
I ACCEPT THE TERMS IN THIS AGREEMENT: MARKET EFFICIENCY IN CLICKWRAP AGREEMENTS AND OPEN SOURCE SOFTWARE

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Cite as: Patrick J. Mondri, *I Accept the Terms in This Agreement: Market Efficiency in Clickwrap Agreements and Open Source Software*, 2 SEVENTH CIRCUIT REV. 540 (2007), at <http://www.kentlaw.edu/7cr/v2-2/mondi.pdf>.

INTRODUCTION

It is pretty ubiquitous now, really. You have just come home from Circuit City, and you are excited about your new computer purchase. You rip open the box and see a piece of paper that indicates your warranty information. Skimming the terms and conditions over, you plug in the computer and turn it on. *Hill v. Gateway 2000*¹ upheld, in principle, the use of the “in-the-box” warranty and terms.

Fortunately, the warranty terms will not need to be invoked, at least for now: your computer has booted up properly. You proceed to load Windows XP, the standard operating system that came with your new purchase. Not content to use outdated software, you also purchase Windows Vista, the newest entry to the hacker-targeted family of Microsoft Windows operating systems.² You anxiously tear open the

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¹ 105 F.3d 1147 (7th Cir. 1997) (discussed in detail *infra*).

² See, e.g., Jason Meserve, *Four More Windows Flaws Patched*, NETWORK WORLD, Apr. 16, 2007.

box and drop in the CD (or, to be precise, DVD).³ You read the End-User License Agreement,⁴ included in small print on flimsy paper with the software.⁵ As the install process starts, you are prompted to agree with Microsoft's End User License Agreement, this time presented to you in a display on the screen. *ProCD v. Zeidenberg* upheld a similar licensing arrangement.⁶

After your purchase of Windows Vista, your wallet is feeling a little light.⁷ So, instead of purchasing Microsoft Office Professional 2007 for the retail price of \$437.99, you opt for the open source⁸ alternative, OpenOffice 2.1.⁹ You launch Internet Explorer (vowing to download Firefox¹⁰ at your earliest free moment) and access the

³ Microsoft Windows Vista is available for purchase on a DVD-ROM. *See generally* Wikipedia, *Windows Vista*, http://en.wikipedia.org/wiki/Windows_Vista (Apr. 24, 2007).

⁴ "An end user license agreement (EULA) is a legal contract between a software developer or vendor and the user of the software. It specifies in detail the rights and restrictions that apply to the software." *EULA Definition by the Linux Information Project*, <http://www.bellevuelinux.org/eula.html> (Feb. 28, 2006).

⁵ End User License Agreement (EULA) terms for Microsoft products can be found online. Microsoft, *Retail Software License Terms*, <http://www.microsoft.com/about/legal/useterms/default.aspx> (last visited Apr. 18, 2007).

⁶ *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447 (7th Cir. 1996) (the court upheld the use of a software license agreement that contained terms of use but were only disclosed after opening the software packaging and reviewing the agreement, discussed in detail *infra*).

⁷ Windows Vista Ultimate (full version) retails for \$379.99. Microsoft, *Windows Vista*, <http://www.microsoft.com/windows/products/windowsvista/editions/ultimate/default.msp> (last visited Apr. 18, 2007).

⁸ Open source software is software that is developed by communities of programmers, typically working for no pay. A further, detailed discussion is included *infra*.

⁹ OpenOffice 2.1 is an alternative to Microsoft Office and contains software that is functionally comparable to many Microsoft Office applications. Additionally, it supports file compatibility with Microsoft Office file formats. *See* OpenOffice.org, <http://www.openoffice.org/> (last visited Apr. 18, 2007).

¹⁰ Firefox is an open-source web browser that competes with Microsoft's Internet Explorer, performing similar functionality. *See* Mozilla, *Firefox Homepage*, <http://www.mozilla.com/en-US/firefox/> (last visited Apr. 18, 2007).

OpenOffice.org website. You download the software and launch the install program. Before you can continue, you are prompted to agree to the OpenOffice license, a close derivative of the General Public License (“GPL”), the license that governs many open source creations.¹¹ You agree to the license and are able to install OpenOffice. *Wallace v. IBM* upheld some aspects of the GPL.¹²

These seemingly routine activities have something in common: Judge Easterbrook. No, the good jurist does not engineer computers, program for Microsoft, or commune with anti-establishment open source programmers in Palo Alto, California. Rather, his forward-thinking decisions in *ProCD*, *Hill*, and *Wallace* paved the way for this series of actions to occur so seamlessly. Through these three decisions, applying sound reasoning based on minimizing transaction costs, Judge Easterbrook has progressively enabled technology innovation to continue in the Seventh Circuit.

Indeed, were it not for *ProCD*,¹³ *Hill*,¹⁴ and *Wallace*,¹⁵ this entire series of events may have been infinitely more complicated. *ProCD*, bolstered by *Hill*, helped shape the national judicial landscape, and other courts have adopted their reasoning. It is likely that *Wallace* will similarly influence the judiciary, as it comes during a crucial crossroads for open source software.

Spanning these decisions are themes of “law and economics.” This Note argues that by applying law and economics reasoning to software licensing issues, the result is a positive outcome for consumers in the promotion of software innovation. Part I of this Note examines *ProCD* and *Hill* as a foundation for the recent *Wallace*

¹¹ The GPL grants the recipients of a computer program broad rights to redistribute and modify the software. In return, the user must share changes and improvements made to the software with others, even when the work is changed or added to. See generally Charles Babcock, *What Will Drive Open Source?*, INFO. WEEK, Mar. 19, 2007 at 36.

¹² (“*Wallace II*”), 467 F.3d 1104 (7th Cir. 2006) (upholding the GPL under an antitrust challenge, discussed in detail *infra*).

¹³ *ProCD Inc. v. Zeidenberg*, 86 F.3d 1447 (7th Cir. 1996).

¹⁴ *Hill v. Gateway 2000*, 105 F.3d 1147, 1148 (7th Cir. 1997).

¹⁵ *Wallace II*, 467 F.3d 1104.

decision. Part II examines open source software and the relationship between *ProCD* and *Wallace*. Finally, Part III discusses the application of law and economics to *ProCD*, *Hill*, and *Wallace*, and concludes that the application of law and economics has promulgated software innovation. The Note calls for courts to apply this law and economics reasoning to future software licensing issues.

I. SOFTWARE, HARDWARE AND LICENSING

A. *ProCD affirms the shrinkwrap license model.*

In 1996, the Seventh Circuit upheld a shrinkwrap license agreement in the widely-cited¹⁶ case *ProCD, Inc. v. Zeidenberg*.¹⁷ A shrinkwrap license was (and remains) a popular means of software licensing.¹⁸ It is a “license agreement or other terms and conditions of a (putatively) contractual nature which can only be read and accepted by the consumer after opening the product.”¹⁹ The term is derived from “the shrinkwrap plastic wrapping used to coat software boxes.”²⁰

In 1996, it was far from clear whether shrinkwrap license agreements would bind the user.²¹ However, *ProCD* provided needed clarity in the Seventh Circuit, holding that “[s]hrinkwrap licenses are

¹⁶ See Kathleen K. Olson, *Preserving the Copyright Balance: Statutory and Constitutional Preemption of Contract-Based Claims*, 11 COMM. L. & POL’Y 83, 111 (2006) (*ProCD* is the “template” courts have used for deciding preemption issues involving contracts regarding software).

¹⁷ *ProCD*, 86 F.3d 1447.

¹⁸ Elizabeth M.N. Morris, *Will Shrinkwrap Suffocate Fair Use?*, 23 SANTA CLARA COMPUTER & HIGH TECH. L.J. 237, 242 (2007) (citing Christopher L. Pitet, *The Problem with “Money Now, Terms Later:” ProCD, Inc. v. Zeidenberg and the Enforceability of the “Shrinkwrap” Software Licenses*, 31 LOY. L.A. L. REV. 325, 343 (1997)).

¹⁹ See William J. Condon, Jr., *Electronic Assent to Online Contracts: Do Courts Consistently Enforce Clickwrap Agreements?*, 16 REGENT U.L. REV. 433, 435 (2004).

²⁰ *Id.*

²¹ Morris, *supra* note 18, at 243.

enforceable unless their terms are objectionable on grounds applicable to contracts in general.”²²

In *ProCD*, the issue was the enforceability of a software license where the terms were not disclosed to the purchaser until after opening the software packaging.²³ The software package compiled more than 3,000 phone directories into a single database.²⁴ Included with the software was a shrinkwrap license agreement.²⁵ The license agreement restricted the end user to using the software for non-commercial purposes.²⁶ If the user rejected the terms of the license, he or she could return the software for a full refund.²⁷ The defendant had purchased the non-commercial version of the software, but taken the underlying phone directory information and resold it for a fee: commercial use, in violation of terms of the license agreement.²⁸

Judge Easterbrook’s now landmark decision²⁹ noted that a shrinkwrap license should be treated as an ordinary contract accompanying the sale of products.³⁰ Further, the court noted there are numerous contracts in everyday life where the “exchange of money precedes the communication of detailed terms.”³¹ Examples include the purchase of insurance (e.g., buyer pays agent, receives coverage immediately, and later receives the terms from the insurance company), ticket to a sporting event or concert (e.g., patron agrees not to record the concert; attendance is agreement), and consumer goods

²² *ProCD*, 86 F.3d at 1449.

²³ *Id.* at 1450.

²⁴ *Id.* at 1449.

²⁵ *Id.* at 1450.

²⁶ *Id.*

²⁷ *Id.* at 1451.

²⁸ *Id.* at 1450.

²⁹ Morris, *supra* note 18, at 243 (“Since the *ProCD* case, courts have generally held that shrinkwrap licenses are generally enforceable.”) (citations omitted).

³⁰ *ProCD*, 86 F.3d at 1449-50.

³¹ *Id.* at 1451.

(e.g., purchaser brings home television and later reads details of the warranty after opening the television at home).³²

Judge Easterbrook also noted in dicta that the makers of ProCD discriminated between categories of purchasers (e.g., commercial and non-commercial).³³ Accordingly, the *ProCD* license was aimed at a legitimate goal: price discrimination resulted in a more efficient market.³⁴ In essence, a commercial user placed a higher value on the software and the underlying information because of the business opportunities the compiled phone directory could help create.³⁵ In contrast, the consumer segment of the market does not place as high a value on the compiled phone directory, using it for convenience or to contact long lost friends.³⁶ However, for this discrimination to work, “the seller must be able to control arbitrage.”³⁷ Using “the institution of contract,” the *ProCD* license efficiently controls arbitrage and, ultimately, creates a more efficient market.³⁸

In the end, the court held that the shrinkwrap license, like other types of transactions where the terms are revealed after the exchange, comply with contract law.³⁹ According to the UCC: “A contract for [the] 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.”⁴⁰ Of course, the court noted that a license is only enforceable if its terms are not facially objectionable under general contract principles.⁴¹

Judge Easterbrook showed foresight when he noted that software could be purchased online, with the software (and corresponding

³² *Id.* at 1451-52.

³³ *Id.* at 1449-50.

³⁴ *Id.* at 1450.

³⁵ *Id.* at 1449.

³⁶ *Id.*

³⁷ *Id.* at 1450.

³⁸ *Id.*

³⁹ *Id.* at 1455.

⁴⁰ *Id.* at 1452-53 (citing UCC § 2-204(1)).

⁴¹ *ProCD*, 86 F.3d at 1449.

license terms) arriving later.⁴² The court detailed the terms of a transaction involving downloaded software, whereby software is received online without any physical media.⁴³ This foreshadowed the now-common technique of downloading open-source (or commercial) software, agreeing to a “clickwrap” license, and installing the software.⁴⁴

A clickwrap license is a close cousin of a shrinkwrap license.⁴⁵ It is similar to a shrinkwrap license in that the user only receives the license after downloading or buying the software.⁴⁶ The license is presented during installation on the computer screen. The license must be read and agreed to as part of the installation process.⁴⁷

Following *ProCD*, numerous courts adopted similar reasoning and also held that the terms of a shrinkwrap or clickwrap license bind the user.⁴⁸ Indeed, *ProCD* stands as the “template” by which other courts patterned their analysis on.⁴⁹ *ProCD* opened the floodgate: while in 1996 it may have been far from clear whether shrinkwrap agreements would be enforced, most jurisdictions will now enforce shrinkwrap and clickwrap agreements (provided the terms are not unconscionable).

⁴² *Id.* at 1452.

⁴³ *Id.* at 1452.

⁴⁴ *Specht v. Netscape Commc’ns. Corp.*, 306 F.3d 17, 21-22 (2d Cir. 2002).

⁴⁵ *Id.* at 22 n.4.

⁴⁶ *Id.*

⁴⁷ *Condon*, *supra* note 19, at 435.

⁴⁸ *See generally* *Bowers v. Baystate Tech., Inc.* 320 F.3d 1317 (Fed. Cir. 2003), cert. denied, 539 U.S. 928 (2003); *CompuServe, Inc. v. Patterson*, 89 F.3d 1257 (6th Cir. 1996); *Kilgallen v. Network Solutions, Inc.*, 99 F. Supp. 2d 125 (D. Mass. 2000); *Stomp, Inc. v. NeatO, LLC*, 61 F. Supp. 2d 1074 (C.D. Cal. 1999).

⁴⁹ *Olson*, *supra* note 16, at 111; *see also* *Bowers*, 320 F.3d at 1325 (Court of Appeals for the Federal Circuit, in applying First Circuit law, notes that “[t]his court believes that the First Circuit would follow the reasoning of *ProCD* and the majority of other courts to consider this issue”).

B. Hill v. Gateway 2000, Inc. affirms the “in-the-box” warranty.

In *Hill v. Gateway 2000, Inc., et al.*, Judge Easterbrook authored an opinion that nicely supplements *ProCD*.⁵⁰ Addressing an arbitration clause that was included as an in-the-box⁵¹ terms and conditions leaflet for a computer purchase, the court upheld the arbitration clause as binding.⁵² As a result, the court extended the principle of the shrinkwrap license to computer hardware.⁵³

The facts were simple. The plaintiff ordered their Gateway 2000 computer system over the phone.⁵⁴ Upon receiving the computer, the plaintiff skimmed the enclosed list of terms.⁵⁵ The terms were alleged to govern unless the customer returned the computer within 30 days of receipt.⁵⁶ Included in the list of terms was an arbitration clause, requiring the use of an arbitrator in the case of a dispute.⁵⁷

After keeping the computer for “more than 30 days,” the plaintiff complained about “its components and performance.”⁵⁸ Retaining Edelman & Combs,⁵⁹ the plaintiff made some bold allegations: notably, that the “product’s shortcomings [made] Gateway a racketeer.”⁶⁰ If demonstrated, this could have led to treble damages⁶¹

⁵⁰ *Hill v. Gateway 2000*, 105 F.3d 1147 (7th Cir. 1997). Interestingly, *Hill* was argued before the court just shy of seven months after *ProCD*.

⁵¹ *Id.* at 1148.

⁵² *Id.* at 1151.

⁵³ *Id.* at 1150.

⁵⁴ *Id.* at 1148.

⁵⁵ *Id.* (“they concede noticing the statement of terms but deny reading it closely enough”).

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ Edelman & Combs bills itself as “Consumer Protection and Class Action Lawyers” at www.edcombs.com (last visited 2/16/07).

⁶⁰ *Hill*, 105 F.3d at 1148.

⁶¹ Damages that, by statute, are three times the amount that the fact-finder determines is owed. BLACK’S LAW DICTIONARY (8th ed. 2004).

under RICO⁶² for the plaintiffs.⁶³ Gateway sought to enforce the arbitration clause.⁶⁴ The central issue, thusly, was whether the arbitration clause on the in-the-box warranty was enforceable.⁶⁵

Citing, *inter alia*,⁶⁶ *ProCD*, the court held that *ProCD* should not be limited to software: it is “about the law of contract, not the law of software.”⁶⁷ Moreover, “[p]ractical considerations support allowing vendors to enclose the full legal terms with their products.”⁶⁸ If vendors did not have the ability to enclose the terms within the packaging of their products, Judge Easterbrook noted the practical inefficiency of having a cashier read the terms of a contract to a purchaser of a computer.⁶⁹

Judge Easterbrook and the court declined to limit the *ProCD* holding to executory contracts⁷⁰ as well, taking note that in both the *ProCD* license and the Gateway 2000 warranty, there remained promises of future performance.⁷¹

Further, Judge Easterbrook dismissed the plaintiff’s argument that *ProCD* does not apply because it involved two merchants; noting that

⁶² Racketeer Influenced and Corrupt Organizations Act. 18 U.S.C. § 1961 *et seq.* (2006).

⁶³ *Hill*, 105 F.3d at 1148.

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Carnival Cruise Lines, Inc. v. Shute*, 499 U.S. 585 (1991) (Supreme Court enforces forum-selection clause included among cruise-ship ticket terms).

⁶⁷ *Hill*, 105 F.3d at 1149.

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ A contract that remains wholly unperformed or for which there remains something still to be done on both sides, often as a component of a larger transaction and sometimes memorialized by an informal letter agreement, by a memorandum, or by oral agreement. BLACK’S LAW DICTIONARY (8th ed. 2004).

⁷¹ *Hill*, 105 F.3d at 1149-50 (“What is more, both *ProCD* and Gateway promised to help customers to use their products Some vendors spend more money helping customers use their products than on developing and manufacturing them. The document in Gateway’s box includes promises of future performance that some consumers value highly; these promises bind Gateway just as the arbitration clause binds the Hills”).

a UCC “battle of the forms” argument was inappropriate because only one form was at issue (the Gateway 2000 warranty).⁷² Ultimately, the arbitration clause was upheld.⁷³

II. CLICKWRAP, OPEN SOURCE AND THE GPL

A. ProCD and Open Source

ProCD enabled the spread of the clickwrap license as a valid licensing methodology.⁷⁴ As discussed *supra*, a clickwrap license is similar to a shrinkwrap license.⁷⁵ In fact, a clickwrap license could be considered an electronic shrinkwrap license.⁷⁶ Clickwrap licensing is the primary means by which freeware,⁷⁷ shareware,⁷⁸ and open source software are distributed; not to mention commercial software licenses

⁷² *Id.* at 1150.

⁷³ *Id.* at 1151.

⁷⁴ See 86 F.3d 1447 (7th Cir. 1996).

⁷⁵ See *supra* nn.29-31.

⁷⁶ See generally Tennille M. Christensen, *The GNU General Public License: Constitutional Subversion?*, 33 HASTINGS CONST. L.Q. 397, 419 (2007) (using shrinkwrap and clickwrap almost interchangeably, distinguished by the method of acceptance of a clickwrap agreement).

⁷⁷ “Freeware is copyrighted computer software which is made available for use free of charge, for an unlimited time.” Wikipedia, *Freeware*, <http://en.wikipedia.org/wiki/Freeware> (Apr. 21, 2007).

⁷⁸ For a good discussion of shareware, see *Storm Impact, Inc. v. Software of the Month Club*, 13 F. Supp. 2d 782, 785 (N.D. Ill. 1998) (“There are two common forms of shareware. With the first, the owner of the software makes the complete software available to users without charge for the purpose of evaluation. If users wish to keep the software after a trial basis, they must forward a registration fee to the owner. Shareware programs distributed in this manner rely to a large extent on the honesty of the users. The second form of shareware contains the computer equivalent of a lock on part of the program. The “lock” is a feature built into the software program which disables portions of the program. The user can sample the unlocked portion at no charge, and, if the user likes what he sees, he can buy the “key” in the form of a floppy disk and registration number which enables the user to use the whole program”).

and website usage licenses.⁷⁹ It is not a stretch to say that each of these software distribution models, particularly open source, would not be nearly as viable without the licensing flexibility and efficiency that clickwrap licensing affords the copyright holder.⁸⁰

While programmers have cooperated on open source-like software projects since the 1950s, the term “open source” originated in early 1998.⁸¹ Open source software, as it is known today, stems from Netscape’s 1998 decision to release the source code for its browser “Netscape Navigator.”⁸² The formal open source initiative stemmed from a collective effort to develop a flexible licensing arrangement that encouraged innovation while maintaining the principles of open source, specifically community cooperation towards a common goal.⁸³

It is challenging to pin down the motivations for individuals and organizations to contribute to open source projects.⁸⁴ At the risk of oversimplifying, the philosophy of open source code is that teams can write better software than individuals, and the best software comes from the efforts of entire communities of the world’s programmers. Hence, open source programmers “openly” share the code for software

⁷⁹ Indeed, almost all software and website licenses are some type of a clickwrap license.

⁸⁰ See generally Lydia Pallas Loren, *Slaying the Leather-Winged Demons in the Night: Reforming Copyright Owner Contracting with Clickwrap Misuse*, 30 OHIO N.U. L. REV. 495 (2004) (the author laments the ubiquity of clickwrap licenses and the imbalance between the copyright holder, arguing that the imbalance leads to copyright holders pursuing terms that “may not be socially beneficial”).

⁸¹ Open Source Initiative, *History of the OSI*, OPEN SOURCE INITIATIVE, <http://www.opensource.org/docs/history.php> (last visited Feb. 20, 2007).

⁸² *Id.* The most notable open source release based on the Netscape Navigator code is known as Firefox. Firefox, <http://www.firefox.com> (last visited Feb. 20, 2007).

⁸³ Matthew D. Stein, Comment, *Rethinking UCITA: Lessons From The Open Source Movement*, 58 ME. L. REV. 157, 160-161 (2006).

⁸⁴ *Id.* at 187-88 (citations omitted) (noting that “scholars have offered various theories about why individual programmers choose to volunteer their time to open source projects, as well as why some open source projects have been embraced by for-profit commercial enterprises”).

they write and, depending on the license, may freely allow anyone to produce derivative works.⁸⁵

Open source software has exploded over the past decade.⁸⁶ At its core, open source software is software that is typically provided free-of-charge to users.⁸⁷ Businesses and government agencies, while initially slow to adopt open-source applications into their environments,⁸⁸ now use Apache⁸⁹ to run their web servers, MySQL⁹⁰ to power their databases, PERL⁹¹ and JAVA⁹² to program applications, and Open Office⁹³ for employee computers.

One strong example that illustrates the open source development process is Firefox, an Internet browser.⁹⁴ Compare Firefox to

⁸⁵ *Id.* at 190.

⁸⁶ *See generally id.* at 184-86.

⁸⁷ *Id.* at 196 n.273 (citing the Open Source Definition's preference for not charging for open source software).

⁸⁸ *See, e.g.,* Robert Weisman, *Government Agencies Adopt Open Source*, THE BOSTON GLOBE, February 14, 2005, at C1.

⁸⁹ *See, e.g.,* Philip J. Weiser, *The Internet, Innovation, And Intellectual Property Policy*, 103 COLUM. L. REV. 534, 613 (2006) (citing <http://httpd.apache.org/>) (Apache operates a popular web server, which is a server that hosts a website – or multiple websites – for Internet use. When a user uses a browser to go to an Internet site, he or she is accessing a web server).

⁹⁰ Stein, *supra* note 82, at 186 (noting MySQL as a leading open source effort. MySQL is a back-end database program. A database stores data and information in a tabular format. MySQL competes with industrial commercial database programs such as Oracle and Microsoft's SQL Server).

⁹¹ *Id.* PERL is a programming language for developing interactive webpages.

⁹² JAVA is a programming language used for numerous applications. The scope of uses spans a broad spectrum, such as website interactivity, business applications, database connectivity, and games. *See* Sun Opens Java, <http://www.sun.com/2006-1113/feature/> (Nov. 13, 2006).

⁹³ OpenOffice is a suite of tools that contains, *inter alia*, a word processor, presentation software, and spreadsheet. It competes with Microsoft Office and shares file compatibility. *See* OpenOffice.org, <http://www.openoffice.org> (last visited Apr. 18, 2007).

⁹⁴ Firefox is an open source browser that competes with Microsoft's Internet Explorer. Firefox, <http://www.mozilla.com/en-US/firefox/> (last visited May 2, 2007).

Microsoft Internet Explorer (“IE”). Microsoft writes all of the code for IE and does not release it to the public.⁹⁵ This allows Microsoft to maintain complete control over the program.⁹⁶ Users cannot tweak the program or alter it without violating the license, and possibly breaking the law.⁹⁷ Firefox, on the other hand, allows users and unaffiliated programmers to see and modify the source code.⁹⁸ Therefore, improvements to the program are not only identified by users, but are also implemented by users. The process by which Microsoft and commercial software is developed was famously compared to a cathedral (orderly, structured, and hierarchical).⁹⁹ In contrast, the open source process was compared to a bazaar (disorderly, non-structured, and cacophonous).¹⁰⁰

⁹⁵ See Stein, *supra* note 82, at 160. As a general rule, Microsoft does not release the source code to most of its applications. However, some applications can be licensed under the Microsoft Shared Source Initiative, such as some Windows code for “internal development and support” and the entire Windows CE source code, used primarily for handheld computers. See Microsoft, *Shared Source Initiative*, <http://www.microsoft.com/resources/sharedsource/licensing/windows.mspx> (last visited Apr. 30, 2007).

⁹⁶ See Stein, *supra* note 82, at 160.

⁹⁷ Fair use notwithstanding, Microsoft, *Windows XP End User License Agreement*, <http://www.microsoft.com/windowsxp/home/eula.mspx> (June 1, 2004) (“You may not reverse engineer, decompile, or disassemble the Software, except and only to the extent that such activity is expressly permitted by applicable law notwithstanding this limitation”). Moreover, the Digital Millennium Copyright Act (DMCA) provides criminal penalties for some instances of reverse engineering. 17 U.S.C. § 1201 (2006).

⁹⁸ See Mozilla *Firefox End-User Software License Agreement*, <http://www.mozilla.com/en-US/legal/eula/firefox-en.html> (last visited Apr. 16, 2007) (“A SOURCE CODE VERSION OF CERTAIN FIREFOX BROWSER FUNCTIONALITY THAT YOU MAY USE, MODIFY AND DISTRIBUTE IS AVAILABLE TO YOU FREE-OF-CHARGE FROM WWW.MOZILLA.ORG UNDER THE MOZILLA PUBLIC LICENSE and other open source software licenses.”) (emphasis in original).

⁹⁹ Eric S. Raymond, *The Cathedral and the Bazaar*, <http://www.catb.org/~esr/writings/cathedral-bazaar/cathedral-bazaar/> (last visited Apr. 18, 2007).

¹⁰⁰ *Id.*

Not only is open source software successfully implemented in many environments, it is growing in popularity.¹⁰¹ Indeed, Firefox now controls 12% of the browser market, and Apache approximately 60% of the web-server market.¹⁰² Large corporations are experimenting with Open Office as a replacement to the standard-issue Microsoft Office suite.¹⁰³ And home users are finding GIMP, a popular graphics manipulation tool, to be a worthy alternative to the expensive Adobe Photoshop.¹⁰⁴

In addition to being worthy alternatives to commercial software, open source software's meteoric rise is also due to its innovative licensing model—a model that enables free use of the software and the accompanying source code, for the trade-off of the user having to share with the development community his or her improvements to the software. The GPL, promulgated by the Free Software Foundation, is one of the most popular open source licenses.¹⁰⁵ The license is designed to promote innovation by giving users the application and the underlying source code, in exchange for the users agreeing to share whatever changes are made with the open-source community.¹⁰⁶ Essentially, there is monetary cost for the software.¹⁰⁷

¹⁰¹ Paul Krill, *Reports: Open Source Gathers Steam*, INFOWORLD, available at http://www.infoworld.com/article/07/02/15/HNopensourcereports_1.html (Feb. 15, 2007).

¹⁰² Depending on the survey, Firefox controls between 12% to 14%, and Apache around 60%. See generally Wikipedia, *Web-Browser Market Share*, http://en.wikipedia.org/wiki/Usage_share_of_web_browsers (Apr. 23, 2007); Netcraft, 2006 Web Server Survey, http://news.netcraft.com/archives/2006/06/04/june_2006_web_server_survey.html (June 4, 2006).

¹⁰³ Wikipedia, *OpenOffice Market Share Analysis*, http://wiki.services.openoffice.org/wiki/Market_Share_Analysis (Apr. 4, 2007) (The respected Forrester Group estimated 8.5% market penetration for OpenOffice in large North American organizations).

¹⁰⁴ *GIMP Website*, <http://www.gimp.org/> (last visited Apr. 18, 2007). The Adobe Photoshop full version retails for \$679.00. Adobe, *Photoshop Site*, <http://www.adobe.com/products/photoshop/photoshop/> (last visited Apr. 18, 2007).

¹⁰⁵ Christensen, *supra* note 75, at 400-01.

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

This licensing model, however, is not without controversy. Linux, in particular, has benefited from the open source boom, and has emerged as a versatile operating system capable of powering everything from smartphones to multi-rack servers.¹⁰⁸ Recently, some have challenged the Linux licensing model.¹⁰⁹ Most notably, in Utah, the Santa Cruz Operation (“SCO”) has challenged IBM (and others’) distribution of Linux.¹¹⁰ SCO claimed that it owns the copyright to Unix through a complicated licensing agreement with Novell.¹¹¹ SCO further alleged that portions of Unix code are in Linux, which is licensed by the GPL.¹¹² This litigation is ongoing, and it is a direct threat to open source and Linux.¹¹³ As a sidenote, SCO has struggled to support its allegations and cite portions of code that infringe, despite numerous court orders to do so.¹¹⁴

One charge that was leveled at open source during the SCO proceedings was that it violated antitrust laws.¹¹⁵ Specifically, in an affirmative defense, SCO alleged that “[t]he GPL violates the U.S. Constitution, together with copyright, antitrust and export control laws[.]”¹¹⁶ Three years later, and hundreds of miles away in an

¹⁰⁸ Neil McAllister, *Devices Gain an Edge with Linux*, INFOWORLD, Sep. 4, 2006 (available at http://www.infoworld.com/article/06/09/04/36FEossinnovlinux_1.html).

¹⁰⁹ Christensen, *supra* note 75, at 398-400. Linux employs the GPL. Wikipedia, *Linux*, <http://en.wikipedia.org/wiki/Linux> (May 3, 2007).

¹¹⁰ *Id.* (citing Complaint, SCO Group v. IBM, No. 030905199 (Utah 3d Dist. filed Mar. 3, 2003), available at <http://www.groklaw.net/pdf/IBM-819EXA.pdf>).

¹¹¹ Compl., SCO Group v. IBM, No. 030905199 (Utah 3d Dist. filed Mar. 3, 2003), <http://www.groklaw.net/article.php?story=20040704170212250>.

¹¹² Christensen, *supra* note 75, at 398-400.

¹¹³ *Id.*

¹¹⁴ See U.S. Dist. Ct. Central Div., Order Granting in Part IBM’s Motion to Limit SCO’s Claims, J. Dale A. Kimball, (D. Utah filed June 28, 2006), available at <http://www.groklaw.net/pdf/IBM-718.pdf> (last visited Apr. 19, 2007).

¹¹⁵ SCO’S Answer to IBM’s Am. Countercls., SCO Group v. IBM, No. 03-C V-0294 (D. Utah filed October 28, 2003), available at <http://www.groklaw.net/article.php?story=200310291549399>

¹¹⁶ *Id.*

unrelated proceeding, the Seventh Circuit illuminated the likely answer to SCO's charge.

B. Wallace v. IBM: The GPL and Antitrust

Recently, the Seventh Circuit took the opportunity to address whether the GPL violates antitrust laws.¹¹⁷ Judge Easterbrook, writing for the court, emphatically concluded that the charge was baseless and that “[t]he GPL and open-source software have nothing to fear from the antitrust laws.”¹¹⁸

The pro-se¹¹⁹ plaintiff, Daniel Wallace, struggled in the district court to state a coherent claim.¹²⁰ The district court judge noted: “Wallace has had two chances to amend his complaint, after Defendants highlighted [deficiencies]. His continuing failure to state an antitrust claim indicates that the complaint has ‘inherent internal flaws.’”¹²¹ The district court dismissed Wallace’s claims on IBM’s motion for summary judgment, holding that “Wallace [had] failed to allege a cognizable antitrust injury.”¹²²

On appeal, Judge Easterbrook, writing for the Seventh Circuit Court of Appeals, took the opportunity to examine the GPL in detail.¹²³ Wallace apparently wanted to build an operating system, such as Microsoft Windows or Linux.¹²⁴ Wallace further alleged “that IBM, Red Hat, and Novell have conspired among themselves and with others (including the Free Software Foundation) to eliminate

¹¹⁷ *Wallace v. IBM* (“*Wallace II*”), 467 F.3d 1104 (7th Cir. 2006).

¹¹⁸ *Id.* at 1108.

¹¹⁹ One who represents one-self in a court proceeding without the assistance of a lawyer. BLACK’S LAW DICTIONARY (8th ed. 2004).

¹²⁰ *Wallace v. IBM* (“*Wallace I*”), 1:05-cv-678RLY-VSS, 2006 U.S. Dist. LEXIS 31908, at *5 (S.D. Ind. May 16, 2006).

¹²¹ *Id.* (citation omitted).

¹²² *Id.*

¹²³ *Wallace II*, 467 F.3d at 1105-06.

¹²⁴ *Id.* at 1106.

competition in the operating system market by making Linux available at an unbeatable price.”¹²⁵

The court began by outlining how the GPL operates.¹²⁶ “Under the GPL, which passes from user to improver to user, Linux and all software that incorporates any of its source code will be free forever, and nothing could be a more effective deterrent to competition, Wallace maintains.”¹²⁷ Wallace saw this as a conspiracy.¹²⁸

While Wallace’s claims could have likely been dismissed tersely offhand, Judge Easterbrook took the opportunity to discuss the GPL and antitrust in detail.¹²⁹ Broadly, Judge Easterbrook inferred and subsequently dismissed three antitrust allegations against the GPL.¹³⁰

First, the GPL does not encourage predatory pricing.¹³¹ The argument is that low prices drive producers out of the market; the surviving producer then drives prices up to “recoup losses incurred during the low-price period.”¹³² Judge Easterbrook noted that the GPL keeps prices of its rivals low, benefiting the consumer, but does not ultimately result in a monopoly.¹³³ “Employing antitrust law to drive prices up would turn the Sherman Act on its head.”¹³⁴

Second, those who accept the GPL are not conspirators under the antitrust laws.¹³⁵ Judge Easterbrook emphasized that antitrust law forbids conspiracies that restrain trade, and the GPL does not restrain trade: “[i]t is a cooperative agreement that facilitates production of

¹²⁵ *Id.* (summarizing district court holding *Wallace I*, 2006 U.S. Dist. LEXIS 31908, at *4-5) (citations omitted).

¹²⁶ *Wallace II*, 467 F.3d at 1106.

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ *Id.* at 1106-08.

¹³¹ *Id.* at 1106-07.

¹³² *Id.* at 1106.

¹³³ *Id.* at 1106-07.

¹³⁴ *Id.* at 1107.

¹³⁵ *Id.* (“the antitrust laws forbid conspiracies ‘in restraint of trade’”) (citing 15 U.S.C. § 1, § 26).

new derivative works, and agreements that yield new products that would not arise through unilateral action are lawful.”¹³⁶

Finally, the GPL is not price fixing.¹³⁷ While copyright and patent laws afford the right to charge enough for an author to cover their fixed costs, an author is not required to charge more.¹³⁸ Further, “[n]o more does antitrust law require higher prices. Linux and other open-source projects have been able to cover their fixed costs through donations of time; as long as that remains true, it would reduce efficiency and consumers’ welfare to force the authors to levy a charge on each new user.”¹³⁹

Having dismissed three antitrust challenges to the GPL, Judge Easterbrook concluded that “[t]he GPL and open-source software have nothing to fear from the antitrust law.”¹⁴⁰

III. *PROCD*, *HILL*, AND *WALLACE*: LAW AND ECONOMICS ENABLE EFFICIENT MARKETS AND INNOVATION

A. *The relationship between ProCD, Hill, and Wallace*

While *ProCD* and *Hill* seem closely related and addressed contractual issues within the scope of software licenses and hardware warranties, *Wallace* addressed the GPL and antitrust concerns.¹⁴¹ Crucially, the progress of open source would have been greatly hindered without the viable use of clickwrap agreements, a close derivative of the *ProCD* shrinkwrap license.¹⁴² In short, were it not for *ProCD*, and the re-affirmation (and, arguably, broadening) of the

¹³⁶ *Wallace II*, 467 F.3d. at 1107 (citations omitted).

¹³⁷ *Id.*

¹³⁸ *Id.*

¹³⁹ *Id.*

¹⁴⁰ See *Specht v. Netscape Commc’ns Corp.*, 306 F.3d 17, 22 n.4 (2d Cir. 2002).

¹⁴¹ *Wallace II*, 467 F.3d at 1105.

¹⁴² See *Specht v. Netscape Commc’ns Corp.*, 306 F.3d 17, 22 n.4 (2d Cir. 2002).

holding in *Hill*), *Wallace* may never have required the attention of the court: open source's innovative licensing model would have been too difficult to administer without clickwrap licensing.

If open source developers could not efficiently, through the use of a clickwrap license, require future improvements to be shared and integrated with the software, the open source model would not be effective. There likely would not exist the community contributions that have, in many cases, allowed open source software to evolve into a viable alternative to commercial software.

In turn, the open source software—in competition with commercial software—has spawned some innovations in commercial software. Firefox, for example, implemented the concept of “tabbed” Internet browsing in early 2004.¹⁴³ Tabbed Internet browsing enables a user to have multiple websites open concurrently within one window (previously, a different window was required for each website a user visited).¹⁴⁴ This useful feature was later included in Microsoft's Internet Explorer 7.0 browser in late 2005.¹⁴⁵

Accordingly, thanks to *ProCD* and similar decisions in other circuits enabling shrinkwrap, and in-turn, clickwrap agreements, open source has been able to thrive.¹⁴⁶ Of course, Judge Easterbrook (through *ProCD*) created open source in the same manner that Al Gore created the Internet:¹⁴⁷ Judge Easterbrook tangentially enabled open source to thrive just as Al Gore, through legislation, approved funds that led to the development of the Internet. Nevertheless, a relationship

¹⁴³ See generally Wikipedia, *Firefox*, <http://en.wikipedia.org/wiki/Firefox> (May 3, 2007).

¹⁴⁴ Tabbed browsing allows for multiple Internet sites to be open in one window, as opposed to having a different window open for each site.

¹⁴⁵ See Microsoft, *Internet Explorer 7 Quick Tour*, <http://www.microsoft.com/windows/IE/ie7/tour/tabs/> (last visited Apr. 17, 2007); Microsoft, *Internet Explorer Developer Blog*, <http://blogs.msdn.com/ie/archive/2005/05/16/417732.aspx> (May 16, 2005).

¹⁴⁶ See Stein, *supra* note 82, at 187-90 (discussing the success of open source software and the different licenses employed).

¹⁴⁷ Al Gore sponsored the High Performance Computing and Communication Act of 1991 (15 U.S.C. § 5501 et seq. (2006)).

exists between *ProCD* and open source, which led to the *Wallace* decision.

*B. Law and Economics: A Common Theme that Promotes
Efficient Markets and Innovation*

Judge Easterbrook and Judge Posner are regularly associated with the so-called “law and economics” movement.¹⁴⁸ Essentially, this is the application of economic analysis to legal problems.¹⁴⁹ This analytical framework has been applied in many legal areas, including “criminal law, family law, employment discrimination, and procedural law.”¹⁵⁰

Indeed, the themes of law and economics run through *ProCD*, *Gateway 2000*, and *Wallace*. Shrinkwrap and clickwrap licenses, as Judge Easterbrook notes, reduce transaction costs and make markets more efficient.¹⁵¹ The *Gateway 2000* warranty also reduces transaction costs and leads to market efficiency.¹⁵² Finally, the GPL enables open source software to compete head on with commercial software, with the rivalry working to the benefit of consumers.¹⁵³

Ultimately, while some take issue with the specifics of Judge Easterbrook’s reasoning and his application of law and economics,¹⁵⁴

¹⁴⁸ Kenneth G. Dau-Schmidt, *Lost in Translation: The Economic Analysis of Law in the United States and Europe*, 44 COLUM. J. TRANSNAT’L L. 602, 603 (2006).

¹⁴⁹ *Id.*

¹⁵⁰ *Id.* (citing Richard A. Posner, *The Future of the Law and Economics Movement in Europe*, 17 INT’L REV. L. & ECON. 3, 4 (1997)).

¹⁵¹ *ProCD Inc. v. Zeidenberg*, 86 F.3d 1447, 1449-50 (7th Cir. 1996).

¹⁵² *Hill v. Gateway 2000*, 105 F.3d 1147, 1150 (7th Cir. 1997).

¹⁵³ *Wallace v. IBM (“Wallace II”)*, 467 F.3d 1104, 1106-7 (7th Cir. 2006).

¹⁵⁴ Notably, 1 Nimmer on Copyright § 1.01 (2006) strongly criticized *ProCD*, arguing that it misread decisions made by sister circuits and, moreover, inappropriately applied the so-called “extra element test,” whereby a contract is not preempted by federal copyright law if there is an extra element in the contract that takes it outside the scope of copyright law. If the extra element is something that falls within the exclusive scope of Copyright law, such as a promise not to reproduce, covered by 17 U.S.C. § 106, the contract is preempted under 17 U.S.C. §

the outcome of the three decisions have doubtlessly benefited consumers in reducing transaction costs in two ways: 1) purchase costs by not, for example, requiring store clerks to read licenses and warranties at the checkout line, and 2) enabling the terms of the GPL to be quickly distributed through clickwrap agreements. As discussed *supra*, enforceability of clickwrap agreements have spurred open source's emergence as a competitor to commercial software.¹⁵⁵

Certainly, other criticisms have been leveled at click wrap agreements or open source licenses from, for example, disturbing the balance between the public and copyright holders or the one-sided nature of the licenses.¹⁵⁶ In enabling innovation, however, Judge Easterbrook's application of economic theories has resulted in a positive outcome for consumers and, ultimately, has promoted software development progress.

C. *The Impact of Wallace*

In his article "Taking the Case: Is the GPL Enforceable,"¹⁵⁷ Jason B. Wacha outlines some of the major arguments against the GPL enforceability. He then provides an analysis of the validity of each of the arguments.¹⁵⁸ Some of the arguments that he debunks include the following: GPL has never been tested in court, the GPL violates export control laws, and the GPL fails as a copyright license.¹⁵⁹ Wacha finds

301. See also Brett L. Tolman, *ProCD, Inc. v. Zeidenberg: The End Does Not Justify the Means in Federal Copyright Analysis*, 1998 B.Y.U. L. REV. 303, 321-327 (1998).

¹⁵⁵ Some argue that the GPL itself should be preempted by Copyright law. See generally Dan Thu Phi Phan, Note, *Will Fair Use Function on the Internet?*, 98 COLUM. L. REV. 169 (2005).

¹⁵⁶ See, e.g., Loren, *supra* note 79.

¹⁵⁷ Jason B. Wacha, *Taking the Case: Is the GPL Enforceable*, 21 SANTA CLARA COMPUTER & HIGH TECH. L.J. 451 (2005).

¹⁵⁸ *Id.* at 457-59 (abstracting the major arguments; throughout the remainder of the article, Wacha meticulously addresses each argument).

¹⁵⁹ *Id.* at 467-71, 481-83.

fault with each of these arguments and others in a spirited legal analysis and defense of the GPL.¹⁶⁰

One of the arguments he addresses is the argument that the GPL violates U.S. federal antitrust law.¹⁶¹ Wach a predicted that this argument would not succeed because “U.S. antitrust law generally has as its goal the prevention of inappropriate behavior between companies or other groups which counteracts the normal competitive actions of a market economy.”¹⁶² Wach a then analyzed the argument within the context of the SCO litigation, discussed *supra*.¹⁶³

Most notably, while Judge Easterbrook could have easily dismissed Wallace’s (apparently vague) allegations in a two-paragraph analysis, Judge Easterbrook took the opportunity to make a strong and unequivocal statement of support that the GPL did not violate antitrust laws.¹⁶⁴ Given the nature of the plaintiff’s apparently vague allegations, this was an easy case to decide.¹⁶⁵ Judge Easterbrook’s decision undoubtedly sends an important message to those who would challenge the GPL on antitrust grounds in other circuits.

Wallace validates Wach a’s prediction that the GPL does not violate antitrust law, at least in the Seventh Circuit.¹⁶⁶ But the impact of *Wallace* is likely broader than just the Seventh Circuit. Indeed, *Wallace* was widely reported among Internet bloggers¹⁶⁷ and on the

¹⁶⁰ *Id.* at 459-92.

¹⁶¹ *Id.* at 476-80.

¹⁶² *Id.* at 476-80.

¹⁶³ *Id.*

¹⁶⁴ *Wallace II*, 467 F.3d at 1108 (“The GPL and open-source software have nothing to fear from the antitrust laws”).

¹⁶⁵ *Id.* (“A ‘quick look’ is all that’s needed to reject Wallace’s claim.” (citations omitted)).

¹⁶⁶ See Wach a, *supra* note 152, at 476-80.

¹⁶⁷ See Infoworld’s Open Sources Blog, http://weblog.infoworld.com/openresource/archives/2006/11/the_gpl_doesnt.html (Nov. 9, 2006); Eric J. Sinrod, *Perspective: How GPL fits in with the Future of Antitrust Regulation*, http://news.com.com/How+GPL+fits+in+with+the+future+of+antitrust+regulation/2010-7344_3-6137894.html (Nov. 22, 2006).

influential Groklaw website, which closely tracks the *IBM v. SCO* litigation and related legal challenges to open source.¹⁶⁸

Undoubtedly, other legal challenges to the GPL and similar open source licenses will be leveled in the future. Because Judge Easterbrook took the opportunity to make a strong statement in defense of the GPL, it would seem that, at least in the Seventh Circuit, the GPL is safe from antitrust challenges.¹⁶⁹

Wallace's significance also stems from the court's continued willingness to apply law and economics reasoning to software licensing matters. Public policy—as measured by increased competition and software innovation—would favor allowing the open source development model to continue to flourish. The application of law and economics appropriately reflects these policy concerns in considering this innovation along with the legal questions facing the court.

CONCLUSION

In tracking the Seventh Circuit Court of Appeals' decisions from *ProCD v. Zeidenberg*, through *Hill v. Gateway 2000*, and ultimately to *Wallace v. IBM*, the Seventh Circuit, and specifically Judge Easterbrook, have positively impacted the economics of information technology transactions, both software and hardware. Along the way, by applying law and economics reasoning to software issues, consumers have ultimately benefited via the innovation of open source software.

In challenges to software licensing arrangements, courts should apply law and economics reasoning, following the trend established in the U.S. Court of Appeals for the Seventh Circuit. In so doing, software developers will be able to continue to drive innovation in the best traditions of Congress' enumerated power in the constitution, to “promote the Progress of Science and useful Arts.”¹⁷⁰

¹⁶⁸ <http://www.groklaw.net/> (last visited Apr. 18, 2007).

¹⁶⁹ *Wallace II*, 467 F.3d at 1108.

¹⁷⁰ U.S. CONST art. I, § 8.