approve a specific version of FOSS for medical devices, cell phones, or other devices, and would like to use DRM to prohibit untested versions, or where privacy protection is of utmost concern.[65] Others concur, claiming that GPLv3 appears to "extend control to the systems the software is run on," which would be a significant encroachment of a manufacturer and others' rights.[66] Partially because of such objections, Torvalds has indicated that he is unsure whether the Linux kernel will be re-licensed under GPLv3.[67]

Furthermore, companies such as TiVo are sometimes required by third parties to implement DRM in order to legally display certain types of content on their devices. HBO, for instance, requires TiVo to implement DRM as a condition for allowing TiVo to display HBO's copyrighted content.[68] Arguably, the FSF should not be able to thwart protections the US Congress has granted copyright holders; lobbying for corrective legislative action may be the more legitimate route.

Of course, this somewhat cynical view of the FSF's motives may not be entirely fair. While accusations against the FSF and its desire for absolute control may contain some truth, DRM does in fact limit free software's freedoms and thwart technological innovation in a very real way. Hence, the FSF's position may be less about control for control's sake, but rather control as a means to protect freedoms the group considers important and that are important to FOSS's continued success. If one cynical view is that the FSF is attempting to simply control both the hardware and the software through the DRM section, another is that developers have and will increasingly use hardware platforms to evade the GPL's requirements. Without GPLv3's DRM solution, FOSS could increasingly look and feel like proprietary software.

---

63. Stephen Shankland, *Torvalds Critical of New GPL Draft*, CNET NEWS.COM, July 28, 2006, http://www.news.com/2100-7344_3-6099475.html.

64. *Id.*

65. Zuck, *supra* note 12.

66. Stephen Shankland, *New GPL Draft Takes Second Crack at DRM*, CNET NEWS.COM, July 27, 2006, http://www.news.com/2100-7344_3-6099236.html.

67. Shankland, *supra* note 61.

68. Jeremy Reimer, *GPL 3 Disses DRM*, ARS TECHNICA, Jan. 1, 2006, http://arstechnica.com/news.ars/post/20060120-6024.html.

4. Who is Right? Anti-DRM Section's Possible Stymieing Effects

Both sides present some plausible arguments. From the anti-GPLv3 perspective, the Anti-DRM Section could stifle corporate sponsorship of FOSS, particularly that which is licensed under GPLv3. This lack of corporate sponsorship, in turn, could slow the FOSS movement and hinder the realization of many of the FOSS movement's perceived benefits, such as greater technological innovation and collaboration. Thus, the FSF's desire to enable technological innovation through GPLv3's anti-DRM terms may ultimately limit it by stymieing corporate input.

Indeed, much of the existing corporate unease with GPLv2 stems from copyleft and its "viral" nature, and arguably GPLv3's anti-DRM section increases the software's viral proclivity, i.e., GPLv3'ed software not only "infects" other software, but has the potential to infect the hardware upon which it runs and third-party copyrighted content, too. The corporate world's solution may be to shun GPLv3 in particular, and FOSS altogether, if GPLv3's spreading proclivities begin to infect increasingly more FOSS projects. In some cases, the inability to protect their IP rights through effective DRM strategies may be enough for some developers, manufacturers, and third-party copyright holders to go this route. The possible magnitude of this problem requires answers to two preliminary issues.

a. Gauging the Importance of Corporate Sponsorship

First, how imperative is corporate sponsorship for FOSS development? Independent developers, for instance, can and often do create FOSS without corporate sponsorship, and could (and most certainly will) continue to do so under GPLv3. Corporate sponsorship is not always necessary for a FOSS project's vitality. Developers often have non-pecuniary motivations related to peer recognition and prestige for creating FOSS, and these robust communities will certainly not disappear even if corporate sponsorship of FOSS dwindles.[69] Hence, even if the new DRM provisions had the effect of stifling some corporate sponsorship, they certainly would not end the FOSS movement.

Nonetheless, numerous examples show how important corporate sponsorship has been to the growth and development of various FOSS projects; thus, stifling corporate sponsorship is a real threat to FOSS development. IBM, for instance, has contributed vast amounts of resources to developing Linux, as have Novell, Oracle, and other prominent

69. JOSH LERNER & JEAN TIROLE, THE SIMPLE ECONOMICS OF OPEN SOURCE 19–22 (2000), *available at* http://ssrn.com/abstract=224008.

companies.[70] These companies have found strategic reasons to do so, and have thus helped build up and foster the spread of FOSS use.[71]

Other companies, most notably Red Hat, have successfully monetized FOSS directly (Linux distributions for enterprise environments in Red Hat's case), and have contributed immense resources to specific FOSS projects to remain commercially viable. Thus, though it is impossible to say exactly how various FOSS projects would fare without corporate sponsorship, it is nearly beyond doubt that these corporate players have contributed significantly to the projects' development, growth, and expansion, and that continued commercial support is important. Though the various FOSS projects may survive without this sponsorship, they certainly would not be as robust as they are now (or will be in the future) without these corporate resources.

b. Gauging the Likelihood of GPLv3's Adoption

Second, the possible stifling effects of the DRM provisions also depend on whether developers widely adopt GPLv3. Software developers, for instance, could vote with their feet and simply stick with GPLv2 if GPLv3 and its DRM provisions truly are a bad idea. As mentioned, Linus Torvalds has already indicated skepticism about GPLv3's merits.[72] Similarly, many of the corporate sponsors of various FOSS projects can either keep those projects under GPLv2 if they own them or, if they are not the copyright owner, use their leverage to convince the copyright owner to remain with the current FOSS license. Thus, GPLv3 could be "dead on arrival."[73]

The likelihood of GPLv3 quickly becoming obsolete, however, is doubtful. Indeed, anti-DRM attitudes among developers are quite prevalent, and their enthusiasm to "stick it to content owners" may be enough reason for many developers and projects to go with the GPLv3. Aside from this purely retaliatory motive, many developers may sincerely desire to develop software that is free from the restrictions that DRM imposes. The FSF, which is the owner of many important FOSS projects, has or will re-license all of its projects under GPLv3.[74] And like with GPLv2, GPLv3's copyleft provision will also most certainly ensure that it gains increasing footing. Consequently, though it is impossible to pre-

70. *See* Press Release, IBM, IBM Taps Boom in Linux Growth by Expanding Commitment to Partners, Linux and Open Source, Dec. 14, 2005, http://www-03.ibm.com/press/us/en/pressrelease/19048.wss.

71. Jay Lyman, *Consultants Report Corporations Embracing, Saving with Open Source*, LINUX.COM, Jan. 19, 2006, http://www.linux.com/articles/51166.

72. *See supra* text accompanying note 61.

73. Vaughan-Nichols, *supra* note 62.

74. See Free Software Foundation, *supra* note 11.

dict exactly how many future projects will be licensed under GPLv3 (as well as how many existing projects will be re-licensed under GPLv3), it is almost certain that, given these factors, the GPLv3 will enjoy some amount of support.

c. FOSS Thriving (Surviving) in a Post-GPLv3 World

Despite these factors, arguably GPLv3's anti-DRM provisions will not be the death knell of corporate participation for a number of reasons. The anti-DRM provisions will not affect companies using GPLv3'ed FOSS internally, for instance, since the companies do not convey the software and thus are not required to share the source code. Large numbers of companies fall into this category and contribute large amounts of resources to FOSS projects in order to have ongoing access to viable software.[75] Presumably they would continue to do so even if the software were under GPLv3.

Furthermore, companies that use and take advantage of web-based GPLv3'ed software services also do not convey the software, and therefore are under no requirement to share the source code and Installation Information to the FOSS under GPLv3. Again, many companies fall into this category and contribute significant resources to fostering FOSS development for their particular needs.[76]

Lastly, other companies that may convey GPLv3'ed software as part of their business may have no need for encryption keys, and thus these anti-DRM provisions would have no strong deterrent effect upon them either. These three categories of companies, in aggregate, cover many commercial uses of FOSS projects; hence, the DRM provisions may have little if any effect on a large number of FOSS projects.

Nonetheless, the anti-DRM provisions could have negative consequences for companies that do use DRM as an integral component of their software/hardware packages and that would like to take advantage of GPLv3 software. Arguably many such companies will be unwilling to provide the encryption keys due to security, warranty, and intellectual property concerns.[77] Of course, as Moglen notes, these companies are free to waive warranties for altered versions of the software the company

---

75. Companies from Google to Yahoo rely heavily on FOSS internally as well as for their web applications. *See* Vaughan-Nichols, *supra* note 2 (indicating that Google developers make use of FOSS, and that Google supports various FOSS projects).

76. For examples of such companies, see http://www.basecamphq.com (last visited Apr. 2, 2008) and http://www.salesforce.com (last visited Apr. 2, 2008).

77. For instance, while the software may be licensed under GPLv3 and thus legitimately restrict the licensee's intellectual property rights in the software, the anti-DRM provisions may negatively affect the licensee's intellectual property rights in the hardware, which arguably the license should not be able to do.

has not certified and tested, although, until the validity of such disclaimers has been litigated, the company may bear some amount of risk in going this route.[78]

Furthermore, as mentioned above, some third-party copyright holders require companies that provide access to their copyrighted content to implement DRM in their devices and software packages as a condition for legally displaying or using that content. These content owners would likely be unwilling to allow companies such access without DRM's protections, and this unwillingness may lead to fewer legal means for obtaining that content. The DRM provisions may thereby kill beneficial deals between companies.

Despite these concerns, the option of FOSS project owners to pick and choose between GPLv2 and GPLv3 depending on the projects' needs and preferences diminishes the likelihood that GPLv3 will have the stifling effects to the extent some imagine. Indeed, if Torvalds ultimately decides to stick with GPLv2 for the Linux kernel, this would mean that embedded device manufacturers could continue to use Linux with DRM under GPLv2 (as can presumably TiVo). Governments and other entities with legitimate privacy concerns taking advantage of GPLv2'ed FOSS can similarly continue to use DRM in their respective spheres.

While this dual presence of licenses may lead to some amount of license proliferation, "forking" of FOSS projects, and its attendant complications and slowing of FOSS collaboration, it is perhaps a more palatable proliferation given the possible advantages the Anti-DRM Section presents. Indeed, legislative action to amend the contentious Digital Millennium Copyright Act (DMCA) is cumbersome, especially given that entities such as the Recording Industry Association of America (RIAA) and Motion Picture Association of America (MPAA), with their deep pockets, would likely dominate the process. GPLv3 represents one measure that could, with time, push industries away from the draconian measure that DRM often represents towards solutions that more effectively satisfy both providers and consumers. With time, as more FOSS projects under GPLv3 are tried out in the commercial context, those with DRM-like concerns may discover more effective and ideal ways to protect their interests than with DRM; it is an experiment worth trying. The Anti-DRM Section may not be the ultimate solution; but it may lead to one.

In the meantime, companies wishing to use GPLv3'ed FOSS but also desiring to protect themselves via DRM face three different possibilities. First, companies may opt against using GPLv3'ed software and

78. *See supra* text accompanying note 60.

instead be forced to other, perhaps less optimal, software options. This result may lead to greater inefficiencies in the software and related markets. Second, such companies may simply use the software without providing the encryption keys and take the calculated risks that 1) they will not be sued, 2) courts will declare the anti-DRM provisions invalid or unenforceable, or 3) the GPLv3 is unenforceable against them. This approach would almost certainly lead to litigation in some cases, and may inadvertently help settle certain outstanding legal questions surrounding GPLv3, as discussed below. Lastly, companies may simply elect to use GPLv3'ed software, comply with GPLv3's terms, and issue disclaimers for altered versions. As mentioned above, this may ultimately push companies toward new, more palatable solutions to protect themselves as well as consumers, but it could also result in litigation surrounding the validity of their issued disclaimers.

d. Conclusion

GPLv3's anti-DRM provisions will thus likely have mixed effects on FOSS development. Despite the uproar during the GPLv3 revision process, the DRM provisions will likely not have significant effects for a large number of FOSS projects because the relevant companies do not convey the software as part of their commercial activities, and therefore do not need to provide any relevant Installation Information. Other companies that do convey FOSS have no need for encryption keys, so the DRM provisions will hardly affect them.

Furthermore, because some projects, notably including the Linux kernel, can simply elect to remain under the GPLv2's terms, fears of vast corporate withdrawal from FOSS development seem exaggerated. While an additional GPL that coexists with GPLv2 is a less than ideal solution that may cause some increased complexity in FOSS development,[79] GPLv3's potential for ultimately helping address the DRM quagmire seems worth the tradeoff.

Conversely, other companies wishing to use GPLv3'ed FOSS as well as DRM face a more uncertain future. These companies may elect not to use GPLv3'ed software, and this choice may cause some modest amount of slowing in FOSS development as well as complicating license proliferation. If companies elect to use GPLv3'ed software, certain beneficial deals between corporations may be hindered, and legal access to third-party content may diminish. While this may be a negative outcome in the short term, ultimately GPLv3's anti-DRM Section could push certain industries

79. Indeed, Eblen Moglen concedes that the two licenses will likely coexist for some time. Tom Sanders, *GPL Licenses Will Co-Exist, Says Author*, IT WEEK, Aug. 17, 2006, http://www.itweek.co.uk/vnunet/news/2162457/future-holds-dual-gpl-licences.

to better solutions that address both their own and consumers' needs more effectively. Nonetheless, companies electing to use GPLv3'ed FOSS may still face litigation, whether they comply with GPLv3 or not. The next section addresses the possible outcomes of that litigation.

5. Legal Implications of GPLv3's Anti-DRM Section

GPLv3's DRM provisions will likely have the effect of helping resolve some outstanding questions surrounding the GPL and DMCA. The DMCA is a relatively recent enactment, and though it has been litigated to some extent, many outstanding legal issues remain.[80] For instance, US courts have adjudicated on when persons or entities violate the DMCA's prohibition against manufacturing or distributing devices that allow others to circumvent technological measures that control access to and copying of programs.[81] They have also determined when circumventing technological measures that control access to programs in itself violates the DMCA.[82]

Courts have not, however, explicitly addressed whether a copyright owner can be effectively forced to waive the DMCA's protections, or if such an imposed waiver is even valid.[83] This scenario is precisely what is at issue with GPLv3's new anti-DRM provision. Arguably one of DMCA Section 1201's six exceptions covers some of what GPLv3 imposes upon copyright holders of GPLv3'ed software anyways, i.e., the exception for reverse engineering.[84] Even this exception, however, is a stretch. It allows users who have obtained a valid copy of a computer program to circumvent technological restrictions if they need to do so in order to achieve interoperability with other programs.[85] The exception says nothing, however, of forcing copyright holders to provide the encryption keys, or "Installation Information," to users. Furthermore, GPLv3 issues a blanket waiver of DMCA protections; it does not limit its scope to situations in which the user is attempting to circumvent the DRM in order to achieve interoperability. Inevitably the issue would need to be litigated.

---

80. *See generally* Amy P. Bunk, Annotation, *Validity, Construction, and Application of Digital Millennium Copyright Act*, 179 A.L.R. FED. 319 (2002).

81. *See* Universal City Studios, Inc. v. Reimerdes, 82 F. Supp. 2d 211 (S.D.N.Y. 2000).

82. *See* 321 Studios v. Metro Goldwyn Mayer Studios, Inc., 307 F. Supp. 2d 1085 (N.D. Cal. 2004).

83. *See* Bunk, *supra* note 80.

84. *See id.* § 12.7.

85. *Id.*

Related to this, the GPL has rarely been directly litigated,[86] at least in the United States,[87] and thus its legal nature remains uncertain in many respects. Some, for instance, have questioned whether the GPL is even enforceable;[88] whether it is a binding contract or simply an effective means for a copyright owner to estopp herself from asserting her copyright;[89] whether it violates the US Constitution, federal copyright law, the DMCA, export control laws, and antitrust laws;[90] whether it fails under the Uniform Commercial Code; and what the scope of derivative works under the GPL is.[91] These represent a sampling of some of the main legal issues commentators have debated regarding the GPL. But because the GPL has never been directly litigated in the US,[92] these debates have remained largely theoretical in nature.

The answers to these questions are important. For instance, if the GPL is simply a noncontractual release of rights rather than a contract, some Supreme Court and other precedents firmly reject the enforceability of such non-contractual releases in certain contexts.[93] Furthermore, whether the GPL is a contract or not also affects the remedies a litigant might have. If it is a contract, the litigant could resort to state law,

86. The Software Freedom Law Center has recently pursued copyright infringement litigation in U.S. courts based on violations of the GPL, but in each case the parties settled these suits before any court could adjudicate on the GPL's provisions. *See* Software Freedom Law Center, BusyBox Developers Agree to End GPL Lawsuit Against Verizon, Mar. 17, 2008, http://www.softwarefreedom.org/news/2008/mar/17/busybox-verizon/. Other related stories are within the SFLC site surrounding the series of suits initiated and ultimately settled.

87. In Germany and Austria, parties have directly litigated the validity of the GPL and came away with rulings that the GPL is enforceable. *See, e.g.*, Landgericht München I [LG] [Munich District Court I], May 19, 2004, No. 21 O 6123/04, *translated in* http://www.jbb.de/judgment_dc_munich_gpl.pdf (upholding a preliminary injunction enforcing the GPL). In one U.S. case, both parties accepted the validity of the GPL as a contract, although the issue was not directly litigated. Progress Software Corp. v. MySQL AB, 195 F. Supp. 2d 328 (D. Mass. 2002). *See also* First Amended Complaint of Plaintiff at 8, MontaVista Software, Inc. v. Lineo, Inc., No. 2-02 CV-00309J (D. Utah Jul. 23, 2002) (alleging that Defendant accepted GPL's validity).

88. SCO's Amended Answer to IBM's Amended Counterclaim at 16, The SCO Group, Inc. v. IBM, No. 03-CV-0294 (D. Utah Mar. 6, 2003).

89. Jason B. Wacha, *Taking the Case: Is the GPL Enforceable?*, 21 SANTA CLARA COMPUTER & HIGH TECH. L.J. 451, 455–56 (2005).

90. *Id.* at 455–75.

91. Under the GPLv3, modifications to the original software program are no longer labeled "derivative works." The authors of GPLv3 altered this terminology to reflect the license's more international focus. "Derivative works" is a term of art within US copyright law. *See* Douglas Hass, *A Gentlemen's Agreement: Assessing the GNU General Public License and Its Adaptation to Linux*, 6 CHI.-KENT J. INTELL. PROP. 213 (2007), *available at* http://ssrn.com/abstract=951842.

92. *See supra* note 86.

93. *See generally* Wacha, *supra* note 89.

whereas if the GPL is not a contract, the litigant would have to rely solely on federal copyright law.[94]

The GPLv3's anti-DRM provisions could also help resolve certain outstanding legal issues. Specifically, the explicit renunciation of the DMCA and other similar acts will undoubtedly trigger DMCA-related litigation and thus greater exploration of the DMCA's provisions. More generally, in settling such disputes, courts may also be forced to explore the nature of the GPL as a legal tool. Many debates about the GPL linger, especially in the US, so the anti-DRM provisions will likely have the consequence of forcing courts to address them head on.[95]

B. *Software Patents and GPLv3's Response*

1. Introduction

Software patents have been controversial in the US since the US Patent and Trademark Office (USPTO) began granting them and federal courts began legitimizing them.[96] Initially, US courts struck down the idea of software being patentable because software is expressed as algorithms and mathematical formulas, and such abstract ideas typically fall outside the realm of patentable subject matter.[97] Courts have since held, however, that software is sometimes patentable because algorithms taken together can constitute an innovative process for accomplishing a desired end, thus outlining which "ideas" and processes are patentable.[98] Other regions of the world continue to grapple with whether to include software within the scope of patent law.[99]

This issue is of keen interest to the FOSS movement. Conceivably, software patent holders could increasingly thwart the liberal licensing

---

94. *Id.* at 462–63.

95. One recent author hardly sees this as a benefit, preferring that the open source community resolve these issues. *See* Hass, *supra* note 91, at 278–79. However, these questions are ultimately legal questions that courts must interpret; no amount of legal drafting would be able to fully address them. Indeed, the FSF explicitly claims in the GPL that the license is not a contract, and even with this express clause the question has remained open. Free Software Foundation, *The GPL tested in US courts—Wallace Vs FSF*, http://www.fsf.org/news/wallace-vs-fsf (last visited Apr. 2, 2008) (quoting Peter Brown, the executive Director of the FSF as saying "[t]he GPL is a software license, it is not a contract.").

96. *See* Diamond v. Diehr, 450 U.S. 175 (1981) (holding for the first time that an otherwise patentable invention does not become unpatentable simply because it utilizes software).

97. *See* Grant C. Yang, *The Continuing Debate of Software Patents and the Open Source Movement*, 13 TEX. INTELL. PROP. L.J. 171, 177–79 (2005) (discussing case law in this area).

98. *Id.* at 178–79 (discussing subsequent cases); *see, e.g.*, In re Alappat, 33 F.3d 1526, 1545 (Fed. Cir. 1994).

99. See, for example, No Software Patents!, http://www.nosoftwarepatents.com (last visited Feb. 19, 2008), a site organized to oppose the grant of software patents in the European Union (EU).

terms of FOSS licenses, which find their basis in copyright law, by asserting their exclusive patent rights against FOSS developers and distributors. One group that sells FOSS insurance alleges that Linux may violate 283 patents.[100] Furthermore, FOSS supporters have worried at various times about rumors that Microsoft plans to initiate large-scale patent infringement suits against FOSS developers and distributors in an attempt to cripple the FOSS movement.[101] Microsoft's recent deal with Novell,[102] described in greater detail below, may lend some credibility to this fear.

Until now, however, the possible infringement suit nightmare has failed to materialize. Some companies have taken steps to ensure that it never does. IBM, for instance, has contributed 500 of its patents to a patent "commons" to ensure that FOSS developers can use those patented ideas in their work,[103] and other companies have taken similar steps.[104] The Open Source Development Labs has also created the patents commons project,[105] while IBM, Novell, Red Hat, Phillips, and Sony have created the Open Invention Network in an effort to enable FOSS development.[106] Nonetheless, many of these same companies continue to acquire software patents at extremely high rates,[107] and while some may be committed to allowing FOSS companies and developers to use their patented technologies in FOSS development, other owners of enormous patent portfolios, such as Microsoft, may be less hesitant to press suit.

Both camps in the FOSS movement believe, to varying degrees, that software patents often stifle rather than encourage innovation, and that copyright protection should be sufficient in the software industry, as described more fully below. While software patents have yet to have the

100. Stephen Shankland, *Group: Linux Potentially Infringes 283 Patents*, CNET NEWS.COM, Aug. 1, 2004, http://www.news.com/2100-7344_3-5291403.html.

101. *See* Stephen Shankland, *HP Memo: Microsoft Planned Open-Source Patent Fight*, CNET NEWS.COM, July 20, 2004, http://www.news.com/2100-7344_3-5276901.html.

102. *See* Press Release, Novell, Microsoft and Novell Announce Broad Collaboration on Windows and Linux Interoperability and Support, Nov. 2, 2006, http://www.novell.com/news/press/item.jsp?id=1196.

103. Stephen Shankland, *IBM Offers 500 Patents for Open-Source Use*, CNET NEWS.COM, Jan. 10, 2005, http://www.news.com/2100-7344_3-5524680.html.

104. Stephen Shankland, *Open-Source Honchos Trash Software Patents*, CNET NEWS.COM, Feb. 1, 2005, http://www.news.com/2100-7344_3-5559647.html (noting IBM's contribution, as well as Sun's intention to free up 1,600 of its patents for FOSS development).

105. Ingrid Marson, *A Patent Commons Project for Open Source*, CNET NEWS.COM, Aug. 10, 2005, http://www.news.com/2100-7344_3-5826752.html.

106. Press Release, Open Invention Network, Open Invention Network Formed to Promote Linux and Spur Innovation Globally Through Access to Key Patents, Nov. 10, 2005, http://openinventionnetwork.com/press_release11_05.php.

107. *See, e.g.*, Press Release, IFI Patent Intelligence, IFI Issues List of 2005's Top Patent Companies, Jan. 10, 2006, http://www.ificlaims.com/press_release012006a.html (showing that IBM and HP continue to be within the top three in terms of acquiring patents).

stifling effect on FOSS development that some have feared, their increasing prevalence, combined with changed corporate attitudes, could yield less favorable outcomes in the future.

Rather than rely on continued corporate goodwill, the FSF has taken steps of its own in GPLv3 to address this growing software patents "problem." The license thus includes a new section titled "Patents," as well as several other provisions that affect software patents. These new provisions, like the Anti-DRM Section, have significant implications for developers and users of software licensed under GPLv3. While the provisions will likely contribute to some amount of balkanization in the FOSS world, the steps the patent provisions take towards addressing the growing software patents problem seem worth this risk.

2. GPLv3's Patent Provisions

GPLv2 purportedly includes an implicit software patent license,[108] as well as the "Liberty or Death" clause that essentially disallows distribution of GPL'ed software if the distributor cannot do so without violating the GPL.[109] But GPLv3 goes a step further by making its intentions regarding software patents more explicit and thorough.

The first two paragraphs of the Patent Section provide two definitions for "contributor" and the contributor's "essential patent claims" in order to set up the third paragraph's grant of a patent license from each contributor to each downstream user.[110] "Contributor" is defined as a "copyright holder who authorizes use under this License of the Program or a work on which the Program is based."[111] The work thus licensed is defined as the "contributor's version."[112] "Essential patent claims" are defined to include any patent claims the contributor may have now or later that could be infringed through validly exercising rights under GPLv3, with one exclusion: claims infringed only as a consequence "of further modification" of the contributor's licensed work are not included in the definition.[113]

Under paragraph 3, anyone who authorizes use of a work under GPLv3 (i.e., any contributor and their contributor version) grants all eventual recipients of the work a patent license (which incorporates their

108. FREE SOFTWARE FOUNDATION EUROPE, PATENTS AND GPLV3 8 (2006), *available at* http://www.fsfeurope.org/projects/gplv3/patents-and-gplv3.en.pdf.

109. *Id.* at 11. The FSF has edited this clause in GPLv3, but its basic meaning remains unchanged. It is found in section 12, titled "No Surrender of Others' Freedom." GPLv3, *supra* note 10, § 12.

110. GPLv3, *supra* note 10, § 11.

111. *Id.*

112. *Id.*

113. *Id.*

essential patent claims) to "make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of their licensed work." Consequently, the contributor grants this patent license with regards only to its contributor version (i.e., software that the contributor modifies and distributes), not to software it distributes without modification.[114] The patent license, however, applies to the entire distribution if any part of it was modified, not just the contributor's contribution.[115]

However, even those who distribute GPLv3'ed software without modification can be subject to GPLv3's discipline for bringing a patent suit: Sections 8 and 10 team up to terminate an entity's permission to use the work if the entity asserts a patent suit claiming that use of the work, or any upstream GPLv3'ed work upon which it is based, infringes their patent portfolio. If the distributor stops distributing and using the work, however, she can escape these sections' terminating effects.[116]

a. The Microsoft Effect

The Patent Section's most conspicuous language aims squarely at Microsoft. During GPLv3's drafting process, the software giant and Novell, a distributor of SUSE Linux, entered an agreement on November 2, 2006 that, among other things, swapped Microsoft certificates containing promises to Novell customers not to bring patent infringement suits against them in exchange for money from Novell.[117] The agreement called for other forms of collaboration between the two companies as well, but this aspect of the agreement in particular drew the immediate censure of the FSF and others in the FOSS community.[118]

Once the two companies entered the agreement, the FSF modified GPLv3's patent provisions in an attempt to make the deal harmless and similar agreements in the future impossible. After several drafts, GPLv3's terms vis-à-vis the Microsoft-Novell deal finally emerged. Paragraph 4 of Section 11 provides a definition of "patent license" to specifically cover the type of deal Microsoft and Novell struck,[119] and is thus not "meant to be confined to agreements formally identified or classified as patent licenses."[120] Paragraph 6 then attacks the deal head on, indicating that when a company "conveys, or propagates by procuring

114. Stephen Shankland, *New GPL Draft Has Olive Branches, Thorns*, CNET NEWS.COM, Mar. 29, 2007, http://www.news.com/2100-7344_3-6171539.html.

115. Free Software Foundation, *supra* note 48, at 17–18.

116. *Id.*

117. Novell, *supra* note 102.

118. Bruce Byfield, *Novell-Microsoft Agreement Delays GPLv3*, LINUX.COM, Mar. 15, 2007, http://www.linux.com/feature/60872.

119. GPLv3, *supra* note 10, § 11.

120. Free Software Foundation, *supra* note 48, at 21.

conveyance" of a GPLv3'ed work, and thereby grants a patent license to another company (e.g., Microsoft's license to Novell and some of its customers), it automatically grants the same license to all other parties which receive the covered work from that other party (i.e., recipients of Novell distributions, even if they do not have Microsoft coupons).[121]

If effective, GPLv3 may thus render the Microsoft-Novell deal harmless because all recipients of Novell distributions would have the same protections, whether paying Microsoft or not. Of course, this result depends on whether Novell distributes GPLv3-covered works with its Linux distributions, which it has indicated it will do.[122] If it does so, the FSF claims that Microsoft would be propagating by "procuring conveyance" of a covered work, and would thus be subject to GPLv3's terms.[123] Microsoft, of course, disputes that it is party to GPLv3.[124]

Paragraph 7 attacks similar deals in the future. It defines patent licenses as "discriminatory" essentially when they mirror the Microsoft-Novell arrangement. "A patent license is 'discriminatory' if it does not include within the scope of its coverage, prohibits the exercise of, or is conditioned on the non-exercise of one or more of the rights that are specifically granted under this License."[125] Paragraph 7 then indicates that a party may not convey covered works if the party enters an arrangement with a third party under which the party gives the third party money in exchange for a discriminatory patent license granted to recipients of covered works from the party.[126] These provisions would prohibit Novell from distributing GPLv3'ed works. Paragraph 7, however, only applies to agreements entered after March 28, 2007, thus excluding the recent Microsoft-Novell deal.[127] Previous drafts had applied paragraph 7's contents to all deals; however, given that the FSF believes that paragraph 6 binds Microsoft, the FSF likely feels that allowing Novell to continue to convey Linux distributions is more tactically sound.[128]

The Patent Section's paragraph 5 also attacks exclusive deals between distributors and third parties. It requires any conveyor of a GPLv3'ed work who knowingly relies on a patent license, and where the "Corresponding Source of the work is not available for anyone to copy,

---

121. GPLv3, *supra* note 10, § 11.

122. Press Release, Novell, Novell Statement on Microsoft GPLv3 Position, July 6, 2007, http://www.novell.com/prblogs/?p=365.

123. FREE SOFTWARE FOUNDATION, GPLv3 FINAL DISCUSSION DRAFT RATIONALE 10 (2007), *available at* http://gplv3.fsf.org/rationale/gpl3-dd4-rationale.pdf.

124. Stephen Shankland, *Microsoft Tries Evading New GPL Grasp*, CNET NEWS.COM, July 6, 2007, http://www.news.com/2100-7344_3-6195278.html.

125. GPLv3, *supra* note 10, § 11.

126. *Id.*

127. *Id.*

128. FREE SOFTWARE FOUNDATION, *supra* note 123.

free of charge and under the terms of [GPLv3], through a publicly available network server or other readily accessible means," to either "1) cause the Corresponding Source to be so available, or 2) arrange to deprive yourself of the benefit of the patent license for this particular work, or 3) arrange, in a manner consistent with the requirements of [GPLv3], to extend the patent license to downstream users."[129] The paragraph concludes by precisely defining when an entity "knowingly relies" upon a patent license.[130]

The Patent Section concludes by indicating that the section's provisions do not have the effect of limiting or terminating any other patent infringement defenses a user may have, such as implied license defenses.[131] Hence, though the terms of GPLv3 should be enough, the license expressly reserves the right of users to assert other defenses otherwise available to the user.

3. FSF's Position: A Step in the Right Direction

Throughout the public debates surrounding these provisions and software patents in general, the FSF was unbending.[132] According to an affiliated group, because software is expressed as algorithms and mathematical formulas, it falls outside the scope of patentable subject matter in the first place.[133] Furthermore, software patents kill innovation because patent holders can prevent potential innovators from taking a "bad" product and improving it.[134] Patent law grants patent holders the ability to prohibit subsequent developers from "practicing the teaching," independent reinvention, or any use of the idea, no matter how the developer discovered it.[135] This system of closed standards is antithetical to the FSF's vision for free software, which focuses on open standards and the group's four freedoms.[136]

What makes this problem even more egregious is the US government's haphazard mode of issuing software patents. Understaffed and underqualified, the USPTO often issues software patents recklessly and

129. GPLv3, *supra* note 10, § 11.

130. *Id.*

131. *Id.*

132. Martin LaMonica, *Stallman Unbending on Software Patents*, CNET NEWS.COM, Jan. 17, 2006, http://www.news.com/2100-7344_3-6027764.html (quoting Richard Stallman as indicating that, even early on in the process, the FSF would likely not change its position on software patents). The FSF did make some concessions later in the drafting process. *See* Free Software Foundation, *supra* note 115, at 17–18.

133. Jim Garrison, *SFLC Argues Against Software Patents in the Supreme Court*, LWN.NET, Dec. 15, 2006, http://lwn.net/Articles/214421/.

134. Eblen Moglen, *Free Software Matters: The Patent Problem*, Oct. 9, 2000, http://emoglen.law.columbia.edu/publications/lu-05.html.

135. *Id.*

136. *Id.*

too broadly.[137] Consequently, software ideas in circulation and in use for some time have suddenly become subject to patent suits.[138]

Some of these complaints about patent law's overreach, of course, are not unique to the software patent realm. But in the FOSS context, patent law may be an even poorer fit for innovation because many FOSS developers are not in the financial position to pay for patent licenses,[139] which the FSF describes as a "legal fiction."[140] Independent developers contribute much of the innovation in the FOSS world, and if they were subject to constant patent infringement suits, presumably such suits could significantly curtail their innovative efforts.

Even if they could pay for the patent licenses, the larger problem for FOSS users remains uncertainty. According to Moglen, in the software context, discovering how many software patents one is infringing is nearly impossible.[141] Unlike a physical invention such as a "spinning wheel," where an inventor need only check a limited number of patents before proceeding, software inventions require the inventor to check considerably more patents, and even after doing so she still likely faces uncertainty as to whether she is violating a software patent.[142]

Hence, Moglen and the FSF describe GPLv3's patent provisions as a "starting point" for how the free software movement should address the problem of software patents.[143] As written, GPLv3 helps prevent software patent holders from encroaching upon the freedoms distributors and developers should enjoy with free software. In the end, however, the group would like to see the total abolition of software patents and recently submitted an amicus brief to the Supreme Court arguing for as much.[144]

4. OSI: Same Side of the Coin?

The OSI has not adopted an official position on software patents or GPLv3's response to them, and persons typically associated with the OSI's FOSS vision have been varied in their responses to both. Nonethe-

---

137. *Id.*

138. *Id.*

139. *Id.*

140. Free Software Foundation, *Opinion on Covenant Not to Assert Patent Claims* 1, http://gplv3.fsf.org/covenant-not-to-assert-dd2.pdf (last visited Feb. 19, 2008).

141. Ingrid Marson, *Free Software's White Knight*, ZDNET NEWS, Mar. 20, 2006, http://news.zdnet.com/2100-3513_22-6051589.html.

142. *Id.*

143. Mark Baard, *New GPL Is Free at Last*, WIRED NEWS, Jan. 16, 2006, http://www.wired.com/science/discoveries/news/2006/01/70028.

144. Brief of the Software Freedom Law Center as Amicus Curiae in Support of Petitioner, Microsoft Corp. v. AT&T Corp., 127 S. Ct. 1746 (2007) (No. 05-1056), *available at* http://www.softwarefreedom.org/resources/2006/msvatt.pdf. The group that submitted the brief is actually the Software Freedom Law Center, which is closely associated with FSF and run by Eben Moglen, formerly FSF's leading lawyer.

less, while their responses have been less absolute than those of the FSF, former and current leaders of the OSI philosophy point out many of the same problems with the software patent system that their FSF brethren do. Furthermore, OSI-approved FOSS licenses contain provisions somewhat similar to those of GPLv3 (at least earlier drafts), suggesting some amount of uniformity in how the groups believe software patents should be addressed.

For instance, Bruce Perens, creator of the OSD and co-founder of the OSI,[145] believes that software patents are problematic for many of the same reasons the FSF does. Due to lack of expertise, the USPTO often issues software patents using extremely low standards, and this results in patent holders with overly broad claims who can conceivably block subsequent developers with better ideas from using these patented ideas.[146]

Furthermore, software stacks, crucial in terms of interoperability, are based upon standards that become adopted over time, and software patents in some cases threaten to cut off access to such stacks.[147] If someone owns a patent on technology that has become a standard in a software stack, that patent holder can extract huge rents through infringement suits from anyone who uses the software stack.[148] While large companies with extensive patent portfolios can defensively preempt such suits, small businesses and independent FOSS developers are left exposed to them.[149] And because many FOSS developers and distributors cannot pass on the royalty fees to customers (because they often work on a non-profit basis), they are essentially left without access to the essential software stacks, which are vital for interoperability purposes.[150]

Rather than openly advocate the abolition of software patents, however, Perens instead proposes legislative corrective action that recognizes the need for interoperability in the online world as well as models that standards-setting organizations should follow.[151] Nonetheless, his approach recognizes many of the same problems that the FSF does, and his recommendations align with many of the objectives the FSF endorses.

---

145. In recent years, however, Perens has seemingly fallen out of favor with the OSI. *See, e.g.*, David Berlind, *OSI Committee Rejects Former Founder Bruce Peren's Membership Application*, ZDNET NEWS, Aug. 22, 2005, http://blogs.zdnet.com/BTL/?p=1763.

146. *See* Bruce Perens, The Problem of Software Patents in Standards, http://www.perens.com/Articles/PatentFarming.html (Aug. 22, 2005).

147. *Id.*

148. *Id.*

149. *Id.*

150. *Id.*

151. *Id.*

Lawrence Rosen, former counsel to the OSI, similarly believes that software patents are problematic[152] and has taken measures to combat their possibly deleterious effects. For instance, he and the OSI have promoted new open source licenses that include patent retaliation provisions similar to those found in earlier drafts of GPLv3.[153] These provisions, found most notably in the Open Software License and the Academic Free License (both of which Rosen wrote), provide users and developers of FOSS with a similar defense against patent suits.[154]

Eric Raymond, another prominent figure in the OSI community, also cites many of the same problems his colleagues do, including standards for patentability that are too low and underqualified patent examiners with the wrong mix of incentives.[155] He also believes that any software created as open source should be considered prior art in any effective software patent system.[156]

Nonetheless, not all members of the OSI-leaning community appear ready to call for a complete prohibition on software patents, as leaders of the FSF do. As Raymond further states, "I think I can imagine a software patent system that was [sic] fair and equitable . . . . [T]here are some software patents which I think are certainly legitimate . . . ."[157] While he views software patents as "annoying," it is a problem that will take care of itself if FOSS advocates do their job effectively, i.e., demonstrate to the business world the advantages of using FOSS over closed systems.[158]

This less absolute stance of Raymond and others[159] seems to be part of the same pragmatism that the OSI has officially advocated since 1998. As noted earlier, commercial enterprises remain committed to prosecuting and obtaining software patents and believe doing so is crucial to their commercial well-being, at least so long as other competitors continue to acquire their own patent portfolios.[160] Hewlett-Packard, for one, sug-

152. Robert McMillan, *Patent War Pending? Lawrence Rosen on How Open Source Can Protect Itself from Software Patents*, LINUXPLANET, Dec. 9, 2002, http://linuxplanet.com/linuxplanet/interviews/4575/1/.

153. *Id.*

154. *Id.*

155. Maya Tamiya, *Eric Raymond Interview*, LWN.NET, Dec. 10, 2000, http://lwn.net/2000/features/ESR/.

156. *Id.*

157. *Id.*

158. *Id.*

159. A group of ten of the more prominent Linux kernel developers published a position paper in September 2006 condemning GPLv3 generally (then in its second draft) and in particular the patent provisions, citing them as a possible invasion of a company's prerogatives and representing a possible chilling effect on the corporate input needed in FOSS development. JAMES E.J. BOTTOMLEY ET AL., THE DANGERS AND PROBLEMS WITH GPLV3 (2006), *available at* http://lwn.net/images/pdf/kernel_gplv3_position.pdf.

160. Stephen Shankland, *HP Balks at Patent Provision in GPL Update*, CNET NEWS.COM, Aug. 2, 2006, http://www.news.com/2100-7344_3-6101381.html.

gested alternative language earlier in the GPLv3 revision process out of fear that the earlier form of the patent section could unwittingly invalidate much of its patent portfolio.[161] Others, including key Linux developers, have expressed similar fears.[162]

Subsequently, the FSF altered GPLv3's patent provisions so that distributors without modification escape Section 11's grasp (providing an automatic patent license to all downstream users for whatever patents read onto the distribution). However, as discussed below, they still remain subject to Sections 8 and 10's effects if they bring a patent infringement suit against someone for exercising their rights under GPLv3; thereby, their permission to use and distribute the work is terminated.

Despite these changes, however, commercial actors' fears may still have some substance. The next section explores what the patent provisions may ultimately mean for FOSS development.

5. Patent Provisions' Possible Effects

Many of the patent provisions' possible effects deal with similar issues to those that the Anti-DRM Section raised. For instance, if a company contributes to and then conveys a GPLv3'ed software program containing certain technologies for which it owns software patents, the company could not press a patent infringement suit against a different party for using the GPLv3'ed software program, even if the company was not the entity that inserted the technologies into the software program (and even if a legitimate patent infringement case could be made).[163] In the end, some software patents probably do act as important incentives to companies and in fact do spur rather than thwart innovation.[164] Merely conveying FOSS could have disastrous results for a company in terms of protecting its patent portfolio. The safest option for many companies may be to avoid GPLv3 altogether.

---

161. *Id.*

162. *See* BOTTOMLEY ET AL., *supra* note 159, at 4.

163. *See* Shankland, *supra* note 160.

164. *See* FEDERAL TRADE COMMISSION, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY ch. 3, at 44–52 (Oct. 2003), *available at* www.ftc.gov/os/2003/10/innovationrpt.pdf (noting that, although many indicators suggest that software patents in current form stifle rather than encourage innovation, some patents may actually have positive effects). *But see* Dan L. Burk & Mark A. Lemley, *Designing Optimal Software Patents*, *in* INTELLECTUAL PROPERTY RIGHTS IN FRONTIER INDUSTRIES: SOFTWARE AND BIOTECHNOLOGY (Robert Hahn, ed. 2005), *available at* http://ssrn.com/abstract=692044 (accepting "as given the proposition that patent law has a positive role to play in fostering software innovation," but dedicating the chapter to showing why the current system is less than ideal in promoting that innovation).

Consequently, a company's fear of involuntarily invalidating significant parts of its patent portfolio could cause large segments of the corporate world to shun GPLv3, and thereby lead to parallel universes of GPLv2 and GPLv3. While GPLv3's dream may be to reduce overall license proliferation by making GPLv3 so attractive that FOSS developers abandon other licenses in favor of it, it may instead increase license proliferation and further splinter the FOSS movement to an extent that significantly harms FOSS development.

This is a major concern of a group of prominent Linux kernel developers, who refer to this phenomenon as the FOSS world's "balkanization."[165] They prefer the well-developed GPLv2 "ecosystem" where Linux distributors can assemble an entire distribution out of GPLv2'ed components.[166] With GPLv3's patent provisions, corporations unwilling to risk their patent portfolios may cut off their input and contributions, and distributions will be forced to "fork" software packages in order to maintain consistent and acceptable licensing schemes.[167] These developers fear that such a development could seriously hamper FOSS development.[168]

Nonetheless, while some amount of license proliferation and balkanization may inevitably occur, for many of the same reasons discussed above, it is unlikely that GPLv3 will have the deleterious effects to the extent some fear. Indeed, despite some of the corporate world's reservations, major players in that world had significant input into the license, and thus already have some amount of buy-in. Many important projects have already converted over to GPLv3.[169] As other major players become familiar with the license—indeed, are forced to do so as the license gains increasing currency—acceptance of its use in the commercial context will likely increase, especially given the strategic advantages FOSS projects provide many commercial actors.

Furthermore, for those projects that cannot stomach GPLv3's patent terms, GPLv2's less explicit patent terms may remain an option in some cases. While some slowing of FOSS development may initially occur, ultimately the movement will likely overcome these speed bumps as familiarity with and acceptance of the newer license increases.

---

165. *See* BOTTOMLEY ET AL., *supra* note 159, at 5.

166. *Id.*

167. *Id.*

168. *Id.*

169. *See* Palamida, GPLv3 and LGPLv3 Information Site, http://gpl3.palamida.com:8080/index.jsp (last visited Feb. 20, 2008) (indicating that as of February 20, 2008, 1744 projects had switched over to GPLv3, including important ones such as Samba).

Furthermore, though these provisions may complicate FOSS development in less than ideal ways, arguably GPLv3's patent provisions help alter the balance of power among software companies in a good way. For instance, owners of large software patent portfolios often use their patents to cross-license with other companies with large portfolios or to use them defensively, i.e., to deter suit against themselves through the threat of a countersuit.[170] While companies with large, significant patent portfolios are relatively well-off in this system, smaller entities are not as favorably positioned. Indeed, large owners of patents can use their patent leverage to force smaller companies into deals that favor the larger entities.[171]

In addition, the current software patent system arguably encourages companies to incur significant—and, in some sense, wasteful—costs in prosecuting software patents, when those resources could be more usefully employed, from a societal perspective, in software research and development.[172] From a policy perspective, then, the GPLv3's patent provisions could push companies to greater innovation rather than wasteful defensive patent buildup.

In conclusion, the more important effect of these provisions could be to shield independent, smaller developers from possible suits and unequal bargaining positions. They may help even the playing field for these smaller entities effectively deal with the leverage of larger companies, at least in terms of software patents. The provisions also arguably encourage more FOSS development, and could help eliminate the wasted costs associated with companies engaging in software patent games. While waiting upon legislative and judicial action to more effectively address the software patent problem may be the more "democratic" thing to do, GPLv3's patent terms represent one potentially useful measure in dealing with the problem and in helping shape any subsequent legislative debates.

Nonetheless, the provisions could slow FOSS collaboration in some cases (especially if the Linux kernel truly does remain under GPLv2) through forking of projects, and diminish some amount of

170. *See generally* James Bessen, Patent Thickets: Strategic Patenting of Complex Technologies (unpublished manuscript), *available at* http://www.researchoninnovation.org/thicket.pdf (describing patent thickets and companies strategic rather than innovation-based incentives for acquiring software patents). *See also* FEDERAL TRADE COMMISSION, *supra* note 164, ch. 2, at 33–34.

171. Bessen, *supra* note 170, at 4.

172. James Bessen & Robert M. Hunt, *An Empirical Look at Software Patents* (Research on Innovation, Working Paper No. 03-17/R, 2004), *available at* http://www.researchoninnovation.org/swpat.pdf (empirically demonstrating that software patent acquisition is associated with lower levels of R&D investments, presumably because companies are more concerned with the strategic use of patents than the innovation incentives).

corporate involvement as companies seek to avoid invalidating large swaths of their patent portfolios. As more and more FOSS projects fall within GPLv3's terms, however, companies will likely learn to deal with the license's terms rather than abandon the strategic advantages of FOSS altogether. The new license certainly changes and complicates the legal background in which these commercial actors will operate, but from a policy perspective, it is an arguably positive change.

6. Legal Implications of GPLv3's Patent Provisions

Like the Anti-DRM Section, the patent provisions could also help settle the questions of whether the GPL is enforceable, whether it is a contract or merely a non-contractual release of rights, and the other related questions discussed previously above. In the US, until this point, most compliance with the GPL's terms has been voluntary and through the assistance and encouragement of FOSS watchdog groups.[173] But if Microsoft, for instance, ultimately does elect to bring large-scale patent infringement suits against the FOSS world, such suits would inevitably involve the questions of whether the GPL is enforceable as a contract or otherwise, and specifically its patent sections. Indeed, whether a legal tool such as GPLv3 can and should be allowed to effectively preempt federal patent law is uncertain.

Of course, GPLv3's patent provisions may be less than ideal precisely because they may encourage suits that otherwise would not occur. Until now, rumors about Microsoft's threats have remained rumors, and the company has apparently lacked enough strategic reasons to press suits in the past. With GPLv3 taking the offensive and effectively invalidating large swaths of software patents, possibly including some of Microsoft's, should the company convey GPLv3'ed software (which the FSF and GPLv3 claim Microsoft has done through its recent deal with Novell), it and other companies may now have the right mix of incentives to press such suits.

Furthermore, Microsoft may have additional incentives to sue given its recent deal with Novell.[174] Microsoft argues that the patent claims Novell is shielding its clients from pertain to Linux.[175] If GPLv3's patent provisions are valid, they would essentially turn

173. *See, e.g.*, Bruce Byfield, *10 Common Misunderstandings About the GPL*, IT MANAGER'S J., Aug. 28, 2006, http://www.thewebcreator.net/2007/04/19/10-common-misunderstandings-about-the-gpl/ (last visited Mar. 4, 2008) (noting that the FSF prefers helping violators of the GPL come into compliance rather than resorting to the courts).

174. Steven J. Vaughan-Nichols, *Novell-Microsoft Patent Deal Secrets, May 28, 2007, Linux-Watch.com*, http://www.linux-watch.com/news/NS8399443208.html (last visited Mar. 18, 2008).

175. *Id.*

Microsoft's deal with Novell "on its head" because everyone would have the same guarantee of non-suit without having to pay Microsoft off.[176] If Microsoft hopes to sign and maintain similar deals with other Linux distributors and FOSS developers,[177] it will first want to ensure that its patents are enforceable, and that GPLv3 terms do not apply. For its part, Microsoft claims it is not a contracting party to GPLv3; the FSF obviously believes otherwise.[178]

Thus, GPLv3's patent provisions will almost certainly push festering legal disputes, which may have otherwise remained dormant, out into the open. While such suits may initially slow and complicate FOSS development, ultimately they should help settle outstanding legal questions in the FOSS movement's favor, both in terms of the license's patent provisions as well as the legal nature of the GPL generally.

IV. CONCLUSION

GPLv3 was controversial in its drafting and will likely remain so in its adoption. Two of its more controversial components, the Anti-DRM Section and the patent provisions, have inspired some of the more heated debates, both within the FOSS world and without. Unanimity on these issues is unlikely to develop anytime soon.

But though GPLv3 may lead to some amount of balkanization and license proliferation in the FOSS world, it will also likely ultimately lead to the community's strengthening. In recent years, DRM has gained increasing prevalence and, in many cases, thwarts the goals of both free software and open source software alike. Furthermore, companies have increasingly acquired software patents as well, thereby incurring significant costs in patent prosecution to effectively participate in a patents game that often has very little to do with software innovation. Some sort of bolstering of FOSS's freedoms was needed in the face of the threats these developments pose, and reliance on corporate goodwill was unlikely to be sufficient.

GPLv3 strikes the right balance. In terms of DRM, it keeps FOSS open for further innovation with few potential costs to those wishing to implement DRM. Though companies (as well as government regulators) may want to limit the use of their product to versions they have tested and certified, this concern is easily addressed through a waiver

176. *Id.*

177. Peter Galli, *Microsoft May Indemnify Some of Red Hat Linux Users*, EWEEK.COM, Nov. 15, 2006, http://www.eweek.com/c/a/Linux-and-Open-Source/Microsoft-May-Indemnify-Some-Red-Hat-Linux-Users/.

178. *See* Shankland, *supra* note 124.

or disclaimer. Or, as the case may be, FOSS projects can simply remain under GPLv2. Unwanted litigation may result concerning the validity of such waivers, the DMCA, and the GPL itself, but these costs, from a societal standpoint, seem more palatable than the huge costs that DRM-locked FOSS could ultimately impose if left unchecked.

And though third-party content owners may require DRM before entrusting their content with hardware and software manufacturers, such parties may be left with little choice as the world increasingly moves away from DRM and towards solutions more satisfactory to owners and consumers alike. GPLv3 may be one effective means for pushing industries, at least in certain contexts, away from the largely acrimonious DRM solution.

In terms of GPLv3's patent provisions, these also represent a partial solution to the increasingly troublesome area of software patents. Legislative action is slow, cumbersome and, until now, has largely failed to occur. Furthermore, companies with large financial stakes and the means to enforce them would likely dominate any significant changes that were to occur.

In the meantime, GPLv3's patent provisions help shield the FOSS movement against the increasingly complicated patent games of commercial actors, and thereby ultimately help protect the movement's innovative path. Though the license's patent terms may lead some corporate sponsors to shun GPLv3, and thereby potentially slow FOSS development through balkanization, it is unlikely that GPLv3 will remain a minority license given the corporate world's input into the license, the FSF's influence and licensing of their projects under GPLv3, and FOSS's proven strategic advantages for many companies including, presumably, many projects under GPLv3.

As GPLv3 works through these growing pains, its benefits should become more apparent. Indeed, the license's patent provisions should increasingly push companies towards focusing more of their efforts on software R&D, and less on pursuing costly software patents for reasons unrelated to innovation. Furthermore, small companies and independent developers will likely benefit from GPLv3's patent terms because the provisions should help level the playing field for those entities vis-à-vis larger commercial actors. This, too, should lead to greater software innovation.

In the end, GPLv3 constitutes license proliferation. Legal complications will arise, and litigation could become necessary to settle the many outstanding questions the GPL raises. But these costs seem worth the possible benefits GPLv3 promises. In one sense, the license certainly complicates the FOSS world, yet in another it simplifies it by

dealing with the growing problems of software patents and DRM in one fell swoop. GPLv3 may not be the ultimate solution, but it is poised as a step in the right direction.