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SHRINK-WRAP LICENSES: THE DEBATE CONTINUES

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An advertisement for Brand "X" software catches the attention of a reader of a computer magazine. The advertisement announces that Brand "X" software is available through telephone order and designates a price. The magazine reader promptly calls the number listed in the ad and places an order. Within a few weeks, the software package, wrapped in brown paper, arrives in the mail together with an invoice which specifies the product, the recipient and the price. Just before opening the brown paper wrapping of the package, however, the purchaser notices a message in bold type attached to the outside of the wrapper, beginning as follows:

BEFORE YOU OPEN THIS PACKAGE:

Carefully read the following legal agreement regarding your use of the enclosed Brand "X" product. By the act of opening the sealed package, using the software or permitting its use, you will indicate your full consent to the terms and conditions of this agreement. If you don't agree with what it says, you may return the software package within 7 days of your receipt for a full refund.

The agreement provides, in essence, that the software publisher is not relinquishing to the buyer all title to the software package. The act of exchanging money for this software package is to be construed instead as transferring full title only to the medium in which the software is embodied (e.g., disc, tape or cartridge), while merely creating a perpetual restrictive use license (without passing title) to the computer program itself. n1

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Agreements such as these, known by descriptive terms such as "box-top," "shrink-wrap," n2 "tear-open," "tear-me-open" and blister-pack" licenses, have become popular instruments through which software publishers attempt to retain substantial rights to the software that they mass distribute. Part I of this article will discuss the terms commonly contained in shrink-wrap license agreements and why software publishers consider these terms to be desirable. Subsequent sections will evaluate the effects of contract, copyright and trade secret law on shrink-wrap licenses.

I. What Shrink-Wrap Licenses are Designed to Accomplish

There are strong financial incentives for software publishers to retain rights in the software packages which they mass market. According to current estimates by the Software Publishers Association, there exists one unauthorized copy for every three legally-purchased software packages in the United States. n3 The resulting cost to the software industry is estimated at over $ 2.3 billion annually in the United States alone. n4

Responsible for a substantial proportion of the unauthorized copying are individuals and companies who copy the programs onto blank diskettes (or onto any other medium) and sell the copied programs. Popularly rented programs, such as Lotus 1-2-3, Word Perfect and Word, range in price from $ 225.00 to $ 500.00. Yet blank diskettes onto which these programs can be copied sell for only one to two dollars, and the

[*385] copying process is completed in a matter of seconds. n5 In an attempt to discourage unauthorized copying, software publishers typically include in their shrink-wrap agreements terms which grant end-users only a nonexclusive, nonassignable, and nontransferable right to operate the program on a single computer system. Such agreements prohibit any copying of the computer program for any reason without the written authorization of the software publisher. n6

A further objective which software publishers seek to achieve by means of shrink-wrap licenses is the prevention of reverse engineering. Most mass-marketed software is distributed only in its object code n7 version. While federal copyright law protects the particular sequences of object code digits or characters by which a computer algorithm is implemented, it does not protect the computer algorithm itself. n8 Thus, copyright law does not prevent a user from reverse engineering the object code version of the program into source code n9 in an attempt to deduce the underlying algorithm. To prevent competition from utilizing this process to create functionally identical yet non-copyright-infringing programs, most shrink-wrap licenses contain a provision precluding the buyer from using the software for any purpose other than operating the program and from disassembling or decompiling n10 the object code into higher-level languages.

Yet another use of shrink-wrap licenses is to disclaim warranties and to limit the publisher's liability in the case of software defects. n11

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There have, thus far, been few reported judicial decisions regarding the enforceability of shrink-wrap license agreements. The most recent of these decisions, ProCD, Inc. v. Zeidenberg, n12 held a shrink-wrap license to be enforceable under sections 2-204 and 2-606 of the Uniform Commercial Code. n13 The first case applying a significant Uniform Commercial Code analysis to shrink-wrap licenses was Step-Saver Data Systems v. Wyse Technology, n14 which held a shrink-wrap license to be unenforceable under section 2-207 of the Uniform Commercial Code. n15 An earlier decision, Vault Corp. v. Quaid Software Ltd., n16 held shrink-wrap licenses to be unenforceable adhesion contracts under Louisiana law. furthermore, the Vault court held a state statute specifically designed to validate shrink-wrap license transactions to be preempted by the Copyright Act. n17

The remainder of this article will evaluate the merits of the arguments which have been raised with respect to shrink-wrap licenses and will anticipate and discuss additional contract, copyright, and trade secret issues which might be raised with respect to these agreements.

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II. Contract Considerations

A. Is There a Binding Contract?

There are principally three ways in which shrink-wrap licenses can be interpreted under the common law of contracts: (1) as imposing conditions subsequent to sale; (2) as terms of a reverse unilateral contract between publisher and end-user; (3) and as imposing conditions precedent to sale.

1. Conditions Subsequent to Sale

On first appearance, shrink-wrap licenses may appear to imply conditions subsequent to sale. According to this interpretation, the purchaser is the "owner" of the product when it is delivered to him, but somehow "loses" that ownership upon opening the package.

Conditions subsequent to sale cause a forfeiture of contract rights which are otherwise due and enforceable. Not surprisingly, they are generally frowned upon by the courts. n18

2. Reverse Unilateral Contract

Suppose that the shrink-wrap agreement is interpreted as an offer from the software publisher to the buyer in the following terms: "a restricted right to use this program is yours if you agree to abide by these license provisions." This rare type of transaction has been coined a "reverse unilateral contract" because it consists of an offer of a performance for a promise, rather than an offer of a promise for a performance. n19

Viewed as a reverse unilateral contract, shrink-wrap licenses have no basis for bargaining to reach an agreement. By the time the user manifests his "assent" by opening the package or using the program, he already possesses full rights of ownership (having paid or promised to pay in return for delivery of the software). By assenting to a post-purchase

[*388] restrictive agreement, the purchaser would be relinquishing rights in return for no further consideration from the publisher. n20

3. Conditions Precedent to Sale

Neither can agreement to the terms of a license which accompanies mail order software properly be construed as a condition precedent to sale. Telephone order purchasers typically do not have the opportunity to read the shrink-wrap terms, much less agree to them, until after they have paid for, or agreed to pay for, the software.

Many software packages, however, are sold by independent dealers rather than through telephone orders from the publishers. If software is purchased through an independent dealer and adequate notice of the license terms is provided to the consumer before the money is paid or agreed to be paid, purchase of the software may manifest acceptance of a conditional offer, with the software publisher as third-party beneficiary. In this situation, a valid bilateral contract, including the terms in the shrink-wrap license, is formed at the moment of sale. The opening of the package has no independent significance. If the terms of the license agreement are hidden beneath opaque packaging, payment of the purchase price may even then represent acceptance of a conditional offer, so long as the buyer is given adequate notice that a license is contained inside. In that event, what the buyer is giving in return for the software package is his money or a promise to pay plus a promise to read the license and to leave the internal seal unbroken (for a refund) if he is not willing to comply with the license terms. In such a condition precedent to a contract, when the purchaser breaks the seal, he is thereby making a binding election to use the software subject to the terms of the license. n21

In actual practice, however, most consumers purchasing software from independent dealers do not receive adequate notice that use of the software will be limited by the terms of a restricted-use license.

[*389] Dealers often sell hardware and software to consumers in a single-sale transaction. Moreover, dealers generally use sales forms, invoices and receipts, all of which imply, if not expressly state, that the transaction is one of a standard sale of goods. n22

B. Does Article 2 of the Uniform Commercial Code Apply?

Article 2 of the Uniform Commercial Code governs transactions in goods in the nature of sales. In cases involving bundled systems, e.g., hardware and software sold together in a unified system where the sale of software is only incidental to the sale of hardware, courts have generally treated the whole transaction as one subject to article 2. n23 In ascertaining whether software packages are goods, the critical question is whether software is tangible or intangible property. Software has been deemed tangible for criminal wire fraud purposes but intangible under the federal tax laws. Statutes and decisions regarding the application of sales and use tax to software have gone both ways. n24

In the case Advent System Ltd. v. Unisys Corp., n25 the court held that article 2 applies to packaged software regardless of whether it is sold in conjunction with hardware. n26 The Advent court compared the medium in which the software is recorded to a book, reasoning that "[w]hen a professor delivers a lecture, it is not a good, but, when transcribed as a book, it becomes a good." n27

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Whether or not software packages can be classified as goods, software publishers using shrink-wrap licenses definitely do not wish to label the transaction a sale. According to section 2-106 of the Uniform Commercial Code, a sale consists in "the passing of title from the seller to the buyer for a price." n28 The purpose of a shrink-wrap license is to prevent title from passing to the end-user.

Even if the transaction is not technically a sale of goods, courts may nevertheless opt to apply article 2. Article 2 has been applied not only to sales, but also to analogous transactions such as leases of personal property. n29 Moreover, article 2 has been very influential in a wide range of other areas of contract law clearly outside the Uniform Commercial Code definition of sales. n30

C. Application of U.C.C. Article 2

Presently, the Third and Seventh Circuits appear at odds with respect to their approaches to shrink-wrap licenses. The first case to have ever applied a Uniform Commercial Code analysis to shrink-wrap software licenses was Step-Saver Data Systems v. Wyse Technology. n31 In that case, the Court of Appeals for the Third Circuit held such a license to be unenforceable under section 2-207 of the Uniform Commercial Code (the battle of the forms provision). n32 The most recent case applying a Uniform Commercial Code analysis to shrink-wrap software licenses is ProCD Inc. v. Zeidenberg. n33 In that case, the Court of Appeals for the Seventh Circuit held such a license to be enforceable under sections 2-204 and 2-606 of the Uniform Commercial Code, while finding section 2-207 to be inapplicable. n34 The factual distinctions in these cases do not appear to merit the opposite results reached by the courts, and will likely encourage forum shopping.

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1. The Third Circuit and the Step-Saver Case: Shrink-Wrap License Held Unenforceable

a) Background of the Step-Saver Case

Step-Saver was the developer and marketer of a multi-user computer system, including an operating system program developed by The Software Link (TSL), entitled "Multilink Advanced." n35 Step-Saver purchased and resold 142 copies of the TSL program as part of its multi-user computer system. All orders by Step-Saver for the software were placed over the telephone. TSL accepted each of the orders over the telephone, and also promised over the telephone to ship the goods promptly to Step-Saver. After each telephone conversation, Step-Saver sent a purchase order, detailing the items to be purchased, the price, the shipping charges, and payment terms. Next, TSL would ship the order along with an invoice containing terms essentially identical to those contained in Step-Saver's purchase order. None of the telephone conversations, purchase orders or invoices indicated that the transaction was anything other than an outright sale, nor conveyed any disclaimer of warranties. n36

The wrapper containing each copy of the program, however, bore a shrink-wrap license which provided the following: (1) that this transaction should be construed as a perpetual nontransferable license to use the software, but not as a sale; (2) that all warranties were disclaimed except for a warranty that the discs were free of defects; (3) that the licensee's sole remedy would be replacement of any defective discs; (4) that the shrink-wrap license was the final and complete agreement between the parties (an integration clause); (5) that the act of opening the package would be construed as acceptance of the shrink-wrap license terms; and (6) that if the receiver of the software package did not agree with these terms, it should return the package unopened within fifteen days in exchange for a full refund. n37

Shortly after Step-Saver sold its computer systems, problems developed with the systems that neither TSL or Wyse, the manufacturer of the terminals used in the systems, was able to solve. Step-Saver sued TSL and Wyse for breach of warranties, and TSL responded that all such warranties had been waived by the shrink-wrap license. n38

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b) Application of U.C.C. Section 2-207

The Third Circuit Court of Appeals analyzed the shrink-wrap license in accordance with section 2-207(1) of the Uniform Commercial Code. n39 This provision, known as the Uniform Commercial Code's battle of the forms rule, provides as follows:

A definite and seasonable expression of acceptance or a written confirmation which is sent within a reasonable time operates as an acceptance even though it states terms additional to or different from those offered or agreed upon, unless acceptance is expressly made conditional on assent to the additional and different terms. n40

This law provides that a communication from a seller, which would otherwise operate as an acceptance, will not so operate if it is made expressly conditional on the buyer's assent to additional or different terms. In such a situation, the seller's response should be construed, instead, as a rejection of the original offer and as a proposal of a counteroffer.

If the seller's response is found not to be expressly conditional, the next issue which must be addressed is whether the buyer assented to the additional or different terms. Finally, if the buyer did not assent to the additional or different terms, the court must determine whether the seller's actions manifested agreement to proceed with the transaction notwithstanding the buyer's failure to agree to the shrink-wrap terms.

As a threshold issue, the Step-Saver court needed to determine whether the conditional acceptance analysis in U.C.C. section 207(l) was applicable. U.C.C. section 2-206(b) provides that "[a]n order or other offer to buy goods for prompt or current shipment shall be construed as inviting acceptance either by a prompt promise to ship or by the prompt or current shipment of conforming or non-conforming goods." The court accordingly found that the contract between TSL and Step-Saver may have been established upon TSL's delivery of the package. If that were the case, TSL did not receive the shrink-wrap license until a contract had already been formed without its terms. The court might have noted that U.C.C. section 2-206(b) would also support the interpretation that a contract was formed and completed as soon as TSL promised over the telephone to promptly deliver the goods.

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In any event, the court held that U.C.C. section 2-207 would dictate the analysis of the transaction even if the contract had already been formed prior to Step-Saver's receipt of the shrink-wrap agreement. In deciding this way, the court followed the official comment to U.C.C. section 2-207, which states that even if a proposed deal has been closed, the conditional acceptance analysis still applies in determining which writing's terms will define the contract. n41

In applying U.C.C. section 2-207, the court held that the integration claim in the shrink-wrap license and the phrase "opening this product indicates your acceptance of these terms" were not sufficient to make TSL's acceptance "expressly conditioned on assent to the additional or different terms" within the meaning of that provision. n42 The court left open the possibility that a refund offer like that contained in TSL's shrink-wrap license might, under another sets of facts, constitute a conditional acceptance. n43 The court found, however, that in this instance, there was no real indication that TSL was willing to forgo the transaction if the shrink-wrap provisions were not included in the contract.

While the Step-Saver court never cited the district court opinion of Baumgold Brothers, Inc. v. Allan M. Fox Co., East, n44 the facts and legal reasoning in the two cases are remarkably similar. In Baumgold, a buyer sent a written purchase order for diamonds to the seller, who promptly shipped the buyer the requested diamonds concurrently with a sales agreement stating that its adoption was an express condition. The agreement enclosed in the shipment contained an integration clause which stated that this was the final and complete agreement between the parties. Applying U.C.C. section 2-207, the court concluded that in spite of the purported expressly conditional language, the seller's act of shipping the diamonds before any assent was manifested clearly evidenced his willingness to proceed with the transaction with or without the buyer's assent to the different or additional terms.

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As in Baumgold, TSL delivered a package to Step-Saver in response to a purchase order, which was accompanied by additional and different terms. By mailing the software to Step-Saver before it had even seen the license terms, TSL evidenced its willingness to proceed with the transaction regardless of whether Step-Saver assented to the shrink-wrap license terms. Therefore, a contract became effective between TSL and Step-Saver providing for a complete transfer of title to the software, without the different terms contained in the shrink-wrap license.

c) Course of Dealing

The Step-Saver court next addressed the issue of whether Step-Saver's continued ordering and usage of software from TSL after receipt of the shrink-wrap license accompanying the first-delivered software package constituted consent to the identical shrink-wrap licenses accompanying the second and subsequent software packages which Step-Saver received. The court held that for two reasons the repeated sending of shrink-wrap licenses containing identical terms, without any action with respect to the issues raised by those terms, did not constitute a course of dealing and did not incorporate these terms into the subsequent software transactions. First, the repeated sending of the shrink-wrap license indicated only that TSL desired those terms-not that Step-Saver agreed to them. Second, TSL's unwillingness or inability to obtain a negotiated agreement regarding these terms indicated that, regardless of whether TSL would have liked a court to incorporate those terms in the event of a dispute, these terms were not part of the parties' commercial bargain.

2. The Seventh Circuit and the ProCD Case: Shrink-Wrap License Held Enforceable

a) Background of the ProCD Case

A computer database called SelectPhone was compiled by ProCD, Inc., which combined information from over three thousand telephone directories into a format from which the information could be easily retrieved. The outside of the box contained a statement that the software was subject to a license agreement found within the box. The enclosed license limited use of the application program and listings to non-commercial uses, and was reproduced on the user's screen each time the program was launched. After purchasing a copy of the software,

[*395] Matthew Zeidenberg established an Internet site where the public could access the software for a fee. He did so with knowledge of the existence of the shrink-wrap agreement but with the belief that the agreement was unenforceable. The court held that this commercial use was in violation of the shrink-wrap license agreement.

b) Non-Applicability of UCC Section 2-207

Distinguishing itself from the Step-Saver case, ProCD held that the transaction completed by the parties did not even implicate section 2-207 of the Uniform Commercial Code. n45 Without any elaboration, Judge Easterbrook concluded that "[o]ur case has only one form; UCC 2-207 is irrelevant." n46 Presumably, Easterbrook meant that since the box incorporated the enclosed license agreement by reference, the license agreement was not a conflicting instrument. Judge Easterbrook's argument fails in a situation where the box is not seen before purchase, since in that case it would be difficult to view the shrink-wrap license as anything other than an acceptance with conflicting terms. One of the difficulties with the court's reasoning is that it assumes the buyer is made aware of the incorporation term before making the purchase. It ignores the reality that, as ProCD itself notes, "[o]nly a minority of sales take place over the counter, where there are boxes to peruse." n47 Furthermore, even in the case of over-the-counter sales, the purchaser may not read the incorporation statement.

c) Application of UCC Section 2-204

Judge Easterbrook found that section 2-204(1) of the Uniform Commercial Code supports the enforceability of shrink-wrap licenses. Section 2-204(1) provides that:

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. n48

According to the Seventh Circuit, the ProCD transaction involved a vendor who made an offer for transfer of the software which included "limitations on the kind of conduct that constitutes acceptance." n49

[*396] In order to accept, the buyer must perform the act "the vendor proposes to treat as acceptance." n50 Because Zeidenberg read the license (which was "splashed" on the screen) and went on to use the software, he agreed to the terms ProCD indicated for acceptance.

Easterbrook argues that this situation is different from one in which "a consumer opens a package to find an insert saying 'you owe us an extra $ 10,000' and the seller files suit to collect." n51 However, it is unclear how these two situations can be distinguished. In both, the buyer is unaware of some circumstance which alters the terms of the transaction. In both instances, the buyer does not receive that which was bargained for. Easterbrook's assertion that the buyer can merely return the software if not satisfied with the terms of the deal was unsupported by any proof that such return would have been permitted or that the seller had any policy of actually providing refunds to those who disagreed with the license terms.

d) Additional Support from UCC Section 2-606

ProCD holds that section 2-606(1)(b) of the Uniform Commercial Code also supports the enforceability of shrink-wrap licenses. n52 This provision provides that acceptance of goods does not occur until the buyer has had a reasonable opportunity to inspect them. Since Zeidenberg did not return the software after inspecting it, the court found that the goods were effectively accepted under section 2-606. n53

It should be kept in mind, however, that it is physically impossible for purchasers of software packages to inspect them without first opening the wrapper - the very act which many shrink-wrap licenses purportedly deem to constitute an acceptance of their terms.

D. Validating State Legislation

In the absence of special legislation designed to validate shrink-wrap licenses, it is unlikely that these agreements will be upheld by the courts as enforceable contracts. Recognizing this, Vault Corporation, a

[*397] software protection company, has urged state legislatures to enact legislation which would create the irrebuttable presumption n54 that any person acquiring a copy of computer software has accepted the terms of the accompanying license agreement. n55 To prevent software publishers from abusing such a law by inserting unconscionable provisions n56 into their license agreements, the model software bill drafted by Vault's counsel does not provide that all terms in the accompanying license agreements are necessarily enforceable, but only those that significantly enhance the ability of the software publishers and distributors to protect their rights under trade secret and copyright law. n57

Terms that the Vault Bill deems to have been accepted include: <bullet>provisions for the retention of title to the software by the licensor; <bullet>prohibitions against copying for any purpose; <bullet>prohibitions against modifying or adapting the software, including prohibitions on translating, <bullet>reverse engineering, decompiling, disassembling or creating derivative works based on the software; <bullet>prohibitions against further transfer, assignment, rental, or other dispositions of the software; and <bullet>prohibitions for the automatic termination of the license agreement without notice if any provisions are breached by the licensee. n58

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As of the time of this writing, Louisiana and Illinois are the only states which have adopted forms of this legislation, and the Illinois statute was subsequently repealed. n59 The Louisiana bill, introduced by State Senator Atkins and Representative Ater, was passed in July of 1984 under the short title, "Software License Enforcement Act." n60 One of the reasons why the model bill drafted by Vault has not received significant support is that although difficult contract issues are resolved by the legislation, it remains problematic whether shrink-wrap licenses can be enforced consistently with the federal law of copyrights and state laws on trade secrecy. n61 This article will now address these further obstacles to shrink-wrap license enforcement.

III. Copyright Considerations

Section 301 of the Copyright Act of 1976 provides that:

All legal or equitable rights that are equivalent to any of the exclusive rights within the general scope of copyright . . . are governed exclusively by the [copyright law]. . . . [N]o person is entitled to any such right or equivalent right in any such work under the common law or statutes of any State. n62

Rights which shrink-wrap licenses attempt to afford to software publishers, even if supported by validating state legislation, may, therefore, be preempted if they fall within the general scope of the copyright law. Shrink-wrap provisions facing the greatest risk of preemption are those in potential conflict with section 117 of the Copyright Act.

Under section 117 of the Copyright Act, n63 it is permissible for a program copy owner to make an adaptation of a computer program

[*399] without the copyright owner's permission, as long as the adaptation is either "created as an essential step in the utilization of the computer program in conjunction with a machine" or "is for archival purposes only." Freedom to modify the program may tempt users to make their own versions of the program and sell them in competition with the original (although section 117 technically prohibits this result, limiting the permissible use of the adaptation to the facilitation of the operation of the original program).

While the adaptation right is most suited to source code, it may also be applied to object code. In order to modify object code, however, it is usually necessary to first disassemble or decompile it, activities which many shrink-wrap licenses are designed to prevent. n64

This issue was specifically addressed in the fifth circuit case of Vault Corp. v. Quaid Software, Ltd. n65 The Vault court held that under Louisiana law, shrink-wrap licenses are contracts of adhesion n66 which are only enforceable to the extent that Louisiana's Software Enforcement

[*400] Act is a valid and enforceable statute. Furthermore, the court found that the provision in the Louisiana statute which prohibits the adaptation of licensed software by decompilation or disassembly was unenforceable and preempted by section 117 of the Copyright Act. n67

The significance of the Vault decision extends far beyond the validity of the Louisiana Software Enforcement Act. If provisions of this Act conflict with section 117 of the Copyright Act, then the application of state common law contract rules or of the Uniform Commercial Code to justify the enforcement or validity of similar shrink-wrap provisions may also be preempted by the Copyright Act. n68

However, in ProCD, Inc. v. Zeidenberg, n69 the court rejected the argument that rights created by contract are "equivalent to any of the exclusive rights within the general scope of copyright" and are thus

[*401] prohibited by section 301 of the Copyright Act. n70 It found that whereas copyright law governs "right[s] against the world," contracts law governs only relations between parties. n71 Since the shrink-wrap license would not affect "[s]omeone who found a copy of [the software] on the street," the court found that copyright law was not being usurped by enforcement of the license agreement. n72

IV. Conclusion

Until recently, it seemed that in the absence of state legislation deeming the purchaser to have "agreed" to the license terms, courts would not hold shrink-wrap licenses enforceable under either the common law of contracts or the Uniform Commercial Code. Moreover, in the one case to date in which such state legislation was found to be applicable, the court nevertheless found some shrink-wrap license provisions to be invalid, as they created rights within the exclusive scope of the federal law of copyrights. However, the recent Seventh Circuit decision holding a shrink-wrap license enforceable under the Uniform Commercial Code, and not preempted by the Copyright Act, created a clear split between the third and seventh circuits. It is not clear which approach other circuits will follow in the future.

n1 * (c) 1998 David A. Einhorn. Mr. Einhorn is a partner in the New York City office of Anderson Kill & Olick, P.C. State Legislatures Act on Intellectual Property Issues, 28 Pat. Trademark & Copyright J. (BNA) 466 (1984).

n2 Although this term was specifically used for software packages wrapped in a cellophane wrapping where the license is visible from beneath the transparent wrapping, it will be used generically in this article to represent all of these license species.

n3 Software Publishers Association, 1997 Report on Global Software Piracy 41 (1997). While in the United States 27% of the total software installed is pirated, the problem is even worse overseas. In Russia, for example, 91% of all software packages are pirated. In China, as much as 96% of the software is illegal. Id. See also James Daly, Apple Stocking Antipiracy Ammunition, Computerworld, Dec. 16, 1991, at 58 [hereinafter Daly].

n4 Software Publishers Association, supra note 3, at 4. While the computer software industry is losing profits, however, the computer hardware industry has handsomely profited as a side effect of the unauthorized duplication of computer software. As Steve Wosniak, co- founder of the Apple Computer Company, has admitted, "[A]ll the piracy . . . has helped sell a lot of computers . . . ." David Salisbury, Computer Industry Toughens its Surveillance of Software Pirates, Christian Sci. Monitor, Mar. 14, 1984, at 5.

n5 Daly, supra note 3, at 58.

n6 Software publishers thereby attempt to circumvent section 117 of the Copyright Act which permits unauthorized copies of computer programs to be made in certain specified circumstances. See infra note 63 for the text of section 117.

n7 "Object Code" is a program consisting of a sequence of low-level, machine-readable instructions, often in binary or hexadecimal digits. See *Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240, 1249-50, 219 U.S.P.Q. (BNA) 113, 121 (3d Cir. 1983).*

n8 A "computer algorithm" is a procedure for a solution of a problem in a finite number of steps. Computer algorithms can be implemented by many different computer programs sufficiently dissimilar in arrangement to entitle each of them individually to copyright protection even though they accomplish the same tasks. See *Gottschalk v. Benson, 409 U.S. 63, 175 U.S.P.Q. (BNA) 673 (1972).*

n9 "Source Code" is a program in any higher-level language, such as BASIC or PASCAL. See *Apple Computer, 714 F.2d at 1249-50, 219 U.S.P.Q. at 121.*

n10 "Disassembling" and "decompiling" are terms of art for the reverse engineering of object code. See Computer Primer and Glossary, 1984 CLE Institute on the Law of Computer-Related Technology (American Patent Law Association) 105.

n11 The following, for example, is the disclaimer contained in the Lotus 1-2-3 shrink-wrap license: Except as specifically provided above, Lotus makes no warranty or representation, either express or implied, with respect to this program or documentation, including their quality, performance, merchantability, or fitness for a particular purpose. Because programs are inherently complex and may not be completely free of errors, you are advised to verify your work. In no event will Lotus be liable for direct, indirect, special, incidental or consequential damages arising out of the use of or inability to use the program or documentation, even if advised of the possibility of such damages. Specifically, Lotus is not responsible for any costs including, but not limited to, those incurred as result of lost profits or revenue, loss of use of the computer program, loss of data, the costs of recovering such programs or data, the cost of any substitute program, claims by third parties, or for other similar costs. In no case shall Lotus' liability exceed the amount of the license fee. The warranty and remedies set forth above are exclusive and in lieu of all others, oral or written, express or implied. No Lotus dealer, distributor, agent, or employee is authorized to make any modification or addition to this warranty.

n12 *86 F.3d 1447, 1452-53, 39 U.S.P.Q.2d (BNA) 1161, 1164-65 (7th Cir. 1996).*

n13 U.C.C. 2-204, 2-606 (1996).

n14 *939 F.2d 91, 105 (3d Cir. 1991).*

n15 U.C.C. 2-207 (1996).

n16 *847 F.2d 255, 270, 7 U.S.P.Q.2d (BNA) 1281, 1295 (5th Cir. 1988).*

n17 Id.

n18 See *State v. Allen, 625 P.2d 844, 848 (Alaska 1981);* see also Robert Greene Sterne & Perry J. Saidman, Copying Mass-Marketed Software, Byte, Feb. 1985, at 387; Stephen Davidson, "Box-top" Software Licenses, 41 Bench & Bar Of Minn. 9, 10 (1984).

n19 E. Allan Farnsworth & William F. Young, Contracts 3.3, at n. 4 (4th ed. 1988).

n20 To solve the problem of no new consideration in bargaining for terms of the license, software publishers may offer new and additional rights to the buyer in exchange

for the purchaser relinquishing rights which he gained through the sale. Publishers may, for example, permit the purchaser to make more copies of the software than those permitted under the Copyright Act, or may provide updates and support services to the purchaser. See Michael Ryan, Offers Users Can't Refuse: Shrink-Wrap License Agreement as Enforceable Adhesion Contracts, *10 Cardozo L. Rev. 2105, 2127 (1989).* Note, however, that this would only constitute new consideration if the user had not been made aware of these benefits prior to his initial decision to purchase the software.

n21 Davidson, supra note 18, at 10.

n22 It may actually be a violation of section 5 of the Federal Trade Commission Act to allow a transaction appear to be a sale but to later inform the purchaser that it is not. *15 U.S.C. 45* (1996). See the S & H "green stamp" cases: *Federal Trade Comm. v. Sperry & Hutchinson Co., 405 U.S. 233 (1972); Eastex Aviation, Inc. v. Sperry & Hutchinson Co., 522 F.2d 1299 (5th Cir. 1975)* (while S & H claimed that it had reserved title to its "green stamps" per license, the court held that because S & H had apparently divested itself of substantial rights to the stamps when they were issued, the mere use of the word "title" in the license was formalistic and without substantive effect).

n23 See, e.g., *Chatlos Sys., Inc. v. Nat'l Cash Register Corp., 635 F.2d 1081 (3d Cir. 1980)* (the parties conceded that a transaction involving hardware, software, and associated services was governed by the U.C.C.).

n24 Id. See generally Jonathan Pauluk, Computer Software and Tax Policy, *84 Colum. L. Rev. 1992 (1984);* Deborah Kemp, Computer Programs as Goods Under the U.C.C., *77 Mich. L. Rev. 1148 (1979).*

n25 *925 F.2d 670 (3d Cir. 1991).*

n26 Id.

n27 *Id. at 675.*

n28 U.C.C. 2-106 (1996).

n29 See, e.g., *Transport Leasing Corp. v. State, 199 N.W.2d 817, 820 n.4 (Minn. 1972)* (finding that what often purports to be a lease is really a conditional sale).

n30 See generally Daniel E. Murray, Under the Spreading Analogy of Article 2 of the Uniform Commercial Code, *39 Fordham L. Rev. 447 (1971).*

n31 *939 F.2d 91 (3d Cir. 1991).*

n32 *Id. at 105;* U.C.C. 2-207 (1996).

n33 *86 F.3d 1447, 39 U.S.P.Q.2d (BNA) 1161 (7th Cir. 1996).*

n34 *Id. at 1452-53, 39 U.S.P.Q.2d at 1164-65.*

n35 *939 F.2d at 93-94.*

n36 *Id. at 95-96.*

n37 *Id. at 96-97.*

n38 *Id. at 94.*

n39 *Id. at 100.* The court did not address the issue of whether it was appropriate to apply U.C.C. article 2 to this software transaction in the first place. This issue was probably not contested by either party because it had recently been resolved in the affirmative by the same circuit in *Advent Sys. Ltd. v. Unisys Corp., 925 F.2d 670 (3d Cir. 1991). 939 F.2d at 95 n. 6.*

n40 U.C.C. 2-207(1) (1996) (emphasis added).

n41 *Step-Saver, 939 F.2d at 101, n.29;* see also *McJunkin Corp. v. Mechanicals, Inc., 888 F.2d 481, 487 (6th Cir. 1989)* (written confirmation sent after a delivery of the products subject to 2-207 because the seller sought thereby to incorporate those additional terms into the existing contract).

n42 *939 F.2d at 102.*

n43 See Dilenschneider v. Micro Data Base Sys., No. 87-*C-6246, 1988 U.S. Dist. LEXIS 2814* (N.D. Ill. Apr. 7, 1988) (suggesting that a shrink- wrap license would be valid and enforceable if a response card containing the license acceptance clause were signed and returned).

n44 *375 F. Supp. 807 (N.D. Ohio 1973).*

n45 *ProCD, 86 F.3d at 1452.*

n46 Id.

n47 *Id. at 1451.*

n48 U.C.C. 2-204(1) (1991).

n49 *ProCD, 86 F.3d at 1452.*

n50 Id.

n51 Id.

n52 *Id. at 1452-53.*

n53 *Id. at 1453.*

n54 The constitutionality of rebuttable and irrebuttable presumptions was examined in the 1976 Supreme Court case of *Usery v. Turner Elkhorn Mining Co., 428 U.S. 1, 28 (1976).* Justice Marshall, speaking for the Court, applied a standard which had been first articulated by the Supreme Court in the 1910 case of *Mobile, J. & K.C.R. Co. v. Turnipseed, 219 U.S. 35, 43:* That a legislative presumption of one fact from evidence of another may not constitute a denial of the equal protection of the law, it is only essential there be some rational connection between the fact proved and the ultimate fact presumed and that the inference of one fact from another shall not be so unreasonable as to be a purely arbitrary mandate. As Usery continues to be good law, it remains unlikely that the Supreme Court would strike down any state software license enforcement acts on equal protection grounds unless they could not be supported by any rational argument. The problem of software piracy provides that rational connection.

n55 See Cal. Legis. Counsel's Digest RN 010823, at 1.

n56 Total disclaimers of liability, for example, might be construed to be unconscionable provisions. See generally David Himolson, Frankly Incredible: Unconscionability in Computer Contracts, 4 Computer/L.J. 695 (1984).

n57 See Letter from Allen Grogan of Blanc, Gilburne, Peters, Williams & Johnston (the firm representing Vault Corporation), to State Senator Atkins, Representative Ater, and Mr. J. Robert Wooley, First Assistant Secretary of State of Louisiana 4 (Feb. 10, 1984).

n58 Id.

n59 Ill. Rev. Stat. ch. 29, para. 801-08 (1988), repealed by PA 85-254 and PA 85-614 eff. Jan. 1. 1988; La. Rev. Stat. 1964 (West 1991). Other states which have expressed some interest in this legislation are California, Arizona, Georgia, Washington and Hawaii.

n60 See La. Rev. Stat. 1964 (West 1991).

n61 Telephone interview with Assemblyman Paul Bolster (D-Atlanta) (Apr. 28, 1985); correspondence from Merce Azar, Senior Assistant to Assemblyman Gray Davis (D-Los Angeles).

n62 *17 U.S.C. 301* (1991) (emphasis added).

n63 This section provides as follows: [I]t is not an infringement for the owner of a copy of a computer program to make or authorize the making of another copy or adaptation of that computer program provided: 1. That such new copy or adaptation is created as an essential step in the utilization of the computer program in conjunction with a machine and that it is used in no other manner, or 2. That such new copy or adaptation is for archival purposes only and that all archival copies are destroyed in the event the continued possession should cease to be rightful. Any exact copies prepared in accordance with the provisions of this Section may be leased, sold, or otherwise transferred along with the copy from which such copies were prepared, only as part of the lease, sale or transfer of all rights in the program. Adaptations so prepared may be transferred only with the authorization of the copyright owner. *17 U.S.C. 117* (1982).

n64 Duncan M. Davidson, Protecting Computer Software: A Comprehensive Analysis, *23 Jurimetrics J. 339, 384 (1983).* Modifications may cause problems for software publishers by creating errors in the program which are later attributed to the publishers. Moreover, programs which have been modified may not be able to utilize new features and enhancements which the publisher subsequently makes available. Thus, prohibiting users from modifying their programs has been advocated as a means of protecting the publishers reputation and goodwill. See Memorandum of Jan. 29, 1985 by Allen Grogan of Blanc, Gilburne, Peters, Williams & Johnston (on file with the office of Assemblyman Gray Davis of California).

n65 *847 F.2d 255, 270 (5th Cir. 1988).*

n66 This part of the Vault decision is of questionable significance in other jurisdictions since most states do not take as strong a position against adhesion contracts as the state of Louisiana does. Mary Brandt Jenson, The Preemption of Shrink-Wrap

Licenses in the Wake of Vault Corp. v. Quaid Software, Ltd., 8 Computer/L.J. 157, 161 (1988).

n67 In making this decision, the Vault court assumed without discussion that 117 is applicable to shrink-wrap license transactions. This is not necessarily the case. Software publishers have argued that "shrink-wrap" licenses are outside of the scope of 117, since this section, according to its precise statutory language, is applicable only to owners of copyrighted works. By including "shrink-wrap" licenses with the software which they mass market, software publishers seek to remove their products from the scope of this provision by labeling the consumer as a licensee rather than an owner of the copy which he acquires. Software publishers further argue that their position is substantiated by the legislative history of 117. Congress adopted this provision in strict accordance with the recommendations of the Commission on New Technological Uses of Copyrighted Works (CONTU), but for the single change of substituting the term owner for the term rightful possessor. While Congress offered no explanation for this choice of terminology, software publishers contend that the change was implemented so that 117 would not impede the licensing of software packages. D. Davidson, supra note 64, at 363. Purchasers of software packages have contended, on the other hand, that the only purpose of the change in language was to exclude innocent finders (those who find software inadvertently lost or intentionally abandoned). Id. In the alternative, they have argued that even if pure licensees were excluded from 117, purchasers of software subject to "shrink-wrap" agreements are not in this category, since they acquire full title to the mediums in which the programs are encoded. Id. at 384. In any event, the few court opinions which have construed 117 have tended to blur the distinction between rightful possessor and owner and have not recognized any substantive difference in the interpretation between the two. See, e.g., *Atari, Inc. v. J.S. & A. Group, Inc., 597 F. Supp. 5, 9 (N.D. Ill. 1983); Midway Mfg. Co. v. Strohon, 564 F. Supp. 741, 750 n. 6 (N.D. Ill. 1983);* see also S. Davidson, supra note 18, at 11. The Vault court followed this trend.

n68 It is an interesting side note that shortly after the Vault decision was published, Microsoft Company stopped using shrink-wrap licenses in conjunction with its software packages. Jenson, supra note 66, at 169 n. 60.

n69 *86 F.3d 1447 (7th Cir. 1996).*

n70 *Id. at 1454.*

n71 Id.

n72 Id.