THE GPL MEETS THE UCC: DOES FREE SOFTWARE COME WITH A WARRANTY OF NO INFRINGEMENT?

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I. Introduction

The GNU General Public License, known as the GPL, is the cornerstone of free software.[1] The GPL has served as the organizing document for free software, providing a structure that has helped transformed the development of software and electronic devices.[2] Software licensed under the GPL may be freely copied and adapted.[3] The source code for the software is made available, to enable anyone to study and change it.[4] The GPL does have "copyleft" restrictions, intended to keep the software free for others.[5] If someone adapts and redistributes GPL'd software, they must likewise allow access to their

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[1] *See* RICHARD STALLMAN, *The GNU Project*, *in* FREE SOFTWARE FREE SOCIETY: SELECTED ESSAYS OF RICHARD M. STALLMAN 12 (Joshua Gay ed., 2002) (discussing how the ubiquity of free software is largely dependent on the GPL); MICHAEL RUSTAD, SOFTWARE LICENSING: PRINCIPLES & PRACTICAL STRATEGIES 355 (Oxford University Press 2d ed. 2013) (declaring General Public License as one of the four most widely used open source licenses). *See also* OPEN SOURCES: VOICES FROM THE OPEN SOURCE REVOLUTION (Chris DiBona et al. eds., 1999) (providing information on GNU General Public License through a collection of essays on free and open source software).

[2] *See GNU General Public License*, GNU (June 29, 2007), *archived at* http://perma.cc/5BJC-WTU4 (highlighting that the GPL is a free copyleft license for software and other kinds of works).

[3] *See* Stephen M. McJohn, *The Paradoxes of Free Software*, 9 GEO. MASON L. REV. 25, 58 (2000) (explaining capabilities of open source software which has little to no restrictions on its use).

[4] *See id.* (articulating that holders of a copy have access to the source code with the ability to make changes).

[5] *See GNU General Public License*, *supra* note 2 (guaranteeing freedom to share and change software programs unlike other licenses); Robert W. Gomulkiewicz, *General Public License 3.0: Hacking the Free Software Movement's Constitution*, 42 HOUS. L. REV. 1015, 1022 (2005) (illustrating how hackers have software freedoms through what is known as copyleft); Greg Vetter, *Exit and Voice in Free and Open Source Software Licensing: Moderating the Rein over Software Users*, 85 OR. L. REV. 183, 196 (2006) (stating that companies who use GPL protected software and have not provided the source code are considered to violate GPL software freedom conditions).

source code.[6] The software is free, in the sense that there are no restrictions on adapting and redistributing it, even if copies are sold.[7] A GPL'd program typically includes the following clause:

> This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.[8]

The clause may not be quite accurate.[9] The licensor makes no warranty of quality that the software will work.[10] But, due to idiosyncrasies of the Uniform Commercial Code, someone who sells software under the GPL may – unknowingly – make a warranty of noninfringement, promising that use of the software does not infringe any patents, copyrights or other third party rights.[11] In other words, someone who sells software under the GPL might be liable for damages, if the buyer were sued by a third party claiming patent or copyright infringement.[12] In today's climate of wide-ranging software patent and copyright enforcement, that could be a substantial risk.

This paper has two goals. The first is specific: to analyze whether the GPL excludes the warranty of noninfringement. The GPL covers many millions of pieces of software.[13] There is a pletho-

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[6] *See* Vetter, *supra* note 5, at 214-15 (describing how the license facilitates the redistribution of the code).
[7] *See* Vetter, *supra* note 5, at 202 (suggesting source codes should remain to be free and open for continued redistribution).
[8] *See GNU General Public License*, *supra* note 2 (stating the rules for the GNU General Public License).
[9] *See GNU General Public License*, *supra* note 2 (declaring the terms of the GNU General Public License); Bennett M. Sigmond, *Free/Open Source Software Licensing – Too Big to Ignore*, 34- COLO. LAW 89, 94 (Dec. 2005) (explaining that the enforceability of licenses seeking to disclaim warranties is on a case by case basis).
[10] *See GNU General Public License*, *supra* note 2 (referring to GPL's disclaimer of warranty when not otherwise stated in writing).
[11] *See* Sigmond, *supra* note 9, at 94-95 (discussing discrepancy over the sale of goods between Uniform Commercial Code and GPL's warranties).
[12] *See GNU General Public License*, *supra* note 2 (referring to third party liability in regards to damages).
[13] *See* Greg R. Vetter, *"Infectious" Open Source Software: Spreading Incentives or Promoting Resistance?*, 36 RUTGERS L.J. 53, 59 (2004) (stating that GPL is "the most widely adopted open software license").

ra of broad software patents.[14] Because software patents are often drafted in abstract terms, a patent developed in one area of technology may be read to apply broadly to software used in entirely different applications.[15] Many software patent holders seek to enforce them, whether for licensing revenue or strategic advantage.[16] Software copyright claims pose a smaller but still substantial hazard.[17] If someone distributing software under the GPL has, albeit unknowingly, promised that the software does not infringe third party rights, they could face a considerable risk.[18] This paper works through the relevant legal code, assesses the risk to developers, and suggests practical ways to reduce the risk.

The paper's broader goal is to analyze how courts may apply commercial law to the GPL. Court cases involving the GPL have been few but may well increase in number, as the GPL covers more commercial products.[19] For example, the GPL covers key software

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[14] *See, e.g.*, Julie E. Cohen & Mark A. Lemley, *Patent Scope and Innovation in the Software Industry*, 89 CALIF. L. REV. 1, 14 (2001) (describing the large number of software patents, and suggesting that they are "accorded unprecedented breadth"). For a broad view of the increasing threat of patent liability, *see* Marshall Leaffer, *Patent Misuse And Innovation*, 10 J. HIGH TECH. L. 142, 144 (2010) (stating that an increasing number of companies, both large and small, are "strategically us[ing] patent litigation as a means to protect their competitive position").

[15] *See* Stephen McJohn, *Scary Patents*, 7 NW. J. TECH. & INTELL. PROP. 343, 2 (2009) (citing JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK 199, 256 (2008)) (stating that software patents often have abstract patent claims that are unclear about what technology they cover).

[16] *See, e.g.*, Chase A. Marshall, *A Comparative Analysis: Current Solutions to the Anticommons Threat*, 12 J. HIGH TECH. L. 487, 489 (2012) (outlining various problems that patents pose to biotechnology that "appear to hinder, rather than promote, the innovation and public benefit" the field seeks to provide). Patents likewise present a threat to other open knowledge systems, such as biotechnology. *Id.*

[17] *See Copyright Software v. Patenting Software*, HARV. UNIV. OFFICE OF TECH. DEV., *archived at* http://perma.cc/M55Q-4HKY (explaining the detriments of choosing copyright over patents to protect software).

[18] *See* Ross Kimbarovsky, *Contracts for Software Developers Who Hate Contracts*, 12 (2009), *archived at* http://perma.cc/3876-PX3M (outlining the risks associated with failure to include limitation of liability clauses in software development contracts).

[19] *See* James G. Gatto, *Doubts Wane over GPL Enforceability,* PILLSBURY LAW (Feb. 2007) *archived at* http://perma.cc/QYM3-C6EU?type=pdf (highlighting that the GPL has recently become the topic of case law). Outside the free software context, commercial parties have definitely made use of the warranty of noninfringe-

running Android devices.[20] Much litigation has already arisen with respect to intellectual property rights related to smartphones.[21] More broadly, commercial parties are increasingly taking free software and incorporating it into their products, meaning that many commercial devices and software packages include free software.[22]

The purpose of the UCC is to "simplify, clarify, and modernize the law governing commercial transactions."[23] In some areas, the UCC has paved the way for new technologies in commercial practice, such as its treatment of electronic chattel paper.[24] In many areas, however, the UCC has been hard-pressed to keep up with changing commercial practices, especially those involving software.[25] Whether modern practices of forming contracts are effective under the UCC

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ment. *See, e.g.,* Phoenix Solutions, Inc. v. Sony Electronics, Inc., 637 F. Supp. 2d 683, 694-97 (N.D.Calif. 2009) (analyzing breach against infringement claim for paid software licenses under federal law); 84 Lumber Co. v. MRK Technologies, Ltd., 145 F. Supp. 2d 675, 678 (W.D. Pa. 2001) (outlining requirements of rightful claim under warranty against infringement claim for paid goods).

[20] *See* Richard Stallman, *Is Android Really Free Software?,* THE GUARDIAN (Sept. 19, 2011), *archived at* http://perma.cc/7P5H-4H3G (differentiating between open and free code in android software under GPL). Android uses the Linux kernel, licensed under the GPL. *Id.* The rest of the Android operating system is released under the Apache license, another free software license which is more permissive than the GPL. *Id.*

[21] *See* Kirti Gupta & Mark Snyder, *Smart Phone Litigation and Standard Essential Patents*, HOOVER.ORG (May 2014), *archived at* http://perma.cc/W3B7-8W3B (arguing that the smart phone industry has seen a dramatic rise in litigation due to patent rights).

[22] *See* McJohn, *supra* note 3, at 31-32 (exemplifying that a commercial software company could incorporate large portions of an open source program into commercial software).

[23] U.C.C. § 1-102 (2013) (noting that this section of the U.C.C. is intended to resolve confusion). *See also In re* Payless Cashways, Inc., 273 B.R. 789, 791 (W.D. Mo. 2002) (stating that the purpose of the U.C.C. is to streamline the law governing commercial transactions).

[24] *See* Jane K. Winn, *Electronic Chattel Paper: Invitation Accepted*, 46 GONZ. L. REV. 407, 409-10 (2011) (pointing to the Revised U.C.C. Article 9, which extends an invitation to update traditional chattel paper systems with new technology and migrate to electronic documents).

[25] *See*, *e.g.*, Mark A. Lemley, *Intellectual Property and Shrinkwrap Licenses*, 68 S. CAL. L. REV. 1239, 1249-50 (1995) (discussing the emergence of shrink wrap licensing and whether the terms in such licenses can be interpreted to constitute valid licensing contracts).

remains unclear.[26] Congress has similarly not clarified the interplay between federal intellectual property law and state commercial law.[27] UCC Article 9 on Secured Transactions, for example, has been unable to resolve whether federal or state filing is necessary to effectively use intellectual property as collateral.[28] Whether a software transaction is a license or a sale is unsettled, with ramifications in other areas of the law.[29]

Software is becoming increasingly important in commercial life, but commercial law is adapting only in fits and starts to software transactions.[30] The Uniform Computer Information Transactions Act was proposed by the NCCUSL to deal with the sale or licensing of software.[31] UCITA provided comprehensive set of rules for such transactions.[32] But because UCITA was widely considered to favor

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[26] *See*, *e.g.*, Lemley, *supra* note 25 at 1250-51 (demonstrating the challenges to applying the UCC in the practice of intellectual property with forming contracts).
[27] *See, e.g.*, Vault Corp. v. Quaid Software Ltd., 847 F.2d 255, 270 (5th Cir. 1988) (holding license term limiting reverse engineering preempted by federal law); *see also* Julie E. Cohen, *Reverse Engineering and the Rise of Electronic Vigilantism: Intellectual Property Implication of "Lock-Out" Programs*, 68 S. CAL. L. REV. 1091, 1092-93 (1995) (demonstrating the shifting and uncertain status of intellectual property protection for computer programs); David A. Rice, *Public Goods, Private Contract and Public Policy: Federal Preemption of Software License Prohibitions Against Reverse Engineering*, 53 U. PITT. L. REV. 543, 602, 605-06 (1992) (exemplifying that Section 301(a) of the Copyright Act of 1976 has exceptions to federal preemption, including reverse engineering).
[28] *See, e.g.*, DOUGLAS J. WHALEY & STEPHEN M. MCJOHN, PROBLEMS & MATERIALS ON SECURED TRANSACTIONS, 35 (Wolters Kluwer Law & Business, 9th ed. 2014) (discussing whether federal filing is required to perfect the security interest and providing the following example cases: "*In re* World Auxiliary Power Co., 303 F.3d 1120 (9th Cir. 2002) (security interest in unregistered copyrights should be filed under Article 9); *In re* Peregrine Entertainment, Ltd., 116 B.R. 194 (C.D. Cal. 1990) (security interest in registered copyrights should be filed in Copyright Office)").
[29] *See, e.g.*, Vernor v. Autodesk, Inc., 621 F.3d 1102, 1116 (9th Cir. 2010) (holding that software was licensed, not sold, therefore was not subject to copyright's first sale doctrine).
[30] *See* Robert W. Gomulkiewicz, *The License is the Product: Comments on the Promise of Article 2B for Software and Information Licensing*, 13 BERKELEY TECH. L.J. 891, 893 (1998) (demonstrating the challenges, through the lawmaking process, to put together a uniform law for software and information licensing).
[31] *See id.* at 893 (reiterating that the NCCUSL and the ALI are impeded by a lack of agreement).
[32] *See, cf. id.* at 893-94 (suggesting the UCITA started life as a proposed Article 2B to the UCC, but became a separate project when the American Law Institute did not

software companies and disfavor consumers, it received little traction in state legislatures.[33] It was adopted in only two states, while four states enacted so-called "bombshelter" statutes, forbidding the application of UCITA.[34] Similarly, a comprehensive revision to Article 2 of the Uniform Commercial Code, which would have some the issues involving software transactions, foundered and became the first broad revision to the UCC not to be adopted by state legislatures.[35] Efforts continue to clarify the law, most notably the American Law Institute's Principles of Software Contracting project,[36] but at present uncertainty obtains in many areas.[37]

Meanwhile, a software license drafted by a software developer (not without help from skilled lawyers) has become one of the

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sponsor the project); *see also* Rochelle Cooper Dreyfuss, *Do You Want to Know a Trade Secret? How Article 2B Will Make Licensing Trade Secrets Easier (But Innovation More Difficult)*, 87 CALIF. L. REV. 191 (1999) (commenting on the growth of Article 2B rules to accommodate a growing intellectual property presence in cyberspace).

[33] *See* Matthew V. Pietsch, *The Perils of Ignoring Software Licenses*, 8 HAW. BAR J. 24, 34 (pointing to the criticism of the UCITA regarding their partiality towards the software industry).

[34] *See* DOUGLAS J. WHALEY & STEPHEN M. MCJOHN, PROBLEMS & MATERIALS ON THE SALE & LEASE OF GOODS, 8-9 (Aspen Publishing 6th ed. 1012) (citing Iowa Code §554D.104, N.C. Gen. Stat. §66-329, W. Va. Code §55-8-15, and 9 Vt. Stat. Ann. §2463(a)) (nothing that the Uniform Computer Transactions Act (UCITA) was enacted in a limited amount of states).

[35] *See id.* at 8 (arguing the new version of Article 2, addressing software transactions, was not adopted by states because of prolonged negotiations).

[36] *See* Maureen A. O'Rourke, *The ALI'S Principles of Software Contracting: Some Comments & Clarifications*, 12 J. HIGH TECH L. 159 (2011) (acknowledging the American Law Institute in developing Article 2B in the UCC).

[37] *See, cf.* Conwell v. Gray Loon Outdoor Mktg. Group, 906 N.E.2d 805, 811 (Ind. 2009) (citing Maureen A. O'Rourke*, An Essay on the Challenges of Drafting a Uniform Law of Software Contracting*, 10 LEWIS & CLARK L. REV. 925, 929-30 (2006)) (noting that the ALI project had been initiated, post UCITA, to bring clarity to the application of commercial law to software). The American Law Institute's Principles of Software Contracting are likely to be persuasive authority on software law issues, although as yet they have not been widely cited in case law. *See* Maureen A. O'Rourke*, An Essay on the Challenges of Drafting a Uniform Law of Software Contracting*, 10 LEWIS & CLARK L. REV. 925, 926 (2006) (noting ALI was written to state basic principles of law and identify possible approaches courts could utilize). The relevant rules of the Principles with respect to the warranty of noninfringement and whether it can be excluded are, although phrased in terms of an indemnity, somewhat similar to the UCC. *See id.* at 931-32 (discussing the narrowing the scope of principles through the UCITA).

most influential documents in software law.[38] The GPL is by far the most widely used license among free and open source licenses.[39] Most notably, the operating system kernel Linux is released under the GPL.[40] Linux has very wide use in computing and represents one of the largest software projects.[41] Because Linux is used in the operating system Android, which runs the majority of smartphones, GPL'd software is now carried around and used by tens of millions of people.[42] The GPL is also the license covering such widely used software as the GNU C Compiler (the preeminent compiler for the popular programming language, C).[43] The GPL is also pervasively used for free and open source software projects from small to large.[44]

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[38] *See* Dr. Peter H. Salus, *Chapter 12, The Daemon, the GNU and the Penguin*, GROKLAW (June 16, 2005), *archived at* http://perma.cc/Z6FQ-8DRK (having realized that he needed to form a license which gave absolute rights to users, "he had spoken with Mark Fischer, a Boston IP lawyer, and to Jerry Cohen, another lawyer, but wrote his own license."). Boston intellectual property lawyers Jerry Cohen and Marc Fischer are reported to have given guidance with the original drafting of the GPL. *See id.* (discussing Jerry Cohen and Mark Fischer's role in drafting the GPL). Other lawyers, such as law professor Eben Moglen, have participated in revisions of the GPL. *See* Matt Lee, *GPL Version 3: Background to Adoption*, FREE SOFTWARE FOUND. (June 9, 2005), *archived at* http://perma.cc/ZE9R-NPTU (describing the revision of the GPL).

[39] *See BSD License Definition*, THE LINUX INFORMATION PROJECT, *archived at* http://perma.cc/B4FY-QSRF (comparing the usage of General Public Licenses to other free software license such as Berkeley Source Distribution (BSD)).

[40] *See* Richard Stallman, *Linux and the GNU System*, GNU OPERATING SYSTEM, *archived at* http://perma.cc/8CRZ-PKNS (explaining that the Linux kernel is often distributed with GNU software, some consider it more accurate to refer to the Linux distributions as GNU/Linux).

[41] *See* Yochai Benkler, *Coase's Penguin, or, Linux and The Nature of the Firm*, 112 YALE L.J. 369 (2002) (describing how projects like Linux differ from typical commercial software development).

[42] *See* Stallman, *supra* note 20 (explaining that the Android operating system contains the Linux kernel which has a GPL).

[43] *See License*, GCC.GNU (Mar. 31, 2009), *archived at* http://perma.cc/3CLG-4EEX (providing license information for software created using the GNU Compiler Collection – formerly known as GNU C Compiler).

[44] *See* Bradley M. Kuhn, Aaron Williamson & Karen M. Sandler, *A Practical Guide to GPL Compliance,* SOFTWARE FREEDOM LAW CENTER (Aug. 26, 2008), *archived at* http://perma.cc/9FVD-MM82 (providing support for the proposition that GPL is used for free and open source software projects).

II. Where Warranty of Noninfringement Claims for GPL'd Software Could Arise

The GPL has been extremely successful in achieving the goals of free software.[45] There has been little litigation under the GPL,[46] so courts have issued little precedent on its interpretation and legal effectiveness.[47] More litigation may arise as free software becomes increasingly in commercially important applications.[48] To

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[45] *See* Gatto, *supra* note 19 (recognizing the success of private enforcement of GPL licenses in forcing compliance with the terms of the agreement).

[46] *See* Rebecca Schoff Curtin, *Hackers And Humanists: Transactions and the Evolution of Copyright*, 54 IDEA 103, 118- 20 (2013) (noting the first case addressing the enforceability of a free software license occurred in 2009); Bradley M. Kuhn, *Some Thoughts on Conservancy's GPL Enforcement*, SOFTWARE FREEDOM CONSERVANCY (Sept. 11, 2014), *archived at* http://perma.cc/W66F-4YAQ (explaining that before resorting to litigation the author prefers to exhaust other alternatives)

> I admit, though, that I do find litigation particularly annoying, time-consuming, and litigation also makes GPL compliance take longer than it should. That's why litigation has always been a last resort, and that 99.999% of GPL enforcement matters get resolved without a lawsuit. Lawsuits are only an option, in my view, when a violation is egregious, and multiple attempts to begin a friendly conversation with the violator are consistently ignored. *Id*.

The gpl-violations.org project also played a role in raising awareness of GPL violations and enforcing rights. *See* Brian Carver, *Share and Share Alike: Understanding and Enforcing Open Source and Free Software Licenses*, 20 BERKELEY TECH. L.J. 443, 446-448 (2005) (discussing efforts to enforce the GPL in Europe, by Harald Welte and his organization, gpl-violations.org).

[47] *See* Gatto, *supra* note 19 (highlighting lack of precedential case law regarding enforceability of GPL licenses).

[48] *See* Kuhn, Williamson & Sandler, *supra* note 44 (observing that litigation in GPL enforcement has increased since 1989). Enforcement of GPL'd software is now often done by the Software Freedom Conservancy. *See* Bradley M. Kuhn, *Some Thoughts on Conservancy's GPL Enforcement*, SOFTWARE FREEDOM CONSERVANCY (Feb. 1, 2012), *archived at* http://perma.cc/3NF5-P42Y (discussing Software Freedom Conservancy's role in GPL enforcement). A violation of the GPL does not of itself give the Software Freedom Conservancy the right to enforce. *See id.* (noting that the holder of the copyright has the right to enforce the GPL). Rather, the holder of the copyright of the software which was issued under the GPL would have the right to enforce breach of the license. *See id.* (discussing the power

date, most of the few cases involving GPL'd software were brought to enforce the GPL.[49] Where parties had used, adapted and redistributed GPL'd software without making the source code available, enforcement action was taken to persuade them to release the code.[50] But enforcement of the GPL has been pursued generally not through litigation but rather through persuasion.[51] So these cases rarely reach court and the few that did were settled after few proceedings.[52]

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of the copyright holder to enforce the software infringement under GPL). The Software Freedom Conservancy encourages authors of free software to transfer their copyright to the Software Freedom Conservancy so that it may enforce any violations on their behalf. *Members Projects & Services*, SOFTWARE FREEDOM CONSERVANCY, *archived at* http://perma.cc/D7DU-CZSB (acknowledging that consolidated copyright structures allow for easier and more effective enforcement). The Software Freedom Conservancy has pursued the approach of using persuasion first and resorting only to litigation when absolutely necessary, meaning that very few cases have been filed. *See* Bradley M. Kuhn, *Some Thoughts on Conservancy's GPL Enforcement*, SOFTWARE FREEDOM CONSERVANCY, *archived at* http://perma.cc/3NF5-P42Y (noting that litigation is burdensome, and is always a last resort).

[49] *See* Gatto, *supra* note 19 (identifying the majority of cases were brought to force compliance with GPL agreement).

[50] *See* STALLMAN, *supra* note 1, at 199 (outlining source code distribution requirements as a part of the GPL preamble).

[51] *See* Eben Moglen, *Enforcing the GNU GPL*, GNU OPERATING SYSTEM (Sept. 10, 2001), *archived at* http://perma.cc/7ZM2-QJ35 (employing other enforcement strategies in lieu of litigation).

> "In approximately a decade of enforcing the GPL, I have never insisted on payment of damages to the Foundation for violation of the license, and I have rarely required public admission of wrongdoing. Our position has always been that compliance with the license, and security for future good behavior, are the most important goals. We have done everything to make it easy for violators to comply, and we have offered oblivion with respect to past faults. In the early years of the free software movement, this was probably the only strategy available. Expensive and burdensome litigation might have destroyed the FSF, or at least prevented it from doing what we knew was necessary to make the free software movement the permanent force in reshaping the software industry that it has now become. Over time, however, we persisted in our approach to license enforcement not because we had to, but because it worked. An entire industry grew up around free software, all of whose participants understood the overwhelming importance of the GPL—no one wanted to be seen as the villain who stole free software, and no one wanted to be the

One other set of cases involving GPL'd software was litigated quite thoroughly.[53] The issue, however, was ownership rights to the original code.[54] After several years, it was clarified that the rights to Linux did not belong to SCO, who claimed them after buying certain assets.[55] The litigation removed a considerable uncertainty about the free software nature of Linux.[56] But the effectiveness and interpretation of the GPL was not an issue, so the decisions shed little light on the GPL.[57] Note that the warranty of title (or not) given under the GPL could have been an issue if parties sued or facing possible suit by SCO had attempted to shift any possible loss to those who had supplied Linux to them.[58] The free software community presented a relatively solid front and did not resort to such measures.[59] But if future questions arise about the rights to software, the various parties may not have as much solidarity.[60]

> customer, business partner, or even employee of such a bad actor. Faced with a choice between compliance without publicity or a campaign of bad publicity and a litigation battle they could not win, violators chose not to play it the hard way". *Id.*

[52] *See, e.g.*, Ryan Paul, *Cisco Settles FSF GPL Lawsuit, Appoints Compliance Officer*, ARS TECHNICA (May 21, 2009), *archived at* http://perma.cc/Z7F8-J3SY (noting that Cisco and the Free Software Foundation reached a quick settlement on their GPL compliance lawsuit).
[53] *See* SCO Grp., Inc. v. Novell, Inc., 578 F.3d 1201 (10th Cir. 2009), *aff'd* 439 F. App'x 688 (10th Cir. 2010) (analyzing arguments regarding dispute in copyright ownership over certain UNIX and Unixware source code).
[54] *See id.* at 1214 (deciding whether the sale of UNIX by Novell included the copyrights to the original Linux source code).
[55] *See id.* at 1227 (reversing the district court's decision that SCO claimed ownership over the UNIX and UnixWare copyrights).
[56] *See* Tom Harvey, *Decisions in SCO-Novell Case Ripples Beyond Utah*, THE SALT LAKE TRIBUNE (Mar. 30, 2010), *archived at* http://perma.cc/AR5-RHSD (discussing the outcome of the SCO-Novell case and the legal and copyright ramifications for open source software).
[57] *See id.* (focusing on the copyrights to UNIX software rather than GPLs).
[58] *See id.* (stating that the jury's decision was good for Linux and the open source community).
[59] *See id.* (stressing that Jason Hall, a founder and board member of the Utah Open Source Foundation, was proud of the decision and Novell's role).
[60] *See id.* (predicting that this decision presents a serious question about the future of an SCO law suit against IBM).

There has been some other litigation involving free software.[61] Most cases were resolved before any reported judicial decisions.[62] Some involved free software license other than the GPL.[63] The one appellate case to squarely hold that a free software license is enforceable concerned the Artistic License.[64] The holding's general principles could likely apply to the GPL, but there are considerable differences between the two licenses.[65] So these cases do little to clarify the legal effect of the GPL.[66] But they do show that the warranty of noninfringement could be a key issue for GPL software.[67]

One of the few reported judicial decisions (as opposed to settled cases, of which there are a few more) involving enforcement of the GPL, decided by the Regional Court of Hamburg,[68] illustrates how warranty of infringement could be an issue (although the relevant licensors were not joined in the case). FANTEC used firewall software for Linux in a media player FANTEC sold.[69] FANTEC received the firewall software from suppliers under the GPL.[70] FANTEC did not comply with the terms of the GPL, because FANTEC did not make the relevant source code available.[71] FANTEC raised as a defense that it did not adapt the free software,

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[61] *See* Gatto, *supra* note 19, at 3 (highlighting GPL's expanding case law).
[62] *See* Gatto, *supra* note 19, at 2 (observing that the vast majority of GPL enforcements have been privately resolved).
[63] *See* Jacobsen v. Katzer, 535 F.3d 1373, 1382 (Fed. Cir. 2008), *appeal dismissed* 449 F. App'x 8 (Fed. Cir. 2010) (highlighting litigation involving the Artistic License).
[64] *See id.* at 1376 (enforcing that an Artistic License is a free and open source license).
[65] *See id.* at 1382 (holding that the Artistic License is clear in creating conditions to protect the economic rights at issue in the granting of a public license).
[66] *See* Gatto, *supra* note 19, at 3 (presenting the expanding case law on GPL); s*ee also* Jacobsen, 535 F.3d at 1382 (addressing the scope of the Artistic License).
[67] *See, e.g.*, Harald Welte, *Regional Court Hamburg Judgment Against FANTEC*, GPL-VIOLATIONS (June 26, 2013), *archived at* http://perma.cc/GQD3-LPFW?type=image (implicating that the warranty of noninfringement is a key issue for GPL software).
[68] *See id.* (indicating the court's finding that FANTEC cannot rely on assurance of license compliance of their suppliers).
[69] *See id.* (holding that FANTEC violated the GNU General Public License in their media player).
[70] *See id.* (stating FANTEC's use of firewalling software for GNU/Linux).
[71] *See id.* (explaining that FANTEC distributed the firmware without complete corresponding source code as required by GPL).

rather had simply received it from suppliers and relied on the suppliers to comply with the GPL.[72] The court rejected FANTEC's argument, holding that FANTEC had obligations to treat GPL'd software according to the terms of the GPL, and any failure by FANTEC's suppliers did not permit FANTEC to use the copyrighted software beyond the authorization of the GPL.[73] For the purposes of this article, the case illustrates how a warranty of noninfringement could very well be litigated.[74] When sued for copyright infringement, a party like FANTEC that had used code supplied by another could bring the supplier in as a third-party defendant.[75] If FANTEC had to pay damages, then FANTEC could in turn recover for breach of warranty from the third-party defendant supplier.[76] However, if the supplier had an effective exclusion of the warranty of noninfringement, it would not be liable to FANTEC, even if FANTEC's liability arose from the code supplied.[77] To further illustrate the possible role of the warranty of noninfringement, if FANTEC sold the media player to customers (whether retail or wholesale), those customers could also be liable for copyright infringement, for using code that had not been distributed in compliance with the GPL.[78] Those customers likewise could recover from FANTEC for breach of the warranty of noninfringement (unless, again, FANTEC successfully excluded the warranty.[79]

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[72] *See id.* (pointing to the court's finding that FANTEC cannot rely on suppliers to comply with GPL).

[73] *See* Welte, *supra* note 67 (stating the court's finding that FANTEC has an obligation to check their products for GNU GPL compliance).

[74] *See* Welte, *supra* note 67 (noting that every company distributing software must comply with licenses).

[75] *See* Welte, *supra* note 67(stating that software compliance is necessary to avoid violating third-party rights).

[76] *See* Welte, *supra* note 67 (explaining that FANTEC could not rely on their suppliers).

[77] *See* Welte, *supra* note 67 (explaining FANTEC is liable for negligent action, not suppliers).

[78] *See* Welte, *supra* note 67 (highlighting the fact that while consumers may not intend to violate the warranty of noninfringement, they may do so unintentionally through purchases made from retail or wholesale distributors).

[79] *See* Mark Radcliffe, *The Fantec decision: German court holds distributor responsible for FOSS compliance*, OPENSOURCE.COM (July 30, 2013), *archived at* http://perma.cc/RW3A-FT27 (clarifying the distinction between producers of goods and consumers in that producers may recover for infringement even against individuals who did not intentionally infringe).

Similarly, several cases to enforce the GPL were brought concerning the software package BusyBox.[80] BusyBox provides a set of utilities for Linux especially useful for embedded systems.[81] The Software Freedom Law Center brought actions against several electronics manufacturers that had sold products using BusyBox without publishing their code.[82] The cases were all settled, with the manufacturers agreeing to publish the code and pay a modest sum toward the costs of enforcing the GPL.[83] As in FANTEC, parties that purchased the relevant products could also have been liable and could have sought recovery for that liability under the warranty of noninfringement.[84]

FANTEC and other actions enforce the GPL; however, the warranty of noninfringement is likely not to be litigated.[85] Those enforcing the GPL are not interested in getting monetary damages or getting injunctions to cease the operations of a business.[86] Rather,

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[80] *See* Prousalis v. Moore, 751 F.3d 272, 273 (4th Cir. 2014) (demonstrating Prousalis's connection as representative of the software Busybox.com); *see also* Software Freedom Conservancy, Inc., v. Westinghouse Digital Elec., LLC, 812 F. Supp. 2d 483, 485, (S.D. N.Y. 2011) (addressing plaintiff's claim against Westinghouse Digital Electronics for distributing BusyBox); *see also* Software Freedom Conservancy, Inc. v. Best Buy Co., Inc., 783 F. Supp. 2d 648, 651(S.D. N.Y. 2010) (discussing action brought against Westinghouse Digital Electronics for copyright infringement in regards to the distribution of BusyBox).

[81] *See* Rob Landley, *The Current State of the BusyBox Project*, LWN.NET (June. 7, 2006), *archived at* http://perma.cc/8XS3-78T6 (explaining how BusyBox utilities serve for Linux commands).

[82] *See* Joab Jackson, *Multiple Consumer Electronics Companies Hit with GPL Lawsuit,* PCWORLD (Sept. 17, 2014), *archived at* http://perma.cc/X7SJ-XBGC (announcing copyright lawsuit brought by the Software Freedom Law Center against 14 electronic companies).

[83] *See* Sean Michael Kerner, *GPL Wins Again*, LINUXPLANET (Aug. 6, 2010), *archived at* http://perma.cc/L6L-SB37 (articulating settlements between list of defendants and Software Conservancy); Gavin Clarke, *GPL scores historic court compliance victory*, THE REGISTER (Aug. 4, 2010), *archived at* http://perma.cc/4TKV-2H6U (stating that Westinghouse reached a settlement with SFC).

[84] *See* Kerner, *supra* note 83 (discussing Westinghouse's noncompliance with the GPL).

[85] *See* Kerner, *supra* note 83 (discussing the desire to litigate); *see also* Radcliffe, *supra* note 79 (explaining that FANTEC received the infringing software from a Chinese manufacturer and failed to publish the complete source code thereby violating the GPL).

[86] *See* Kerner, *supra* note 83 (describing Conservancy's preference for compliance).

GPL enforcement's goal is simply to get the parties to comply with the GPL, which generally means making the relevant code available.[87]

Things could be quite different, however, where an action is brought not by someone seeking compliance with the GPL, but rather contending that code released under the GPL infringes other intellectual property rights.[88] If FANTEC and its customers had been sued for damages and an injunction by a patent holder looking for revenue, then their lawyers might very well have looked to shift losses using the warranty of noninfringement.[89] FANTEC and the BusyBox cases also illustrate a hazard of using software provided by another (free and otherwise).[90] Someone may be liable for infringement of copyright or patent even though they did not write the code or know that it infringed.[91] Innocent buyers may be liable, which is one reason that they may feel inclined to recover from the sellers who triggered that liability.[92]

Two cases involving alleged infringement by free software illustrate the risks that defendants might wish to pass on.[93] Oracle

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[87] *See* Kerner, *supra* note 83 (reiterating that compliance with the GPL is a primary goal).

[88] *See Some Questions Every Business Should Ask About the GNU General Public License (GPL)*, *archived at* http://perma.cc/4JVA-33L2 (discussing the legal issues incorporating GPL code and proprietary code and the "viral" effect of the GPL on the proprietary code).

[89] *See* DAN L. BURK & MARK A. LEMLEY, THE PATENT CRISIS AND HOW THE COURTS CAN SOLVE IT 7-8 (The University of Chicago Press, 2009) (stating that patents are an increasing threat to innovators and inventors); *see also* ADAM B. JAFFE & JOSH LERNER, INNOVATION AND ITS DISCONTENTS: HOW OUR BROKEN PATENT SYSTEM IS ENDANGERING INNOVATION AND PROGRESS AND WHAT TO DO ABOUT IT 38 (Princeton Univ. Press ed., 2004) (explaining that patents prevent imitation and infringement).

[90] *See* Radcliffe, *supra* note 79 (indicating that FANTEC was sued for a GPL violation).

[91] *See* Radcliffe, *supra* note 79 (noting that FANTEC claimed they had assurance from the manufacturer that the source code they received was complete).

[92] *See* Radcliffe, supra note 79 (recommending that companies should maintain a trusted network of third party suppliers in order to establish an effective compliance policy).

[93] *See* Oracle Am., Inc., v. Google Inc., 750 F.3d 1339 (Fed. Cir. 2014) (involving alleged infringement by free software); *see also* Complaint at 2, Microsoft Corp. v. TomTom N.V., No. 09CV00247, 2009 WL 585682 (W.D. Wash. Feb. 25, 2009) (alleging TomTom infringed upon patents held by Microsoft).

sued Google, contending that the Android operating system infringed Oracle's patents and copyrights related to the Java programming language.[94] If Android infringed such rights, then technically anyone using an Android phone could be liable for some damages.[95] Rights holders rarely sue consumers, so that is unlikely to be litigated.[96] But sellers of devices that use Android (such as phones, tablets, and an increasing array of electronics) could be liable – and might prove a likely target for a holder of patents or copyrights.[97] Part of the Android code is released under the GPL.[98] The relevant portion of Android in *Oracle v. Google* is released under the Apache License.[99] That license, unlike the GPL, explicitly excludes the warranty of non-infringement.[100]

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[94] *See Oracle*, 750 F.3d at 1350-51 (stating Google's Android platform contained 37 Java packets that were copied verbatim).
[95] *See* 35 U.S.C. § 271(a) (2012) (articulating that users of materials that infringe upon a patent may be liable under the statute).
[96] *See* Haochen Sun, *Overcoming the Achilles Heel of Copyright Law*, 5 NW. J. TECH. & INTELL. PROP. 267, 296 (2007) (acknowledging that there is little incentive for right holder's to sue consumers).
[97] *See* Gupta, *supra* note 21, at 2 (highlighting that the mobile wireless industry has become increasingly litigious between multinational technology and software corporations).
[98] *See* Stallman, *supra* note 20 (noting that much of the source code from Android has been released as free software).
[99] *See* Stallman, *supra* note 20 (stating that Android software was released under the Apache 2.0 License).
[100] *See Apache License, Version 2.0,* THE APACHE SOFTWARE FOUND., *archived at* http://perma.cc/E79J-7HJA (providing the disclaimer of warranty for the Apache License 2.0)

> Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an 'AS IS' BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, **NON-INFRINGEMENT**, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License. (emphasis added). *Id.*

Those that develop software under the GPL could be side casualties of patent battles.[101] They could also simply be the primary targets of patent or copyright holders.[102] Microsoft sued TomTom, a maker of navigation devices, for patent infringement.[103] Microsoft alleged the TomTom infringed Microsoft's patents on its Fat32 file system.[104] TomTom used the Linux kernel.[105] The case was resolved with a licensing agreement.[106] Microsoft or other rights holders could certainly bring more actions against other parties that make, sell, or simply use devices running Linux.[107] Microsoft has stated a number of times that Linux potentially infringes various Microsoft patents.[108] More broadly, the huge number of issued software patents and the broad nature of many of those patents is widely recognized as raising issues of claims of infringement against almost anyone that develops, sells, or even uses software.[109]

The increasing use of patents to secure licensing fees increases the chances of claims related to GPL'd software.[110] Patent litiga-

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[101] *See* Ryan Paul, *Microsoft and TomTom Settle Patent Dispute*, ARS TECHNICA (Mar. 30, 2009), *archived at* http://perma.cc/WVR7-HBAM (pointing to an example of a patent dispute case); *see also* Ina Fried, *Microsoft, TomTom Settle Patent Dispute*, CNET (Mar. 30, 2009), *archived at* http://perma.cc/LVR5-V33L (highlighting that Microsoft claimed TomTom's use of the Linux kernel were infringed).

[102] *See* Fried, *supra* note 101(cautioning software developers under the GPL that they could face patent litigation campaigns from large companies, such as Microsoft).

[103] *See* Fried, *supra* note 101 (reporting Microsoft's lawsuit against TomTom for patent infringement).

[104] *See* Fried, *supra* note 101 (explaining two of Microsoft's patents that cover legacy compatibility features in Microsoft's FAT file system).

[105] *See* Fried, *supra* note 101 (stating that TomTom's used the open source Linux kernel in its navigation products).

[106] *See* Fried, *supra* note 101 (concluding that Microsoft and TomTom settled with a licensing agreement).

[107] *See, e.g.*, Bryan Pfaffenberger, *The Coming Software Patent Crisis: Can Linux Survive?*, LINUX JOURNAL (Aug. 10, 1999), *archived at* http://perma.cc/Y9A5-C87A (discussing the long recognized hazard of open-source authors' vulnerability to patent infringement lawsuits).

[108] *See* Eric Krangel, *Microsoft Sues TomTom for Linux Patent Infringement*, BUSINESS INSIDER (Feb. 25, 2009), *archived at* http://perma.cc/88VY-JCU3 (citing Microsoft's various past claims against Linux for patent infringement).

[109] *See id.* (observing that Microsoft has had more than 200 of its patents infringed upon by Linux and other open source programs).

[110] *See GNU General Public License*, *supra* note 2, at 8 (discussing patent claims used to enforce patent licenses).

tion was often limited to corporate contests, such as between competitors within an industry.[111] The purchasers of products had little to fear from patent holders.[112] But the search for targets has now broadened to include such "end-users."[113] One patent holder, for example, takes the position that its patents cover a photocopier that scans a document and emails it.[114] The patent holder has sought licensing fees not just from photocopier manufacturers like Xerox and Lexmark, but from many businesses that use such copiers.[115]

III. Whether Uniform Commercial Code Article 2 Applies to Software Under the GPL

A threshold question is whether Article 2 of the Uniform Commercial Code applies to software distributions under the GPL. Whether UCC Article 2 applies to software transactions generally is unsettled.[116] The case of the GPL adds several complications.[117]

Article 2 applies to "transactions in goods."[118] Is software "goods"? The UCC definition of "Goods" is "all things (including specially manufactured goods) which are movable at the time of iden-

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[111] *See* Jean O. Lanjouw & Mark Schankerman, *Characteristics of Patent Litigation: A Window on Competition*, 32 THE RAND J. OF ECON. 129 (2001) (observing that competing firms commonly engage in patent litigation).
[112] *See* David Long & Matt Rizzolo, *Protecting "End Users" from Patent Infringement Actions*, INSIDE COUNSEL (Sept. 18, 2013), *archived at* http://perma.cc/X9LV-KP3P (commenting that historically a company rarely brought infringement claims against end users).
[113] *See id.* (describing how "end-users" now need protection from patent infringement actions).
[114] *See* Joe Mullin, *Notorious "Scan-To-Email" Patents Go Big, Sue Coca-Cola And Dillard's*, ARS TECHNICA (Jan. 6, 2014), *archived at* http://perma.cc/Y25J-CH7A (reporting that MPHJ Technology Investments also brought a number of patent claims against small business workers over scan-to-email functions).
[115] *See id.* (announcing the MPHJ has established agreements to not bring claims against printer and copier companies that license with them).
[116] *See* George E. Henderson, *A New Chapter 2 for Texas: Well-Suited or Ill-Fitting*, 41 TEX. TECH. L. REV. 235, 271 (2009) (discussing whether a software transaction is a sale or licensing transaction).
[117] *See* Sapna Kumar, *Enforcing the GNU GPL*, 2006 U. ILL. J.L. TECH. & POL'Y 1, 16-17 (2006) (evaluating the UCC interpretation of software licenses and noting GPL is a failed contract).
[118] *See* U.C.C. § 2-102 (establishing that Article 2 of the Uniform Commercial Code applies to transactions in the sale of goods).

tification to the contract for sale."[119] Goods include moveable things, not immoveable things (real estate) or intangible things (such as intellectual property rights) or services (where the seller does something, as opposed to delivering something).[120]

A software transaction, then, could be beyond Article 2 if software was not considered a tangible thing,[121] if the transaction was simply for intangible rights related to the software (as opposed for copies of software itself), or if the transactions was for services, as opposed to delivery of the software.[122] Courts have long struggled in determining whether Article 2 applies to software transactions.[123] As White and Summers put it, "Courts, sometimes hesitantly, have generally held under section 2-102 that computer software are 'goods.'"[124] The special considerations for free software add some complications to that analysis.[125] Courts have likewise struggled with the question of whether a contract for software is one for goods or one for services.[126] The cases tend to hold that if the contract calls for development of software, it is a services contract outside Article 2.[127] If the contract simply calls for delivery of software, then it is an

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[119] *See* U.C.C. § 2-105(1) (citing the Uniform Commercial Code definition of "Goods").

[120] *See* JAMES J. WHITE & ROBERT S. SUMMERS, UNIFORM COMMERCIAL CODE § 2-1, 24 (6th ed. 2010) (describing what is included as "Goods" under the Uniform Commercial Code).

[121] *See id.* at 25-33 (discussing the application of UCC Article 2 to transactions in software).

[122] *See id.* at 27-28 (discussing the treatment of hybrid agreements that involve both goods and services).

[123] *See* Andrew Rodau, *Computer Software: Does Article 2 of the Uniform Commercial Code Apply?*, 35 EMORY L. J. 853, 865 (1986) (noting the definition of goods attributed by the courts for other products is inconsistent with the treatment of software).

[124] WHITE & SUMMERS, *supra* note 120, at 25.

[125] *See* WHITE & SUMMERS, *supra* note 120, at 34 (resolving specific issues in regards to free software and the applicability of contract terms to those users).

[126] *See* Neibarger v. Universal Coop., Inc., 486 N.W.2d 612, 621-23 (Mich. 1992) (noting that if the intent is to acquire a good, the software will be governed under the UCC even though services would be involved, but if the intent was to acquire a service the transaction would not be governed by the UCC even though goods were involved).

[127] *See* Pearl Invs., LLC v. Standard I/O, Inc., 257 F. Supp. 2d 326, 353 (D. Me. 2003) (quoting "for purposes of applicability of the UCC, development of a software system from scratch primarily constitutes a service").

Article 2 contract.[128] However, the cases drawing the line between providing software as goods and developing software as a service are hardly consistent.[129] Free software licenses could be used in any number of settings.[130] Because of the huge number of software distributions under the GPL, this issue has considerable practical importance.[131] Article 2 provides a set of rules for sales transactions.[132] It tells the parties not just what warranties are made, but also the obligations of seller to deliver and buyer to accept, the remedies for breach of contract, and other sales issues.[133] Courts have generally held that the sale of software is a transaction in goods subject to Article 2.[134]

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[128] *See* Micro Data Base Sys., Inc. v. Dharma Sys., Inc., 148 F.3d 649, 654–55 (7th Cir. 1998) (suggesting that when the sale of goods outweighs the service it is governed by the UCC); Advent Sys. Ltd. v. Unisys Corp., 925 F.2d 670, 675–76 (3d Cir. 1991) (adopting the argument that software is a good as defined by the UCC); RRX Indus., Inc. v. Lab–Con, Inc., 772 F.2d 543, 546–47 (9th Cir. 1985) (distinguishing software as a good from a service where the vendors sold preexisting software and any service accompanying the sale of such software is incidental).
[129] *See* Wachter Mgmt. Co. v. Dexter & Chaney, Inc., 282 Kan. 365, 369 (2006) (indicating that Kansas' Supreme Court considers software is "goods:); Al-Bawaba.com, Inc. v. Nstein Tech. Corp., 862 N.Y.S.2d 812 (2008) (discussing the implications of the parties agreeing to treat software as a service).
[130] *See What is Free Software?*, GNU, *archived at* http://perma.cc/LED9-EK69 (describing free software licenses, which allow users the freedom to copy, run, and further modify the software).
[131] *See* Sigmond, *supra* note 9 at 89 (revealing how the momentous use of open source licensing is creating a wide scope of legal issues).
[132] *See* Rodau, *supra* note 123, at 858-59 (noting various rules of Article 2 regarding the formation of contracts of sale).
[133] *See* U.C.C. § 2-313 (explaining ways an express warranty by the seller may be created); *see also* U.C.C. § 2-314 (announcing that there is an implied warranty that the goods sold shall be merchantable when the seller is a merchant dealing with goods of that kind); U.C.C. § 2-301 (describing the obligations of the parties in a contract for the sale of goods); U.C.C. § 2-703 (listing various remedies for sellers in the event the buyer breaches the contract by rejecting or revoking acceptance of the goods or failing to make timely payment on or before delivery of goods); U.C.C. § 2-711 (explaining remedies for the buyer in a sales transaction when the seller breaches the contract).
[134] *See* WHALEY & MCJOHN, *supra* note 28, at 8-14 (discussing the treatment of contracts of sales of software); *Advent System Ltd*., 925 F.2d at 675-76 (stating the majority of courts view software as fitting within the definition of a "good" under the U.C.C.); Dahlmann v. Sulcus Hospitality Technologies, Corp., 63 F. Supp. 2d 772, 775 (E.D. Mich. 1999) (looking to the intent of the purchaser as to whether the contract is covered by the UCC); Softman Products Co., LLC v. Adobe Systems,

Some software distributions are made as part of a larger sale of goods and so would be comfortably within Article 2; even assuming a jurisdiction took a narrow view of whether Article 2 applied to pure software transactions.[135] Goods today very often include some electronics.[136] Even the most modest microchip is likely to come containing the software that controls the chip, even if the user is unlikely to be aware of the software.[137] Linux, the free software operating system kernel, is often embedded on microchips.[138] To give a common example, wireless routers used in homes often run Linux, although the homeowner may be unlikely to be aware of that.[139] The sale of routers would be comfortably within the meaning of "transactions in goods."[140] Likewise, any device with a microchip in it (from dishwashers to fitness monitors to toys to . . .) is likely to come with software loaded onto it, and that software often is free software.[141]

Inc., 171 F. Supp. 2d 1075, 1084 (C.D. Cal. 2001) (nothing that various other courts have held that software is considered a good).

[135] *See* Rodau, *supra* note 123, at 892 (addressing that Article 2 of the U.C.C. applies to computer software even in a common law system, which narrowly construes statutes to limit their application).

[136] *See* Rodau, *supra* note 123, at 862 n.35 (inferring that electronics are goods because they can be distributed to users in a variety of physical mediums).

[137] *See* Rodau, *supra* note 123, at 870 (demonstrating that software is contained in an array of electronics).

[138] *See* Adam Fabio, *Advanced Transcend WiFi SD Hacking: Custom Kernels, X, and Firefox*, HACK A DAY (Sept. 19, 2013), *archived at* http://perma.cc/CZ6N-PMSW (discussing that Linux can be embedded on microchips such as an SD card).

[139] *See id*. (noting a case of GPL enforcement involved the code on a WiFi card). The Transcend WiFi card was programmed with GPL'd code. *See id.* (noting that the transcend card included GPL). When the card was sold, it nevertheless was not sold with access to the source code, a violation of the GPL. *See id.* (acknowledging that excluding other source codes was a GPL violation). After considerable prodding from the free software community, the maker agreed to release the code. *See id.* (highlighting one of the most cavalier GPL violations in regards to WiFi and Linux).

[140] *See* Rodau, *supra* note 123, at 864 (noting Section 2-102 makes Article 2 generally applicable to transactions in goods).

[141] *See* Rodau, *supra* note 123, at 874-75 (expressing that at the point when software becomes a physical medium, it is a tangible object).

Electronics companies have recognized the technical and economic advantages of using free software.[142]

To expand even more the set of Article 2 transactions involving free software licenses, we can also consider the nascent movement of "open hardware."[143] Just as many believe that software should be distributed in a way that the recipient can study, adapt, and redistribute the software, so some think the same freedom should apply to hardware.[144] The leading open-source hardware license, The TAPR Open Hardware License, was drafted to track the principles of the GPL[145] and used much of the language of the GPL, including the language on exclusion of warranties.[146] Other open hardware projects simply use the GPL, even though it was drafted with software in mind.[147] Perhaps the best known open source hardware project, the Arduino microprocessor, uses a Creative Commons Share Alike li-

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[142] *See* McJohn, *supra* note 3, at 38 (articulating incentives such as enjoyment of programming, the desire to show off technical feats to others in the field or to further computer science).

[143] *See* John R. Ackermann, *Toward Open Source Hardware*, 34 DAYTON L. REV. 183, 212 (2009) (introducing TAPR Open Hardware, which is an attempt to translate the concepts of Open Source Software into an Open Source Hardware community).

[144] *See id.* at 184 (asserting that individuals in the industry sought to implement a free and open source philosophy comparable to the GNU General Public License).

[145] *See id.* at 183 (discussing the goals of GPL). "At its most fundamental, the goal of licenses like the GPL is to foster a community where those who benefit from the work of others in turn contribute their improvements to that community. A similar movement, inspired by many of the same concerns that drove those software developers, has taken shape among people involved in electronic hardware design efforts on a collaborative basis: the idea of Open Source Hardware." *Id.* at 183.

[146] *See The TAPR Open Hardware License*, TAPR (May 25, 2007), *archived at* http://perma.cc/6GPB-LUPD (comparing the TARP license to the GPL). The warranty exclusion in the TAPR license tracks the language from the GPL, including the lack of any exclusion of the warranty of noninfringement: "THE DOCUMENTATION IS PROVIDED ON AN "AS-IS" BASIS WITHOUT WARRANTY OF ANY KIND, TO THE EXTENT PERMITTED BY APPLICABLE LAW. ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND TITLE, ARE HEREBY EXPRESSLY DISCLAIMED." *Id.*

[147] *Cf.* Eli Greenbaum, *Open Source Semiconductor Core Licensing*, 25 HARV. J.L. & TECH. 131 (2011) (discussing use of GPL to license semiconductor cores).

cense, which was drafted the expand the copyleft principles of the GPL to creative works.[148]

With respect to free software, there is another issue beyond whether software constitutes goods: whether a distribution of free software under a license is a *transaction* in goods.[149] Article 2 applies to "transactions in goods." [150] That definition could exclude most free software distributions from the coverage of Article 2, which is entitled "Sales of Goods."[151] Most free software distributions are not sales transactions, in the sense of code for money.[152] Most distributions of free software are done without charging a price.[153] A common practice is to post software on a site like Github or SourceForge and make it freely available to others, under the GPL (and sometimes the application of the GPL is phrased quite loosely).[154] Those could well be characterized as unilateral contributions, not transactions.[155] The law of sales does not apply to gifts.[156]

One could, however, characterize even a cost-free distribution of software under a restrictive license such as the GPL as a transac-

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[148] *See Frequently Asked Questions*, ARDUINO, *archived at* http://perma.cc/3U73-Z7P8 (discussing the use of Creative Commons Share Alike license).
[149] *See* Lori Brennan, *Why Article 2 Cannot Apply to Software Transactions*, 38 DUQ. L. REV. 459, 461-62 (discussing courts treatment of software transactions as nothing more than sale of goods). *See also* Kerry M. Smith, *Suing the Provider of Computer Software: How Courts are Applying U.C.C. Article Two, Strict Tort Liability, and Professional Malpractice,* 24 WILLAMETTE L. REV. 743, 746 (1988) (discussing the categorization of software as a good).
[150] *See* U.C.C. § 2-102 (introducing Article 2 as applying to transactions in goods).
[151] *See* Smith, *supra* note 149, at 746 (noting that if a transaction strictly referred to the passing of title to the property, then the licensing of software would not be considered a transaction because the license only allows the use of the good, not the full transfer of title to that good).
[152] *See Selling Free Software*, GNU, *archived at* http://perma.cc/7LD7-P8YG (stating that free software is sometimes distributed without cost).
[153] *See Selling Free Software*, *supra* note 152 (defining "free" software in two general contexts: freedom or to price, with some free programs distributed at no cost and some at substantial prices).
[154] *See* Sigmond, supra note 9, at 89 (listing numerous software projects hosted by SourceForge).
[155] *See* Sigmond, supra note 9, at 89 (describing internet platforms, like SourceForge, that are used for hosting open source projects).
[156] See U.C.C. § 2-102 (excluding gifts).

tion, because both parties have rights and responsibilities.[157] The drafters of the UCC did not limit Article 2 to "sales" or even to "contracts."[158] Rather, they chose the broader category of "transaction."[159] Transaction is not a defined term, either in Article 2[160] or in the general definitions in Article 1, but could encompass exchanges broadly.[161] The recipient of the software does not receive it without conditions.[162] Rather, the license is subject to many conditions, intended to prevent the recipient from making the software non-free.[163] If the recipient redistributes the software, he or she is deemed to accept the GPL's restrictions.[164] This exchange of obligations could be considered to make the transfer a transaction.[165] For the same reason, even if the GPL is treated as a bare license rather than a contract, distribution of software under the GPL could be treated as a transaction, if obtaining rights under the license requires the licensee to take steps to abide by the terms of the GPL.[166]

Some distributions of free software would certainly qualify as sales.[167] As famously stated, free in free software means "'free as' in

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[157] *See* Brian W. Carver, *Part I: Law and Technology: IV. Business Law: A. Notes: Share and Share Alike: Understanding and Enforcing Open Source and Free Software Licenses,* 20 BERKELEY TECH. L.J. 443, 448 n.34 (2005) (noting a restriction found in the GPL that requires that the license's text, including user's rights and responsibilities, be included with any software distribution under the GPL).
[158] *See Articles of the UCC*, US LEGAL, *archived at* http://perma.cc/7BBG-JFHY (summarizing the Articles of the UCC).
[159] *See id.* (discussing the scope of UCC article 2).
[160] *See* U.C.C. § 2-103–106 (omitting a definition of a transaction).
[161]*See* U.C.C. § 1-201 (stating that "transaction" is not defined in the broad definitions of Article 1).
[162] *See* Ackermann, *supra* note 143, at 211 (giving an example of conditions imposed by the Open Hardware License (OHL)).
[163] *See* Ackermann, *supra* note 143, at 183 (noting that the purpose of licenses are to ensure that software users retain the freedoms afforded by the definition of Free Software).
[164] *See* Jackson, *supra* note 82, at 1 (describing possible legal implications for redistribution of software).
[165] *See GNU General Public License, supra* note 2 (explaining how free software exchanges are often treated like transactions).
[166] *See* discussion *infra* pp. 28-30 (discussing the issue of whether the GPL is a contract or a bare license).
[167] *See* Sean Silverthorne, *Red Hat Software Sells Free Software,* ZDNET (Sept. 26, 1998), *archived at* http://perma.cc/PKS7-BXXZ (stating that Red Hat distributes free software via sales); *see also* Julie Bort, *A Feisty Linux Company That Wants to*

'free speech,' not as in 'free beer.'"[168] Free software licenses permit distribution of the software for money.[169] Many businesses, such as Red Hat and Canonical, sell free software.[170] Although, for example, Linux is available for no charge from many sources, many prefer to purchase a distribution from Red Hat in order to receive the additional services that Red Hat offers, along with access to Red Hat's version of Linux.[171] The Android operating system is free, but included with the sale of a smart phone.[172] Many smaller developers adapt widely available software and sell their adaptations.[173] A considerable portion of free software distributions would qualify as sales of goods.[174]

Some free software distributions are transactions.[175] Free software can be sold, because "free" refers to the lack of restrictions on the software, not to the money charged, if any, for a copy (which the recipient is then free to copy, adapt, and distribute).[176] Some parties sell software for money under the GPL.[177] Other distributions

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Take on Android, SLATE (July 14, 2013), *archived at* http://perma.cc/DCG5-QDMF (stating that Canonical is known for distribution of Linux software).

[168] *What is Free Software?*, *supra* note 130*; see also* Rustad, supra note 1, at 357 (quoting Richard Stallman "Free as in free software means liberty to use source code, not that it was necessarily free in price like free beer").

[169] *See* SUBHASISH DASGUPTA, ENCYCLOPEDIA OF VIRTUAL COMMUNITIES AND TECHNOLOGIES 285-86 (George Washington University ed., 2006) (stating that freeware's key difference from "free software" is that the licenses do not allow sale).

[170] *See* Bort, *supra* note 167 (stating that Canonical is known for selling Linux software); *see also* Silverthorne, *supra* note 167 (stating Red Hat sells free software).

[171] *See* Silverthorne, *supra* note 167 (listing the additional services and variations offered by Red Hat).

[172] *See Operating Systems*, GEEK, *archived at* http://perma.cc/5ABT-8JW8 (indicating that preloaded Android software comes with mobile phones).

[173] *See* Stallman, *supra* note 20 (listing the Apache 2.0 License as an example of an adapted software by Android).

[174] *See* Advent System Ltd., 925 F.2d at 675-76 (emphasizing the majority of courts view software distribution as sales of goods under the U.C.C.).

[175] *See* Gomulkiewicz, *supra* note 30, at 893 (discussing commercial transactions in terms of software distribution).

[176] *See* STALLMAN, *supra* note 1, at 20 (defining "free" in free software to indicate the freedom of use by the user).

[177] *See Selling Free Software*, *supra* note 152 (explaining the process of selling software which indicates software distribution at a price or at no price at all).

might also be transactions, even without money changing hands.[178] Two businesses could agree to share software that they have developed independently.[179] That quid pro quo could qualify as a transaction.[180] Likewise, if a number of parties participated in a development project, each contributing code with an eye toward benefitting from the finished project that might be viewed as a series of transactions.[181] So Article 2 will apply to some free software distributions.[182] Indeed, the warranty provisions of the GPL are drafted with this in mind, as discussed below.[183]

In addition, even if Article 2 was held not to apply to a transaction in free software, on the theory that the software is not goods, the court is likely to apply the rules of article 2 anyway.[184] There is no alternative law governing software.[185] Although several models statutes have been drafted and a proposed revision of article 2 that would have encompassed some software transactions none have been widely adopted by state legislatures, in part because software vendors were so successful in shaping the drafting process that other parties strongly resisted adoption.[186] Article 2 remains the authoritative

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[178] *See Selling Free Software*, *supra* note 152 (analyzing a software distribution as a moneyless transaction).
[179] *See, e.g.*, *Cross license definition*, MERRIAM-WEBSTER (Oct. 2, 2014,), *archived at* http://perma.cc/B9S5-BV63 (defining cross license as "a license that is granted by a patent holder to another . . . who reciprocates with a similar license").
[180] *See* U.C.C. § 2-102 (describing the scope of Article 2 and application to transactions).
[181] *See* William D. Hawkland & Linda J. Rusch, *Transactions in Goods,* 1 HAWKLAND UCC SERIES § 2-102:2 (2014) (noting that, for Article 2 to apply, there must be a "transaction" and that transaction must be "in goods").
[182] *Cf* M.A. Mortenson Co. v. Timberline Software Corp., 998 P.2d 305, 310 (2000) (accepting the parties' assertion that UCC Article 2 applies to software licensing).
[183] *See* discussion *infra* pp. 28-30 (describing why the provisions in Article 2 were drafted to apply to some free software distribution).
[184] *See* I. Lan Systems, Inc. v. Netscout Service Level Corp., 183 F. Supp. 2d 328, 332 (D. Mass. 2002) (discussing that UCC Article 2 was applied by the court to an embedded agreement within a sale of software).
[185] *See id.* (discussing that software law in Massachusetts and noting that most states do not have laws governing software licenses).
[186] *See id.* (discussing resistance to adoption of a comprehensive legislative scheme, Uniform Computer Information Transactions Act ("UCITA"), to govern software licensing).

source for sales law, so courts are likely to apply it to sales of the things that don't meet the definition of goods.[187]

A software contract could be a transaction simply to provide intellectual property rights or services, and so not be covered by Article 2.[188] Goods are defined to mean things which are movable.[189] The whole point of a GPL distribution, however, is to provide the code.[190] Indeed, granting rights under the GPL to code without providing access to a copy of the code would violate the GPL.[191] Rather, the distribution of free software involves the granting a license, which is an intangible, along with the distribution of software, often in the ephemeral form of a download of computer files.[192] As White and Summers state, however, courts have generally applied Article 2 to sales of software, in part for lack of a better alternative. [193]

Finally, an additional reason for courts to apply article 2 to free software licenses is that those licenses, in their warranty provisions especially, were drafted to track Article 2.[194] The GPL, as noted below,[195] states that the software code is provided "'AS IS' WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE."[196] That language was

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[187] *See id.* at 331 (inferring from opinion that other courts will apply Article 2 to software licensing transactions as the U.S District Court of Massachusetts did).
[188] *See id.* at 331 (discussing how a software contract may not appear to be a transfer of goods).
[189] *See* U.C.C. § 2-105 (defining "goods" as moveable items).
[190] *See Frequently Asked Questions about the GNU Licenses,* GNU OPERATING SYSTEM (Oct. 18, 2014), *archived at* http://perma.cc/8VZJ-TSHA (stating that the whole point of the GPL is to provide the code to users).
[191] *See id.* (discussing that distributing software without some of the source codes would violate the GPL).
[192] *See* John A. Rothchild, *The Incredible Shrinking First-Sale Rule: Are Software Resale Limits Lawful*, 57 RUTGERS L. REV. 1, 5 (2004) (describing how a transaction involving acquisitions of software involves a license to use the software).
[193] *See* WHITE & SUMMERS, *supra* note 120, at 25 (stating that courts "sometimes hesitantly, have generally held under section 2-102 that computer software are 'goods'").
[194] See *GNU General Public License*, supra note 2 (explaining the disclaimer of warranty provision in free software).
[195] *See infra* p. 30-31 (describing the GPL's attempt to exclude all warranties).
[196] *GNU General Public License*, *supra* note 2, at 9.

patently drafted to track 2-316 of Article 2 of the UCC.[197] It specifically mentions the UCC warranties of merchantability and fitness for a particular purpose.[198] It employs the broad exclusionary language supported by 2-316, "AS-IS."[199] It then puts everything in block capitals, to meet the requirement of UCC 2-316 that exclusions of warranty must be conspicuous to be effective.[200] Where the document was drafted specifically with the UCC warranty provisions in mind, applying the UCC to it makes sense.[201] In particular, where the document seeks to take advantage of the provisions of the UCC to exclude warranties, a court would likely also apply the protective provisions that require specific language to exclude warranties.[202]

The leading UCC treatise supports such a conclusion with a related rationale.[203] White & Summers discuss the puzzle of what law to apply to cases involving software, where Article 2 does not apply, such as where the transaction is predominantly about the provision of services.[204] In such cases, they note, there is no clearly defined body of "software law" to fill the gaps.[205] That being the case, they suggest that courts should "determine what policy objectives the particular Code section in question implicates, and then, in light of those policies, determine whether the particular facts of the transac-

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[197] *See GNU General Public License*, *supra* note 2, at 9 (inferring that the language of the GPL is in compliance with article 2-316 of the UCC); *see also* U.C.C. § 2-316 (stating the words necessary to negate a warranty or modify implied warranties of merchantability).

[198] *See GNU General Public License*, *supra* note 2, at 9 (stating that the disclaimer of warranties includes warranties of merchantability and fitness).

[199] *See GNU General Public License*, *supra* note 2, at 9 (noting the "AS IS" language of this provision is similar to that language included in subsection 3 of the UCC 2-316).

[200] *See GNU General Public License*, *supra* note 2, at 9 (highlighting the font of this provision meets the conspicuous requirement set forth in subsection 2 of the UCC 2-316).

[201] *See GNU General Public License*, *supra* note 2, at 9 (inferring that the UCC 2-316 is the correct provision to apply to the GPL).

[202] *See* Clemons v. Nissan N. America, Inc., 997 N.E.2d 307, 318 (Ill. App. Ct. 2013) (noting that the specific language is required to exclude warranties).

[203] *See* WHITE & SUMMERS, *supra* note 120, at 27 (explaining the ideal approach to questions of law involving software and hardware).

[204] *See* WHITE & SUMMERS, *supra* note 120, at 27 (outlining a policy based approach).

[205] *See* WHITE & SUMMERS, *supra* note 120, at 26 (explaining how some software issues do not fall under Article 2 and the predicament this imposes).

tion invite the application of the section by analogy."[206] This policy approach would likely counsel apply the warranty provisions of the UCC to the GPL, even in cases where there was not a "transaction in goods."[207] The GPL was drafted with the warranty provisions in mind.[208] The warranty provisions carefully sort out cases where warranties should apply from those where they should not apply.[209] Even though the GPL addressed only warranties of quality, not the warranty of title and noninfringement, the specific policies embodied in the warranty of noninfringement provision allow courts ample tools to determine when it should apply and when it should be excluded.[210]

IV. The GPL Exclusion of Warranties May Not Include Infringement Claims

As the Free Software Foundation explains, "For the developers' and authors' protection, the GPL clearly explains that there is no warranty for this free software."[211] The FSF recommends that each source file should include the paragraph above, stating that the software comes "WITHOUT ANY WARRANTY."[212] If the program does terminal interaction, it should "output a short notice like this when it starts in an interactive mode: 'This program comes with ABSOLUTELY NO WARRANTY.'"[213]

The text of the GPL seeks to exclude all warranties in broad terms:

15. DISCLAIMER OF WARRANTY.

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[206] WHITE & SUMMERS, *supra* note 120, at 27.
[207] *See* WHITE & SUMMERS, *supra* note 120, at 28 (considering the majority's application of the policy approach).
[208] *See GNU General Public License*, *supra* note 2 (articulating the warranty provisions).
[209] *See GNU General Public License*, *supra* note 2 (articulating works covered by warranty, and those that are not).
[210] *See GNU General Public License, supra* note 2 (outlining the warranty of noninfringement).
[211] *GNU General Public License, supra* note 2.
[212] *GNU General Public License, supra* note 2.
[213] *GNU General Public License, supra* note 2.

> THERE IS **NO WARRANTY** FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" **WITHOUT WARRANTY OF ANY KIND**, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.[214]

That would seem to exclude all warranties. But, as explained below, sometimes, broad language is not sufficient to achieve specific goals.[215]

The Uniform Commercial Code likewise appears to make the exclusion of warranties effective.[216]

§ 2-316. EXCLUSION OR MODIFICATION OF WARRANTIES.

> (1) Words or conduct relevant to the creation of an express warranty and words or conduct tending to negate or limit warranty shall be construed wherever reasonable as consistent with each other; but subject to the provisions of this Article on parol or extrinsic evidence (Section 2-202) negation or limitation is inoperative to the extent that such construction is unreasonable.

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[214] *GNU General Public License, supra* note 2 (emphasizing the original, and adding extra emphasis). The license is hardly exceptional in its exclusion of the warranty of merchantability; *see* Robert W. Gomulkiewicz, *The Implied Warranty of Merchantability in Software Contracts: A Warranty No One Dares to Give and How to Change That*, 16 J. MARSHALL J. COMPUTER & INFO. L. 393, 402 (1997) (stating the implied warranty of merchantability "represents a well-intended but failed idea").

[215] *See infra* pp. 22 (discussing that the warranty makes the risk of being sued for patent infringement greater).

[216] *See* U.C.C. § 2-316 (discussing the exclusion or modification of warranties).

> (2) Subject to subsection (3), to exclude or modify the implied warranty of merchantability or any part of it the language must mention merchantability and in case of a writing must be conspicuous, and to exclude or modify any implied warranty of fitness the exclusion must be by a writing and conspicuous. Language to exclude all implied warranties of fitness is sufficient if it states, for example, that "There are no warranties which extend beyond the description on the face hereof."
>
> (3) Notwithstanding subsection (2)
>
> (a) unless the circumstances indicate otherwise, all implied warranties are excluded by expressions like "as is," "with all faults" or other language which in common understanding calls the buyer's attention to the exclusion of warranties and makes plain that there is no implied warranty;[217]

The GPL disclaimer carefully abides by Section 2-316.[218] The GPL avoid making express warranties, simply by not making any. [219] The GPL excludes also all implied warranties.[220] First, it explicitly states that "…WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE."[221] Second, the GPL explicitly provides that the software is provided "AS IS."[222] Under 2-316(3)(a), that likewise excludes all implied warranties.[223] This belt-and-suspender approach thoroughly excludes all express and implied warranties.[224] One might think that a warranty must be

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[217] *Id.*
[218] *See GNU General Public License, supra* note 2 (excluding and modifying implied warranties).
[219] *See GNU General Public License, supra* note 2 (remaining silent on proffering warranties).
[220] *See GNU General Public License, supra* note 2 (rejecting all implied warranties).
[221] *GNU General Public License, supra* note 2.
[222] *GNU General Public License, supra* note 2.
[223] *See* U.C.C. § 2-316 (excluding implied warranties).
[224] *See id.* (excluding express warranties).

either express or implied, so an exclusion of all express and implied warranties would include all warranties.[225] But, under U.C.C. Article 2, warranties go beyond those express and implied.[226] The U.C.C. defines its terms with specificity, not always with the meaning that one would ordinarily expect.[227] In the world of the U.C.C., a bank account is not an "account,"[228] cattle may be "equipment,"[229] and a consignment is not a "consignment" if it is known to be a consignment.[230]

Under the UCC scheme, there is another set of warranties, which are neither express nor implied warranties:

> § 2-312. WARRANTY OF TITLE AND AGAINST INFRINGEMENT; BUYER'S OBLIGATION AGAINST INFRINGEMENT.
> (1) Subject to subsection (2) there is in a contract for sale a warranty by the seller that
> (a) the title conveyed shall be good, and its transfer rightful; and
> (b) the goods shall be delivered free from any security interest or other lien or encumbrance of which the buyer at the time of contracting has no knowledge.
> (2) A warranty under subsection (1) will be excluded or modified only by specific language or by circumstances which give the buyer reason to know that the

[225] *See id.* (explaining the exclusion of warranties under the U.C.C.).
[226] *See id.* (stating "there are no warranties which extend beyond the description on the face hereof").
[227] *See* U.C.C. § 1-201 (explaining that U.C.C. definitions are limited to a contractual context, rather than matching up with layman's terms).
[228] U.C.C. § 9-102(iii) (defining "account" as expressly excluding "deposit accounts").
[229] Morgan County Feeders, Inc. v. McCormick, 836 P.2d 1051, 1053 (Colo. App. 1992) (holding that cattle used in dude ranch cattle drives were not inventory, consumer goods, or farm products, and thus fell into the residual category of "equipment"). According to § 4-9-109(2), C.R.S., goods are equipment "if they are used or bought for use primarily in business (including farming or a profession) ... or if the goods are not included in the definitions of inventory, farm products, or consumer goods." *Id.* at 1053.
[230] *See* U.C.C. § 9-102(iii) (providing that a consignment is not considered a consignment if the consignor is "generally known by its creditors to be substantially engaged in selling the goods of others").

> person selling does not claim title in himself or that he is purporting to sell only such right or title as he or a third person may have.
> (3) Unless otherwise agreed a seller who is a merchant regularly dealing in goods of the kind warrants that the goods shall be delivered free of the rightful claim of any third person by way of infringement or the like but a buyer who furnishes specifications to the seller must hold the seller harmless against any such claim which arises out of compliance with the specifications.[231]

Section 2-312 first provides a warranty so fundamental that it is often overlooked.[232] Seller effectively promises, "These goods are mine to sell."[233] If the goods belong to someone else, Seller will breach that warranty of title to Buyer.[234] Because a buyer would normally expect such a warranty of ownership, the UCC provides that it is not excluded by a general exclusion of warranty, rather "will be excluded or modified only by specific language or by circumstances which give the buyer reason to know that the person selling does not claim title."[235] In other words, if the goods may not belong to Seller, Seller must make that quite clear with specific language.[236] A general warranty disclaimer, such as "As-Is" or "WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED" will not exclude the warranty of title.[237] As the Official Comment states,

> The warranty of subsection (1) is not designated as an "implied" warranty, and hence is not subject to Sec-

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[231] U.C.C. § 2-312.
[232] *See* U.C.C. § 2-312(1) (stating that in a contract for sale there is an embedded warranty that title shall be good, transfer rightful, and the goods free from encumbrances).
[233] *See id.* (providing an example of one of the most fundamental warranties inherent in a contract to sell).
[234] *See id.* (stating that the warranty will be breached if a seller lacks authority to contract for the sale of the goods).
[235] U.C.C. § 2-312(2).
[236] *See id.* (explaining that the warranty can be modified if specific language is used or the circumstances are known to the buyer).
[237] *See* U.C.C. § 2-312 cmt. 6 (stating that warranty of title is not an implied warranty and therefore not excluded by a general warranty disclaimer).

> tion 2-316(3). Disclaimer of the warranty of title is governed instead by subsection (2), which requires either specific language or the described circumstances.[238]

Suppose an art dealer had a painting to sell. The dealer was aware that there was a claim to ownership of the painting (that it was conveyed under an invalid will or it was wrongfully misappropriated during the war or the painting had been loaned or . . . .). The art dealer believes the claim is baseless, but you never know. The art dealer could sell the painting and disclaim the warranty of title. To do so, the sales contract would have to say quite specifically that there was no warranty of title. A general disclaimer, such as "As-Is" or "No Warranties" would be insufficient. Buyers expect to own what they buy. If the seller is to avoid making that basic promise, the U.C.C. requires her to warn the buyer with specific language. Seller says "I'll sell you whatever rights I have in this, but the risk is on you that it actually belongs to someone else."

In addition to Seller promising that the goods will become Buyer's personal property, Seller promises that Buyer's use of the goods will not violate anyone's intellectual property rights.[239] This is the warranty of property rights that is important for software.[240] Section 2-312(3) creates a warranty of noninfringement.[241] A merchant selling goods warrants not just that she owns them, but that buyer will not infringe third party rights.[242] If buyer purchases the goods and they are seized for infringement (of copyright or patent or trademark or trade secret, etc.), then seller will be liable to buyer.[243] Likewise, if using or reselling the goods infringes third party rights, buyer can recover from seller.[244] For example, where a company purchased software for an interactive voice recognition system from a

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[238] *See* U.C.C. § 2-312.
[239] *See* U.C.C. § 2-312(3) (outlining the warranties required by the seller and that the goods should be delivered free from infringement).
[240] *See id.* (requiring that a merchant warrants that the "goods shall be delivered free of the rightful claim of any third person by way of infringement or the like").
[241] *See id*. (offering the requirements of a warranty of noninfringement).
[242] *See id*. (discussing the buyer's obligation against infringement).
[243] *See id*. (requiring the seller to warrant that the goods are free of any infringement claims).
[244] *See id*. (inferring that a violation of the warranty against infringement would make the seller liable to the buyer).

supplier, the company was entitled to recover for breach of the warranty of noninfringement, when the company was sued for infringement of a patent covering the technology.[245]

The warranty of noninfringement will be breached if a substantial claim of infringement is brought by a third-party.[246] Courts hold that a judicial finding of infringement is not required.[247] Rather, it is sufficient if there is a "non-frivolous claim of infringement that has any significant and adverse effect, through the prospect of litigation or otherwise, on the buyer's ability to make use of the purchased goods."[248] That interpretation is especially important for software transactions.[249] As noted, the great number and broad language of software patents make it a real risk that anyone dealing with software could be sued for patent infringement.[250] The warranty of non-infringement warrants not just that the buyer will not infringe any patents, but that no one will even claim that the buyer is not infringing any patents.[251] That is a very broad warranty that few software distributors would care to make.

That raises the question of how a seller can avoid making the warranty. Section 2-312 does not state specifically how to exclude the warranty of non-infringement.[252] Subsection 2, which requires specific language or special circumstances to exclude a warranty, re-

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[245] *See* Phoenix Solutions, Inc. v. Sony Electronics, Inc., 637 F. Supp. 2d at 683, 700 (N.D. Cal. 2009) (denying the third party defendant's motion for summary judgment claiming Sony supplied them with specifications to be customized, and thereby falling under the exception in U.C.C. § 2-312(3)).
[246] *See* U.C.C. § 2-312 cmt. 3 (discussing third party role in non-infringement warranties).
[247] *See id.* (indicating that it is the seller's duty "to see that no claim of infringement of a patent or trademark by a third party will mar the buyer's title").
[248] *See Phoenix Solutions*, 637 F. Supp. 2d at 696 (quoting Pacific Sunwear of California, Inc. v. Olaes Enters., Inc., 84 Cal. Rptr. 3d 182, 194 (Cal. Ct. App. 2008)).
[249] *See* Phoenix Solutions, 637 F. Supp. 2d at 696 (reiterating how an appropriate claim sits somewhere "between a purely frivolous claim and a claim that has been proven to show liability").
[250] *See id.* (calculating that a claim for patent infringement is risky because no court has specifically held claim construction as a necessary requirement to a rightful claim).
[251] *See* U.C.C. § 2-312 (acknowledging that it is the duty of the seller to ensure that no claim of infringement will interfere with the buyer's title).
[252] *See* U.C.C. § 2-312(1)(a) (specifying that "title conveyed shall be good").

fers specifically only to the warranty of title in Subsection 1.[253] By contrast, subsection 3 simply provides that the Seller will make a warranty of title "unless otherwise agreed."[254] That seems to provide the parties more flexibility to exclude the warranty. If that is the case, the GPL might exclude the warranty of noninfringement even though it does not specifically refer to noninfringement or the like. The next section discusses whether the GPL could be interpreted to exclude the warranty of noninfringement because such exclusion is "agreed."[255] The following section follows another possibility.[256] The Uniform Commercial Code seeks to adapt to commercial practices.[257] It will incorporate into the transaction terms that are sufficiently widely used in the field, under the rubric of "usage of trade."[258]

It is worth noting that the UCC is consistent with the recent attempt of the American Law Institute to state the principles of software law.[259] The ALI Principles of Software Contracting would provide for an indemnity of infringement, the equivalent of a warranty of noninfringement.[260] The ALI would require specific language to ex-

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[253] *See* U.C.C. § 2-312(2) (describing exclusions or modifications of warranties under subsection 1).
[254] *See* U.C.C. § 2-312(3) (solidifying the duty of a seller to ensure good title to third party buyers).
[255] *See infra* pp. 24-31.
[256] *See infra* pp. 34-7 (discussing an explicit exclusion of a warranty for infringement).
[257] *Uniform Commercial Code*, USLEGAL, INC., *archived at* http://perma.cc/CHN7-8QLU (identifying the UCC as a "comprehensive modernization of various statutes relating to commercial transactions").
[258] *See* U.C.C. § 2-314(3) (stating that implied warranties may arise from the "course of dealing or usage of trade").
[259] *See* PRINCIPLES OF THE LAW OF SOFTWARE CONTRACTS §13.09 (2014) (stating that the American Law Institute's Principles of the Law of Software Contracts replaced the warranty against infringement in the UCC Article 2,which created a warranty whenever a licensor makes representations that a licensee would reasonably rely on and limits disclaimers of warranties which the licensee would find unexpected); *see also Here's a Quick Way to Understand Uniform Commercial Code*, LAWS.COM, *archived at* http://perma.cc/75MZ-SKHC (noting the ALI's role in developing the UCC).
[260] *See* Kristie Prinz, *Series on ALI Software Contract Principles: Changes Default Rule from Implied Warranty to Implied Indemnification Against Infringment*, SILICON VALLEY IP LICENSING LAW BLOG (June 4, 2009), *archived at* http://perma.cc/L5A6-K6AF (explaining the ALI principles for implied indemnification in a software contract).

clude the warranty, thus making it even more likely that the GPL and similarly worded languages do not exclude the warranty.[261] The indemnity would be excluded only by an exclusion that is "conspicuous, and uses language that gives the transferee reasonable notice of the modification or notice that the transferor has no obligation to indemnify the transferee."[262] However, like the UCC, the Principles would allow for exclusion based on usage of trade.[263] The Principles provide, however, that no indemnity of infringement would be made where no money was charged for the software, which would mean that most free software would not be subject to the indemnity obligation.[264] The commentary specifically noted that this would make sense, where parties contribute free software without a charge.[265]

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[261] *See* AMERICAN LAW INSTITUTE, PRINCIPLES OF THE LAW OF SOFTWARE CONTRACTS § 3.01(e) (2010) (allowing the transferor disclaimer of an indemnification obligation).

[262] *Id.* at § 3.01(e)(1) (noting the requirements for a transferor to be disclaimed of indemnification obligations).

[263] *See id*. at § 3.01(e)(2) (stating that indemnification may be "excluded or modified . . . by course of performance, course of dealing, or usage of trade").

[264] *See id.* at § 3.01 cmt. a (specifying that indemnity is applicable only in cases where the transferor receives money for the software).

[265] *See* AMERICAN LAW INSTITUTE, PRINCIPLES OF THE LAW OF SOFTWARE CONTRACTS § 3, topic 1, summary overview (noting that requiring open source software developers to indemnify each other would have a "chilling effect"):

> The Principles do not imply indemnification by the transferor if the transferor did not receive money or the right to payment of a monetary obligation in exchange for the software. This would be the case for many collaborators in the open-source community who routinely exchange code without requiring monetary compensation in return. Open-source developers often are a large, diverse group and individual contributors may not have access to counsel to assist them in evaluating copyright or trade-secret claims or searching for patents, many of which may be invalid. An indemnification duty therefore may have a chilling effect on participation in open-source projects. *Id.*

V. Whether the GPL Excludes the Warranty of Noninfringement by Agreement

Under 2-312, the parties to a transaction may agree to exclude the warranty of noninfringement.[266] This rule is more flexible than with the exclusion of the warranty of title, which must be excluded by specific language, such as "seller hereby forsakes and quit claims all of his right, title, and interest in acts two buyer."[267] The language must be specific and certain.[268] The statement that seller sold his "'right, title and interest'" and that to "'his knowledge there was no title and existence by way of registration with the state of Michigan or with any other state or with any notion'" was insufficient.[269] By contrast, "the warranty against infringement in section 2-312 is applicable '[u]nless otherwise agreed.' This phrase does not appear to be as stringent as the specific language requirement in 2-312(2)."[270] One might argue that the GPL excludes the warranty of noninfringement by agreement where it clearly states that the software is transferred "WITHOUT WARRANTY OF ANY KIND."[271]

However, there are several obstacles to this position.[272] First, within the context of the paragraph excluding warranties, the exclusion is directed only at warranties of quality.[273] It expressly mentions the implied warranties of merchantability and fitness for a particular purpose, both warranties of the quality of the goods.[274] The follow-

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[266] *See* U.C.C. § 2-312(3) (stating that a warranty of title is in effect by default "unless otherwise agreed").
[267] WHITE & SUMMERS, *supra* note 120, at 504-05.
[268] *See* U.C.C. § 2-312(2) (indicating that specific language must be used to exclude or modify a warranty of title).
[269] Jones v. Linebaugh, 191 N.W.2d 142, 144 (Mich. Ct. App. 1971).
[270] WHITE & SUMMERS, *supra* note 120, at 505, n.15.
[271] *See, e.g.*, Bunge Corp. v. N. Trust Co., 623 N.E.2d 785, 791-92 (Ill. App. Ct. 1993) (inferring that the term warranty can be construed to include warranty of non-infringement without stating the precise terms infringe or infringement, because the term warranty equates to ownership); *GNU General Public License*, *supra* note 2 (displaying the language "WITHOUT WARRANTY OF ANY KIND" in its disclaimer of warranty provision).
[272] *See GNU General Public License*, *supra* note 2 (providing a disclaimer of warranty within the terms and conditions of the license).
[273] *See GNU General Public License*, *supra* note 2 (stating the licensee bears the burden of any issues as to quality and performance of the programs).
[274] *See GNU General Public License*, *supra* note 2 (disclaiming explicitly the implied warranties of merchantability and fitness for a particular purpose).

ing sentence then emphasizes that there are no warranties with respect to how the software works: "THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION."[275] Within the paragraph, there are no references to infringement of third party rights.[276] Other portions of the GPL discuss copyrights, patents and trademarks, without any indication that there is an exclusion of warranty with respect to such rights.[277] Portions of the most recent version of the GPL specifically discuss patent rights in considerable detail, again without any limitation on the warranty of noninfringement.[278] As a matter of interpretation of the license, it appears difficult to argue that the language constitutes an agreement that there is no warranty of noninfringement.[279]

Second, a greater obstacle perhaps lies in the legal nature of the GPL. The drafters of the GPL have firmly taken the position that the GPL does not represent an agreement between the licensor and license fees.[280] Rather, it is considered to be a unilateral transfer of rights, not dependent on any agreement between the parties.[281] The drafters of the GPL consider it to be a "bare license," rather than a contractual agreement.[282] Under this theory, someone who distributes code under the GPL gives permission to others to use that code without infringing copyright, but only subject to the terms of the

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[275] *GNU General Public License*, *supra* note 2.
[276] *See GNU General Public License*, *supra* note 2 (making no reference to infringement of third party rights).
[277] *See GNU General Public License*, *supra* note 2 (mentioning no infringement of third party rights in any other section of the license).
[278] *See GNU General Public License*, *supra* note 2 (outlining patent rights with no mention of any limitation on the warranty of noninfringement).
[279] *See GNU General Public License*, *supra* note 2 (postulating that the absence of any language on warranty of noninfrigment suggests no agreement has been made).
[280] *See* Lothar Determann, *Dangerous Liaisons – Software Combinations as Derivative Works,* 21 BERKELEY TECH. L.J. 1421, 1491-92 (2006) (stating the GPL allows licensees to sell and resell copies).
[281] *See id.* at 1494 (explaining that the software transfer is considered a transfer of rights between the licensees).
[282] *See* Mark R. Patterson, *Must Licenses Be Contracts? Consent and Notice in Intellectual Property*, 40 FLA. ST. U. L. REV. 105, 107-08 (2012) (inferring that the GPL insists on "bare licenses" because they are advocates of open source software).

GPL.[283] If someone uses the code in a way that does not comply with the terms of the GPL, then that permission is terminated and the person may infringe the copyright in the code, such as by redistributing it without permission from the copyright holder.[284] The GPL, under this view, is a one-way grant of permission, not a two-way agreement.[285]

In the words of the general counsel for the Free Software Foundation:

> The word 'license' has, and has had for hundreds of years, a specific technical meaning in the law of property. A license is a unilateral permission to use someone else's property. The traditional example given in the first-year law school Property course is an invitation to come to dinner at my house. If, when you cross my threshold, I sue you for trespass, you plead my 'license,' that is, my unilateral permission to enter on and use my property. A contract, on the other hand, is an exchange of obligations, either of promises for promises or of promises of future performance for present performance or payment.[286]

Under this bare license view of the GPL, there is no agreement between the licensor and the licensee. [287] If that is the case, then an exclusion of the warranty of noninfringement could not be something "otherwise agreed" to by the parties.[288]

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[283] *See id*. at 135-38 (discussing GPL restrictions on bare licenses).
[284] *See id*. at 137-38 (stating that the GPL terminates permissive use in the event of a violation).
[285] *See id*. at 135 (specifying that the permissions were free from restrictions between the parties).
[286] *The GPL is a License, Not a Contract, Which is Why the Sky Isn't Falling,* GROKLAW (Dec. 14, 2003), *archived at* http://perma.cc/8KH5-3NAR (discussing why the GPL code is a license rather than a contract).
[287] *See* Patterson, *supra* note 282, at 107-08 (noting that "[p]rominent advocates of open source copyright licensing vigorously contend that access to open-source software is granted through property-law 'bare licenses' whose terms are binding on licensees even without their consent").
[288] *See* Patterson, *supra* note 282, at 108 (adopting the view that licensing restrictions are only enforceable with a contract as long as there is constructive notice by the owner).

However, it may well be that the GPL is treated by the law as an agreement, notwithstanding the view of its drafters.[289] The author of a legal instrument does not define its legal character.[290] Nowhere more than commercial law do courts reach conclusions counter to the view of the parties.[291] A "lease" is often treated as a security agreement.[292] A "confirmation" may be treated as the contract itself.[293] A promissory note labeled "Negotiable" will readily be held nonnegotiable (and so not subject to the holder in due course doctrine).[294]

As Professor Patterson has shown, there is relatively little specific legal support for the "bare license" theory of the GPL.[295] In real property, there might be a bare license, such as permission to enter land, which would mean the recipient was not trespassing.[296] Such a license might be subject to conditions.[297] But with respect to personal property, transfers of property interests subject to conditions have been much less likely to be enforced by courts.[298] As many

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[289] *See* Patterson, *supra* note 282, at 148 (illustrating how assent is formed regardless of the user's lack of notice of the license).

[290] *See, e.g.*, JAMES BROOK, SECURED TRANSACTIONS: EXAMPLES & EXPLANATIONS, 25-27 (4th ed. 2008) (discussing how some leases may be considered security agreements under Article 9 of the UCC "irrespective of the form in which it is initially presented to the world").

[291] *See* Gomulkiewicz, *supra* note 30, at n.18 (displaying the common controversy regarding critiques of commercial law court opinions).

[292] *See* BROOK, *supra* note 290 (describing forms made to look like leases, but in actuality are security agreements).

[293] *See* Maria del Pilar Perales Viscasillas, *Battle of the Forms, Modification of Contract, Commercial Letters of Confirmation: Comparison of the United Nations Convention on Contracts for the International Sale of Goods (CISG) with the Principles of European Contract Law (PECL)*, 14 PACE INT'L L. REV. 153, 158-161 (2002) (discussing that contract modifications in a commercial confirmation letter can be accepted by the recipient's silence).

[294] See Michael P. Sullivan, Annotation, *Effect on Negotiability of Instrument, Under Terms of UCC §3-104(1) of Statements Expressly Limiting Negotiability or Transferability*, 58 A.L.R.4TH 632 § 2[a] (1987) (highlighting that a negotiable promissory note can be made nonnegotiable by writing "nonnegotiable" on the face of the instrument).

[295] *See* Patterson, *supra* note 282, at 108 (discussing the "bare license" theory).

[296] *See* Patterson, *supra* note 282, at 117-18 (discussing how "bare licenses" could apply to real property).

[297] *See* Patterson, *supra* note 282, at 117-18 (noting that a licensor can grant permission for licensee to enter property "for specific purposes").

[298] *See* Patterson, *supra* note 282, at 119 (noting that "few personal property cases have enforced this form of restriction").

have noted, intellectual property is quite different than other forms of property, and one cannot simply assume that real property concepts will be readily applicable to intellectual property.[299] There are also good policy reasons not to introduce new legal forms into the already crowded legal structure of property, where the same result can be achieved quite simply with the existing law of contract, with its resources for treating the many issues of enforceability and scope that will likely arise.[300] This certainly does not mean that the bare license theory of the GPL would not ultimately be accepted by courts.[301] But it would be difficult to describe it as something on which a licensor could rely.[302]

Characterizing restrictive licenses as two-sided contracts rather than one-sided bare licenses also means, as Professor Patterson shows, that parties will be protected against terms they could otherwise be subject to without notice.[303] The drafters of the GPL have offered a reason for not requiring acceptance of the GPL; it is more efficient to have a single grant of rights subject to restrictions, as opposed to getting the other party to agree to those restrictions.[304] But such efficiency is likely outweighed by the hazard of a party being subject to restrictions without consent or notice of them.[305]

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[299] *See* Thomas W. Merrill & Henry E. Smith, *The Property/Contract Interface*, 101 COLUM. L. REV. 773, 774-75 (2001) (highlighting the legal uncertainties of applying real property law to intellectual property).

[300] *See* Patterson, *supra* note 282, at 109 (establishing the drawbacks in the current legal landscape).

[301] *See* Patterson, *supra* note 282, at 109 (acknowledging the reluctance of courts to enforce non-contractual intellectual property license restrictions).

[302] *See* Patterson, *supra* note 282, at 110 (emphasizing the inherent difficulties of authors relying on such novel property rights).

[303] *See* Patterson, *supra* note 282, at 147-150 (providing example of limited protection under bare licenses in comparison to two-sided contracts).

[304] *See* Patterson, *supra* note 282, at 147-48, (quoting Richard M. Stallman,"[t]here's another reason not to use contract law: It would require every distributor to get a user's formal assent to the contract before providing a copy. To hand someone a CD without getting his signature first would be forbidden. What a pain in the neck!")

[305] *See* Patterson, *supra* note 282, at 148 (discussing the concerns of parties being subject to restriction of which they are unaware).

In addition, the GPL itself undercuts the idea that no agreement is required between the parties.[306] The most recent version of the license provides "Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so." [307] The previous version, which is still perhaps more widely used, is even more demanding: "Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it." [308]

Trying to make this language consistent with the bare license theory requires conjuring a rather strange hybrid: a wholly unilateral grant of permission, which is effective only if the other party agrees to it.[309] In addition, the grant would be deemed to terminate if the party, having accepted the license, does not subsequently comply with all its terms and conditions.[310] A GPL case would be one where the question would be such matters as whether a party agreed to the terms of a software license, the content of those terms (such as, whether the GPL excluded the warranty of noninfringement), whether the party complied with those terms, and if not, the consequences of noncompliance.[311] It seems unlikely that a court dealing with a GPL case would be able to construct an entirely new area of law and fashion rules to govern not just that case, but future cases involving the GPL.[312] Rather, contract law already provides a body of law dealing with the question of when a voluntary obligation is enforcea-

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[306] *See GNU General Public License, Version 3*, OPEN SOURCE INITIATIVE (June 29, 2007), *archived at* http://perma.cc/M9BS-YLL3 [hereinafter *GPL Version 3*] (discussing the terms of the license agreement in the preamble).
[307] *Id*.
[308] *GNU General Public License, Version 2*, OPEN SOURCE INITIATIVE (June 2, 1991), *archived at* http://perma.cc/KU63-GNYB [hereinafter *GPL Version 2*].
[309] *See id.* (conditioning permission to modify or distribute the program or its derivative works on acceptance of License); *see also GPL Version 3*, *supra* note 306 (noting that acceptance of license terms is required for modifying or propagating covered works).
[310] *See GPL Version 3, supra* note 306 (discussing basis for automatically terminating the license).
[311] *See* Kumar, *supra* note 117, at 14-15 (discussing the potential contract litigation that could arise under the GPL).
[312] *See* Kumar, *supra* note 117, at 19-20 (inferring this idea from the reliance on contract law for GPL disputes).

ble, what the content of the obligation is, what the conditions apply to the obligation, and the effects of failure to live up to terms and conditions attached to the obligation.[313]

Contract law rules on offer and acceptance, for example, would likely be applied to the GPL, to sort out whether a party accepted the terms of the GPL.[314] Under existing case law, it is hardly clear that someone would accept all the terms of the GPL simply "by modifying or distributing" code distributed under the GPL, especially if the party had not read the relevant language.[315] There was a time when shrinkwrap licenses might be enforceable, where a party might be deemed to agree to the terms of a license that was not seen until the shrinkwrap around a package of software was removed.[316] Where such licenses were quite common and the only alternative was a burdensome procedure such as requiring prior consent by purchasers at the point of purchase, enforceability of such unseen and unagreed - to provisions had countervailing policies in support.[317] But now software pervasively and easily can require the checking of a box to receive positive agreement.[318]

This does not mean that every use of the GPL would require getting explicit agreement, such as checking a box in a window be-

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[313] *See* Kumar, *supra* note 117, at 24-25 (examining the GPL within the framework of contract law, including promissory estoppel).

[314] *But see* Kumar, *supra* note 117, at 16 (concluding that the GPL is not a contract).

[315] *Cf.* Theresa Gue, *Triggering Infection: Distribution and Derivative Works Under the GNU General Public License*, 2012 U. ILL. J.L. TECH. & POL'Y 95, 101-102 (discussing the potential implications of a user modifying or distributing code under the GPL).

[316] *Cf.* Apik Minassian, *The Death of Copyright: Enforceability of Shrinkwrap Licensing Agreements*, 45 UCLA L. REV. 569, 571 (1997) (discussing typical shrinkwrap licenses including those that are contained within a package and bind the user upon opening).

[317] *See* Sean F. Crotty, *The How and Why of Shrinkwrap License Validation Under the Uniform Computer Information Transactions Act*, 33 RUTGERS L.J. 745, 758-59 (2002) (inferring that the benefits of shrinkwrap licenses outweigh the burden of requiring prior consent of consumers).

[318] *See* Ed Bayley, *The Clicks That Bind: Ways Users "Agree" to Online Terms of Service*, ELECTRONIC FRONTIER FOUNDATION (Nov. 16, 2009), *archived at* http://perma.cc/W7K8-LY3T (describing that with a simple clicking of a box users may be binding themselves to a contract as stated in the terms of agreement).

fore using the software.[319] Rather, the UCC and contract law generally provide a flexible framework that accommodates commercial realities.[320] In the case of the GPL, there is the special circumstance that the GPL is extremely well-known.[321] If, for example, someone knows of the GPL and sees any reference to the GPL in acquiring the software, they might well be deemed to accept at least its general terms.[322] Without a clear acceptance of the terms of the GPL, a contract could also be formed by the conduct of the parties.[323] UCC 2-204(1) sets a broad, flexible framework for recognizing contracts without formalities: "(1) A contract for sale of goods may be made in any manner sufficient to show agreement, including conduct by both parties which recognizes the existence of such a contract."[324]

There could be agreement to the GPL, even without specific agreement.[325] That leaves the question, however, of whether all the terms of the GPL would be included in the contract.[326] A contract would not automatically include all the terms of the GPL.[327] Under UCC 2-207(3):

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[319] *See* Mark A. Lemley, *Terms of Use*, 91 MINN. L. REV. 459, 464-65 (2006) (explaining that assent is not required by both parties to bind parties to a contract).

[320] *See Uniform Commercial Code Article 2B Licenses*, MINDSERPENT.COM (Mar. 10, 1998), *archived at* http://perma.cc/B5V5-DA5D (stating that the UCC and contract law have flexible standards).

[321] *See* Wallace v. IBM, 467 F.3d 1104, 1107 (7th Cir. 2006) (stating that "copyright and patent laws give authors a right to charge more, so that they can recover their fixed costs (and thus promote innovation), but they do not require authors to charge more. No more does antitrust law require higher prices"). Although the GPL is very widely used for free software, the Seventh Circuit rejected the argument that its use constituted a conspiracy at monopolization of relevant software markets or an illegal agreement to set prices for software. *See id.* at 1106.

[322] *See* Crotty, *supra* note 317, at 757 (inferring that if a consumer sees reference to the GPL and subsequently opens up the product the contractual terms contained in the GPL is now binding).

[323] *See* Crotty, *supra* note 317, at 755 (inferring that explicit assent is not required by both parties to form a contract); *see also* Lemley, *supra* note 319, at 464-65 (reaffirming the idea that mutual assent is not required to bind both parties to a contract).

[324] U.C.C. § 2-204(1).

[325] *See* U.C.C. § 2-207(3) (stating that in the absence of an actual contract, conduct that recognizes a contract can be sufficient to establish one).

[326] *See id.* (inferring that the terms of the GPL may not be included in a contract established by conduct).

[327] *See id.* (inferring that the GPL would not be incorporated into a contract established by conduct under other provisions of the UCC)).

> Conduct by both parties which recognizes the existence of a contract is sufficient to establish a contract for sale although the writings of the parties do not otherwise establish a contract. In such case the terms of the particular contract consist of those terms on which the writings of the parties agree, together with any supplementary terms incorporated under any other provisions of this Act.[328]

In sum, it remains unclear whether agreement is required to make the GPL enforceable, what would constitute agreement to the GPL, and what terms of the GPL would be included if the agreement was based on implied assent or conduct.[329] The next section considers whether an exclusion of the warranty of noninfringement would be made under the UCC, as a usage of trade.[330]

VI. "Usage of Trade" and Free Software Licenses

Under the Uniform Commercial Code, warranties may be excluded by usage of trade.[331] For warranties of quality, § 2-316 is explicit on this point.[332] One might apply the same reasoning to the warranty of noninfringement.[333] Along the same lines, § 2-312 states that the warranty of title may be excluded "by circumstances which give the buyer reason to know that the person selling does not claim title in himself or that he is purporting to sell only such right or title as he or a third person may have."[334] An auctioneer need not state a disclaimer of warranty of title if it is clear that the auctioneer is simp-

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[328] *Id*.
[329] *See id*. (referencing that this provision still needs to be interpreted in regards to the incorporation of the GPL).
[330] *See infra* pp. 35-38 (outlining when warranties may be excluded by usage of trade).
[331] *See* U.C.C. § 2-312 (codifying buyers obligation against infringement but also supplying the ability to modify the warranty provided); *see also* U.C.C. § 2-316 (codifying exclusion or modification of warranties).
[332] *See* U.C.C. § 2-316 (stating explicitly, "an implied warranty can also be excluded or modified by course of dealing or course of performance or usage of trade").
[333] *See id.* (inferring that based on the scope and language included in the exclusion or modification of warranties the application could be easily applied).
[334] U.C.C. § 2-312.

ly selling goods for others without knowledge of their provenance.[335] Although that provision does not address the warranty of noninfringement, the reasoning would seem applicable.[336] Indeed, the standard for excluding the warranty of noninfringement is less strict, so something that could exclude the warranty of title should be able to exclude the less sticky warranty of noninfringement.[337] Could the warranty of noninfringement be excluded under that clause, on the theory that free software is known to be sold without a warranty of noninfringement? The factual question is similar to whether usage of trade excludes the warranty.[338] Both questions would rest on the common expectation of those who deal with free software license.[339] This section addresses that question by looking at free software licenses. Were the issue litigated, there could be other evidence about the understanding of those in the trade.[340] The U.C.C. defines "usage of trade" as:

> Any practice or method of dealing having such regularity of observance in a place, vocation, or trade as to justify an expectation that it will be observed with respect to the transaction in question. The existence and scope of such a usage must be proved as facts. If it is established that such a usage is embodied in a trade code or similar record, the interpretation of the record is a question of law.[341]

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[335] *See* U.C.C. § 2-316 (announcing that "…unless the circumstances indicate otherwise, all implied warranties are excluded by expressions like 'as is,' 'with all faults' or other language which in common understanding calls the buyer's attention to the exclusion of warranties and makes plain that there is no implied warranty"). It is commonly understood at an auction that all goods are sold as is to the highest bidder.

[336] *See id.* (inferring that based on the reasoning behind § 2-316, it follows that the same should apply to warranty of noninfringement).

[337] *See id.* (determining the standard for the warranty of noninfringement).

[338] *See id.* (explaining the proposition that when dealing with the usage of trade, an implied warranty can be excluded or modified).

[339] *See GNU General Public License*, *supra* note 2 (discussing the commonly held idea that free software has a warranty of noninfringement).

[340] *See Software Warranties*, SOFTWARE CONTRACTS. NET (2008), *archived at* http://perma.cc/4YJK-NAS3 (explaining that off the shelf software is often sold on an "as-is" basis).

[341] U.C.C. § 1-303.

The question would be whether there is sufficient evidence that those trading in free software would expect to receive no warranty of infringement.[342]

There is, however, precious little written on whether the warranty of noninfringement is provided with free software, or even with software generally.[343] Software developers often have considerable knowledge of the terms of software licenses.[344] The Debian Legal listserve includes reams of acute analysis of the applicability of various software licenses to factual situations, along with practical resolution of licensing issues.[345] Discussions are readily found online of the legal implications and the interpretation of software licenses.[346] Among coders, the most frequent discussion of warranties in general covers what sort of actions can be taken with code or devices without voiding the warranty under which it was provided.[347] There is little discussion of whether free software comes with a warranty, presumably because the licenses, like the GPL, are so clear that they intend to provide no warranty.[348] As noted, no one seems to have discussed

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[342] *See* U.C.C. § 2-316 (dealing with the usage of trade and the warranty of noninfringement);. *Ssee also GNU General Public License*, *supra* note 2 (inferring the implications of free software).

[343] *See Intellectual Property Indemnity Clauses*, INTELLECTUAL PROP. & TECH. FORUM (Apr. 23, 2014), *archived at* http://perma.cc/UG63-6GUC (inferring that a previous lack of interest on the part of the legal community has led to a lack of precautionary measures in this area).

[344] *See* E. GABRIELLA COLEMAN, CODING FREEDOM: THE ETHICS AND AESTHETICS OF HACKING, 119 (Princeton Univ. Press 2012) (explaining how software developers place a high emphasis on continuous learning to promote technological advancement).

[345] *See DFSG and Software License FAQ (Draft), archived at* http://perma.cc/8SH6-HELN (clarifying legal inquiries presented by users about free software licensing); *see also* Coleman, *supra* note 344, at 143 (noting that the Debian community provides a platform for software licensing improvement.)

[346] *See DFFSG and Software License FAQ (Draft)*, *supra* note 345 (addressing common issues experienced by users of free software licensing).

[347] *See DFSG and Software License FAQ (Draft)*, *supra* note 345 (outlining three forms of software licensing actions that are available to users for their specific needs).

[348] *See, e.g.*, *GNU General Public License*, *supra* note 2 (protecting developers and authors by disclaiming that there is no warranty for GPL's free software).

the fact that this blanket exclusion does not specifically include an exclusion of the warranty of noninfringement.[349]

One tangible source of whether free software transactions exclude the warranty of noninfringement is the licenses themselves.[350] The following are culled from a database of free licenses compiled by the Free Software Foundation.[351]

The Apache License, widely used for many Internet servers, expressly excludes the warranty of noninfringement (bolded below), unlike the GPL:

> Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, **NON-INFRINGEMENT**, MERCHANTABILITY, or FITNESS FOR APARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.[352]

The Artistic License is similar:

> DISCLAIMER OF WARRANTY: THE PACKAGE IS PROVIDED BY THE COPYRIGHTHOLDER AND CONTRIBUTORS "AS IS' AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES. THE

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[349] *See Intellectual Property Indemnity Clause*, *supra* note 343 (omitting discussion of any exclusion of the warranty of noninfringement).

[350] *See* Matthew Hennessy & Mark Weber, *Software License Agreements – 3 Key Provisions (Scope, Infringement and Cap)*, LEXOLOGY (Nov. 14, 2011), *archived at* http://perma.cc/44RQ-HHXU (discussing that a non-infringement warranty will be excluded if not explicitly expressed within the software license).

[351] *See Various Licenses and Comments about Them*, GNU OPERATING SYSTEM, *archived at* http://perma.cc/33PS-CTT5 (listing free licenses that exclude warranties of non-infringement).

[352] *Apache License*, *supra* note 100.

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The BSD license, another widely used license, stemming from the BSD Unix project, is similar to the GPL:

> Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:
> (1) Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
> (2) Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
> (3)The name of the author may not be used to endorse or promote products derived from this software without specific prior written permission…
> THIS SOFTWARE IS PROVIDED BY THE [LICENSOR] ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,

[353] *Artistic License 2.0.,* THE PERL FOUND., *archived at* http://perma.cc/WWF5-A698.

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The Intel Open Source License specifically excludes the warranty of noninfringement:

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Other corporate licenses, such as the IBM Public License, Version 1.0, are also careful to exclude the warranty of noninfringement specifically.[356] But the Standard ML of New Jersey Copyright License,

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[354] *BSD License Definition*, supra note 39.

[355] *Licensing/Intel ACPI Software License Agreement*, THE FEDORA PROJECT, *archived at* http://perma.cc/FG94-LYZX.

[356] *See IBM Public License Version 1.0*, OPEN SOURCE INITIATIVE, *archived at* http://perma.cc/EE9W-VWWV (applying no warranty to noninfringement).

issued by the large telecommunications company Lucent (successor to the fabled Bell Labs), did not.[357]

The Modified BSD license does not exclude the warranty of noninfringement, even though the drafter took great pains to exclude a great variety of possible forms of liability, suggesting once again that the warranty of noninfringement is simply not on the radar screen of free software licensors:

> THIS SOFTWARE IS PROVIDED [BY THE AUTHOR] ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL [THE AUTHOR] BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGE (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.[358]

The CeCILL is the one license to exclude the warrant of noninfringement any way other than simply using the single word.[359] The license was drafted in French and perhaps reflects the expertise avail-

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[357] *See Standard ML of New Jersey Copyright, Notice, License, and Disclaimer*, STANDARD ML OF NEW JERSEY, *archived at* http://perma.cc/R6J6-EV3Y (excluding a specific statement disclaiming any warranty of noninfringement).

[358] *BSD License Definition*, *supra* note 39.

[359] *See CeCILL Free Software License Agreement*, CECILL, *archived at* http://perma.cc/6MCA-GJP7 (declaring the exclusion of noninfringement by stating that "the Licensor does not either expressly or tacitly warrant that the Software does not infringe any third party intellectual right …").

able to its venerable listed authors, "CEA, a public scientific, technical and industrial research establishment; Centre National de la Recherché Scientifique; Institut National de Recherche en Informatique et en Automatique"

> 9.4 The Licensor does not either expressly or tacitly warrant that the Software does not infringe any third party intellectual property right relating to a patent, software or any other property right. Therefore, the Licensor disclaims any and all liability towards the Licensee arising out of any or all proceedings for infringement that may be instituted in respect of the use, modification and redistribution of the Software. Nevertheless, should such proceedings be instituted against the Licensee, the Licensor shall provide it with technical and legal expertise for its defense. Such technical and legal expertise shall be decided on a case-by-case basis between the relevant Licensor and the Licensee pursuant to a memorandum of understanding. The Licensor disclaims any and all liability as regards the Licensee's use of the name of the Software. No warranty is given as regards the existence of prior rights over the name of the Software or as regards the existence of a trademark. [360]

Note that the license, drafted by French lawyers, avoid the noisy BLOCK CAPITALS used by American lawyers to meet the requirements that an exclusion of warranty be CONSPICUOUS.[361]

The License of Python does carefully exclude the warranty of noninfringement, perhaps because the author of a leading free software licensing book is an attorney with the Python Software Foundation.[362]

> 4. PSF is making Python 2.0.1 available to Licensee on an "AS IS" basis. PSF MAKES NO

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[360] *Id.*
[361] *See id.* (excluding the use of "block capitals" from the French drafted license).
[362] *See History of PSF Officers & Directors*, PYTHON SOFTWARE FOUNDATION, *archived at* http://perma.cc/CK8A-QG5H (listing officers and directors between 2001 and 2014).

> REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED. BY WAY OF EXAMPLE, BUT NOT LIMITATION, PSF MAKES NO AND DISCLAIMS ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR THAT THE USE OF PYTHON 2.0.1 WILL NOT INFRINGE ANY THIRD PARTY RIGHTS. [363]

Earlier versions of the Python license did not so address the issue:

> STICHTING MATHEMATISCH CENTRUM [AND CNRI] DISCLAIM ALL WARRANTIES WITH REGARD TO THIS SOFTWARE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, IN NO EVENT SHALL STICHTING MATHEMATISCH CENTRUM OR CNRI BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE. [364]

It would appear unlikely that one working in the free software arena could reasonably assume that there was an implicit exclusion of the warranty of noninfringement.[365] Many licenses do not exclude the warranty of noninfringement.[366] The most frequently used license, the GPL itself, does not exclude the warranty of noninfringement, or even refer to it in the explanatory material on the Free Software Foundation's site.[367] In addition, because the warranty is so

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[363] *Python 2.0.1 License*, PYTHON, *archived at* http://perma.cc/6N8F-XJGB.
[364] *Id.*
[365] *See id.* (inferring that there are no implied warranties in the disclaimer).
[366] *See id.* (highlighting an example of a disclaimer that excludes the warranty of infringement).
[367] *See The Free Software Foundation (FSF) is a Nonprofit with a Worldwide Mission to Promote Computer User Freedom and to Defend the Rights of all Free Software Users,* FREE SOFTWARE FOUND., INC., *archived at* http://perma.cc/P8NM-4HYL (highlighting the Free Software Foundation and excluding any mention of the warranty of infringement).

frequently excluded expressly, it would appear that licensors are easily able to do so when they so wish.[368]

Beyond the brief exclusion of the warranty of noninfringement in some free software licenses, there is one case where parties license that addressed the matter in detail.[369] Red Hat Software distributes, among other things, its own version of Linux.[370] A few years ago, there was some uncertainty as to the rights to Linux.[371] A company called SCO stated claims (later rejected by the courts) that Linux infringed on copyrights held by SCO, on the theory that SCO held the rights to UNIX, on which Linux is based in part, and that IBM had contributed code to the Linux project that also infringed SCO's rights.[372] To reassure its customers, Red Hat expressly warranted that its software did not infringe SCO's rights and offered an indemnity to its customs in the event that SCO brought an action against them.[373] Likewise, Novell, Hewlett-Packard and Montavista offered their customers any indemnity against any claims.[374] One could argue from those actions that the industry understood the default to be no warranty of noninfringement, but a single, unusual case is difficult to use as the basis for evidence of a trade usage.[375]

VII. Expressly Excluding the Warranty of Noninfringement

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[368] *See id*. (inferring that the excluded warranty is frequently not used by users).
[369] *See* The SCO Inc., 578 F.3d 1201, at 1204 (10th Cir. 2009) (discussing a singular example of licensing rights).
[370] *See* Silverthorne, *supra* note 167 (pointing to Red Hat selling versions of Linux software).
[371] *See* SCO, 578 F.3d at 1206-07 (introducing the confusion with Linux licensing agreements with SCO).
[372] *See* Jonathan Zittrain, *Normative Principles For Evaluating Free And Proprietary Software*, 71 U. CHI. L. REV. 265, 267 (2004) (describing history of disputes involving rights to Linux, an open source operating system).
[373] *See* Stephen Shankland, *Red Hat Offers Software Warranty*, CNET NEWS (Jan. 19, 2004), *archived at* www.perma.cc/BV6C-SZSS (introducing Open Source Assurance Program, which is offered by Red Hat to protect customers against copyright infringement).
[374] *See id.* (comparing similar indemnification plans used by Novell, Hewlett-Packard and Montavista).
[375] *See* SCO, 578 F.3d at 1206-07 (highlighting the complexities involved in copyrights under a purchase agreement which may or may not satisfy the warranty of infringement).

As the foregoing shows, it may well be that someone who distributes (especially by sale) software under the GPL may make a warranty of noninfringement. This section discusses several ways to reduce that risk by expressly and specifically excluding the warranty. The simplest way for someone to make the GPL exclude the warranty of noninfringement would be to insert that word into the exclusion of warranties, as many other free software licenses do.[376] But the GPL itself forbids any changes to its text: "Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed."[377] It is a little ironic that a license that freely allows computer code to be adapted forbids changing the legal code of the license itself.[378] One might reason that the same sort of freedoms that apply to software code should apply to legal code, perhaps even more strongly, given how legalese can bind people.[379] But there is a sound reason for the provision.[380] The GPL is a standardized license used for millions of computer programs.[381] If people were to customize the GPL, then someone using GPL'd software would have to read through the code of the license (or run it through software that compared the text to the Platonic GPL) to see what rights they would receive.[382] Creating new versions of the GPL would risk "forking" the GPL, putting more than one version in circulation so that parties could no longer rely on the familiar terms of the GPL and would have to expend resources in determining which version of the GPL they

[376] *See GNU General Public License*, *supra* note 2 (highlighting the easiest method of avoiding the default rule regarding the warranty for free software).
[377] *GNU General Public License*, *supra* note 2.
[378] *See GNU General Public License*, *supra* note 2 (banning individuals from modifying the terms of the GPL).
[379] *See Frequently Asked Questions about GNU Licenses*, *supra* note 190 (noting the near certainty that a modified license may be incompatible with the GNU GPL and offering the use of the exception offered by GPL version 3 as an alternative).
[380] *See Frequently Asked Questions about GNU Licenses*, *supra* note 190 (explaining that the most widespread license is the GNU GPL).
[381] *See Frequently Asked Questions about GNU Licenses*, *supra* note 190 (explaining that the "proliferation of different free software licenses is a burden").
[382] *See Frequently Asked Questions about GNU Licenses*, *supra* note 190 (allowing users to modify and customize the GPL as long as the new license is given another name, does not include the GPL preamble, and the instructions-for-use are modified and clearly do not mention the GNU).

were dealing with.[383] One could address this with clear attribution in the comments to affected code, but even keeping track of attribution would add considerably to the irksome task of attending to legalities where one simply wants to deal with software.[384]

Although the GPL forbids changes to its text, it likely would not infringe copyright to change the text.[385] Functional legal code is not copyrighted.[386] Insertion of a comma and a single word ("NONINFRINGEMENT") would not be the creation of a derivative work.[387] Moreover, fair use would permit any theoretical copyright infringement.[388] But although a change would not infringe copyright, it could possibly infringe the trademark GPL to use the term on a non-standardized form of the GPL.[389] Most important, perhaps, it would be counter to the spirit of free software, as well as counterproductive, and so an option that someone distributing free software may not choose, for reasons beyond legal technicalities.[390]

The most recent version of the GPL does provide a slightly less direct way to expand the exclusion of warranties, but only for material added by the licensor.[391] The GPL may not be changed, but may be supplemented (a license provision that echoes the UCC rule for parole evidence, which may not contradict the written terms of a

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[383] *Cf. Frequently Asked Questions about GNU Licenses*, *supra* note 190 (describing the "mere proliferation of different free software licenses" as "a burden in and of itself").

[384] *See Frequently Asked Questions about GNU Licenses*, *supra* note 190 (offering that it is possible to make multiple versions of the GPL although it tends to have practical consequences).

[385] *See Frequently Asked Questions about GNU Licenses*, *supra* note 190 (commenting that you are not required to claim a copyright on changes to modified versions of a GPL).

[386] *See GNU General Public License*, *supra* note 2 (explaining the terms and conditions of when copyrighting applies).

[387] *See* Gue, *supra* note 315, at 124-25 (highlighting the limits and abilities of creating a derivative work).

[388] *See* Gue, *supra* note 315, at 127 (indicating that under fair use, owners of GPL-covered work do not face liability for infringement).

[389] *See* Gue, *supra* note 315, at 102 (defining how the GPL works under the license theory).

[390] *See* Gue, *supra* note 315, at n.143 (discussing how a loophole in the GPL could become contrary to the spirit of the GPL).

[391] *See GNU General Public License*, *supra* note 2 (asserting that the GPL clearly states that there is no warranty for free software and some devices may deny users access to use modified versions of the software).

contract but may supplement it).[392] Section 7 of the GPL V.3 provides, in pertinent part:

> Notwithstanding any other provision of this License, for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms:
> a) Disclaiming warranty or limiting liability differently from the terms of sections 15 and 16 of this License;[393]

The GPL permits additional exclusions of warranty, but they would only apply to material added by the licensor.[394] That would leave considerable risk.[395] A party that adapted software would still make a warranty of noninfringement for the portions of the software that others had written.[396] A party that redistributed free software (with or without code she added to it) would make a warranty of noninfringement for the redistributed code.[397] That is a considerable limit, because most free software distributions include code from others.[398] It is a rare piece of software that does not build on others.[399] With respect to the GPL in particular, one reason it is commonly used is that

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[392] *See GNU General Public License*, *supra* note 2 (allowing the terms of the GPL to be supplemented through exceptions).

[393] *GNU General Public License*, *supra* note 2 (explaining how one can supplement terms of the license).

[394] *See GNU General Public License*, *supra* note 2 (noting that additional permissions on material can be added when one has the appropriate copyright permission).

[395] *See GNU General Public License*, *supra* note 2 (inferring that unless proper measures are instituted when sharing covered work issues might arise).

[396] *See GNU General Public License*, *supra* note 2 (explaining that when an individual is conveyed a copy of covered work, they then have the option to remove additional permissions from the copy).

[397] *See GNU General Public License*, *supra* note 2 (indicating that when a party redistributes software, this shared software will still be covered by a warranty of non-infringement).

[398] *See GNU General Public License*, *supra* note 2 (recognizing that when you share software that you have modified, you must pass the same freedoms that you received).

[399] *See GNU General Public License*, *supra* note 2 (suggesting that because free software is shared readily, it is rare that the software has not been changed since its creation).

the relevant distributor used code under the GPL, and so uses the GPL on the augmented distribution.[400]

In practice, it appears that parties go beyond what the GPL appears to permit, and add exclusions of warranty in their licenses. For example, the Micropolis GPL License Notice, in a provision entitled "ADDITIONAL TERMS per GNU GPL Section 7" seeks to eliminate every conceivable warranty, including the warranty of non-infringement.[401] The provision is worth quoting in full for its attempt to enumerate every conceivable legal risk:

> This disclaimer supplements the one included in the General Public License. TO THE FULLEST EXTENT PERMISSIBLE UNDER APPLICABLE LAW, THIS PROGRAM IS PROVIDED TO YOU "AS IS," WITH ALL FAULTS, WITHOUT WARRANTY OF ANY KIND, AND YOUR USE IS AT YOUR SOLE RISK. THE ENTIRE RISK OF SATISFACTORY QUALITY AND PERFORMANCE RESIDES WITH YOU. ELECTRONIC ARTS DISCLAIMS ANY AND ALL EXPRESS, IMPLIED OR STATUTORY WARRANTIES, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY, SATISFACTORY QUALITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT OF THIRD PARTY RIGHTS, AND WARRANTIES (IF ANY) ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE. ELECTRONIC ARTS DOES NOT WARRANT AGAINST INTERFERENCE WITH YOUR ENJOYMENT OF THE PROGRAM; THAT THE PROGRAM WILL MEET YOUR REQUIREMENTS; THAT OPERATION OF THE PROGRAM WILL BE UNINTERRUPTED OR ERROR-FREE, OR THAT

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[400] *See GNU General Public License*, *supra* note 2 (stating the GPL was designed to protect the freedoms of distributing and receiving copies of free software).

[401] *See Micropolis GPL License Notice*, MICROPOLIS (Feb. 4, 2010), *archived at* http://perma.cc/UX3N-7U78. (highlighting Micropolis's added express terms to the GPL to avoid any warranty liability under the license).

> THE PROGRAM WILL BE COMPATIBLE WITH THIRD PARTY SOFTWARE OR THAT ANY ERRORS IN THE PROGRAM WILL BE CORRECTED. NO ORAL OR WRITTEN ADVICE PROVIDED BY ELECTRONIC ARTS OR ANY AUTHORIZED REPRESENTATIVE SHALL CREATE A WARRANTY. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF OR LIMITATIONS ON IMPLIED WARRANTIES OR THE LIMITATIONS ON THE APPLICABLE STATUTORY RIGHTS OF A CONSUMER, SO SOME OR ALL OF THE ABOVE EXCLUSIONS AND LIMITATIONS MAY NOT APPLY TO YOU.[402]

If someone distributing code under the GPL were to add an exclusion of warranty that was in separate text, it is unlikely that there would be an objection or claim that it somehow violated the GPL.[403] It would not change the text of the GPL itself, and the goal of warranty exclusion is entirely consistent with the spirit of the GPL.[404]

In addition to adding language referring specifically to an exclusion of the warranty of noninfringement, a licensor could consider getting positive agreement to the terms of the license.[405] As discussed above, it is not clear whether the GPL's restrictions are effective without agreement by the person subject to the terms.[406] Obtaining consent would not only clarify that the warranty of noninfringement was excluded, but also make clear that the many other terms of the GPL were accepted.[407] But obtaining consent

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[402] *Id.*
[403] *See GNU General Public License*, *supra* note 2 (allowing users of the GPL to add terms to the GPL via separate text).
[404] *See GNU General Public License*, *supra* note 2 (listing disclaiming warranties that may be added to GPL text via separate text).
[405] *See* Vetter, *supra* note 13, at 138-139 (noting terms of GPL license enforceability may turn on whether there was explicit or implied assent).
[406] *See* Vetter, *supra* note 13, at 138-139 (examining uncertainty regarding enforceability of GPL license terms when there is express versus implied assent).
[407] See Patterson, *supra* note 282, at 148 (noting express consent to GPL would imply acknowledgment and acceptance of GPL terms).

would make distribution of the software less smooth, not to mention change the practice of dealing with free software.[408] Some would quite reasonably not view the risks (which in many cases, especially when the software is distributed without charge, would be minimal) as justifying requiring adding that layer of legality to a software distribution.[409]

VIII. Conclusion

The GPL, then, may have the effect of warranting that software it covers comes with a warranty of noninfringement. Whether that applies to any particular distribution would depend on many things: whether there was a charge for the software, whether the software was specially developed, and how a court might resolve a number of open legal issues: the applicability of the UCC to software, the interpretation of the little-litigated provisions of both the UCC and the GPL with respect to excluding warranties, and the legal nature of the GPL itself, as a bare license or a contract. Someone wishing to avoid those legal uncertainties could release code under the GPL, supplemented with a specific exclusion of the warranty of infringement – and perhaps obtain consent of the recipient to those terms. More broadly, it may be that courts have more occasions to address the legal effect of the GPL. The GPL has been a highly successful hack on software law. How it should be given effect in the many transactions it now reaches will requiring once again recalibrating a number of legal tools.

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[408] *See* Patterson, *supra* note 282, at 148 (discussing the difficulties of obtaining formal consent similar to that required in contract law in a free software setting).

[409] *See* Patterson, *supra* note 282, at 148 (noting the addition of express consent requirement wouldn't give consumers greater knowledge of risk because they will not likely read or understand the terms).