When Your Refrigerator Orders Groceries Online and Your Car Dials 911 After an Accident: Do We Really Need New Law for the World of Smart Goods?

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INTRODUCTION

With digital functionality, goods are already doing amazing things and soon will do even more. Manufactured goods increasingly will operate with the aid of computer programs and be connected to the Internet. The changes in store for us are captured in this headline from the online magazine, Wired, *Your Car: The Next Net Appliance*.[1] The story discussed beta testing of an operating system for embedded software that can be mounted on small and inexpensive hardware.[2] An explosion in "smart" goods is upon us.

In this Article, I argue that the law of goods does not need change in many of its elements despite current technological change. Furthermore, I argue that it makes sense to treat copies of freestanding software as goods even if they are in electronic files. One body of law should govern transactions in hardware and software, including refrigerators, cars, personal computers and their operating systems, manufacturing and medical equipment, as well as freestanding software itself. These products are all properly classified as goods. For these products, Article 2 of the Uniform Commercial

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1. Leander Kahney, *Your Car: The Next Net Appliance*, WIRED, Mar. 5, 2001, *at* http://www.wired.com/news/technology/ 0,1282,42104,00.html.

2. *Id.*; *See also* Margaet Kane, *Accenture, Microsoft Carpool on Auto Gadgets*, CNET News.com, Jan. 10, 2002, *at* http://news.cnet.com/news/0-1006-200-8428652.html?tag=prntfr) (concerning combining cars and computers).

Code (U.C.C.) successfully addresses issues of contract formation, warranties, performance standards, and damages.[3]

The more difficult question is the proper legal framework for transfer and use restrictions in contracts for digital products. The U.C.C. does not deal adequately with these issues. Sophisticated and disinterested law reform is necessary to determine to what extent transfer and use restrictions are legitimate commercial tools and to what extent these restrictions threaten competition, innovation, and free flow of information. The need for nuanced treatment of these issues is not a reason for creating a separate body of law for software, however, because licensing may become a standard transaction type for goods other than software.

The sponsors of the U.C.C., the American Law Institute (A.L.I.) and the National Conference of Commissioners of Uniform State Laws (NCCUSL), have been unable to agree on a new legal framework for either "smart" goods or freestanding software. In 2001, they failed to agree on changes in the scope of Article 2[4] as it relates to transactions in these products.[5] As a result, efforts to revise or amend Article 2 have broken down.[6] This was the most recent chapter in the disagreement between the two organizations concerning the law of software transactions. When the A.L.I. concluded that a proposed U.C.C. Article 2B on licenses was not

3. U.C.C. §§ 2-101 to 2-725 (1992).

4. Although the applicable scope provision of existing Article 2, Section 2-102, states that it applies to "transactions" in goods, the short title of the Article is "Sales." U.C.C. § 2-101 (2000). In addition, most of the Article's sections are written in terms of buyers and sellers. A "sale" is defined as "the passing of title from the seller to the buyer for a price." U.C.C. § 2-106(1). Goods are defined as movable things. *See* U.C.C. § 2-105(1). Comment 1 to Section 1-102 suggests that it is appropriate to apply the U.C.C. by analogy to subject matter not expressly included within the scope of the Act. U.C.C. § 1-102 cmt. 1.

5. *Final Attempt to Achieve U.C.C. Article 2 Amendments Underway*, 24 A.L.I. REP. (2001) (describing different approaches of the two organizations in 2001, with the A.L.I. membership voting in May 2001 for a version that left scope as is, so that boundary issues would continue to be decided by the courts, while NCCUSL's membership voted in August for a scope provision addressing the coverage of software transactions, excluding freestanding software but including some embedded software).

6. *Id*. (as of the fall of 2001, there were still efforts underway to draft an acceptable scope provision; also stating that if these efforts were successful, the Article 2 amendments would require approval in 2002 by the A.L.I. Annual Meeting). However, the A.L.I. did not schedule any further work on Article 2 at its May, 2002, meeting, indicating a failure of the effort.

satisfactory, NCCUSL nonetheless decided to promulgate it as a freestanding uniform law, the Uniform Computer Information Transactions Act (UCITA).[7] UCITA has been enacted in only two states.[8] Vigorous opposition from a coalition of software user interests, including insurance companies, retailers, manufacturers, libraries, attorneys general in their capacities as consumer protection officials, and consumer advocates, succeeded in stopping the legislation everywhere in 2001 and early 2002.[9] Three states, more than adopted UCITA, have enacted "bombshelter" provisions in an attempt to prevent choice of law clauses from making UCITA applicable to their residents.[10] Furthermore, a special American Bar Association (A.B.A.) task force issued a critical report on UCITA in January, 2002,[11] further diminishing its prospects. As the lone dissenter among the nine-member A.B.A. group said, "I know of no way that the report can be read other than to require a rewrite of UCITA to simplify it and to change many of the policy decisions embedded in it . . . ."[12]

It seems likely that we are in for a continuing period of case law development of the law of software licensing, with Article 2 serving as the primary authority, either directly or by analogy. Given the flaws in the scope framework approved by NCCUSL in 2001,[13] this

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7. *Article 2B Is Withdrawn from U.C.C. and Will Be Promulgated by NCCUSL as Separate Act*, 21 A.L.I. REPORTER (1999), *at* http://www.ali-aba.org/ali/r2103 (in official publication of the A.L.I. reporting that Article 2B would not be promulgated as part of the U.C.C. and that A.L.I.'s governing Council "continued to have significant reservations about both some of its key substantive provisions and its overall clarity and coherence").

8. The enactments were in Virginia and Maryland. VA. CODE ANN. §§ 51.1-54.1 (2000); MD. CODE ANN. [COM. LAW. I] §§ 22-101 to 22-81b (2000).

9. Americans for Fair Electronic Commerce Transactions (AFFECT), *at* http://www.4cite.org (last visited Jan. 27, 2002).

10. *See* Iowa Code Ann. § 554D.104(4)(2001); N.C.G.S.A. § 66-329 (2001); W.Va. Code Sec. 55-8-15 (2001).

11. *See* American Bar Association Working Group Report on the Uniform Computer Information Transaction Act, January 31, 2002, *at* http://www.abanet.org [hereinafter, A.B.A. UCITA Report] (finding, among other problems, that UCITA is "extremely difficult to understand" and that its scope is uncertain).

12. *Id.* at 24 (MINORITY REPORT by Donald A. Cohn (stating that the fact that the A.B.A. has not endorsed UCITA, as it normally does with uniform laws, will hurt its prospects for enactment). Cohn also issued an addendum to his minority report that said, "I have been unable to find any really positive statements with regard to anything that the NCCUSL and A.B.A. advisors have been laboring over for ten (10) years . . . ." *Id.* at 37.

13. *See supra* note 5.

is a better approach. The courts frequently apply Article 2 to software transactions, often without stating whether they are applying it directly or using it as persuasive authority. A comment to the Restatement (Third) of Torts has recognized the general applicability of Article 2, stating: "Under the [U.C.C.] software that is mass-marketed is considered a good . . . . However, software that was developed specifically for the customer is a service."[14] The application of Article 2 is unproblematic for most issues, including contract formation, warranties and damages. On the other hand, transfer and use restrictions are not dealt with in Article 2, because they are inconsistent with the idea of a cash sale. (In a credit sale or a lease, in contrast, the secured party or lessor is concerned about protecting its rights in the goods and thus has a legitimate interest in restricting transfer and use; the secured party has a contingent property interest and the lessor remains the owner and has a reversionary interest.) When it comes to transfer and use restrictions in software transactions labeled "licenses," courts have to decide whether the transaction is really a disguised sale, designed to evade the user protections of federal intellectual property law, including the first sale and fair use doctrines.[15]

As long as UCITA has some life in the legislatures or the leadership of NCCUSL, it may be impossible to draft uniform law appropriately governing transfer and use restrictions. UCITA purports to deal with these issues, along with all others, by "freedom of contract."[16] UCITA does not actually use a free contract system, but rather a regulatory system that delegates to licensors the power to impose terms by delayed boilerplate.[17] The A.B.A. task force on UCITA squarely rejected this approach as without "any economic justification" and called for terms to be disclosed before the customer pays or becomes bound to the transaction.[18] Even if UCITA did leave

14. RESTATEMENT (THIRD) OF TORTS § 19 cmt.(d) (1997).

15. For a discussion of the cases, see Softman Prods. Co. v. Adobe Syss., Inc., 2001 WL 1343955 (C.D. Cal. 2001) (reviewing the case law and finding that a transaction denominated a "License" was in fact a sale, so that the first sale doctrine permitted transfer).

16. *See* UCITA, prefatory note (2000).

17. UCITA §§ 208, 209, 112. U.C.C. § 2-207(2) and its comments reject this approach. U.C.C. § 2-207(2) cmts. 2-7 (2001).

18. *See* A.B.A. UCITA Report, *supra* note 11.

transfer and use issues to the contracting parties, a contract is an inadequate vehicle for development of competition and information policy. Antitrust and intellectual property law recognize this point.[19]

When the smoke finally clears from the UCITA wars, it may be possible to deal sensibly with transfer and use issues as part of a new effort at a "hub and spoke" revision of Article 2. This would permit use of a hub of provisions applicable to all types of goods, including smart goods and software products, along with spokes applicable only to certain types of transactions, such as those in copies of software. A "hub and spoke" approach was briefly considered in 1995 during the Article 2 revision process,[20] but it was abandoned before a serious effort to implement it, when the leadership of NCCUSL decided instead to create a separate project to draft U.C.C. Article 2B.[21] The advantage of the "hub and spoke" approach is that it reduces the need to apply multiple bodies of law to mixed transactions in hard and soft products, but still permits some different legal rules for particular types of goods. Formation, warranty and damages provisions should be the same for all goods, but transfer and use provisions might be different for software. On the other hand, transactions with transfer and use restrictions may eventually be legitimately employed for goods other than software, and if so, the revised Article 2 spokes concerning transfer and use restrictions could be made more generally applicable.

A uniform law is not the only possible approach. Contractual transfer and use restrictions could be left to the common law, perhaps supported by a "Restatement of Licensing." Alternatively, a federal statutory approach to contract transfer and use restrictions might be best because the issues are so intertwined with federal intellectual property and competition law.

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19. *See generally* Sherman Antitrust Act, 15 U.S.C. §§ 1-2 (2000); MARK A. LEMLEY ET AL., SOFTWARE AND INTERNET LAW 539-44 (2000) (overview of antitrust law restrictions on monopolization and agreements in restraint of trade and discussion of modern view that intellectual property laws are also designed to promote competition).

20. Linda J. Rusch, *A History and Perspective of Revised Article 2: The Never Ending Saga of a Search for Balance*, 52 SMU L. REV. 1683 (1999).

21. Proposed Article 2B was renamed UCITA after A.L.I. withdrew from the project and NCCUSL decided to promulgate it as a freestanding uniform law. *See supra* note 7 and accompanying text.

CLASSIFYING SOFTWARE AS GOODS: A FUNCTIONAL APPROACH

Contemporary commercial law takes a functional approach to classification issues. For example, a "security interest" is distinguished from a "lease" on the basis of the economic realities of the transaction.[22] An economically meaningful reversionary interest in the lessor is the essence of a lease.[23] Simply calling a transaction a "lease" will not avail a seller who reasonably expects to get the goods back only upon default; such a transaction is really a credit sale, not a true lease. Similarly, in deciding whether to apply Article 2 to hybrid transactions or to non-sale transactions, the courts look to policy considerations and ask whether the particular Article 2 section in question functions well as the governing law for the issue in question.[24]

Interestingly, before he became reporter for UCITA, Professor Raymond Nimmer took the functional approach to classification of software transactions:

> Ownership of a copy should be determined based on the actual character, rather than the label, of the transaction by which the user obtained possession. Merely labeling a transaction as a lease or license does not control. If a transaction involves a single payment giving the buyer an unlimited period in which it has a right to possession, the transaction is a sale. In this situation, the buyer owns the copy regardless of the label the parties use for the contract. Course of dealing and trade usage may be relevant, since they establish the expectations and intent of the parties. The pertinent issue is whether, as in a

22. U.C.C. § 1-201(37) (2000) (defining "security interest"); U.C.C. § 1-201(37) cmt. 37 (noting "all of these tests [in the statutory text] focus on economics, not the intent of the parties").

23. *See, e.g.*, *In re* Bumgardner, 183 B.R. 224, 228 (Bankr. D. Idaho 1995); *In re* Allen, 174 B.R. 293, 295 (Bankr. Or. 1994); Carlson v. Giacchetti, 616 N.E.2d 810, 814 (Mass. App. Ct. 1993); Woodson v. Ford Motor Credit Co., 114 B.R. 278, 284-85 (U.S.D.C. N.D. Okal. 1990); *In re* Aspen Impressions, Inc., 94 B.R. 861 (Bankr. E.D. Pa. 1989).

24. JAMES J. WHITE & ROBERT SUMMERS, 1 UNIFORM COMMERCIAL CODE 3 (4th ed. 1995). "We believe that the best general approach for courts to take is to determine what policy objectives the particular Code section in question implicates, and then, in light of those policies, determine whether the particular facts of the transaction invite the application of the section by analogy." *Id.*

> lease, the user may be required to return the copy to the vendor after the expiration of a particular period. If not, the transaction conveyed not only possession, but also transferred ownership of the copy.[25]

In a recent case concerning applicability of the first sale doctrine to a computer program, the court quoted this passage from Nimmer and then concluded that a transaction involving a single payment for a perpetual transfer of possession is a sale that transfers ownership of the copy of software.[26]

There are two basic classification issues in the treatment of software contracts. The first is whether software is goods. The second is to what extent these transactions, often designated "licenses," are like sales and to what extent they are legitimately viewed as different. The first issue is easier to evaluate. The second is addressed below with a focus on the End User License Agreement (EULA).

Even in the twenty-first century, lawyers find it hard to give up certain vestiges of formalism. Thus, in making the determination whether software is goods, some commercial lawyers want to debate whether copies of software are "tangible." This approach can be tied to the Article 2 definitional requirement of a movable thing.[27] Even if software is not a "thing," the courts may apply Article 2 by analogy.[28] Often the courts apply Article 2 without stating whether they are doing so directly or by analogy.

The software industry uses an instrumental approach to the tangibility issue. For purposes of the Copyright Act, software producers argue that copies of software in random access memory (RAM) are "material objects" deserving copyright protection.[29] When

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25. RAYMOND NIMMER, THE LAW OF COMPUTER TECHNOLOGY, § 1.18(1) (1992).
26. Softman Prods. Co. v. Adobe Syss., Inc., 2001 WL 1343955 (C.D. Cal. 2001).
27. U.C.C. § 2-105(1) (2001).
28. U.C.C. § 1-102 cmt. 1.
29. Federal copyright law treats copies of software as tangible when it defines copies to include "material objects . . . from which the work can be perceived . . . with the aid of a machine." 17 U.S.C. § 101 (1994). If copies of software were not material objects, then copyright law would not bar one from making unauthorized copies. *See* MAI Syss. Corp. v. Peak Computer, Inc., 991 F.2d 511, 517-19 (9th Cir. 1993) (placing a computer program in RAM qualifies as copying for copyright purposes). *See also* Joseph P. Liu, *Owning Digital Copies, Copyright Law and the Incidents of Copy Ownership*, 42 WM. & MARY L. REV. 1245 (2001) (arguing that copyright law should preserve users' rights by recognizing an unlimited

it comes to issues concerning the scope of UCITA and Article 2, however, software companies argue that copies of computer programs are not movable things and should not be within Article 2. Using a functional approach, it makes sense to treat software as goods for most Article 2 issues because the policies of Article 2 are fitting. Moreover, courts apply this rationale. The technical requirement under Article 2 for a "thing" can be met by using the analysis contained in the copyright definition of "copies,"[30] which notes that a copy of software must be tangible to be read by a computer.[31]

The case of a freestanding software product delivered in an

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right to access digital copies in one's possession and a more limited right to transfer digital copies to others).

30. Another body of law implicated in this tangibility debate is the Magnuson-Moss Warranty Act, which applies to warranties of consumer products, defined in terms of "tangible personal property." 15 U.S.C. § 2301(1) (1994). Copies of digital code have to be tangible to be machine readable. *See supra* text accompanying note 29. The Federal Trade Commission should promulgate a regulation to clarify that copies of software are tangible products. *See* 16 C.F.R. § 700.1(a) (1999) (stating "[w]here it is unclear whether a particular product is covered under the definition of consumer product, any ambiguity will be resolved in favor of coverage"). Another issue is whether there is a sale for purposes of Magnuson-Moss. Its definition of "written warranty" refers to warranties in connection with a "sale." 15 U.S.C. § 2301(6). Sale is not a defined term but its meaning is a matter of federal law. It is of persuasive importance, however, that in the absence of UCITA, courts generally apply Article 2, of the U.C.C. to software transactions. RESTATEMENT (THIRD) OF TORTS-PRODUCTS LIABILITY, *supra* note 14 (under the U.C.C., "software that is mass-marketed is considered a good"). There is nothing in the federal statute that suggests that Congress wished to delegate to the states the power to remove transactions from the scope of Magnuson-Moss by creating a new transaction name for a transaction functionally the same as, or closely analogous to, a sale. The definition of "implied warranty" in Magnuson-Moss, 15 U.S.C. § 2301(7), incorporates state law implied warranties in connection with sales. However, because UCITA also recognizes such warranties, the UCITA implied warranties would come within the Magnuson-Moss definition if federal law interprets the meaning of "sale" in Magnuson-Moss to include consumer software transactions.

31. *See* text accompanying *supra* note 29. Recently, high tech companies have begun to use another feature of the law of goods, the common law tort of trespass to chattels, to protect computer systems and online databases. Trespass to chattels is a tort that protects chattels against dispossession or intermeddling by means of physical contact. *See* RESTATEMENT (SECOND) OF TORTS, § 217 (1995). In *CompuServe, Inc. v. Cyber Promotions, Inc.*, 962 F. Supp. 1015, 1021 (S.D. Ohio 1997), a case holding that sending of unwanted e-mails is actionable as a trespass to chattels, the court noted that electronic signals are sufficiently tangible to support a claim for trespass. For other cases dealing with trespass to chattels by means of electronic access to computer systems, see Ebay v. Bidders Edge, 100 F. Supp.2d 1058 (N.D. Cal. 2000) (involving use of search robots to obtain website content); Intel v. Hamidi, 114 Cal. Rprt.2d 244 (Cal. App. 4th 2000) (involving sending inflammatory e-mails).

electronic file, considered the most difficult by some, can be made easy: This software is tangible because it can drive a machine.[32] One advantage of starting with the supposedly difficult case is that all other cases then fall into line. For example, if software in an electronic file is tangible and considered goods, it follows that software embedded in goods is tangible and thus is also goods. A functional approach also stresses that U.C.C. Article 2 works well for most issues in software disputes because, like other goods, copies of software are functional products. The value of many other products also lies in intangible inputs such as design, whether patented or not, and workmanship, rather than in raw materials. For example, the raw materials in a car represent a tiny fraction of its value. Yet, at the end of the production process, cars are sold to "end users." The end users do not buy the car's design elements or the services that went into making the car. The same can be said of software end-use customers; both the car and software purchaser acquire a functional product.

Although Article 2 works well as a basic framework, it has not been sufficient for consumer transactions. A great deal of state and federal statutory consumer law supplements this framework.[33] By treating software as something other than goods, UCITA unnecessarily raises issues about whether the law applicable to consumer goods applies to software.[34] Furthermore, by not creating analogous consumer law for software transactions, UCITA leaves this problem unresolved. Rejecting UCITA and treating software as goods eliminates the need to reinvent consumer law to cover

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32. Some would say that only a copy in "object" code is tangible, but the distinction between "source" code and "object" code is itself not clear, because source code can be converted to object code by a computer program. David S. Touretzky, *Source vs. Object Code: A False Dichotomy*, July 12, 2000, *available at* http://www/cs/ci,/edi/~dst/DeCss/object-code.txt.

33. *See, e.g.*, Magnuson-Moss Warranty Act, 15 U.S.C. § 2301 (1994). *See supra* note 30 (discussing the scope of Magnuson-Moss).

34. *See supra* text accompanying note 30. UCITA § 105(c) deals with conflicts between consumer protection laws and UCITA, but it does not provide that existing consumer protection statutes applicable to goods also apply to UCITA transactions. *See* UCITA § 105(c) (2000). A change in section 105(c) proposed by NCCUSL's UCITA Standby Committee would provide that the act does not supersede a consumer protection law "applicable to the subject matter of this Act." Report of the UCITA Standby Committee, Dec. 17, 2001 (on file with author). Under either version, therefore, it is left to attorneys general and consumer advocates to press for revisions of state consumer protection laws to make them applicable to UCITA transactions.

software.

Treating even freestanding software in electronic form as goods avoids line-drawing based on means of storage and delivery (whether on a disk or in an electronic file and whether in Read Only Memory or Random Access Memory). The drafters of Revised Article 2 attempted to include embedded software within its scope by explicit, technical language, but they were stymied by the fact that it becomes ever harder to distinguish embedded and non-embedded software.[35] If much depends on any given test, the product could be re-engineered to take advantage of whatever legal regime is preferable. Thus, attempting a distinction would likely drive engineering decisions in undesirable ways.[36]

UCITA concedes the analogous character of software to other goods by making use of Article 2's general approach to many of the issues. UCITA then proceeds to tweak Article 2's rules in favor of software producers in ways that other sellers would like to have applied to themselves. For example, UCITA gives explicit approval to holding back terms until after payment and delivery of a product, an approach that certain sellers, such as the computer company Gateway, Inc., would like to use with impunity.[37] There are two less

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35. Philp Koopman & Cem Kaner, *The Problem of Embedded Software in UCITA and Drafts of Revised Article 2*, 43 U.C.C. BULL., rel. 1 & 2 (2001).

36. *Id.*

37. *Compare* UCITA §§ 208, 209, 112; *with* Klocek v. Gateway, 104 F. Supp.2d 1332 (D. Kan. 2000). *Klocek* has the most complete analysis of why Article 2 does not make material terms in the box enforceable. *Id.* at 1339-42. *See also* Jean Braucher, *Delayed Disclosure in Consumer E-Commerce as an Unfair and Deceptive Practice*, 46 WAYNE L. REV. 1805, 1819-1824 (2000) (discussing *Klocek* and other cases concerning delayed terms and arguing that Article 2 does not validate material terms sent after contract formation, which ordinarily occurs at the latest upon order and delivery). The leading cases treating delayed material terms as valid have come from the U.S. Court of Appeals for the 7th Circuit, and the first case in this line, *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447, 1450 (7th Cir. 1996), applied Article 2 to software and data on a CD, stating: "we treat the licenses as ordinary contracts accompanying the sale of products, and therefore as governed by the common law of contracts and the Uniform Commercial Code." The ProCD court, while applying Article 2 to software, seems to have been led astray in its reading of Article 2 by then-proposed U.C.C. Article 2B, which it cited and explained as follows, "New words may be designed to fortify the current rule with a more precise text that curtails uncertainty." *Id.* Since the ProCD case, the A.L.I. has withdrawn from the Article 2B project, a high-level A.B.A. task force has strongly criticized the approach to contracting taken in UCITA, and most states have declined to enact UCITA. *See supra* text accompanying notes 7-11. As a result, courts should not continue to use UCITA as persuasive authority concerning the meaning of Article 2.

frequently discussed examples of significant differences between UCITA and Article 2. First, UCITA has a lower standard of performance that cuts off certain customers' right to exit the transaction.[38] A buyer of goods may reject the goods for any nonconformity to the contract, whereas a non-mass market licensee under UCITA may reject goods only for a material breach. Second, UCITA rejects the Article 2 case law dealing with the question what remedies are available to consumers when the contract limits the remedy to repair but repair cannot be accomplished. When a limited remedy of repair fails its essential purpose, a consumer buyer has a right to consequential and incidental damages, even if the parties excluded those damages in the original contract.[39] UCITA provides that if the licensor includes a term making the exclusion of consequential and incidental damages independent of the agreed remedy, then the failure of the essential purpose of that agreed remedy does not allow recovery of consequential and incidental damages.[40]

The differences between UCITA and Revised Article 2 should be understood as having more to do with the differences in the views of the members of the two drafting committees than with differences in the character of the goods covered by each statute. The fact that UCITA tips the balance in favor of the producer means that conventional goods sellers are likely to find UCITA's invitation to "opt in" on the basis of software elements of the goods attractive.[41]

Some functional arguments that the law of goods does not work well for software are that it is easily copied and inherently buggy. While it is true that digital material can be easily copied, federal

38. *Compare* UCITA § 704 (2000) (refusal of tender permitted for "material breach" in non-mass-market transactions), *with* U.C.C. § 2-601 (2000) (so called "perfect tender" rule, permitting rejection of goods for any conformity to the contract).

39. *See* U.C.C. § 2-719(2). Revised Article 2, in the 1999 NCCUSL annual meeting draft, would have retained this rule for consumers.

40. *See* UCITA § 803(c).

41. *See* UCITA § 104, which allows opt-in to UCITA in the case of a "material" software element. Comment 4(b)(3) to section 103 states that, "Materiality is ordinarily clear if the program is separately licensed as part of the transaction." UCITA § 104 cmt. 4(b)(3). Thus, by putting a "license" clause in the standard form contract, software in goods is brought within UCITA and provides the basis for opting the entire transaction into UCITA. This would include its contract formation rules. *See* UCITA § 104.

intellectual property law already deals forcefully with unauthorized copying. Willful infringement is a crime, subject to criminal fines and up to five years in prison for the first offense.[42] A commercial contracting statute is not likely to add much deterrence for parties willing to risk criminal sanctions. In addition, although software is often buggy, this state of affairs may be more a result of producers' choices to rush products to market than anything inherent about software. Domestic law facilitating shoddy engineering may lead to long-term competitive disadvantages in the world market.[43]

Treating software as goods is the easy classification issue in software licensing. The more difficult issue concerns to what extent these transactions should be treated as sales as opposed to "licenses." The issues concerning the licensing form of transaction, particularly the EULA, are discussed in the next section.

A FOCUS ON TRANSACTION TYPE–WHY THE END USER LICENSE AGREEMENT?

It is useful to distinguish the two kinds of software license lumped together in UCITA. One is the license of intellectual property rights as part of a distribution system that uses intermediaries. This is conventional intellectual property licensing, also used in publication of books, music, and films, where the owner of the copyright licenses some of its rights to a distributor to permit that party to make and to distribute copies to ultimate customers.

The other type of software license is known as the End User License Agreement (EULA). This type of licensing is a more recent legal innovation. It raises novel competition and information policy issues. The EULA may be used in either direct or indirect marketing. In indirect marketing, the copyright owner typically requires the intermediary to distribute the copy of the product with the EULA. Under UCITA, the EULA is conceived of as creating privity of contract, although this privity might not be the conclusion under common law. In direct marketing, the EULA is clearly the contract

42. *See* 17 U.S.C. § 506(a) (1998); 18 U.S.C. § 2319 (2001).

43. Cem Kaner, *Software Engineering and UCITA*, 18 J. MARSHALL J. COMPUTER & INFO. L. 435, 527-46 (2000).

between the producer and the customer under both UCITA and the common law, if validly assented to.

Software producers have various reasons for using the EULA rather than selling or authorizing sales of copies.[44] Perpetual licenses of software copies, a common form of EULA, are functionally like sales of copies, except for efforts to restrict transfer and use. A primary reason for employing end user licenses in mass marketing is to change intellectual property rights otherwise provided to users by federal law. Professor Charles McManis has detailed the copyrights of users that EULAs potentially threaten, particularly fair use rights of criticism, comment, and research.[45]

My focus is on another purpose of the EULA, a purpose that is at least in part legitimate. Under the first sale doctrine, the owner of a copy of a copyrighted work has the right to transfer the copy without the permission of the copyright owner.[46] Assuming federal law permits, the EULA is a way to prohibit transfer and restrict use in order to implement price discrimination, also known as price differentiation.[47]

Price discrimination involves charging customers based on their willingness to pay. It is legal when not accompanied by efforts to undermine competitors.[48] By pricing according to number of users or

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44. The history of the EULA dates to a time when intellectual property protection for computer programs was first doubtful and then of uncertain scope. *See* Softman Prods. Co. v. Adobe Syss., Inc., 2001 WL 1343955 (C.D. Cal. 2001); *see also* Step-Saver Data Syss., Inc. v. Wise Tech., 939 F. 2d 96 n.7 (3d Cir. 1991) (describing the EULA as "largely anachronistic" after Congress amended the first sale doctrine in 1990 to prohibit commercial lending or leasing of software, to deal with the risk of unauthorized copying); Lothar Determann & Aaron Xavier Fellmeth, *Don't Judge a Sale by Its License: Software Transfers Under the First Sale Doctrine in the United State and the European Community*, 36 U.S.F. L. REV. 1 (2001) (arguing that use of license terminology should have no impact on whether a transaction is a sale for purposes of the first sale doctrine and suggesting that a software transaction can be both a sale and a license). Other transactions fit under more than one category; for example a secured credit sale is both a secured transaction and a sale.

45. *See* Charles McManis, *The Privatization (or "Shrink-Wrapping") of American Copyright Law*, 87 CAL. L. REV. 173 (1999).

46. 17 U.S.C. § 109 (1998).

47. *See* Michael J. Meurer, *Price Discrimination, Personal Use and Piracy: Copyright Protection of Digital Works*, 45 BUFF. L. REV. 845 (1997); CARL SHAPIRO & HAL R. VARIAN, INFORMATION RULES: A STRATEGIC GUIDE TO THE NETWORK ECONOMY 19-51, 299-300 (1999) (using the term "price differentiation" to distinguish legal price discrimination from that which violates the Robinson-Patman Act of 1936).

48. *Id.*

type of use, licensors can charge large companies more than small ones or individuals. The number of users operates as a rough measure of the product's value to the customer. Site licensing is a way to fine-tune this value-based pricing. Setting different prices for home use or commercial purposes is another way to discriminate on the basis of the value customers place on the product.

Economists note that price discrimination benefits licensors by allowing them to capture more of the consumer surplus. Price discrimination, however, is not completely bad for users. For example, price discrimination benefits small users who would not be willing to pay the single price that would otherwise be charged to recapture investment. Price discrimination reduces the deadweight loss of foregone consumer surplus that occurs in a one price regime.[49]

Some transfer and use restrictions are necessary to maintain price discrimination and prevent arbitrage by favored customers. Without enforceable transfer restrictions, a customer who acquired for personal use at a low price might resell to a company with many users and a commercial use purpose. If restrictions on the number of users or type of use were not permissible, it would be impossible to use these methods of approximating the value that customers put on the product. Software companies seek to make customers "licensees" rather than "buyers" of copies to have enforceable restrictions on transfer and use, making possible the benefits of price discrimination.

While producers need limited enhancement of their property rights to enforce price discrimination, these rights could have undesirable side effects if not carefully constrained. These potential side effects of licensing include reduced access to expression and information now obtained on the second-hand market, in the public domain, and by shared use through libraries and educational institutions.[50] The switch from books and journals to e-books and electronic databases should not be an occasion to reduce public access to information or to negatively effect second generation creation. In short, licensing that facilitates contractual price discrimination has the potential to negatively transform access to

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49. *See* Julie E. Cohen, *Copyright and the Perfect Curve*, 53 VAND. L. REV. 1799 (2000).

50. *See id.*; Wendy J. Gordon, *Intellectual Property As Price Discrimination: Implications for Copyright*, 73 CHI.-KENT L. REV. 1367 (1998).

expression and information. It also could have harmful effects on competition in goods markets.

UCITA makes transfer and use restrictions in EULAs presumptively enforceable.[51] Section 105 then provides a case-by-case tool to undo any damage to fundamental public policy done by such restrictions.[52] It is possible to do better than this vague policing mechanism. There are issues that will arise routinely and that need explicit solutions.

Certain transfers need to be protected against attempted contractual restriction. Transfer restrictions have the potential to eliminate the used product market with several negative effects on consumer welfare. Used product markets create downward pressure on prices of new products. They also provide access to products and expression for those unable or unwilling to pay the lowest price available for the new item. Another problem with transfer restrictions is their potential to burden mergers and acquisitions of businesses, creating windfall gains for producers who would be able to extract a new fee for transfer of the license to a new owner, even if the type of use remained the same.[53]

Currently, the "license" form of transaction is not commonly used for goods other than software. Price discrimination in hard goods is achieved through product differentiation. Licensing of software elements in goods could, however, lead to the use of transfer restrictions on software elements in goods, thereby adversely affecting second-hand markets in consumer goods such as cars, appliances and electronic components. Furthermore, the license form might be adopted for the whole transaction. Soon, licensing may not be limited to software in goods, but may be used for the entire product. We might even see goods with no software in them, such as

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51. UCITA §§ 307(b), 503(2) (2000).

52. *See* UCTIA § 105(b) (giving courts discretionary power to refuse to enforce contract terms that violate fundamental public policy).

53. Virginia's version of UCITA was originally enacted with a non-uniform protection for transfers as part of a merger or acquisition. VA. CODE ANN. § 59.1-505.3(2)(D) (2000). As a result of a lobbying effort by producers, both houses of the Virginia legislature have voted to strike the provision, and at this writing, the bill awaits the governor's signature. Patrick Thibodeau, *Virginia to nix key UCITA provision; Merging firms could be kept from transferring their software license*, COMPUTER WORLD, Mar. 18, 2002, *available at* http://www.computerworld.com/ storyba/0,4125,NAV47_STO69198,00.html.

clothing, being licensed, putting used clothing stores and Goodwill Industries out of business because of transfer restrictions. It is possible that price discrimination without product differentiation will become a feature of all goods markets, allowing producers to charge more to those who put a higher value on the goods.

Leasing of goods is already common. A comparison of licenses and leases is illuminating. As noted above, the essence of a lease transaction is an economically meaningful reversion in the lessor.[54] Because a lessor of goods expects to get the goods back, use restrictions are a legitimate feature of a lease and provide a means to preserve the value of the reversionary interest. Licensors of software do not have an economic interest in copies distributed to end users because they can make another copy at little or no cost; the copies have no reversionary value. The purposes of transfer and use restrictions in licenses are to police price discrimination and also potentially to inhibit competition. If transfer of goods is prohibited, then competition from the second-hand market is eliminated. If comment and criticism are prohibited, this ban inhibits competition over quality.[55]

A car license for a term shorter than the useful life of the car is effectively a lease because of the reversion value. Conversely, a perpetual car license is not a lease because there is no reversion value. The only difference between a license and sale would be that the license entails restrictions on use and transfer, necessary to achieve price discrimination without product differentiation. It is

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54. *See* U.C.C. § 1-201(37) (2001); U.C.C. § 1-201(37) cmt. 37. *See In re* Bumgardner, 183 B.R. 224, 228 (Bankr. D. Idaho 1995); *In re* Allen, 174 B.R. 293, 295 (Bankr. Or. 1994); Carlson v. Giacchetti, 616 N.E.2d 810, 814 (Mass. App. Ct. 1993); Woodson v. Ford Motor Co., 114 B.R. 278, 284-85 (U.S.D.C. N.D. Okal. 1990); *In re* Aspen Impressions, Inc., 94 B.R. 861 (Bankr. E.D. Pa. 1989).

55. For further analysis of issues concerning use of the EULA in software transactions, see David A. Rice, *License with Contract and Precedent: Publisher-Licensor Protection Consequences and the Rationale Offered for the Nontransferabilty of Licenses under Article 2B*, 13 BERKELEY TECH. L.J. 1239 (1998) (arguing that the policy implications of permitting boilerplate transfer restrictions have not been adequately aired or addressed); *see also* David A. Rice, *Digital Information as Property and Product: U.C.C. Article 2B*, 22 U. DAYTON L. REV. 621 (1997); David A. Rice, *Public Goods, Private Contract and Public Policy: Federal Preemption of Software License Prohibitions Against Reverse Engineering*, 53 U. PITT. L. REV. 543 (1992); David A. Rice, *Licensing the Use of Computer Program Copies and the Copyright Act First Sale Doctrine*, 30 JURIMETRICS J. 157 (1990).

noteworthy that in secured credit sales, use and transfer restrictions are permitted to preserve collateral value. In a perpetual license of a car or other hard goods for cash, however, the only purposes for use and transfer restrictions would be to enforce price discrimination and to potentially inhibit competition.

Car licensing may never come to pass, but Palm Pilots, in which the software is the predominant component, are already licensed. It is conceivable that other goods with or without software will be licensed. It is possible that licensing will be a boon to producers and also to the customers who could get the benefit of lower prices due to price discrimination. This potential benefit is another reason why the law of hardware and software should be integrated. Rules developed for transfer and use restrictions in software licensing are likely to work for hard goods, too.

The major problems with transfer and use restrictions in license transactions are impact on fair use and competition. Another problem of some significance is that transfer restrictions have the potential to exacerbate solid waste disposal problems. There is already a problem of what to do with the vast number of computers discarded each year. Enforceable transfer restrictions on computer operating systems, which would eliminate reuse by second-hand buyers or donees not willing to pay new "license" fees, would turn even more old computers into unwanted junk. Waste problems would be compounded dramatically by enforceable transfer restrictions on embedded software in cars and appliances or by transfer restrictions in licenses of hard goods themselves.

It is likely that the solid waste problem can be dealt with by the same legal rules that are needed to remedy the negative impacts on competition from transfer and use restrictions. At a minimum, the law should make unenforceable transfer restrictions that operate against the same category of user, whether the transfer is direct or through an intermediary. For example, a consumer licensee should be able to make a transfer to another consumer licensee or to a second-hand dealer who sells to consumers. Protecting transfers to the same category of user would preserve the second-hand market for e-books, software, and Palm Pilots, while still permitting price discrimination (because a consumer could not make a transfer to a commercial user, if the license so provided). Similarly, allowing businesses to transfer

their mass-market software when the business is sold would avoid counterproductive restraints on alienation and windfalls of new fees for producers. Expanded use by a larger acquiring company should, however, be subject to enforceable restrictions to maintain price discrimination. Transfer restrictions are also needed to protect trade secrets in non-mass market software products.

Other limits on transfer and use restrictions may be important to protect gifts, even though the gift is from one category of user to another. For example, a donation by an individual of a used computer with its operating system to an impoverished school or church does not cost the producer of the operating system anything if the school or church would not have otherwise acquired an operating system. Nevertheless, it is not an easy matter to draft a rule to capture the nuances of this problem. It may be that charitable donations generally should be protected in order to protect the instances where they do not cost the producer and provide social benefits.[56]

A premise of my limited defense of the EULA is that transfer and use restrictions should have to be effectively communicated before deals are consummated. A Microsoft lawyer famously wrote that "the license is the product."[57] Customers need to know in advance what the product is, and this is among the reasons that UCITA's "contracting" model is indefensible.[58]

CONCLUSION

Classification of software contracts involves two questions, whether software is goods and whether the transaction type should be seen as involving a sale, a license, or perhaps both at once. The first question, involving classification of the subject matter of the transaction, is relatively easy; a functional analysis leads to treating

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56. *See* VA. CODE ANN. § 59.1-505.3(2)(C) (2000) (prohibiting restrictions on transfer of mass market licenses to public elementary and secondary schools, public libraries, charitabale organizations, and from consumer to consumer).

57. Robert Gomulkiewicz, *The License is the Product: Comments on the Promise of Article 2B for Software and Information Licensing*, 13 BERKELEY TECH. L.J. 891 (1998).

58. *See* Braucher, *supra* note 37. In consumer contracts, use of UCITA's delayed disclosure model for material terms, including transfer and use restrictions, subjects software companies to enforcement actions under the Federal Trade Commission Act and the states' equivalents. *Id*.; *see also* A.B.A. UCITA Report, *supra* note 11.

copies of software, sold as products, as goods. The second question, concerning classification of the transaction type, is more complex. A legitimate function of the End User License Agreement (EULA) is to enable price discrimination, to the benefit of producers and customers who would otherwise forego transactions (because a higher price would be charged under a single price regime). While some transfer and use restrictions are necessary to enforce price discrimination, producers have tended to write EULAs that go beyond this purpose and that have the potential to burden competition by eliminating second-hand markets and burdening mergers and acquisitions. EULA restrictions on fair use rights also interfere with the information policy reflected in intellectual property law. Nuanced law reform, certainly more nuanced than is found in UCITA, will be needed to distinguish legitimate from illegitimate uses of the EULA. If licensing of smart goods or perhaps even "dumb" goods comes to pass, nuanced treatment of transfer and use restrictions will be needed in the law of goods generally, not just for software transactions.