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The New Uniform Commercial Code

***27** SOFTWARE CONTRACTING

Maureen A. O'Rourke
Boston University School of Law
Boston, Massachusetts

***29** This Discussion Draft is being circulated for discussion at the 2007 Annual Meeting of The American Law Institute. Other comments on the draft are also welcome. As of the time of publication of this Draft, neither the Council nor the membership of the Institute has taken a position on the material contained within it; therefore, the views expressed here do not represent the position of the Institute.

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PRINCIPLES OF THE LAW OF SOFTWARE CONTRACTS

Discussion Draft (March 30, 2007)

SUBJECTS COVERED:

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The Executive Office THE AMERICAN LAW INSTITUTE 4025 Chestnut Street Philadelphia, Pa. 19104-3099 Telephone: (215) 243-1600 • Telecopier: (215) 243-1636 E-mail: ali@ali.org • Website: http://www.ali.org

***30 Introduction** [FNa1]

The law of software transactions continues to develop. Case law and secondary literature present unresolved issues concerning (1) the nature of software transactions; (2) the acceptability of current practices of contract formation and the implications of these practices for determining governing terms; (3) the relationship between federal intellectual property law and private contracts governed by state law; and (4) the appropriateness of contract terms concerning quality, remedies, and other rights. Further, the near demise of the Uniform Computer Information Transactions Act (UCITA) and the vague scope provision of amended Article 2 of the Uniform Commercial Code (U.C.C.) (also unlikely to be widely adopted) exacerbate the confusion, calling attention to the current legal vacuum.

Because of its burgeoning importance, perhaps no other commercial subject matter is in greater need of harmonization and clarification. [FN1] Although the software industry is relatively young, it constitutes an increasingly important share of our economy. [FN2] Further, the law governing the transfer of hard goods is inadequate to govern software transactions because software is characterized by novel speed, copying, and storage capabilities, and new inspection, monitoring, and quality challenges. [FN3] In short, parties to software transactions would greatly benefit from the clarification and improvement of this area of the law. Software vendors and copyholders of all types can perform their various roles confidently and efficiently only after the clarification of applicable rules.

These Principles seek to clarify and unify the law of software transactions. In light of the many percolating legal issues that pertain to the formation and enforcement of software agreements, an attempt to "restate" this law would be premature. Reinforcing this view, software technology continues to develop, which influences methods of doing business and changes or creates new legal issues. [FN4] Instead of restating the law, a "Principles" project accounts for the case law and recommends best practices, without unduly hindering the law's adaptability to future developments. For example, the "Principles" drafter can formulate the "black letter" rather broadly, with substantial elaboration in Comments. Further, although these Principles often employ prescriptive language, a "Principles" project is not the law unless and until a court adopts it. Courts can apply the Principles as definitive rules, as a "gloss" on the common law or U.C.C. Article 2, or not at all, as they see fit. The appropriate form for this project on software contracts is therefore "Principles of the Law of Software Contracts," rather than a Restatement. This approach is not new. The ALI has employed the "Principles" approach before in projects such as "Principles of Corporate Governance: Analysis and Recommendations" [FN5] and "Principles of the Law of Family Dissolution: Analysis and Recommendations." [FN6]

Of course, denominating the Project as "Principles of the Law of Software Contracts" does not shield it from the claim that *any* legal work in this area is premature. [FN7] However, the benefits of establishing some order now outweigh the costs of having to accommodate new technologies and business methods later. Of course, offering "guidance" and providing "frameworks" sometimes are tempting strategies for avoiding hard choices. [FN8] Choices will have to be made if the project is to be successful, and in making such choices, the Principles attempt to adopt best practices.

***31** These Principles address several sets of issues. The first issue involves the scope of the project. For a discussion of this difficult issue, see the Summary Overview to Chapter 1, Topic 2, that follows. We conclude that the appropriate scope of the project is agreements for the transfer of software or access to software for a consideration, i.e., software contracts. The project does not include the exchange of digital art or digital databases for reasons discussed in the Summary Overview to Topic 2 of this Chapter.

Another set of contentious issues involves how to classify a software agreement. Is the agreement a sale or a license? Should it depend on the vendor's label? As courts treat the matter, the nature of the parties' federal intellectual property rights turns in part on resolution of this classification issue. In addition, is software goods or an intangible? If the former, current U.C.C. Article 2 and consumer-protection laws directed at sales of goods apply. However, amended Article 2, if enacted, would expressly exclude "information" from its scope. [FN9] If software agreements are not sales of goods, the common law currently governs, except in Virginia and Maryland, which have passed UCITA. These Principles resolve these issues by setting forth a unified approach to software contracts that could apply regardless of whether, under previous interpretations, the transaction constituted a sale or license, or whether software is goods or an intangible.

Beyond scope and classification, two central issues emerge (each with many components). The first involves the process of contract formation, with a focus on what constitutes assent to standard terms presented in either shrinkwrap or electronic form. The second issue deals with the content of terms, focusing on terms that restrict copyholder rights and that govern the quality of the software. The issues of formation and content are closely related. UCITA suffers in part from the perception that it legalized formation methods highly favorable to software producers, thereby allowing them to dictate terms that deprived copyholders of their rights while diminishing the dissemination of information. [FN10]

Issues arising from the process of formation in the software environment share common themes with other kinds of contracts.

Major questions involve the enforcement of contract terms that become available only after assent, and/or that are presented in a take-it-or-leave-it standard form. Neither Article 2 of the U.C.C. nor the common law has satisfactorily resolved these issues, as evidenced by the amount of litigation, conflicting decisions, and ink spilled in the law reviews. In addition, critics claim that UCITA's freedom-of-contract orientation led its drafters blindly to affirm these contracting processes without tailoring the rules to fit the realities of software contracting, [FN11] which raise important issues regarding formation and assent. Accordingly, these issues are fair game for these Principles, which will likely influence resolution of the issues in other contexts.
Software contracts create a wide array of new issues on the substantive side. One central issue is whether contracting parties are free to broaden or narrow the protections afforded by federal and state intellectual property law. Resolution of this issue requires not only attention to contract law, but sensitivity to the balance of rights created by intellectual property law. Another issue involves the limits of freedom of contract. What terms should be stricken on unconscionability, public policy, or related grounds? A third important issue involves the appropriate level of quality protection for users of software in light of the engineering challenges and ***32** diverse methods of producing it, on the one hand, and defective software's potential to cause calamitous harm, on the other. A fourth issue involves the permissible range of software remedies providers may employ, including self-help mechanisms, and remedy limitations.

[FNa1]. Thanks to our Advisers, Consultative Group members, and the ALI Council for invaluable suggestions. Thanks also to Cornell students Michael Prehogan, Mark Kanaga, and Adam Smith for excellent research assistance and for writing the first draft of several Illustrations.

[FN1]. See, e.g., I.Lan Systems, Inc. v. Netscout Service Level Corp., 183 F. Supp. 2d 328, 332 (D. Mass. 2002) ("[A]cross most of the nation, software licenses exist in a legislative void. Legal scholars . . . have tried to fill that void, but their efforts have not kept pace with the world of business.").

[FN2]. See, e.g., Micalyn S. Harris, UCITA: Helping David Face Goliath, 18 John Marshall J. Computer & Info. L. 365, 366 (1999) ("In 1997, the world packaged software market exceeded $100 billion and that figure does not include custom and proprietary software provided to customers and clients by developers, system integrators, and consultants . . . ."); Overview of UCITA, Report of the Joint Task Force of the Delaware State Bar Association Sections of Commercial Law, et al., January 5, 2000 at 3 ("Information technology already accounts for more than one-third of the U.S. economy and is, by far, its most rapidly growing sector.").

[FN3]. See, e.g., Adobe Systems Inc. v. Stargate Software, Inc., 216 F. Supp. 2d 1051, 1059 (N.D. Cal. 2002).

[FN4]. Thus far, technological change has been striking. See, e.g., Harris, supra note 2, at 366.

[FN5]. American Law Institute Publishers (1994). "While articulation of the law as discerned in decided cases would be the foundation of the Project, [it] explicitly call[s] for going beyond 'restating the cases' and for making 'recommendations . . . .'" Id., President's Foreword at xx.

[FN6]. Matthew Bender (2002). See Director's Foreword at xv ("Principles" project appropriate for work "that starts with carefully considered assumptions about the best interests" of the parties).

[FN7]. "Because the technology that a uniform software license law would govern has not reached anything even approaching repose, it is impossible to draft a UCC software article in the best Llewellynesque tradition." Peter A. Alces, W(h)ither Warranty: The Bloom of Products Liability Theory in Cases of Deficient Software Design, 87 Calif. L. Rev. 271, 271-272 (1999).

[FN8]. See Rochelle Cooper Dreyfuss, Do You Want to Know a Trade Secret: How Article 2B Will Make Licensing Trade Secrets Easier (But Innovation More Difficult), 87 Calif. L. Rev. 191, 261 (1999). ("[G]iving guidance is not the same as taking sides; providing a framework for analysis is not a determination of the law.").

[FN9]. Amended U.C.C. § 2-103(1)(k).

[FN10]. Mark A. Lemley, Beyond Preemption: The Law and Policy of Intellectual Property Licensing, 87 Cal. L. Rev. 111, 122 (1999) ("[S]ince [UCITA] makes it so easy to write and enforce the terms of a contract, a software vendor with a good lawyer can quite easily enforce *virtually whatever terms it likes* simply by putting them 'conspicuously' in a multi-page document that the user cannot even see (much less agree to) until after buying, installing, and beginning to run the software.").

[FN11]. Nim Razook, The Politics and Promise of UCITA, 36 Creighton L. Rev. 643, 645--646 (2003).

***33 Chapter 1**

DEFINITIONS, SCOPE, AND GENERAL TERMS

TOPIC 1 DEFINITIONS

§ 1.01 Definitions

As used in these Principles

(a) Access Agreement

An "access agreement" is an agreement for the distribution of software-based services or applications for use from a remote system, such as from the Internet or a private network, or from another medium now known or hereafter developed.

Comment:

a. Generally. Under § 1.06, these Principles apply when, for a consideration, an application service provider makes software available to customers. This model may increasingly play a role in the software industry.

REPORTERS' NOTE

Definition. The definition is taken in part from Webopedia, http://www.webopedia.com/TERM/A/Application_Service_Provider.html, last accessed 11/10/05 (an application service provider constitutes "a third-party entity that manages and distributes software-based services and solutions to customers across a wide area network from a central data center.") and in part from PC World, 9/19/2005, http://www.pcworld.com/news/article/0,aid,123475,tk, dn110905X,00.asp., last accessed 11/16/05. See Keith Bennett, et al. Service-Based Software: The Future for Flexible Software, Proceedings of the Seventh Asia-Pacific Software Engineering Conference 214-221 (2000); see also Lary Lawrence, Commentary, UCITA § 102, Definitions, 12 Anderson UCC § 102:1UC (2003); Raymond T. Nimmer, Licensing in the Contemporary Information Economy, 8 Wash. U. J. L. & Pol'y 99, 139 (2002); Mark F. Radcliffe, UCITA, E-Signature, Federal, State and Foreign Regulations: Contracts and Online Content Providers 649 PLI/Pat 753 (2001).

(b) Agreement

An "agreement" is the bargain of the parties in fact as found in their language or other circumstances.

REPORTERS' NOTE

Definition. The definition is taken from U.C.C. § 1-201(3).

(c) Computer

A "computer" is an electronic device that processes information and follows instructions to accomplish a purpose.

***34 Comment:**

a. Generally. A computer consists of hardware that follows a software program's instructions in order to process data. This is a broad definition and includes items such as cell phones and antilock brakes. However, the scope provisions limit the coverage of the Principles through their treatment of software contracts, goods with embedded software, and mixed transactions. See Chapter 1, Topic 2.
A computer itself is goods. Computers can have a general or specific purpose. They can be stand-alone or embedded in other goods.
b. Embedded system. An embedded system consists of a computer incorporated into other goods for a specific purpose. See § 1.07, Reporters' Note to Comment *a*.

REPORTERS' NOTE

Definition. The definition is taken in part from UCITA § 102(a)(9), www.casde.unl.edu/vn/glossary/earth_c.htm, last accessed on 7/1/2004, and Red River Service Corp. v. U.S., 60 Fed. Cl. 532, 534 n.14 (2004).

(d) Consumer Transaction

A "consumer transaction" is a transfer of software primarily for personal, family, or household purposes.

REPORTERS' NOTE

Definition. The definition is taken from U.C.C. § 9-102(a)(26).

(e) Contract

A "contract" is the total legal obligation that results from the parties' agreement.

REPORTERS' NOTE

Definition. The definition is taken from U.C.C. § 1-201(11).

(f) Digital Content

"Digital content" consists of "digital art" or a "digital database."
(1) "Digital art" is literary and artistic information stored electronically, such as music, photographs, motion pictures, books, newspapers, and other images and sounds.
(2) A "digital database" is a compilation of facts arranged in a systematic manner and stored electronically. A digital database does not include digital art.

***35 Comment:**

a. Generally. Digital art and digital databases are discussed in the Summary Overview to Topic 2 on scope. Neither constitute software under the definition of software in § 1.01(i).

REPORTERS' NOTE

Comment a. Generally. For a definition of "digital art," see Peter Moore, Steal This Disk: Copy Protection, Consumers' Rights and The Digital Millennium Copyright Act, 97 Nw. U. L. Rev. 1437, 1457 n.158 (2003) (defining digital art as analogous to written works, music, or movies); see also Dan L. Burk, Muddy Rules for Cyberspace, 21 Cardozo L. Rev. 121, 121-124 (1999) (discussing various types of digital art, including new types of information services such as electronic

newspapers and other authored works); Lydia Pallas Loren, The Changing Nature of Derivative Works in the Face of New Technologies, 4 J. Small & Emerging Bus. L. 57, 58-59 (2000) (describing digital art as "images, text, and sounds" analogous to print media, as well as new technologies including hypertext and "integrated works").
On digital databases, see Eric C. Jensen, An Electronic Soapbox: Computer Bulletin Boards and the First Amendment, 39 Fed. Comm. L.J. 217, 218 n.8 (1987) (citing Williams, Electronic Databases, 228 SCIENCE 445, 445 (1985)); John Tessensohm, The Devil's in the Details: The Quest for Legal Protection of Computer Databases and the Collections of Information Act, H.R. 2652, 38 IDEA 439 (1998).

(g) Digital Content Player

A "digital content player" consists of software that renders digital content visible, audible, or otherwise perceivable.

Comment:

a. Generally. These Principles separately define "digital content" and "digital content player." The reasons for the distinction are discussed in § 1.01(i), Comment *a*, and in the Summary Overview to Topic 2 on scope. Section 1.01(i) defines software to include a digital art player, but not digital content.

REPORTERS' NOTE

For a definition of "digital art player," see June M. Besek, Music on the Internet, 765 PLI/Pat 417 (2003) (hardware or software that plays digital art); Denis T. Rice, Copyright Disputes Involving Online Activities, 717 PLI/Pat 299 (2002); see also Jack M. Balkin, Digital Speech and Democratic Culture: A Theory of Freedom of Expression for the Information Society, 79 N.Y.U. L. Rev. 1 (2004); Niva Elkin-Koren, Cyberlaw and Social Change: A Democratic Approach to Copyright Law in Cyberspace, 14 Cardozo Arts & Ent. L.J. 215 (1996); Peter Moore, Steal This Disk: Copy Protection, Consumers' Rights, and the Digital Millennium Copyright Act, 97 Nw. U. L. Rev. 1437 (2003); Mark Stefik and Alex Silverman, The Bit and the Pendulum: Balancing the Interests of Stakeholders in Digital Publishing, 16, No. 1 Computer Law. 1 (1999).
A "video game engine" used in commerce to describe the software component of a video game constitutes a digital art player under the definition in subsection (g). Video-game companies commonly license their game engines to other video-game manufacturers.

(h) Record

***36 A "record" is information that is inscribed on a tangible medium or that is stored in an electronic or other medium and is retrievable in perceivable form.**

REPORTERS' NOTE

The definition of record is taken from UCITA § 102(a)(55) and U.C.C. Revised Article 1-201(b)(31). See Patricia Fry, X Marks The Spot: New Technologies Compel New Concepts for Commercial Law, 26 Loy. L. A. L. Rev. 607, 622 (1993) ("The dictionary definitions of the word 'record' include the idea of 'writing' something down, or placing the information in some permanent or durable form.").

(i) Software

(1) "Software" consists of statements or instructions that are executed by a computer to produce a certain result.
(2) Software does not include digital content but does include a digital content player.

Comment:

a. Generally. Software is an amorphous term. As used in the software community, software sometimes refers to digital information that performs a utilitarian function whether for end users (an application program) or for the operation of the system itself (an operating system program). In addition, software sometimes encompasses digital art, defined in § 1.01(f)(1), and constituting digital versions of literary and artistic information, such as books, music, and motion pictures. However, the software community more often distinguishes the latter group because, unlike software, it consists of artistic or literary content and does not perform a utilitarian function. Under these Principles, the definition of software encompasses the first meaning of software—digital information performing a utilitarian function—but excludes digital art. The reasons for excluding digital art from these Principles are discussed in the Summary Overview of Topic 2 on Scope.

Digital database is defined in § 1.01(f)(2) and does not include digital art. The software community rarely conceives of software as referring to nonliterary and nonartistic factual data stored electronically. These Principles therefore exclude such databases from the definition of software. These Principles refer to digital art and digital databases as "digital content" and digital content is excluded from the definition of software under § 1.01(i)(2). See also the Summary Overview of Topic 2 on Scope for further discussion.

b. Digital art and software. Technical literature supports the distinction between digital art and software. See the Reporters' Notes to this Section.

REPORTERS' NOTES

Comment a. Generally. The definition of software comes from the Copyright Act, 17 U.S.C. § 101 (1982), with some refinement. For a discussion of the breadth of the concept of software, see David Nimmer et al., The Metamorphosis of Contract into Expand, 87 Cal. L. Rev. 17, 21 (1999); see also Stephen Y. Chow, UCITA: A 1990's Vision of E-Commerce, 18 John Marshall J. Computer & Info. L. 323, 327 (1999).

***37** *Comment b. Digital art and software*. See Peter Moore, Steal This Disk: Copy Protection, Consumers' Rights and the Digital Millennium Copyright Act, 97 Nw. U. L. Rev. 1437, 1457, n.158 (2003) ("Digital media such as written works, music, or movies cannot be considered computer programs by any technologically accurate definition of the term.").

(j) Standard-Form Transfer of Generally Available Software

A "standard-form transfer of generally available software" is a transfer of
(1) small quantities of software to an end user; or
(2) the right to access software to a small number of end users if the software is generally available to the public under substantially the same standard terms.

Comment:

a. In general. Transfers of small quantities of software are consistent with the quantities of software transferred in a retail sale. But standard-form transfers of generally available software include some transfers not usually considered retail transactions, such as transfers of open-source software, shareware, and freeware.

An end user intends to use the software for business, personal, or family reasons, and includes large and small businesses and consumers. But end users do not intend to offer the software commercially to third parties.

Section 2.01, Comment *a*, discusses the reasons for including businesses in the treatment of small-quantity standard-form transfers. Section 2.03 governs standard-form transfers when the quantity of copies transferred is not small.

Software is "generally available to the public" even if certain subsets of the public are excluded from obtaining it, such as people under 18 years of age. Further, software is "generally available to the public" even if software marketing targets particular groups, such as foreign speakers, or particular services or industries, so long as the software is available to the general public.

Illustrations:

1. B, a consumer, downloads and installs a single copy of a software vendor's word-processing software. The software is available to the general public via the Internet under the same terms. The transfer is a standard-form transfer of generally available software. Same result if B purchases one copy of the software at a retail store.
2. B, a small general contractor with 18 employees, downloads three copies of software to assist in accounting tasks. If the software is available to the public under substantially the same terms, the transfer is a standard-form transfer of generally available software because three copies of the software is consistent with a retail transaction. If B had downloaded 100

copies of the software or downloaded one copy after agreeing to a multiple-user license agreement, the magnitude of the transfer would be inconsistent with a retail sale. In addition, in the case of a multiple-user agreement, the terms would be different from a typical retail sale.

***38 REPORTERS' NOTES**

Comment a. Generally. "'Retail market' has its standard dictionary meaning, which refers to sales (or other transfers) of commodities in small quantities primarily to consumers." UCITA § 102, Comment 39.

Under UCITA, "mass-market transactions" are roughly transactions aimed at a broad market and governed by a standard form. See UCITA § 102(a)(44). See generally Jean Braucher, The Failed Promise of the UCITA Mass-Market Concept and its Lessons for Policing of Standard-Form Contracts, 7 J. Small & Emerging Bus. L. 393 (2003).

Under UCITA, an "end user is a licensee that intends to use the information or informational rights in its own business or personal affairs. An end user is not engaged in . . . making the information commercially available to third parties, directly or indirectly." Id.

"'Shareware is software that is distributed free on a trial basis with the understanding that the user may need or want to pay for it later."' Jane K. Winn, Spyware: Contracting Spyware by Contract, 20 Berkeley Tech. L.J. 1345, 1347 n.10 (2005), quoting Shareware, Watis.com. "'Freeware . . . . is programming that is offered at no cost and is a common class of small applications available for downloading and use in most operating systems."' Id. at 1347, n.11, quoting Freeware, What is.com.

(k) Standard Form and Standard Term

(1) A "standard form" is a record regularly used to embody terms of agreements of the same type.
(2) A "standard term" is a term in a standard form relating to a particular matter that has not been negotiated.

REPORTERS' NOTES

The definition of a standard form is taken from the Restatement Second of Contracts § 211(1) and UCITA § 102(a)(61). The definition of a standard term is taken from UCITA § 102(a)(63).

(l) Transferor and Transferee

(1) A "transferor" is a party who, pursuant to an agreement, has provided or has agreed to provide software or access to software to a transferee.
(2) A "transferee" is a party who, pursuant to an agreement, has a right to receive software or access to software from the transferor.

REPORTERS' NOTES

The definitions are loosely based on UCITA § 102(a)(42) and (43), defining licensor and licensee.
[Sections 1.02 through 1.05 reserved.]

TOPIC 2 SCOPE

Summary Overview

Scope issues constitute a great challenge. Logic and clarity may be difficult to achieve because of the wide array of digital information transactions and the ***39** diversity of parties to them. Formulating an appropriate approach to scope requires attention to many questions. First, is the appropriate *subject matter of transfer* all digital information, including digital art and nonliterary and nonartistic databases, or should the Principles narrow the scope, for example, to software, such as application software and operating systems? Second, should the Principles apply to all *formation types* or should they be limited, for example, to formation of standard-form agreements? Third, should the Principles apply to all *forms of transactions*, including licenses, sales, and other rights of access? Fourth, should the Principles apply regardless of the *medium of transfer* so that they encompass both transfers of digital information stored on a disk or CD-ROM and digital information delivered electronically? Fifth, should the Principles apply to *mixed transactions* involving software and goods, services, or other digital content?

One strategy for avoiding these difficult questions and the scope issue's complexity is to draft a set of very broad scope provisions, such as by including all transactions in digital information, whether governed by a standard form or not, and regardless of the form of the transaction or whether mixed or not. Conversely, the project's scope could be narrow, such as by focusing on standard-form licensing of consumer software. A third strategy, chosen here, is to locate a common core of transactions that has led to most of the disputes and litigation, because the transactions do not fit comfortably under existing law. This strategy requires identifying what is different about the various kinds of digital-information transactions and, ultimately, requires difficult line-drawing, but the approach is attentive to the reasons for the project in the first place. Notwithstanding the adoption of any strategy, the scope provisions must be as clear and concise as possible, and some exclusions of subject matter are necessary solely to achieve that purpose. Nevertheless, nothing in the scope provisions precludes a court from applying these Principles by analogy when deemed appropriate.

What subject matters of transfer, formation types, forms of transactions, and mixed transactions best encompass a project on digital information?

Subject matter of transfer. The digital information community produces a broad range of products, including (a) software programs that bring about results on computers; (b) digital art, such as digital versions of books, magazines, music, movies, and photographs; and (c) nonliterary or nonartistic databases. Although software, digital art, and digital database transactions share commonalities such as methods of contracting and distribution and the content of terms in end-user agreements, several reasons, both theoretical and practical, suggest a narrower approach to scope that excludes agreements for the transfer of digital art and digital databases.

Unlike digital art and digital databases, software is a mixture of expressive art and a utilitarian invention, and does not fit comfortably within any current conception of intellectual property. [FN1] Software is unusual in the large amount of resources used to create it and its usefulness, on the one hand, and, because of the way it is stored, its susceptibility to easy copying and distribution, on the other. [FN2] These characteristics create difficult legal issues pertaining to the accommodation of ownership and user rights. A contractual approach to software transactions may facilitate answers to these questions that, with respect to digital art and digital databases, are already the subject of Congressional and other attention under copyright law. [FN3] In addition, software production often involves unique engineering ***40** challenges, which suggests the need for special quality, inspection, and monitoring rules. [FN4] Further, unlike digital art and digital databases, software often comprises part of the architecture of a network. [FN5] But current law contains a vacuum with respect to the development of a framework for analyzing network issues. [FN6]

On a more practical level, excluding digital art and digital databases narrows the transaction types to a manageable level because digital art and digital database transactions implicate many industries and kinds of transfers. UCITA, which contains an expansive scope provision, was forced to create industry-specific exclusions for industries that were already heavily regulated [FN7] or that were sufficiently distinct to warrant separate treatment. These exclusions added to the complexity and challenge of UCITA's scope provisions. More important, the rapid rise of software's importance in our economy and its unique role as both "a product and a process" suggest that successful treatment of this subject matter would prove to be a significant accomplishment in its own right. [FN8]

Courts facing difficult legal issues involving digital art and digital database transactions can look to these Principles by analogy when appropriate. For example, legal issues pertaining to the appropriate interface between ownership of databases and user rights abound. [FN9] Some issues are clearly the domain of copyright law. For example, pure facts cannot be copyrighted, [FN10] but a compiler who selects and/or arranges data in an original way can copyright the original aspect of the collection. [FN11] But courts have also wrestled with issues that share similarities with those in the software domain, and courts can look to these Principles for guidance. For example, the issue of whether a compiler of a database can, by contract, restrict rights to material that cannot be copyrighted [FN12] is not far removed from the question of whether a software vendor can, by contract, ban or limit the right to reverse engineer software. Both issues involve the power of parties through their agreements to influence intellectual property law's balance between owner and user rights in the intellectual property. In addition, digital art and software often share common forms of delivery and presentation of terms, and these Principles' treatment of issues such as the enforcement of shrinkwrap, clickwrap, and browsewrap may be applicable by analogy to digital-art transactions.

Formation types. Much contentious law involves take-it-or-leave-it standard-form transfers between software vendors and consumer or business end users, and the Principles should address these issues. But custom-written software agreements between businesses account for a significant portion of the software industry's revenue and raise important formation and substantive issues of their own. [FN13] These Principles therefore should include tailored transactions as well.

Form of transaction. The Principles should apply to all agreements for the transfer of software for a consideration including licenses, sales, and access contracts. This approach eliminates heretofore contentious debates over the characterization of a transaction, and its implications. For example, the application and reach of these Principles should not depend on whether a vendor characterizes a transaction as a sale or a license. For further discussion, see § 1.06, Comment *b*. Of course, courts still may be required to distinguish a sale from a license, for example, for purposes of federal intellectual property law, such as copyright law, or for state consumer-protection law.

***41** Transfers of software often include significant continued support and upgrade responsibilities. So long as the predominant purpose of the transaction is the transfer of software, these Principles apply to the transfer of software. See § 1.08(b).

Medium of transfer. Issues of copying, transfer, product quality, and remedies arise whether a vendor delivers software on a tangible medium, such as on a disk or CD-ROM, or electronically, such as over the Internet. Issues of quality and remedies also arise when an application service provider makes software available to customers. These Principles therefore should apply to the software transfer regardless of the medium of transfer.

Embedded software and mixed transactions. Software embedded in goods should less frequently raise issues concerning copying, transfer, support, maintenance, upgrade, inspection, monitoring, licensing restrictions, or remedial limitations (in any way distinct from the goods themselves). For example, embedded software typically is difficult to copy and special-purpose in nature so that the owner of one kind of goods with embedded software cannot easily copy the software and transfer it for use in another brand or kind of goods. In addition, "[w]hen software is embedded and marketed as an integral part of goods, many, if not most, people would consider the software to be part of the goods." [FN14] For these reasons, these Principles exclude transfers of embedded software, except when the "predominant purpose" of the transaction is the transfer of the software, in which case the above issues are more likely to arise. Software issues may also arise when parties transfer goods and non-embedded software (with or without digital content or services), and these Principles apply to the software portion of these transactions as well (unless any digital content or services predominates). Finally, these Principles apply to the software portion of transfers involving software and services or software and digital content (with no goods involved) when the predominant purpose of the transaction is the transfer of the software, in which cases issues of copying, transfer, inspection, monitoring, licensing restrictions, or remedial limitations often arise.

Like UCITA, these Principles do not apply to transactions that involve telecommunication services, such as the distribution of audio and visual content either on cable or over the Internet, and do not apply to most transactions involving the motion picture and music industries. However, these Principles effectuate these exclusions, not by creating industry-specific carve-outs, but by limiting the scope to transfers of software as defined in § 1.01(i) and by utilizing the predominant-feature test for mixed transactions in § 1.08.

Section 1.01(i), which defines software and §§ 1.06 through 1.08, on scope, accomplish the goals set forth in this discussion. Section 1.01(i) defines software to exclude digital content (digital art and digital databases), and §§ 1.06 through 1.08 delineate the software transfers covered by the Principles. The rules and Comments on scope that follow surely do not clearly place every transaction on one side or the other of the scope line. No scope provisions could achieve that goal. Instead, the goal is a limited number of coherent rules that courts can apply to most transactions.

§ 1.06 Scope, Generally

(a) These Principles apply to agreements for the transfer of software or access to software for a consideration. Software agreements include *42 agreements to sell, lease, license, access, or otherwise transfer or share software.

(b) These Principles do not apply to

(1) the transfer of any disk, CD-ROM, or other tangible medium that stores the software, or

(2) the transfer of a security interest in software.

Comment:

a. *Software*. Software, as defined in § 1.01(i), consists of information used by a computer to produce a particular result. It does not include digital art or a digital database (digital content), as defined in § 1.01(f). However, courts can look to these Principles by analogy to resolve issues involving digital content when appropriate. See supra, Chapter 1, Topic 2, Summary Overview.

Under subsection (b)(1) of this Section, these Principles do not apply to any disk, CD-ROM, or other tangible medium that stores the software. If a disk is defective so that the software is inaccessible, for example, Article 2 of the Uniform Commercial Code applies to determine the transferee's warranty and remedial rights. Although this approach creates the anomaly that two sets of rules may apply to the same transaction, such a result is appropriate and inevitable in a project focusing on the special problems presented by the software component of mixed transactions. Further, such a treatment is not unique to software contracts. Consider, for example, a contract for the construction of a home that includes the delivery of various appliances.

Illustration:

1. B purchases a word-processing program on a CD-ROM. The CD-ROM is defective. These Principles apply to the transfer of the word-processing program but not to the defective CD-ROM. The warranty rules of Article 2 of the Uniform Commercial Code comfortably govern the quality of the CD-ROM, whereas these Principles directly address quality concerns relating to the software program.

b. Form of transaction. Under these Principles, software agreements include licenses, sales, leases, access agreements, and the like. The Principles determine whether particular terms are enforceable, not based on the parties' characterization of the form of the agreement, but based on assessing the legitimacy of the process of contracting and the appropriateness of the substantive term in light of federal intellectual property law, public policy, and unconscionability concerns. On the other hand, under subsection (b)(2), the Principles do not apply if the substance of the transaction is to create a security interest in software, in which case Uniform Commercial Code Article 9 applies.

Vendors use a licensing structure in part to control downstream rights. For example, a software vendor may seek to narrow a transferee's use of the software. Enforcement of the restriction should not depend on whether the software vendor labels the transfer a license or a sale and, if the former, whether the restriction therefore runs with the software to remote end users. Instead, enforcement should depend on (i) whether federal law renders the restriction unenforceable because it ***43** upsets the intellectual property balance between exclusionary rights and creating a rich public domain; (ii) whether the end user had sufficient notice and opportunity to read the term restricting rights; and (iii) whether the restriction runs afoul of public policy or unconscionability norms.

Illustrations:

2. A, a software developer, transfers software to B, a distributor of software. B transfers the software to C, a retail store. D, a small business purchases the software from C and agrees electronically to a licensing arrangement with A. A provision in the agreement prohibits any transferee from reverse engineering the software. These Principles apply to A's rights to enforce the restriction against D.

3. B, a small software engineering firm, downloads, without charge, open-source software from A, another software engineering firm active in the open-source movement. The software license authorizes B to use the source code in its projects, but requires B and any of B's transferees to reveal the source code to transferees of any products that include or are derived from the original source code. These Principles apply to A's right to enforce the restriction against B.

c. Types of parties and transfers. Parties to software agreements include software developers, vendors, distributors, and end users. These Principles apply to both tailored or negotiated transfers between these parties, including agreements for software development, distribution and access, and take-it-or-leave-it standard-form transfers. "Access agreement" is defined in § 1.01(a).

d. The requirement of consideration. These Principles apply to contracts as defined in the Restatement Second of Contracts §§ 1 and 17. Such contracts require an agreement supported by consideration. Consideration for the software can be money or something else given in exchange for the software. The Principles therefore apply to the transfer of "open-source software" when the transferor requires the transferee to agree to maintenance or integration services or other consideration (such as providing source code).

Terms of use agreements attached to open-source software also constitute consideration under these Principles. Although general contract law distinguishes between a condition for a gift and consideration, in the typical case a court finds consideration when a condition constitutes more than is necessary to transfer a gift. Terms of use agreements, such as requiring the distribution of derivative software under the same terms as the initial transfer, are not necessary to convey software and therefore constitute consideration under general contract law.

The open-source movement clearly raises novel issues, and some rules applicable to proprietary software apply awkwardly to open-source software. For example, open-source agreements generally do not restrict use, transfer, copying, or modification of the software, whereas such terms are common in agreements for the transfer of proprietary software and raise enforcement issues. See infra §§ 1.09 and 1.10. Open-source software also raises unique issues of its own, for example, with respect to warranties and remedies. Unlike proprietary software, where warranties and remedies fit comfortably within a legal framework, the development of open-source software is often a large, dispersed group effort and, ***44** despite the quality and reliability of some open-source products, vendors have little control over product quality.

Nevertheless, open-source software transfers share sufficient characteristics with proprietary software to be included in these Principles. For example, the legality of restrictions on the use of open-source software, such as the "copyleft" requirement that a transferee provide the source code to recipients of the transferee's products derived from the transferor's source code, raise questions analogous to the enforcement of proprietary software's various restrictions on use. In addition, open-source licenses often announce that copying, exchanging, or modifying software constitutes acceptance of the terms of the license. This formation strategy raises issues analogous to the enforcement of shrinkwrap agreements in the proprietary setting. These Principles therefore should govern open source, with carve-outs and special rules as necessary.

Illustrations:

4. B, a consumer, downloads virus-protection software engineered by A. A does not charge for the software, but a standard term requires B to agree to install and use additional software that displays pop-ups. These Principles apply because B's agreement to install the additional software constitutes consideration.

5. B, a small software-engineering firm, downloads, at no cost, open-source software from A, another software-engineering firm active in the open-source movement. The software license authorizes B to use the source code in its projects, but requires B and B's transferees to reveal the source code to transferees of any products that include or are derived from the original source code. The license also requires B to set forth the text of the license to B's transferees. Both B's agreement to reveal the source code of the distributed products and to provide the terms of the license constitute consideration and these Principles apply.

e. Transfer of a digital content player. These Principles apply to the transfer of a digital content player for a consideration. For example, when a party, in order to play music on a computer, downloads a digital content player from the Internet or purchases it on a CD-ROM from a store, these Principles apply to the transfer of the digital content player. If the device is embedded in goods, § 1.07 applies. If the device is part of a mixed transaction, § 1.08 applies.

***45 Illustration:**

6. B purchases an "all-in-one" software package for creating audio, video, photo, and data projects. Among other things, the software allows B to edit pictures, design screen savers, and display movies. The software constitutes a digital content player, see §§ 1.01(g) and 1.01(i)(2), and these Principles apply.

f. Digital content. These Principles do not apply to the transfer of, or access to, digital content that, under § 1.01(f), consists of digital databases and digital art. See § 1.01(i)(2). Thus, these Principles do not apply, for example, when a party accesses a specific factual database, such as a telephone directory. Nor do these Principles apply when a user downloads movies or music. Courts facing difficult legal issues involving digital-database and digital-art transactions can look to these Principles by analogy when appropriate. See supra Topic 2, Summary Overview, "Subject matter of transfer."

Illustration:

7. A, a database provider, licenses its digital database of bibliographic information on recorded music to B, a music store. B provides its customers with access to the information for a consideration. These Principles do not apply to the transaction between A and B, nor to the transaction between B and its customers. A court could apply the Principles by analogy,

however.

REPORTERS' NOTES

Comment a. Software. For a criticism of an overly broad treatment of digital-information transactions, see Stephen Y. Chow, UCITA: A 1990's Vision of E-Commerce, 18 John Marshall J. Computer & Info. L. 323, 326 (1999); see also American Bar Association Working Group Report on the Uniform Computer Information Transactions Act ("UCITA"), Jan. 31, 2002, at 7 (("UCITA attempts to address this area of the law audaciously by trying to cover virtually every issue of concern, whether raised by industry or consumer groups, while not cutting back on scope.").

Comment b. Form of transaction. See Robert Merges, The End of Friction? Property Rights and Contract in the "Newtonian" World of On-Line Commerce, 12 Berkeley Tech. L.J. 115, 118 (1997). See also id. at 120 ("The privity requirement has been alleviated or eliminated in other fields. Why not in cyberspace?").

Comment c. Types of parties and transfers. Software developers or vendors include both large and small companies with thousands or only a handful of employees. Software end-users include "multinational corporations, small entrepreneurial firms, professionals, educational institutions, not-for-profit organizations and consumers." Nim Razook, The Politics and Promise of UCITA, 36 Creighton L. Rev. 643, 650-651 (2003).

Tailored transactions account for a significant portion of the software industry's revenue. See Mark A. Lemley et al., Software and Internet Law 382 (2d ed. 2003); Micalyn S. Harris, UCITA: Helping David Face Goliath, 18 John Marshall J. Computer & Info. L. 365, 366 (1999) ("In 1997, the world packaged software market exceeded $100 billion and that figure does not include custom and proprietary software provided to customers and clients by developers, system integrators, and consultants . . . ."); Overview of UCITA, Report of the Joint Task Force of the Delaware State Bar Association Sections of Commercial Law, et.al., January 5, 2000 at 3 ("Information technology ***46** already accounts for more than one-third of the U.S. economy and is, by far, its most rapidly growing sector.").

Comment d. The requirement of consideration. General contract law distinguishes between unenforceable gift promises and enforceable promises supported by consideration. "A gift is not ordinarily treated as a bargain, and a promise to make a gift is not made a bargain by the promise of the prospective donee to accept the gift, or by his acceptance of part of it. *This may be true even though the terms of the gift impose a burden on the donee as well as the donor*." Restatement Second, Contracts § 71, Comment *c* (emphasis added). Nevertheless, courts should find consideration when the burden constitutes more than is necessary to transfer the gift. See, e.g., Affiliated Enterprises, Inc. v. Waller, 5 A.2d 257, 259-260 (Del. 1939) (distinguishing "mere incidental or friendly detriments, not intended as ingredients of a bargain" from "bargained-for consideration."). For a discussion that focuses on software contracts, see Wayne R. Barnes, Rethinking Spyware: Questioning the Propriety of Contractual Consent to Online Surveillance, 39 U.C. Davis L. Rev. 1545, 1597 (2006) ("[B]y clicking that she has accepted [the] EULA from KaZaa, bundled with [spyware], the user has ostensibly struck a bargain. She will receive a program she sought for 'free.' Of course, '[i]n a sense, [she] is paying, but the coin is privacy, not money."') (quoting Paul M. Schwartz, Property, Privacy, and Personal Data, 117 Harv. L. Rev. 2055, 2072 (2004), quoting Cade Metz, Spyware—It's Lurking on Your Machine, PC Mag., Apr. 22, 2003, at M7); Matthew D. Stein, Rethinking UCITA: Lessons From the Open Source Movement, 58 Me. L. Rev. 157, 194 (2006) ("The GPL . . . is not just a mere permission. It imposes obligations upon licensees that must be accepted in order to exercise the rights granted in the license. . . . Given these obligations, many have suggested that the GPL would likely be intepreted as a contract, not a bare license.")

For a rich discussion of the history, philosophy, and success of the open-source movement, see generally Steven Weber, The Success of Open Source (2004). See also id. at 84:

> [O]pen source developers are some of the most vehement defenders of intellectual property rights. Rarely do these developers put their software in the public domain, which means renouncing copyright and allowing anyone to do anything with their work. Open source collaboration depends on an explicitly intellectual property regime, codified in a series of licenses. It is, however, a regime built around a set of assumptions and goals that are different from those of mainstream intellectual property rights thinking. The principal goal of the open source intellectual property regime is to maximize the ongoing use, growth, development and distribution of free software. To achieve that goal, this regime shifts the fundamental optic of intellectual property rights away from protecting the prerogatives of an author toward protecting the prerogatives of generations of users.

Additional helpful commentary includes Matthew D. Stein, Rethinking UCITA: Lessons From the Open Source Movement, 58 Me. L. Rev. 157 (2006); Jonathan Zittrain, Normative Principles for Evaluating Free and Proprietary Software, 71 U. Chi.

L. Rev. 265 (2004); Lawrence Lessig, The Limits in Open Code: Regulatory Standards and the Future of the Net, 14 Berkeley Tech. L.J. 759 (1999); Margaret J. Radin & R. Polk Wagner, The Myth of Private Ordering: Rediscovering Legal Realism in Cyberspace, 73 Chi.-Kent L. Rev. 195 (1998).

For a discussion of the position that open source demands special legal treatment, see Jean Braucher, New Basics: 12 Principles for Fair Commerce in Mass-Market Software and Other Digital Products, working paper, May 27, 2005. For a somewhat different view, see Ieuan G. Mahoney & Edward J. Naughton, Open Source Software Monetized: Out of the Bazaar and into Big Business, 21 N. 10 Computer & Internet L. 1, 1 (2004) ("The open source movement may have been born as a political ideology, a communitarian alternative to corporate profit seeking and the 'privatization' of technical innovation, but it has been transformed into a commercial enterprise."); David McGowan, Legal Implications of Open Source Software, 2001 U. Ill L. Rev. 241, 290 ("As to formation . . . the rule that a contract may be formed 'in any manner sufficient to show agreement, including conduct by ***47** parties which recognizes the existence of such a contract' is a familiar one that may be readily applied in [the context of open source software].").

There are many different open-source license agreements. A typical open-source term concerning contract formation states:

> You are not required to accept this license, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

Id. at 256.

Downstream users of open-source software generally will not contest the enforcement of the agreement, which gives users rights they would otherwise not have under copyright law. Id. at 290. But this leaves open various issues. For example,

> In theory, if an in-house programmer incorporates a small portion of [open source] code into an integrated proprietary product and the integrated product is distributed, the source code to the entire derivative work becomes subject to the [contract]. This specific issue has never been litigated. It is unclear how the 'derivative work' subject to [the contract] would be defined . . . . It is also unclear when [contract]-protected code is deemed integrated into the derivative work, or when it is sufficiently 'independent or separate' so as not to trigger the mandatory licensing obligation.

Lori E. Lesser, Open Source Software: Risks, Benefits & Practical Realities in the Corporate Environment, Practising Law Institute, PLI Order Number 5141 (Nov. 2004); see also Matthew D. Stein, Rethinking UCITA: Lessons From the Open Source Movement, 58 Me. L. Rev. 157, 191 (2006) (the "copyleft" provision is a "potential pitfall awaiting programmers that want to take their software project private and license it under a proprietary license.").

Illustration 3. See Brian Carver, Comments on ALI Software Licensing Principles, Michigan Law School (Fall 2005).

Illustration 4. See Lany Magid, It Pays to Read License Agreements, PC Pitstop, available at http://www.pcpitstop.com/spycheck/eula.asp (last accessed March 28, 2005).

Illustration 5. See Brian Carver, Comments on ALI Software Licensing Principles, Michigan Law School (Fall 2005).

Illustration 7. See Muze Inc. v. Digital On-Demand, Inc., 123 F. Supp. 2d 118 (S.D.N.Y. 2000).

§ 1.07 Scope; Embedded Software

(a) These Principles apply to the transfer of software embedded in goods if a reasonable transferor would believe the transferee's predominant purpose for engaging in the transfer is to obtain the software.

(b) These Principles apply to the transfer of software upgrades and replacements of embedded software only if these Principles applied to the transfer of the embedded software being upgraded or replaced.

***48 Comment:**

a. Generally. Embedded software is built or integrated into goods so that the user cannot easily separate the software from the goods. In addition, the user cannot easily replace embedded software without the aid of a technician. Typically, the transferee does not select embedded software, nor can the transferee purchase the software separately on the market. Further, although technology is moving rapidly and embedded software is increasing in sophistication (consider, for example, the complexity of software embedded in a cell phone with a web browser and camera), it is often less complex than non-embedded software, and is designed to function without human intervention. Often the usefulness of embedded software does not depend on continued support and upgrades. Finally, embedded software is usually transferred as part of the goods under one agreement and the transferee obtains the right to use the software in connection with the goods. Although much embedded software shares these characteristics, no particular factor is controlling, and a court should take into account all factors. The ultimate question on whether software is embedded is whether, viewed objectively, the software is part of the goods or is a separate item.

Embedded software is ubiquitous. It runs devices such as washing machines, automatic-teller machines, computer equipment such as routers, printers, and disk drives, VCRs, microwave ovens, cars, game consoles, and airplanes. However, software loaded on a general-purpose computer is not embedded software. People can purchase computers without operating systems and other software (although vendors often bundle the two) and, at any rate, the purchaser can easily substitute other software.

Software embedded in goods should less frequently raise issues unique to the software such as copying, transfer, support, maintenance, upgrade, inspection, monitoring, licensing restrictions, or remedial limitations. For example, embedded software typically is difficult to copy and is proprietary in nature so that the owner of one kind of goods with embedded software cannot easily copy the software and transfer it for use in another brand or kind of goods. Section 1.07 therefore excludes transfers of embedded software, except in the unusual case where the "predominant purpose" of the transaction, viewed objectively, is the transfer of the software, in which case the above issues are more likely to arise.

b. Predominant purpose. The "predominant purpose" test focuses on the transferee's purpose for entering the transaction. The predominant purpose is the most important purpose for entering the transaction. It is not enough that a "material purpose" of the transaction is the transfer of the software. There can be many "material" purposes of a transaction, and, for clarity, these Principles reject a "material purpose" test.

Factors to consider in determining the predominant purpose include the language of the agreement; the nature of the goods and the software; the price of the goods and the software (the greater the proportional price of the goods, the more likely a reasonable transferor would believe the predominant purpose is the sale of goods); the nature of the parties' bargaining over the goods and the software (did the transferee bargain for the goods or the software); the ease of copying and transferring the embedded software; the general availability of the software on the market; whether there is a separate price for the software; and whether the transferor ***49** developed the software for the particular transferee or the particular product. No particular factor is controlling.

Illustrations:

1. B, a consumer, enters A, a retail store, and asks to purchase a microwave oven. A sells B a microwave oven with embedded software for $700. The software is not available separately on the market and was developed specifically for this oven. A reasonable transferor would believe B's predominant purpose is to purchase a microwave oven to cook food. These Principles do not apply to the transaction, which is a sale of goods governed by Article 2 of the U.C.C.
2. B, a consumer, wants to purchase a DVD player to play B's DVDs and is shopping in a store. B selects a particular model because of a function provided by the software embedded in the DVD player. The software is not available separately on the market, and was developed specifically for this DVD player. These Principles do not apply. Even though one material purpose of selecting the particular DVD player was its software functions, a reasonable transferor would believe the "predominant purpose" of the transaction was for B to obtain a DVD player to play DVDs.

c. Whose purpose. This Section inquires into the transferee's purpose for entering the transaction. Further, consistent with general contract law, the test is objective; the issue is what a reasonable transferor would believe about the transferee's intentions, not the transferee's actual intentions. In addition, the objective test takes into account what the transferor knew or should have known about the transfer. Ordinarily, in the case of embedded software, a reasonable transferor would believe the transferee's predominant purpose is to use the goods, and sale-of-goods law applies. Instances in which a reasonable transferor would believe the transferee's predominant purpose is to obtain the software should be infrequent, although technological advances are changing the nature of these transactions. Accordingly, these Principles do not establish a flat rule.

Illustrations:

3. B, a hospital, purchases computerized surgical equipment with built-in software that operates an endoscope. A

reasonable transferor would believe the hospital's predominant purpose is to obtain the equipment. These Principles do not apply.

4. B, a consumer, purchases an electronic date-book that contains embedded software. The software is not separately available on the market and is difficult to separate from the product. In addition, the software is neither complex nor sophisticated. The agreement describes the transfer as a sale of goods and not a transfer of software. A reasonable transferor would believe B's predominant purpose is to purchase goods not software and these Principles do not apply. If B was a software engineer and purchased the date-book to obtain the software for use in another software project, and such an activity was common, these Principles would apply to the software transfer. A reasonable transferor would believe B's predominant purpose is to acquire the software.

***50** *d. Digital art player and multimedia products*. Multimedia products, such as interactive games, use various interactive technologies and usually include audio, video, and graphics, as well as software. If the software is embedded in a game console, for example, this Section applies to determine whether these Principles apply. Some factors for determining the transferee's predominant purpose in the particular context may suggest that the Principles do not apply. For example, the language of the agreement may describe the transaction as a transfer of a game and not of software. In addition, some transferees obtain a game for the entertainment value embodied in the game's digital content, not for the functionality of the software. Further, transferees often cannot select the embedded software nor can they purchase the software separately on the market. In addition, the software is often not easy to copy or transfer.

Other factors in the particular context may suggest that a reasonable transferor would believe the transferee's predominant purpose is to obtain the software. Just as some people acquire games for the digital content, others obtain them because their interactivity creates most of the entertainment value. This is especially true if the digital content is of low quality. Further, in some games, the combination of development time, resources, and percentage of software in a product greatly outweighs the digital content (some game software comes with little or no media content at all). Finally, some transferees are known to purchase particular games to obtain the software to use as a platform for the development of other games or projects.

Courts should weigh all of the above factors to determine the outcome in individual cases. Of course, this creates a line-drawing challenge. However, this is no different from the challenge of applying the predominant-feature test in mixed sale-of-goods and services cases, something that courts have been doing successfully for many years under Article 2 of the U.C.C. Further, based on current technology, the line-drawing may not be too difficult because the software in a game often overwhelms the digital content both in terms of quantity and quality. At any rate, even if the Principles technically do not apply under the predominant-feature test, courts can apply these Principles by analogy to the transfer of the software in multimedia products when the reasoning behind particular substantive Principles apply persuasively to the software transfer.

e. Software upgrades and replacement software. Under § 1.07(b), these Principles do not apply to the transfer of upgrades and replacements of embedded software unless these Principles applied to the transfer of the embedded software being upgraded or replaced. For example, if a software engineer purchases a DVD player with embedded software to use the software as a platform for the development of another project, and such an activity was common, these Principles may apply to the embedded-software transfer. A reasonable transferor often would believe the engineer's predominant purpose is to acquire the software. See Illustration 4. If the software engineer purchases replacement software or a software upgrade of the embedded software for the same reason, these Principles apply. In the typical upgrade or replacement of embedded software, however, these Principles will not apply. For example, replacement software, such as software for operating a used car's braking system, simply restores goods to the condition they were in, or ***51** should have been in, when originally sold, and the policy concerns focused on in these Principles are not implicated.

Illustration:

5. B, an automobile mechanic, purchases replacement software to run a car's braking system in a car he is repairing. A reasonable transferor would believe B's predominant purpose is to obtain the software and these Principles apply to the transfer to B. However, the transfer of the software from B to the car owner when B installs the software in the car does not come under these Principles.

REPORTERS' NOTES

Comment a. Generally. See generally Phillip Koopman and Cem Kaner, Why the Proposed Article 2 Revisions Fall Short for

Embedded Systems, DRAFT, 1 (November 18, 2000), at http://www.kaner.com/pdfs/koopmanKanerArticle2.pdf (embedded software not "separately available"), last accessed 7/1/2004.

An embedded system is a "special-purpose computer system built into a larger device" as distinguished from a "general-purpose personal computer." See http://en.wikipedia.org/wiki/Embedded_system#Examples_of_embedded_systems, last accessed on 6/28/2004. "A typical embedded system consists of a single-board microcomputer with software in ROM, which starts running some special purpose application program as soon as it is turned on and will not stop until it is turned off (if ever). An embedded system may include some kind of operating system but often it will be simple enough to be written as a single program." See Free Online Dictionary of Computing entry "Embedded System" at: http:// www.nightflight.com/foldoc-bin/foldoc.cgi?query=embedded+system, last accessed on 7/1/2004.

A general-purpose computer is not part of an embedded system. See Wikipedia, http://en.wikipedia.org/wiki/embedded-system, last accessed on 6/30/2004 ("An embedded system is a special-purpose computer system built into a larger device. An embedded system is required to meet very different requirements than a general purpose computer."). For further discussion of what is not an embedded system, see The Embedded Software Strategic Market Intelligence Program 2002/2003 Volume IV: Java in Embedded Systems (Report) at: http://www.the-infoshop.com/study/vd15953_Embedded_Software.html, last accessed on 7/1/2004.

For a discussion of the prevalence of embedded software see FactGuru entry "Embedded Software" at http://www.site.uottawa.ca:4321/oose/index.html #embeddedsoftware, last accessed 7/1/2004; see also the "Overview" at the Embedded Software Center at UT-Dallas: http:// www.utdalls.edu/research/esc/overview.html, last accessed 7/1/2004. "Embedded software is used to control electronic products not normally identified as computers. Embedded software usually executes on an internal micro-controller or a Digital Signal Processor (DSP) used to control other product components. . . . Products that contain embedded software include cellular telephone handsets and base-stations, portable MP3 players, television set-top boxes, data network switching equipment, automobiles, modems and hard disk drives, high efficiency electric motors, and digital cameras." Overview, supra. As technology develops, of course, the lines between computers and embedded software in goods will continue to blur.

U.C.C. § 9-102(a)(44) defines an embedded computer program as requiring that "(i) the program is associated with the goods in such a manner that it customarily is considered part of the goods, or (ii) by becoming the owner of the goods, a person acquires a right to use the program in connection with the goods."

Comment b. Predominant purpose. These Principles reject UCITA's "material purpose" test, UCITA § 103(b)(1)(B), as being too vague and too likely to draw in transactions better left to sale-of-goods law. Parties often have many "material purposes" for entering transactions. See Cem Kaner, Symposium: Uniform Computer Information Transaction Act: ***52** Software Engineering and UCITA, 18 J. Marshall J. Computer & Info. L. 435, 525-527 (1999); see also Jean Braucher, The Uniform Computer Information Transaction Act and Electronic Commerce: 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?, 8 Wash. U. J.L. & Pol'y 241 (2002).

Factors for determining the predominant purpose are found in Page v. Hotchkiss, 2003 Conn. Super. LEXIS 3341 (Conn. Super. Ct. 2003); USM Corp. v. First State Insurance Co., 641 N.E.2d 115, 117 (Mass. App. Ct. 1994); CONOPCO, Inc. v. McCreadie, 826 F. Supp. 855, 869-872 (D. N.J. 1993); Honeywell, Inc. v. Minolta Camera Co., 1991 U.S. Dist. LEXIS 20743, 13 (D. N.J. 1991) (the proportional value of each part of the transaction); Coca-Cola Bottling Co. v. Coca-Cola Co., 696 F. Supp. 57, 85 (D. Del. 1988) (language of the agreement); Neilson Business Equipment Center, Inc. v. Italo v. Monteleone, M.D., P.A., 524 A.2d 1172, 1175 (Del. 1987); see also Laura McNeill Hutcheson, The Exclusion of Embedded Software and Merely Incidental Information from the Scope of Article 2B: Proposals for New Language Based on Policy and Interpretation, 13 Berk. Tech. L.J. 977, 984 (1998).

Comment d. Digital art player and multimedia products. See Michael F. Clayton & Robert P. Henley, Avoiding Intellectual Property Liability, 709 PLI/Pat 185, 222 (2002) (Multimedia products, such as games, "combine audio, video, graphics, and text and [include] technologies that range from interactive web sites to videobooks. . . . ."); Nick Montfort, "Why Consider 'Multimedia,"' Panel Talk at ACM Hypertext 2002 (15 June 2002) at http:// nickm.com/if/ht02_panel.txt, last accessed on 7/1/2004. ("Multimedia works combine different media elements in a new way, such that, while they retain the qualities of the different media they are, these elements are part of the same work or system."); UCITA § 103, Comments 2(d), 5(c). "Because of the multiple, complex uses of intellectual property in developing multimedia products, such products generally present complicated rights, ownership and clearance issues." Michael F. Clayton & Robert P. Henley, Avoiding Intellectual

Property Liability, 709 PLI/Pat 185, 222 (2002); see also Ian C. Ballon, The Emerging Law of the Internet, 547 PLI/Pat 169, 189 (1999) (distinguishing multimedia works as "derivative works" under copyright classifications); Pamela Samuelson & Robert J. Glushko, Intellectual Property Rights for Digital Library and Hypertext Publishing Systems, 6 Harv. J. L. & Tech. 237, 240-241 (1993) (asserting the inadequacy of copyright categories for multimedia works).
Illustration 2 is based on the discussion in the American Bar Association Working Group Report on the Uniform Computer Information Transactions Act, Jan. 31, 2002, at 10.
Illustration 3 is based on an example in Laura McNeill Hutcheson, The Exclusion of Embedded Software and Merely Incidental Information from the Scope of Article 2B: Proposals for New Language Based on Policy and Interpretation, 13 Berk. Tech. L.J. 977, 989-990 (1998).

§ 1.08 --Scope; Mixed Transfers Including Non-Embedded Software

(a) For purposes of this section,
- (1) "goods" include any embedded software, and
- (2) a "mixed transfer" constitutes a single transaction that consists of the transfer of non-embedded software and any combination of goods, digital content, and services.
(b) In the case of a mixed transfer, these Principles apply to the transfer of the non-embedded software unless the transfer also includes digital content or services and a reasonable transferor would believe the transferee's predominant purpose for engaging in the transfer is to obtain the digital content or services.

Comment:

***53** *a. Scope of Section*. Section 1.08 applies when non-embedded software (see § 1.07, Comment *a*, for a discussion of embedded software) constitutes part of a single transaction that also includes the transfer of any combination of goods (defined in this Section to include any embedded software), digital content, and services. For example, a seller may market a general-purpose computer with already-loaded software that is not integral to the computer and that is often sold separately from the computer. Under §§ 1.07 and 1.08, the software is not embedded in goods, but is part of a mixed transfer, and § 1.08(b) determines whether these Principles apply. (If the computer also contains embedded software, § 1.07 determines whether these Principles apply to the embedded software.)
Subsection (b) also applies to other mixed transfers, including:
(1) mixed goods and non-embedded software that also include services or digital content or both. For example, the subsection applies to a "turn-key system," which is a package of hardware, software, and services sold together as a package or unit. For another example, subsection (b) applies if a transferee purchases a game console (a special-purpose computer) that comes with CDs consisting of software and digital art for insertion into the console.
(2) mixed software and services when goods (other than any tangible medium that stores the software) are not included. For example, the transfer of software may be part of professional services, such as when a bank delivers home-banking software to a customer.
(3) mixed software and digital art, when goods (other than any tangible medium that stores the software) are not included. For example, subsection (b) applies when an end-user downloads a game from the Internet that consists of a combination of digital art and software, or purchases a game CD that consists of the same for insertion into a game console. Subsection (b) applies as well to mixed software-digital database transfers, such as when an end user downloads software as part of a transaction to access a specific factual database, such as a telephone directory.
Subsection (b) also applies to the transfer of a device that includes several versions of non-embedded software. Suppose a cellphone also has various non-embedded software programs that run music, video, and a GPS system. If, for example, the dispute is over the software running the GPS system, the issue under (b) would be: What is the user's predominant purpose for the transfer—is it getting the data or the functionality of the GPS system?
Section 1.08 does not apply if the parties engage in two or more separate transactions, for example, one involving software and another involving goods, a service, or digital content. Courts must distinguish a single-transaction mixed transfer, which involves both non-embedded software and some combination of goods, services, and digital content, in which case § 1.08 applies, from separate transactions in which, under § 1.06, these Principles apply to the transfer of the software. Distinguishing mixed transfers from separate transactions is a common issue of general contract law and depends on the

parties' intentions.

When these Principles apply under subsection (b), they apply only to the non-embedded software.

***54** *b. Predominant purpose*. As with embedded software, for purposes of subsection (b), the predominant purpose is the most important purpose for entering the transaction. It is not enough that a "material purpose" of the transaction is the transfer of the software. There can be many "material" purposes of a transaction, and, for clarity, these Principles reject a "material purpose" test.

Factors to consider in determining the predominant purpose include the language of the agreement; the nature of the goods, service, or digital content and the software; the market value of each; the development time, resources, and percentage of software as compared to any digital content, the nature of the parties' bargaining (did the transferee bargain for the goods, service, or digital content, on the one hand, or the software on the other); the ease of copying and distributing the software; the general availability of the software on the market; whether there is a separate price for the software; whether the transferor developed the software for the particular transaction; and whether the transferee sought the software to run many digital-content programs. See also § 1.07, Comment *b*.

The predominant-purpose test governs mixed transfers for several reasons. First, these Principles should apply only when issues related to the software are likely to arise, such as contract formation, copying, reverse engineering, transferring, quality, and coordination with federal intellectual property law. Further, the predominant-purpose test often will point to an obvious result. In addition, mixed transactions are analogous to embedded-software transactions and these Principles should treat them the same way. For clarity and ease of use, the scope rules should have as few variations as possible.

c. Whose purpose. As with embedded software, subsection (b) inquires into the transferee's purpose for entering the transaction. Further, consistent with general contract law, the test is objective; the issue is what a reasonable transferor would believe about the transferee's intentions, not the transferee's actual intentions. In addition, the objective test takes into account what the transferor knew or should have known about the transfer.

d. Application of the predominant-purpose test. If, as posited in Comment *a*, a vendor markets a general-purpose computer with already-loaded, non-embedded software, these Principles apply to the software portion of the transaction under § 1.08(b).

If a supplier transfers a package of hardware, software, and maintenance services together as a "turn-key" system, in which the supplier selects and loads non-embedded software onto the selected computer hardware before delivery, these Principles apply to the non-embedded software portion of the transfer under § 1.08(b) unless a reasonable transferor would believe the transferee's predominant purpose for engaging in the transfer is to obtain the services. This should be rare.

Subsection (b) also applies if a transfer consists of non-embedded software, goods, and digital content. For example, suppose a transferee purchases a game console, which constitutes a special-purpose computer, that comes with CDs of individual games consisting of software and digital art for insertion into the console. As with the discussion of embedded software in a game console, see § 1.07 and Comment *d*, some factors for determining the transferee's predominant purpose in the particular context may suggest that the Principles do not apply to the CDs. For example, the language of the agreement may describe the transaction as a transfer of a game and not of software. Similarly, some transferees obtain a game for the ***55** entertainment value embodied in the game's digital content, not for the functionality of the software. Further, transferees often cannot select the software nor can they purchase the software separately on the market. In addition, the software may not be easy to copy or transfer.

Other factors in the particular context may suggest that a reasonable transferor would believe the transferee's predominant purpose is to obtain the software. Just as some people acquire game CDs for the digital content, others obtain them because their interactivity creates most of the entertainment value. This is especially true if the digital content is of low quality. Further, in some game CDs, the combination of development time, resources, and percentage of software in a product greatly outweighs the digital content (some game software comes with little or no media content at all). Finally, some transferees are known to purchase particular games to obtain the software to use as a platform for the development of other games or projects.

As with the discussion of embedded software in a game console, courts should weigh all of the above factors to determine the outcome in individual cases. Of course, this creates a line-drawing challenge. However, this is no different from the challenge of applying the predominant-feature test in other contexts such as mixed sale-of-goods and services cases, something that courts have been doing successfully for many years under Article 2 of the U.C.C. Further, based on current technology, the line-drawing may not be too difficult because the software in a game CD often overwhelms the digital content both in terms of quantity and quality. At any rate, even if the Principles technically do not apply under the predominant-feature test, courts can apply these Principles by analogy to the transfer of the software in multimedia products when the reasoning behind substantive Principles apply persuasively to media transfers.

The same challenge under subsection (b) occurs when a transferee purchases a GPS system for her car, which includes a console, non-embedded software, and a digital database. The test is the same—would a reasonable transferor believe the transferee's predominant purpose is to obtain the software or the database?

As already noted, subsection (b) also governs transactions encompassing both services and the transfer of software when goods (other than the tangible medium that stores the software) are not included. For example, professional services include legal, financial, insurance, and medical services. In those instances where the transfer of software is part of professional services, such as when a bank delivers home-banking software to a customer, subsection (b) applies and the issue is whether a reasonable transferor would believe the transferee's predominant purpose is to obtain the services or the software. Suppose, for example, the bank selects the software, which is unavailable on the market, and furnishes it for free. These Principles likely do not apply to the software transfer because a reasonable transferor would believe the transferee's predominant purpose is to receive professional banking services. Contrast this with a bank that sells or furnishes to its customers software that is available on the market for balancing check books or tracking cash flow. A reasonable bank-transferor would believe its customer's predominant purpose is to acquire the software and these Principles apply to the software transfer.

Subsection (b) also applies to mixed software-digital art transactions, such as when an end-user downloads a game from the Internet that consists of digital art and ***56** software, or purchases a separate game CD that consists of the same for insertion into a special-purpose computer. The test and considerations are the same as when a transferee purchases a game console together with CDs consisting of software and digital art. See supra this Comment.

Finally, subsection (b) applies to mixed software-digital database transactions, such as when an end user downloads software as part of a transaction to access a specific factual database, such as a telephone directory. If there is no choice of software on the market and the software is provided solely by the database service, a reasonable transferor likely would believe the end user's predominant purpose is access to the database. On the other hand, if an end user downloads cite-checking software to access various databases, which software is available on the market along with other brands, a reasonable transferor would believe the end user's predominant purpose is to acquire the software.

Illustrations:

1. B purchases a digital camera for the price of $1500. The package includes non-embedded software for organizing, editing, and printing the pictures on a computer. Under § 1.08(b), these Principles apply to the transfer of the non-embedded software, but not to the sale of the digital camera and its embedded software (unless the Principles apply to the embedded software under the predominant-purpose test of § 1.07).
2. A, a company that designs, manufactures, and sells automated industrial packaging equipment systems, develops such equipment for B's plastics factory. The agreement calls for both the installation of the equipment as well as the delivery of a "supervisory control and data acquisition system," which is the non-embedded software interface between the new equipment and B's existing accounting software. This is a mixed transaction involving the transfer of goods and non-embedded software. Under § 1.08(b), these Principles apply to the transfer of the software comprising the "supervisory control and data acquisition system."
3. B, a supermarket, purchases a turn-key system consisting of a special-purpose computer and non-embedded software for performing B's cash-register functions. The seller selected the computer and software and loaded the software on the machine before delivery. Under § 1.08(b), these Principles apply to the software transfer.
4. A, a courier company, provides software to B that permits B to access data on the location of B's package that A is delivering. A reasonable transferor would believe B's predominant purpose is to obtain A's services in carrying B's package. Under § 1.08(b), these Principles do not apply. The result would not be different even if, as part of the single transaction, A offered the tracking software at a separate price or B selected a particular service over another because of the tracking software. In either case, a reasonable transferor would believe that B's predominant purpose was to obtain A's services of carrying the package even though acquiring the particular software may have been a material purpose.
5. B, a consumer, purchases a desktop-publishing package that contains both software and large libraries of digital art files, including picture, audio, ***57** and video files. B selects the particular package in part because of the composition and size of the digital art file libraries. A reasonable transferor would believe that B's predominant purpose is to utilize the desktop-publishing software tools, not to gain access to the digital art file libraries, even though the latter may have been a

"material purpose" of the transaction. Under § 1.08(b), these Principles apply to the software transfer.

6. B seeks to open a bank account at A bank. A delivers home-banking software to B when B opens the account. B does not select the software, which, by itself, has no market value. A reasonable transferor would believe B's predominant purpose is to obtain the banking services, and, under § 1.08(b), the Principles do not apply.

7. B downloads software to access her e-mail account. B selects the particular software, which is available on the market at a particular price. B cannot receive the services other than by acquiring the software. A reasonable transferor would believe B's predominant purpose is to acquire the software, and, under § 1.08(b), these Principles apply to the software transfer.

e. Software-development agreements. These agreements typically include the development of software for a particular purpose as well as after-delivery maintenance, problem solving, and update services. Upgrades may consist of new functions or features or merely repair the original software (patches). Ordinarily, a reasonable transferor would believe the transferee's predominant purpose in contracting for the development of software is to obtain the finished software and these Principles apply to the software transfer under subsection (b). The conclusion would not be different if the software developer agrees to provide support and upgrades for a particular period of time. In contrast, a reasonable transferor would believe the predominant purpose of an agreement with a software consultant to provide phone technical support and diagnostic work is services. In fact, the consultant has not transferred any software. These Principles therefore do not apply to such an agreement.

Illustrations:

8. A, a software-development company, transfers software to B, an insurance company. The agreement calls for the transfer of the software, as well as incidental and customary services such as installation, technical support, training, and maintenance services. A reasonable transferor would believe B's predominant purpose is to obtain the software. Under § 1.08(b), these Principles apply to the software transfer.

9. B, an engineer who is designing a "programmable controller" for use in a factory setting, contracts with A, a software-development company, for A to design and develop software to be incorporated into the controller. The agreement calls for billing at different hourly rates for different services, using language such as "man-days," "time," and "design." A reasonable transferor would believe B's predominant purpose is to obtain the software and, under § 1.08(b), these Principles apply to the software transfer.

f. Telecommunications services, motion pictures, and sound recordings. Under the definition of software ***58** (§ 1.01(i)) and the predominant-purpose test, these Principles rarely should apply to transactions that involve telecommunication services, such as the distribution of audio and visual content either on cable or over the Internet. But the Principles do not include any industry-specific exclusions.

Illustration:

10. B, a consumer, downloads software from A, an Internet telecommunications company, that allows B to make telephone calls over the Internet, either to another computer or to a regular telephone. A bills B for the calls at rates substantially lower than regular telephone rates. A owns the network infrastructure that allows the calls to be routed to other computers or telephones. Transferees who want to access A's service must use A's software. (Contrast this with e-mail and other services that are open in the sense that any platform can create, host, and route e-mail through the Internet to any other platform, independent of hardware, operating system, and software. Each software package may do things in a different way.) A reasonable transferor would believe B's predominant purpose is to receive A's telecommunication services and, under § 1.08(b), these Principles do not apply.

REPORTERS' NOTES

Comment a. Scope of Section. See American Bar Association Working Group Report on the Uniform Computer Information Transactions Act, Jan. 31, 2002, at 11-12.

The definition of a turn-key system is taken from Neilson Business Equipment Center, Inc. v. Monteleone, 524 A.2d 1172, 1174 (Del. 1987); see also USM Corp. v. First State Ins. Co., 641 N.E.2d 115, 118 (Mass. App. Ct. 1994).

Comment b. Predominant purpose. See the discussion in § 1.07, Reporters' Note to Comment *b*. See also RRX Industries, Inc. v. Lab-Con, Inc., 772 F.2d 543 (9th Cir. 1985) (Article 2 applied because software package, included training, repair services, and upgrades considered incidental). In Mortgage Plus, Inc. v. Doc Magic Inc., 2004 U.S. District Lexis 20145 (D. Kan. 2004), DocMagic transferred software to Mortgage Plus as part of services for the preparation of documents. The court stated:

> In this case, the *service* provided by DocMagic in preparing documents for Mortgage Plus and other lender customers clearly is the predominant purpose of the Agreement. The software provided to DocMagic customers is worthless without the actual loan preparation services; thus, the software is wholly incidental to the agreement. This is supported by the fact that although Mortgage Plus continued to possess the referenced software after DocMagic discontinued its loan preparation services, Mortgage Plus immediately sought to restore its access to the loan preparation services, claiming such services were critical to close outstanding loans.

Comment e. Software-development agreements. Software-development agreements are similar to agreements for the sale of specially manufactured goods, which come under U.C.C. Article 2. See NMP Corp. v. Parametric Technology Corp., 958 F. Supp. 1536, 1542 (N.D. Okla. 1997); Architectronics, Inc. v. Control Systems Inc., 935 F. Supp. 425, 432 (S.D.N.Y. 1996) (services/product packages analogous to specially manufactured goods).

Illustration 2. But see Slidell, Inc. v. Millennium Inorganic Chemicals, Inc., 2004 WL 1447921, D. Minn., June 28, 2004 (holding that the predominant purpose was the sale of the equipment).

Illustration 4. These Principles differ from UCITA, which applies to the software provided by the courier company. See UCITA § 103, Comment 4.

Illustration 6. Cf. Mortgage Plus, Inc. v. Doc Magic Inc., 2004 U.S. District Lexis 20145 (D. L. 2004).

***59** *Illustration 8*. See Allstate Life Ins. Co. v. Peoplesoft, Inc., 2004 WL 1375383, N.D. Ill., May 26, 2004.

Illustration 9. But see Micro-Managers, Inc. v. Gregory, 147 Wis.2d 500 (Ct. App. 1988) (focusing on the billing arrangement, the court found that the predominant purpose was services).

TOPIC 3

GENERAL TERMS

Summary Overview

Topic 3 situates the Principles within the larger legal framework of both federal and state law. Topic 3 also provides guidance on some general contracting issues that have particular relevance in software agreements.

Generally, a model law or set of principles addressing transactions that are contractual in nature would not explicitly address its relationship to federal law for two reasons. First, a private contract is much less likely than a state statute to conflict with federal law. Second, there is little to say about the federal/state relationship because it is clear and noncontroversial: Federal law trumps inconsistent state law. However, the subject matter of these Principles intersects the subject matter of the federal Copyright and Patent Acts, and those statutes place some express limits on enforceable contract terms. Further, primarily when state contract law enforces standard-form agreements, questions about the consistency of that enforcement with the federal scheme may arise. Thus, Topic 3 expressly addresses questions of enforceability of terms under the federal intellectual property statutes. It also considers matters more traditionally associated with contract law such as a court's power to set aside all or part of an agreement as against state public policy or as unconscionable, the relation of the Principles to other state law, and rules on choice of law and choice of forum.

Topic 3 also raises the question dealt with throughout these Principles, namely, is there anything to add to already existing law on topics such as public policy, unconscionability, and choice of law and forum? In some cases, we have replicated current law in the "black letter" (see, e.g., § 1.10 on public policy and § 1.11 on unconscionability), but have provided expanded Comments to help explain why some concepts may be particularly relevant or be of heightened concern in the software-contracting context. In others, we have tried to provide guidance in particular areas of concern such as standard-form transfers of generally available software and choice-of-law issues.

There is substantial overlap between certain Sections. For example, a term that may be unenforceable under intellectual property law might also be considered void as against state public policy or unconscionable. In many cases, though, the court should be able to make distinctions among the doctrines. Decisions addressing contract enforcement in light of the intellectual property statutes or state public-policy doctrine focus primarily on third-party effects by analyzing whether the term sought to be enforced imposes unacceptable externalities on third parties or society generally. If the provision relates to innovation, it is most appropriately addressed first under federal law rather than state public policy, because the concerns underlying the federal intellectual property law will be implicated. If the answer under federal law is unclear, however, state public policy can also be relevant. Indeed, courts may prefer to use a state public-policy analysis to avoid difficult ***60** questions of the federal/state balance when the federal rule leaves room for differing interpretations. Unconscionability, in contrast, focuses primarily on the bargaining process between the two parties to a particular agreement at the time of its formation and the substantive terms of the agreement.

A contractual provision that forbids the licensee from independently developing a competitive product for a period that outlasts the software's copyright, for example, raises primarily questions of enforceability under federal intellectual property law, not issues of state public policy or unconscionability. The provision implicates the concerns of intellectual property law because it attempts to expand the rights granted under the statutes by lengthening the copyright's term beyond that which the Copyright Act would provide. If federal law is unclear as it often is, a court could appropriately import its own state's public policy into the analysis.

A term disclaiming liability for damages for gross negligence on the licensor's part would, of course, not implicate federal intellectual property law but rather state public policy and unconscionability concerns. Such disclaimers may not be void as against public policy if the state believes that they may be valid in certain circumstances, but may be unconscionable in the particular context.

Section 1.12, "Relation to Other Law," places the Principles within the larger legal context. It makes clear that the Principles are not intended to displace other relevant law.

Section 1.13, "Choice of Law in Standard-Form Transfers of Generally Available Software," recognizes that permitting parties to choose the law that will govern enforcement of their agreement decreases costs by enhancing certainty. Nevertheless, certain safeguards are appropriate to recognize the interests of transferees in retail-like markets who may not appreciate the implications of choice-of-law clauses. Thus, this Section, places some restrictions on choices in this context.

Section 1.14, "Forum Selection Clauses," like § 1.13 on choice of law, recognizes that permitting parties to choose a forum may be efficiency enhancing. It adopts the "unfair or unreasonable" test of the Restatement Second of Conflict of Laws. Unlike § 1.13, it applies to both standard form and negotiated transfers of software.

§ 1.09 -Enforcement of Terms Under Federal Intellectual Property Law

> **A term of an agreement is unenforceable if it (a) conflicts with a mandatory rule of federal intellectual property law; or (b) conflicts impermissibly with the purposes and policies of federal intellectual property law; or (c) would constitute federal intellectual property misuse in an infringement proceeding.**

***61 Comment:**

a. Scope. Software is clearly copyrightable subject matter, and decisions of the Federal Circuit indicate that it regards software as patentable subject matter. The federal intellectual property statutes sometimes place limits on enforceable contractual terms either explicitly or implicitly. Of course, many other federal statutes and regulations (e.g., the Federal Trade Commission Act and regulations thereunder) may also limit enforceable contractual terms. The Principles focus on federal intellectual property law because the relationship between it and breach-of-contract actions seeking to enforce particular terms has been highly contentious and courts could benefit from guidance in this area.

That guidance may be usefully derived from the preemption analysis that has developed under both copyright and patent law. Although neither law preempts the enforcement of a breach-of-contract cause of action as a general matter, both copyright and patent law may refuse to enforce particular terms under a preemption analysis. Because both copyright and patent law adopt conflict rather than field preemption (see below), the question is whether, in the circumstances, enforcement of a particular contract conflicts with federal intellectual property law or policy. Whether a particular contract conflicts with federal intellectual property law or policy depends on the terms of that contract. Thus, the Principles often refer to preemption of particular terms, a usage of the term "preemption" that may be unfamiliar to those outside of the intellectual property area, but one that is consistent with judicial analysis.

Preemption may be either statutorily or constitutionally based and express or implied. In § 301, the Copyright Act contains an express preemption provision, stating that "all legal or equitable rights that are equivalent to any of the exclusive rights within the general scope of copyright . . . and come within the subject matter of copyright . . . are governed exclusively by this title." 17 U.S.C. § 301(a). Courts interpret this language to mean that a cause of action is preempted if the subject matter at issue is within the scope of the Act and the rights a party is seeking to enforce or protect are not qualitatively different from rights under the Act. The Patent Act, in contrast, contains no such express language.

The ultimate source of authority for implied preemption is the Supremacy Clause of the U.S. Constitution, which states, "Th[e] Constitution, and the Laws of the United States which shall be made in pursuance thereof . . . shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the contrary notwithstanding." U.S. Const. Art. VI, cl. 2. Whether the Intellectual Property clause itself is an independent source of implied preemption is an open question. The Intellectual Property Clause states, "The Congress shall have Power . . . To promote the Progress of Science and the useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." Id., Art. I, § 8, cl. 8. Because the intellectual property statutes are enacted pursuant to this power, the extent of Supremacy Clause preemption is necessarily related to the interpretation of the Intellectual Property Clause.

There are two types of implied preemption—field preemption and conflict preemption. Field preemption addresses situations in which federal law completely ***62** excludes the states from acting in the area. Field preemption does not apply to either copyright or patent law. Conflict preemption is relevant to both copyright and patent law, and applies when particular state statutory enactments or the enforcement of common-law claims for relief would impermissibly interfere or "conflict" with the purpose of the federal scheme. An impermissible conflict occurs when "either [] compliance with both state and federal regulation is a 'physical impossibility' or where state law stands as an 'obstacle to the accomplishment and execution of the full purposes and objectives of Congress."' ASCAP v. Pataki, 930 F. Supp. 873, 878 (S.D.N.Y. 1996) (citations omitted). In such cases, the state law will be preempted to the extent of the conflict. So, for example, a state may not by statute provide patent-like protection to mass-marketed unpatentable products because enforcement of the state statute would impermissibly interfere with the federal interests embodied in the patent system.

Generally, two types of agreements can raise preemption questions under both patent and copyright law. The first category includes terms that expand the affirmative exclusive rights that the intellectual property statutes would otherwise confer by, for example, providing additional rights in protected material or creating copyright or patent-like rights in unprotected material. The second group of terms consists of those that narrow or exclude statutory (such as fair use in copyright) or common-law limitations on the exclusive rights.

As noted above, usually intellectual property law does not preempt the enforcement of terms of private agreements because restrictive provisions in agreements bind only the contracting parties, unlike state statutes which, by operating against the world, compete directly with the federal system. Nevertheless, intellectual property policy may exert a preemptive effect on agreements in certain circumstances. For example, preemption issues are heightened when software is distributed under take-it-or-leave-it standard-form agreements that, by virtue of state enforcement, more closely resemble state legislation competing with the federal scheme than a bargain between two parties.

Courts take a variety of approaches in analyzing contractual claims for preemption. Under copyright law, one approach is to hold that the mere existence of an agreement provides the "extra element" making the claim qualitatively different from one in copyright. The parties' reciprocal promises and the transfer of consideration form an extra element under § 301 that avoids preemption of the breach-of-contract action and the particular clause sought to be enforced. Other courts analyze the particular provision at issue. If it merely restates or directly conflicts with copyright law then the breach-of-contract claim is preempted and the cause of action is one in copyright law. For example, if the alleged contractual breach is based solely on the licensee's unauthorized copying of the software, some courts would hold the contractual claim preempted and require the plaintiff to proceed under copyright law.

Under patent law, courts have held certain provisions in agreements invalid, including a covenant not to contest a patent's validity and a provision requiring a licensee to continue paying royalties after the patent's expiration. Courts have also used the doctrine of patent misuse to police certain types of contractual provisions.

These Principles adopt the patent view and that of copyright courts that focus on the particular provision at issue. Merely because the agreement may be otherwise ***63** enforceable under the Principles does not shelter particular provisions from challenge.

If the parties have agreed on the consequences for the remainder of the agreement if a particular provision is severed, the

court should enforce that agreement unless it is unreasonable. If the parties have not so agreed or their agreement is unreasonable, the court may enforce the remainder of the agreement or treat the entire agreement as unenforceable.
b. Mandatory rules. Section 1.09(a) emphasizes that parties cannot contract around mandatory rules of the intellectual property laws. For example, rules requiring a writing for transfer of copyright ownership and assignment of patents are mandatory. In some cases, the statutes expressly permit the parties to modify the statutory "default" rule. For example, the Copyright Act permits parties to contract in certain circumstances to treat a creation as a work made for hire. In such cases, the parties are free to bargain with respect to the particular issue.
Unfortunately, the intellectual property statutes often do not clearly delineate between mandatory and default rules. Courts should look to the language of the relevant statute in determining what rules are mandatory. The Uniform Commercial Code (U.C.C.) and relevant commentary about or interpretation of the U.C.C. may provide a helpful analogy. Under the U.C.C., rules are mandatory when their reason for existence is to restrict the parties' conduct.

Illustration:

1. A, a software vendor, orally transfers ownership of its copyright to B. This agreement is unenforceable because it conflicts with a mandatory rule of intellectual property law. See 17 U.S.C. § 204(a) ("A transfer of copyright ownership, other than by operation of law, is not valid unless an instrument of conveyance . . . is in writing and signed by the owner of the rights conveyed or such owner's duly authorized agent.")

c. Purposes and policies preemption. Section 1.09(b) makes it clear that a term of an agreement that impermissibly conflicts with the federal intellectual property law under the standards of the case law is also unenforceable. The parameters of "purposes and policies" preemption remain unclear, but certain types of contractual provisions are particularly troubling. Terms that strike at the heart of the intellectual property balance between promoting the public welfare by granting exclusive rights as an incentive to innovate, and promoting the public welfare through robust competition fueled in part by broad dissemination of information and a rich public domain, are most susceptible to challenge, and particularly so when part of a standard-form transfer of generally available software. Such preemption may occur under the copyright statute itself or the implied preemption analysis applicable to both copyright and patent law.
One approach the Principles could take would be to identify particular suspect terms in the "black letter." This is difficult because preemption law is quite uncertain and results are sensitive to the particular factual circumstances. Nevertheless, some troublesome terms can be discerned from the cases. Again, particularly when contained in a standard form as part of a retail-like transaction, provisions that would purport to do any of the following can be problematic from an intellectual property perspective when contained in a software agreement:
***64** -(1) preclude the transferee generally from making fair uses of the work;
-(2) ban or limit reverse engineering;
-(3) restrict copying or dissemination of factual information; and
(4) forbid transfer of the software.
Examples 1-3 overlap to a certain extent. Fair use shelters more conduct, however, than just reverse engineering under certain circumstances. The general concern with all of the examples listed is that their enforcement may unduly limit dissemination of information and frustrate follow-on innovation.
Nor is the list exclusive. Other terms, particularly when ubiquitous, may be problematic. For example, a term requiring a transferee to grant back rights to the transferor in the transferee's own independently created innovations can raise questions of enforceability under federal intellectual property law because it may create disincentives for the transferee to innovate. A term that prohibits a transferee from seeking federal intellectual property rights on its own independently created innovations raises similar issues.
The goal here is not to direct a court to hold any of the terms noted above unenforceable, but rather to identify certain troublesome areas and to provide a mode of analysis. While this lack of certainty may be frustrating, it is particularly appropriate in a Principles project, which aims not to restate the law but rather to provide a set of principles for courts to consider. Factors a court should consider in deciding whether to hold a term of an agreement unenforceable include:
-(1) whether the agreement effectively expands the scope of the transferor's rights or contracts the scope of the transferee's rights to its own creations under federal law;
-(2) whether the agreement was negotiated and the parties' relative bargaining power;
-(3) the degree to which enforcement of the provision is likely to affect competition adversely; and

-(4) the degree to which enforcement of the provision is likely to affect innovation adversely.

Terms limiting decompilation

A term limiting decompilation (one form of reverse engineering) may be reasonable in the context of a negotiated agreement under which the transferor and transferee are in a confidential relationship, and the transferor seeks to maintain the trade-secrecy status of the source code. It is more troublesome when contained in a standard-form agreement in a retail-like transaction. Courts have reached different conclusions in that setting under copyright law, and have not addressed it under patent law. Some commentators argue that boilerplate provisions against reverse engineering are unenforceable under patent law.

In assessing these provisions under an intellectual property analysis, it is of course important to consider also the provisions of the Digital Millennium Copyright Act (DMCA) as incorporated into the Copyright Act. The DMCA contains provisions that, inter alia, prohibit circumvention of technological tools that ***65** control access to a copyrighted work except in limited circumstances. These limited circumstances include reverse engineering for purposes that have been found fair under the copyright case law. Thus, if a particular program is protected by a technological measure under the DMCA, the right to reverse engineer is governed by the DMCA not these Principles. Where, however, there is no such technological measure employed, merely a contractual provision prohibiting reverse engineering, these Principles apply.

Terms restricting distribution of factual information

A term restricting distribution of factual information may be reasonable when the licensor has invested a substantial sum in gathering the information, has not released the information generally to the public, and would lose all or most of its market if a transferee copied and marketed the information in competition with the originator. It is less likely to pass muster if the transferor seeks to use intellectual property rights in the software to exert control over non-copyrightable data.

Terms limiting transfer

Terms forbidding transfer of the software implicate both copyright and patent policy regarding when the intellectual property owner's rights are exhausted. The transferor may have legitimate reasons for not wishing to grant the transferee the ability to further transfer the code. Often, negotiated agreements limit the transferee's right to transfer the software because the transferor may not wish to deal with competitors or others. This is not problematic unless the transferor has monopoly power, and even then, the term is most likely enforceable. Or the agreement may have granted rights in confidential source code, which the transferor does not wish the transferee to further transfer. Generally, such restrictions on transfer in negotiated agreements should be enforceable.

Restrictions on transfer are more problematic in the standard-form, retail-like market context. Even in that case, however, such restrictions may be pro-competitive. For example, use and transfer restrictions may permit the licensor to price discriminate efficiently. Price discrimination is not, however, always efficient. In such cases, courts should be more willing to refuse to enforce the provision.

Assuming the transferee has a right to transfer the software, the question arises as to what conditions the transferor may impose on further transfer. Generally, agreements granting rights to both proprietary and open-source software provide for their terms to "run with" the software and bind transferees. Both types of agreements often place restrictions on use, copying, and modification of the software although the nature of the restrictions is different: Proprietary software agreements seek to protect the original transferor's intellectual property rights, while open-source licenses seek to keep the software from being subject to assertions of proprietary rights. Conditions on transfer should generally be enforceable until the relevant intellectual property right expires unless the particular restriction is problematic.

Other terms

An agreement under which the transferee must grant back rights in improvements may enhance competition by enabling both the transferor and transferee to compete or, depending on its terms, may represent an attempt by the ***66** transferor to extend the scope of its monopoly. Terms that place restrictions on the marketing of the transferee's independently developed product may discourage the transferee from innovating or may be part of a pro-competitive collaborative development model.

Summary

In cases involving troublesome terms like those discussed above, it is relevant whether the agreement is negotiated or standard form. When an agreement is negotiated, it does not create rights against the world like the exclusive copyright or patent rights. A court might still analyze the relative bargaining power of the parties, but should generally not upset freely bargained-for transfers. When an agreement is not negotiated, and the opportunity to obtain the software free of the restriction at a reasonable price does not exist, the "agreement" effectively creates rights against the world that may place it at odds with intellectual property policy.

Another factor is the effect of preempting the restriction. If the conduct the provision restricts were to become widespread, would it adversely affect incentives to innovate in the first place? Or is the restriction an attempt to control markets beyond that which the exclusive federal rights give to the right owner?

A useful model for determining relevant factors is the rule of reason in antitrust law, which also considers a number of factors in assessing the desirability of conduct. Preemption, however, is broader—a provision may be preempted even though its enforcement would not result in a violation of the antitrust laws. For example, a term requiring a royalty to extend past the expiration of a patent may not violate antitrust law, but it is nevertheless preempted. Still, however, antitrust law's rule-of-reason analysis may help courts to identify what factors are relevant in a preemption inquiry. By focusing on the anti-competitive effects of a restrictive contractual provision versus its pro-competitive justifications, the rule of reason invites courts to undertake a detailed analysis of the particular restriction at issue within the relevant market context. Many restrictions may enhance competition by helping the rightholder to more efficiently develop and commercialize technology including, for example, by facilitating production that otherwise would not occur (as in the case where the holders of blocking patents engage in cross-licensing). On the other hand, restrictive provisions can frustrate competition as well as follow-on innovation. A similar analysis may help courts decide whether, within the particular market context, a provision will unduly interfere with federal policy reflected in intellectual property law. Of course, this does not occur when the provision at issue is within the scope of the federally granted right. Thus, courts must be careful not to use antitrust law to undermine contractual provisions reflecting those rights. They may, however, find the law's modes of analysis useful in assessing provisions that attempt to extend those rights.

***67 Illustrations:**

2. A, a large electronic-game manufacturer, produces a software program that prevents its game console from accepting game cartridges manufactured by other companies. B, a start-up game manufacturer with little bargaining power, concludes that to be profitable its games must work on A's console. A grants rights to B in software that "unlocks" the console so that B's games will work on A's console. The agreement prohibits B in perpetuity from marketing any of its games that work on A's console for use on any other company's game console. Because of its unreasonable duration and restriction on competition, the term frustrates the intellectual property balance and is preempted. (It likely also constitutes misuse. See Comment *d*.) If the restriction were in effect only until the relevant intellectual property right expired, it would not frustrate the intellectual property balance to the same extent, but it may be preempted because it prohibits B from marketing its own, independently created expression on consoles other than A's and narrows the population of end users to owners of A's console.

3. B, an electronic-game manufacturer, acquires through a shrinkwrap license a copy of software developed by A, another electronic-game manufacturer. The license precludes reverse engineering of the software for any purpose. B nonetheless reverse engineers the software in order to understand the software's unprotected ideas and develops its own software that is not in competition with A's. The contract term disallowing all reverse engineering is enforceable if A has a patent that would protect against such reverse engineering. If not, the term is likely preempted by copyright or patent law. If, however, A's software contains a technological measure controlling access that is protected under the DMCA, B's ability to reverse engineer is governed by the DMCA.

4. A, a producer of software programs that arrange raw data, agrees to provide B, a municipality, with a software application for the storage and sorting of property-tax-valuation information. C, a real-estate listings company, seeks access to the raw, non-copyrightable data compiled by B, but A seeks to bar B from giving C access to the data based on a term of the software agreement between A and B forbidding such a dispersal. A court might consider such a term preempted or misuse (see Comment *d*) because the software provider has attempted to use its copyright to control uncopyrighted data

that it has not collected. Because the data is uncopyrightable, however, the more appropriate approach might be to consider the restriction void on state public-policy grounds. See § 1.10.

5. Organization A licenses source code under standard terms that permit the licensee to modify and distribute the software provided that the licensee distributes its modifications under terms that replicate those in A's standard form (including the term authorizing modifications provided they are distributed only with A's terms). The term placing conditions on distribution of modifications is likely enforceable as long as those modifications are a derivative work of the original code. It is more troublesome if the ***68** modifications are independently developed and separable from the original code.

6. A, a producer of databases, spends more than $10 million to compile an electronic database of telephone numbers and markets the database bundled with search and retrieval software. A term in A's agreement with B, a consumer, restricts B's usage of the bundle to the household. The agreement also bars B from making backup copies of the software and database. The agreement is likely not governed by these Principles because the transferee's predominant purpose is most likely to obtain the database rather than the search and retrieval software. Nevertheless, a court may apply these Principles by analogy. In that case, the term restricting use to the household is enforceable, but the term barring backup copies likely is not. Enforcement of the household-use restriction creates incentives for parties such as A to produce databases. But the term barring backup copies of both the software and database is unnecessary to protect A, and is in conflict with federal policy embodied in § 117 of the Copyright Act. If not preempted, the term barring backup copies may be unenforceable as against state public policy. See § 1.10.

7. A makes its software generally available to the public. A's standard-form contract prohibits transferees from benchmarking the software and distributing the information so obtained. (Benchmarking involves testing the product against others as well as establishing facts about its performance. Such a term implicates copyright rights because benchmarking normally requires running the software, which in turn requires loading the software into RAM. Loading the software into RAM creates a copy according to some courts and the Copyright Office.) Because there is a strong public interest in permitting customers to evaluate the software's performance and in disseminating the information obtained in part to encourage the production of other innovative, competitive software modules, the term may be preempted by copyright law. It may also be unenforceable on grounds of state public policy.

d. Intellectual property misuse. Subsection (c) directs a court in a contract claim to strike a provision that would constitute misuse if the action were one for infringement of the relevant intellectual property right. This places the Principles somewhat at odds with the one decided case addressing this issue. The court in that case found that the particular terms did not constitute misuse but also stated its reluctance to apply misuse as a defense to a contract claim because it is customarily a defense only in infringement proceedings. As a matter of policy, however, the Principles' position is, however, quite sensible. Misuse is an equitable doctrine that is a defense to infringement. It acts to prevent rightholders from extending the scope of their protection in an anti-competitive way. As a matter of intellectual property policy, when a claim in breach of contract is brought, courts should refuse to enforce any provision in the agreement that would have been considered misuse had the action been one for infringement.

***69 Illustrations:**

8. A's copyright on a spreadsheet program expires in 2090. A's standard agreement provides that its transferees agree not to implement the ideas contained in the program and/or develop a competing program independently for a period of 99 years from the date of the agreement. The provision constitutes copyright misuse and is preempted.

9. See Illustrations 2 and 4 above for examples of other conduct that might constitute misuse.

REPORTERS' NOTES

Comment a. Scope. The 1976 Copyright Act's legislative history suggested that programs were copyrightable as literary works. H.R. Rep. No. 94-1476, 94th Cong., 2d Sess. 54 (1974), reprinted in 1976 U.S.C.C.A.N. 5659, 5667. The Commission on New Technological Uses of Copyrighted Works (CONTU), established by Congress to assess protection for computer software, concluded that copyright law was an appropriate model, and Congress adopted CONTU's recommendations in 1980. H.R. Rep. No. 96-1307(I), at 23 (1980), reprinted in 1980 U.S.C.C.AN. 6460, 6482. See also Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240 (3d Cir. 1983), cert. dismissed, 464 U.S. 1033 (1984) (holding that copyright law protects object code as well as source code and operating systems as well as applications).

The Federal Circuit's decisions in State Street Bank & Trust v. Signature Financial Servs., 149 F.3d 1368 (Fed. Cir. 1998) and AT&T v. Excel Communications, 172 F.3d 1352 (Fed. Cir. 1999) essentially affirmed the patentability of software. The Supreme Court has never directly addressed the question, but at least some regard its decision in Diamond v. Diehr, 450 U.S. 175 (1981) as opening the door to software patents. Henri H. Hanneman, The Patentability of Computer Software 37 (Kluwer Law & Taxation Publishers 1985); Martin Goetz, Memoirs of a Software Pioneer, 24 IEEE Annals of the History of Computing 14, 23 (2002); David D. Lowry & Michael R. Lowry, Legal Issues in Knowledge-Based Software Engineering, 1995 Proceedings of the 10th Knowledge-Based Software Engineering Conference 61, 63.

For decisions discussing the test of copyright preemption under § 301 of the Copyright Act, see, e.g., Kabehie v. Zoland, 102 Cal. App. 4th 513, 521 (2002) ("One approach is that breach of contract actions are never preempted. This approach is based on the theory that a breach of contract includes a promise and the existence of the promise is the extra element avoiding preemption. Taquino v. Teledyne Monarch Rubber (5th Cir. 1990) 893 F.2d 1488, 1501; Architectronics, Inc. v. Control Systems, Inc. (S.D.N.Y. 1996) 935 F. Supp. 425, 438-439.) A second approach is a fact-specific analysis of the particular promise alleged to have been breached and the particular right alleged to have been violated. (National Car Rental v. Computer Associates (8th Cir. 1993) 991 F.2d 426, 429-430.)"). See also ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1454 (7th Cir. 1996) ("Contracts . . . generally affect only their parties; strangers may do as they please, so contracts do not create 'exclusive rights."').

Commentators and courts assume that constitutional preemption supplements § 301 preemption. ASCAP v. Pataki, 930 F. Supp. 873, 878 (S.D.N.Y. 1996) (applying constitutional preemption principles in a copyright case); Robert P. Merges, Peter S. Menell & Mark A. Lemley, Intellectual Property in the New Technological Age 846-848 (3d ed. 2003). In *Pataki*, the court addressed New York statutes (i) requiring copyright owners to provide proprietors of venues allegedly engaging in copyright infringement with notice within 72 hours of their entry into the venue to investigate infringement; and (ii) providing the venues with remedies for a copyright owner's failure to comply with the notice requirement. 930 F. Supp. at 876. The court stated, "Both the deterrent effect of . . . the notice requirement and the nullification of federal remedies [by providing a counterclaim in an infringement action for failure to comply with a state statute] create an obstacle to ***70** the accomplishment and execution of the full purposes and objectives of Congress in enacting the federal copyright statute. This obstacle gives rise to conflict preemption under the Supremacy Clause." Id. at 880.

The Supreme Court's patent-law preemption doctrine has ostensibly vacillated between conflict and field preemption. Bonito Boats, Inc. v. Thunder Craft Boats, Inc. invalidated a state statute that provided patent-like protection to mass-marketed boat hulls, and seemed to adopt field preemption, citing with approval an earlier decision identifying patent law as a "'scheme of federal regulation . . . so pervasive as to make reasonable the inference that Congress left no room for the States to supplement it."' 489 U.S. 141, 167 (1989) (quoting Rice v. Santa Fe Elevator Corp., 331 U.S. 218, 230 (1947)). However, *Bonito Boats* left intact the Court's earlier ruling in Kewanee Oil Co. v. Bicron Corp., which held that state trade-secret law is not generally preempted by patent law. 416 U.S. 470, 479 (1974) ("The only limitation on the States is that in regulating the area of patents and copyrights they do not conflict with the operation of the laws in this area passed by Congress. . . ."). Thus, conflict preemption seems to be the rule in patent law.

For cases discussing whether patent law preempts contract terms, see Lear, Inc. v. Adkins, 395 U.S. 653 (1969) (holding licensees may not be estopped from challenging patent validity); Brulotte v. Thys, 379 U.S. 29 (1964) (holding invalid a clause requiring payment of a royalty after the patent expires). Note, however, that the Federal Circuit has limited the doctrine of licensee estoppel. See Joseph F. Brodley & Maureen A. O'Rourke, An Incentives Approach to Patent Settlements: A Commentary on Hovenkamp, Janis & Lemley, 87 Minn. L. Rev. 1767, 1779-1780 (2003). The rule against post-expiration royalties has also been criticized. See Donald S. Chisum et al., Principles of Patent Law, 1222-1235 (3rd ed. 2004).

Comment b. Mandatory rules. See, e.g., 17 U.S.C. § 204 (2004) (requiring a writing for transfer of copyright ownership); 35 U.S.C. § 261 (2004) (requiring a writing for the assignment of a patent).

See 17 U.S.C. § 101 (defining "work made for hire").

See Revised U.C.C. § 1-303, Comment 3 (2004) (describing rules as mandatory when their "very office is to control and restrict the actions of the parties. . . .").

Comment c. Purposes and policies preemption. For a helpful discussion of implied preemption, see Mark A. Lemley, Beyond Preemption: The Law and Policy of Intellectual Property Licensing, 87 Cal. L. Rev. 111, 136-151 (1999).

UCITA's drafters found efforts to codify preemption law difficult in part because of its uncertainty. For discussions of UCITA's widely criticized preemption provision, see Jacques De Werra, Moving Beyond the Conflict Between Freedom of

Contract and Copyright Policies: In Search of a New Global Policy for On-Line Information Licensing Transactions, 25 Colum. J.L. & Arts 239 (2003) (criticizing UCITA's preemption provision); Garry L. Founds, Shrinkwrap and Clickwrap Agreements: 2B Or Not 2B?, 52 Fed. Comm. L.J. 99 (1999) (suggesting that UCITA underestimated the scope of the preemption problem and that federal legislation would be preferable); James S. Heller, UCITA: Still Crazy After All These Years, and Still Not Ready for Prime Time, 8 Rich. J. L.& Tech. 5 (2001) (arguing that UCITA's preemption section provides inadequate protection for information users including consumers and libraries); Pamela Samuelson, How Tensions Between Intellectual Property and UCITA are Likely to be Resolved, 570 PLI/Pat 741 (1999) (discussing UCITA's drafting history and problems with its approach to intellectual property law).

Comment *c* above identifies particular troublesome provisions that may upset the intellectual property balance:

(i) In a copyright infringement action, fair use functions as an equitable defense. The essential notion is that not all uses of a copyrighted work constitute infringement lest "rigid application of the copyright statute [would] on occasion . . . stifle the very creativity which that law is intended to foster." Stewart v. Abend, 495 U.S. 207, 236 (1990). Indeed, the exclusive rights of the copyright owner defined in § 106 of the Copyright Act are expressly "[s]ubject to section[] 107" on fair use. 17 U.S.C. § 106. Section 107 lists examples of types of uses (e.g., commentary, criticism, news ***71** reporting, and education) often considered fair, and four nonexclusive factors for a court to weigh in evaluating a claim of fair use (the nature of the use and of the copyrighted work itself, the quantity and importance of what the infringer took, and the effect on the copyright owner's market). There is an important public interest in permitting fair uses, making contractual provisions prohibiting behavior that the Copyright Act would protect subject to scrutiny for preemption.

Fair use is a heavily fact-intensive inquiry, and no list could enumerate all of the types of activity that might be restricted by agreement that could under certain circumstances be considered fair. Thus, Comment *c* above lists terms restricting fair use as ones that merit scrutiny. The exact content of those provisions would be determined on a case-by-case basis. The next two examples in Comment *c* discussed immediately below identify conduct often—but not always—considered fair that is also often addressed in software agreements.

(ii) Under copyright law, it is fair use to engage in reverse engineering to develop an independently created computer program that interoperates with the one reverse engineered if the requisite compatibility information is not available otherwise. Sony Computer Enter., Inc. v. Connectix Corp., 203 F.3d 596 (9th Cir. 2000); Atari Games Corp. v. Nintendo of America, Inc., 975 F.2d 832 (Fed. Cir. 1992); Sega Enters. Ltd. v. Accolade, Inc., 977 F.2d 1510 (9th Cir. 1992). The Digital Millennium Copyright Act (DMCA), while generally prohibiting circumvention of technological tools that control access to copyrighted works, permits circumvention for reverse engineering under the same circumstances as the case law. 17 U.S.C. § 1201(f) (2004); see also S. Rep. No. 105-190, at 13 (explaining that the exception was to adopt the rule of current case law). In 2002, NCCUSL adopted a resolution adding a § 115 to UCITA. Jonathan Band, Closing the Interoperability Gap: NCCUSL's Adoption of a Reverse Engineering Exception in UCITA, 19 No. 5 Computer & Internet Law. 1, *4 (2002). Section 115, modeled on the DMCA, provides that contractual provisions against reverse engineering are unenforceable in certain circumstances. UCITA § 115 and Comment 5. The European Union, in its Software Directive, adopted a similar approach, permitting decompilation for interoperability purposes and prohibiting enforcement of contractual provisions nullifying that right. Council Directive of 14 May 1991 on the Legal Protection of Computer Programs, 1991 O.J. (L-122) 42, art. 6(1); art. 9(1).

In Vault Corp. v. Quaid Software Ltd., the Fifth Circuit used a constitutional analysis to hold preempted under copyright law a provision of the Louisiana Software License Enforcement Act that enforced provisions against decompilation and disasembly (both types of reverse engineering) in standard-form agreements. 847 F.2d 255 (5th Cir. 1988). The decision left open the question whether a court could enforce such a provision under state common law rather than statute and avoid preemption. Some commentators argued not. See, e.g., David A. Rice, Public Goods, Private Contract and Public Policy: Federal Preemption of Software License Prohibitions Against Reverse Engineering, 53 U. Pitt. L. Rev. 543, 602, 606 (1992). (Note that the *Vault* court stated that the shrinkwrap "is a contract of adhesion which could only be enforceable if the Louisiana [statute] is a valid and enforceable statute." Vault Corp. v. Quaid Software, Ltd., 655 F. Supp. 750, 761 (E.D. La. 1987), aff'd, 847 F.2d 255 (5th Cir. 1988)).

Since that time, a number of courts have held shrinkwrap licenses enforceable in the absence of an enabling statute, although most of these decisions did not involve questions of preemption. See, e.g., these Principles § 2.01, Reporters' Note to Comment *b*; ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1449 (7th Cir. 1996) (addressing a preemption issue, and stating, "Shrinkwrap licenses are enforceable unless their terms are objectionable on grounds applicable to contracts in general"); Brower v. Gateway 2000, Inc., 676 N.Y.S.2d 569 (App. Div. 1998) (enforcing an arbitration provision in a boilerplate contract); M.A. Mortenson Co. v. Timberline Software Corp., 998 P.2d 305, 313 (Wash. Sup. Ct. 2000). Other courts have held to the contrary. See, e.g., Specht v. Netscape Comms. Corp., 306 F.3d 17 (2d Cir. 2002) (refusing to enforce an agreement under California law when the user did not have notice of its terms before engaging in the downloading intended to signal acceptance of the terms); Klocek v. Gateway, Inc., 104 F. Supp. 2d 1332 (D. Kan. 2000); Arizona Retail Systems, Inc. v. The Software Link, Inc., 831 F. Supp. 759 (D. Ariz. 1993); ***72** Step Saver Data Sys., Inc. v. Wyse Technology, 939 F.2d 91, 102 (3d Cir. 1991) (holding a license unenforceable when the buyer was "assured" that the license did not apply and the terms did not constitute a conditional acceptance under U.C.C. § 2-207).

In Bowers v. Baystate Techologies, Inc., the Federal Circuit held that § 301 of the copyright law did not preempt a provision against reverse engineering in a shrinkwrap agreement. 320 F.3d 1317, 1325 (Fed. Cir. 2003) (implying also that *Vault's* preemption holding did not extend to "private contractual agreements supported by mutual assent and consideration"). The mutual assent and consideration that characterizes a contract claim provided the "extra element" to render the breach-of-contract claim qualitatively different from one sounding in copyright infringement. Id. The dissent would have followed *Vault's* constitutional preemption analysis and held the provision preempted:

> A state is not free to eliminate the fair use defense. Enforcement of a total ban on reverse engineering would conflict with the Copyright Act itself by protecting otherwise unprotectable material. If state law provided that a copyright holder could bar fair use of the copyrighted material by placing a black dot on each copy of the work offered for sale, there would be no question but that the state law would be preempted. A state law that allowed a copyright holder to simply label its products so as to eliminate a fair use defense would "substantially impede" the public's right to fair use and allow the copyright holder, through state law, to protect material that the Congress has determined must be free to all under the Copyright Act. See Bonito Boats, 489 U.S. at 157, 109 S. Ct. 971.
>
> I nonetheless agree with the majority opinion that a state can permit parties to contract away a fair use defense or to agree not to engage in uses of copyrighted material that are permitted by the copyright law, if the contract is freely negotiated. A freely negotiated agreement represents the "extra element" that prevents preemption of a state law claim that would otherwise be identical to the infringement claim barred by the fair use defense of reverse engineering. . . .
>
> However, state law giving effect to shrinkwrap licenses is no different in substance from a hypothetical black dot law. Like any other contract of adhesion, the only choice offered to the purchaser is to avoid making the purchase in the first place. . . . State law thus gives the copyright holder the ability to eliminate the fair use defense in each and every instance at its option. In doing so, as the majority concedes, it authorizes "shrinkwrap agreements . . . [that] are far broader than the protection afforded by copyright law."
>
> . . . I respectfully dissent.

Id. at 1335-1338.

Under the *Kewanee Oil* case, the ability of parties to reverse engineer under trade-secret law is one factor that led the Court to hold that patent law does not preempt state trade secret law:

> If a State, through a system of protection, were to cause a substantial risk that holders of patentable inventions would not seek patents, but rather would rely on the state protection, we would be compelled to hold that such a system could not constitutionally continue to exist . . .
>
> Trade secret law provides far weaker protection in many respects than the patent law. While trade secret law does not forbid the discovery of the trade secret by fair and honest means, e.g., independent creation or reverse engineering, patent law operates "against the world," forbidding any use of the invention for whatever purpose for a significant length of time.

***73** Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 489-490 (1974). The *Bonito Boats* case also emphasized the importance of reverse engineering, holding that a state statute could not remove from the public one way of reverse engineering a mass-marketed unpatented product.

> That the Florida statute does not remove all means of reproduction and sale does not eliminate the conflict with the federal scheme. . . . In essence, the Florida law prohibits the entire public from engaging in a form of reverse engineering of a product in the public domain. This is clearly one of the rights vested in the federal patent holder, but has never been a part of state protection under the law of unfair competition or trade secrets. See Kewanee, 416 U.S. at 476, 94 S. Ct. at 1883 . . . .

Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 160 (1989).

Commentators who argue that provisions against reverse engineering in software license agreements are preempted under patent law include Rice, Public Goods, supra, at 581; John Mauk, Note, The Slippery Slope of Secrecy: Why Patent Law Preempts Reverse-Engineering Clauses in Shrink-Wrap Licenses, 43 Wm. & Mary L. Rev. 819 (2001). The same question arises as in copyright law (most acutely under the *Vault* case)—does it make a difference that *Bonito Boats* dealt with a state statute rather than a contract action?

Because the law on preemption of reverse engineering is in a state of flux, the Principles do not adopt a blanket rule, but instead recognize that terms that ban reverse engineering are problematic particularly because of the strong patent policy that permits reverse engineering in the absence of a patent right.

(iii) Under copyright law, facts are not protected although their original selection or arrangement may be. Feist Publications, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340 (1991). A software vendor may grant rights in its software under terms that restrict the dissemination of a fact-based database built using the software. See Illustration 4 above. Such a term is vulnerable to preemption.

The lack of protection for facts can, however, present a problem for certain firms like database providers who market a fact-based product that is expensive to create but also easily copied once made available. A term restricting copying or distribution of factual information may be reasonable under the circumstances. Although digital databases are outside the scope of these Principles, courts may nevertheless find the multi-factor test discussed here helpful in addressing a preemption challenge to restrictions in a digital database agreement. In assessing, for example, a provision that creates copyright-like rights in a fact-based database, it would be relevant to show the extent of the database proprietor's investment in gathering the information, whether the transferee's use free-rides on the proprietor's efforts and directly competes with it, and whether, if such conduct were widespread, it would undercut incentives to create such information in the first place. See NBA v. Motorola, Inc., 105 F.3d 841 (2d Cir. 1997).

(iv) Both copyright and patent law contain a first-sale doctrine. Under copyright law, the copyright owner has the exclusive right to distribute copies of the copyrighted work publicly. 17 U.S.C. § 106(3). The first-sale doctrine, codified in § 109(a), permits "the owner of a particular copy . . . lawfully made . . . or any person authorized by such owner . . . without the authority of the copyright owner, to sell or otherwise dispose of the possession of that copy . . ." without infringing the public-distribution right. The general first-sale doctrine of § 109(a) is limited in the case of software. Section 109(b) prohibits the owner of a copy of software from renting, leasing, or lending that copy for direct or indirect commercial advantage. Congress enacted this limitation to respond to copyright owners' fears that software rentals would encourage unauthorized copying by customers who would rent the software for less than its retail price, copy it, and return it to the lender for another to copy. See H.R. Rep. No. 101-735, 101st Cong., 2d Sess. 8 (1990), reprinted in 1990 U.S.C.C.A.N. 6935, 6939 (noting that some software with a retail price of $495 had a rental price of $35).

For a discussion of the first-sale doctrine applied to software, see Christian H. Nadan, ***74** Software Licensing in the 21st Century: Are Software "Licenses" Really Sales, and How Will the Software Industry Respond, 32 A.I.P.L.A. Q.J. 555 (2004); David A. Rice, Licensing the Use of Computer Program Copies and the Copyright Act First Sale Doctrine, 30 Jurimetrics J. 157 (1990) (arguing that the first-sale doctrine applies to mass-marketed software); see also generally Thomas M.S. Hemnes, Restraints on Alienation, Equitable Servitudes, and the Feudal Nature of Computer Software Licensing, 71 Denv. U. L. Rev. 577 (1994) (suggesting that the law of equitable servitudes provides a useful guide for deciding what license terms should be enforceable against transferees).

For suggestions of how a license term might facilitate price discrimination, see ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1449-1450 (7th Cir. 1996).

For a discussion of how to distinguish between efficient and inefficient price discrimination, see Michael J. Meurer, Copyright Law and Price Discrimination, 23 Cardozo L. Rev. 55 (2001).

Patent law's first sale—or exhaustion—doctrine is a common-law concept, and permits certain use restrictions:

> As a general matter . . . an unconditional sale of a patented device exhausts the patentee's right to control the purchaser's use of the device thereafter. . . . The exhaustion doctrine, however, does not apply to an expressly conditional sale or license. . . . [E]xpress conditions . . . are contractual in nature and are subject to antitrust, patent, contract, and any other applicable law, as well as equitable considerations such as patent misuse.

B. Braun Medical, Inc. v. Abbott Labs., 124 F.3d 1419, 1426-1427 (Fed. Cir. 1997) (explaining the framework for assessing license restrictions established by the Federal Circuit in Mallinckrodt, Inc. v. Medipart, Inc., 976 F.2d 700 (Fed. Cir. 1992) to require first determining whether a restriction "exceeds the scope of the patent grant. If it does not, [the patentee] cannot be guilty of patent misuse. If it does, the restriction must be evaluated under the rule of reason.").

For discussions about the enforceability of open-source licenses, see Michael J. Madison, Reconstructing the Software License, 35 Loy. U. Chi. L.J. 275 (2003); David McGowan, Legal Implications of Open Source Software, 2001 U. Ill. L. Rev. 241; Daniel B. Ravicher, Facilitating Collaborative Software Development: The Enforceability of Mass-Market Public

Software Licenses, 5 Va. J.L. & Tech. 11 (2000); Jason B. Wacha, Taking the Case: Is the GPL Enforceable?, 21 Santa Clara Computer & High Tech. L.J. 451 (2005); Greg R. Vetter, ''Infectious" Open Source Software: Spreading Incentives or Promoting Resistance?, 36 Rutgers L.J. 53 (2004).

Because preemption is essentially a decision reflecting a balancing of competing interests, it is perhaps inevitable that courts will have to employ a multi-factored test to determine whether enforcement of a particular contractual provision is preempted. The factors listed in Comment *c* are relevant. See generally, J.H. Reichman & Jonathan A. Franklin, Privately Legislated Intellectual Property Rights: Reconciling Freedom of Contract with Public Good Uses of Information, 147 U. Pa. L. Rev. 875, 930 (1999) (suggesting a doctrine of public-interest unconscionability and noting that "such factors as the market power of the party imposing the term in question, the extent to which the specific contractual transaction is associated with the exercise of intellectual property rights, the extent to which a . . . standard form contract fairly and reasonably attempts to differentiate between specific classes of users . . . and the potential harm to public-interest uses of information" as relevant to whether a term should be enforced).

For a discussion of the relationship between antitrust law and intellectual property rights, and the use of the rule of reason to assess many common restrictive license provisions in an antitrust setting, see Antitrust Guidelines for the Licensing of Intellectual Property, Issued by the U.S. Dept. Of Justice and the F.T.C., Apr. 6, 1995 and sources cited therein.

Comment d. Intellectual property misuse. The scope of the misuse doctrine is uncertain. It is a fairly new development in infringement actions under copyright law. The seminal case is Lasercomb America, Inc. v. Reynolds, 911 F.2d 970 (4th Cir. 1990) (holding the copyright owner engaged in misuse when it licensed its software under terms prohibiting licensees and their employees from developing a competitive product for 99 years). See also ***75** Alcatel USA, Inc. v. DGI Technologies, Inc., 166 F.3d 772 (5th Cir. 1999) (finding misuse when a licensing agreement prohibited copying necessary to test compatibility between a microprocessor card and an operating system, and stressing that the copyright owner could not "indirectly seek[] to obtain patent-like protection of its hardware—its microprocessor card—through the enforcement of its software copyright"); Practice Management Information Corp. v. American Medical Association, 121 F.3d 516 (9th Cir. 1997) (holding an exclusivity clause misuse); In re Napster, Inc. Copyright Litigation, 191 F. Supp. 2d 1087 (N.D. Cal. 2002) (identifying two approaches to misuse: (1) requiring a finding of an antitrust violation before misuse can apply; and (2) focusing on the question whether the right holder has expanded the scope of its statutory rights; and noting that both tests generally rely on antitrust law to a certain extent).

Misuse has a longer history under patent law. See Morton Salt Co. v. G.S. Suppiger Co., 314 U.S. 488 (1942); Motion Picture Patents Co. v. Universal Film Mfg. Co., 243 U.S. 503 (1917). Generally, license provisions may be classified as: (1) per se misuse; (2) per se non-misuse; and (3) all others assessed under a rule-of-reason analysis. See Raymond T. Nimmer, The Law of Computer Technology § 7:37 (West Group 2004) (quoting Virginia Panel Corp. v. MAC Panel Co., 133 F.3d 860 (Fed. Cir. 1997)). "The courts have identified certain specific practices as constituting *per se* patent misuse, including . . . arrangements in which a patentee effectively extends the term of its patent by requiring post-expiration royalties, *see, e.g., Brulotte v. Thys Co.*, 379 U.S. 29, 33, 85 S.Ct. 176, 179, 13 L.Ed.2d 99, 143 USPQ 264, 266 (1964)." *Virginia Panel*, 133 F.3d at 869. Section 271(d) of the Patent Act defines the second class of conduct that is per se non-misuse to include, inter alia, a unilateral refusal to license and tying in the absence of market power. 35 U.S.C. § 271(d) (2004).

See also Mark A. Lemley, Beyond Preemption: The Law and Policy of Intellectual Property Licensing, 87 Cal. L. Rev. 111, 151-158 (1999) (discussing the desirability of using copyright misuse as opposed to the "coarser tool[]" of preemption "to restrict the enforcement of anticompetitive licensing provisions").

Because misuse analyzes the same types of factors as a preemption inquiry generally, the Principles provide for preemption of a term that would constitute misuse if the proceeding were one for infringement. But see Davidson & Assocs., Inc. v. Internet Gateway, 334 F. Supp. 2d 1164, 1182-1183 (E.D. Miss. 2004) (stating that copyright misuse is not a defense to a breach-of-contract claim), aff'd, Davidson & Assocs. v. Jung, 422 F.3d 630 (8th Cir. 2005).

Illustration 3. Cf. Atari Games Corp. v. Nintendo of America Inc., 975 F.2d 832 (Fed Cir. 1992). But see Bowers v. Baystate Techologies, Inc., 320 F.3d 1317, 1325 (Fed. Cir. 2003).

Illustration 4. See Assessment Technologies of WI, LLC., v. WIREdata Inc., 350 F.3d 640, 647 (7th Cir. 2003) (contractual limitation on licensees' right to reveal "their own data, especially when . . . the complete data are unavailable anywhere else, might constitute copyright misuse.").

Illustration 6. See Pamela Samuelson, Legally Speaking: Does Information Really Want to be Licensed, Communications of the ACM, September, 1998.

Illustration 7. See Judge Orders Software Developer to Remove and Stop Using Deceptive and Restrictive Clauses, available

at http:// www.oag.state.ny.us/press/2003/jan/jan17a_03.html (visited Oct. 26, 2005). New York State Attorney General Eliot Spitzer successfully sued Network Associates, makers of the popular McAfee anti-virus software, under New York State's General Business Law for including a clause prohibiting transferees from publishing product reviews or the results of benchmark tests without permission. For the proposition that loading software into RAM creates a copy within the meaning of the Copyright Act, see MAI Sys. Corp. v. Peak Computer, Inc., 991 F.2d 511 (9th Cir. 1993), cert. dismissed, 510 U.S. 1033 (1994).
Illustration 8. See Lasercomb America, Inc. v. Reynolds, 911 F.2d 970 (4th Cir. 1990).

§ 1.10 Public Policy

***76 A term of an agreement is unenforceable if the interest in enforcement of the term is clearly outweighed in the circumstances by a public policy against its enforcement.**

Comment:

a. In general. As a general rule, policing agreements using state public-policy considerations should occur only when the policy itself is fundamental. There are many public policies that apply to the enforcement of agreements. Freedom of contract is itself an important public policy. Freedom of contract allows private parties to govern themselves and, in the absence of a market failure, to move goods and services to their highest-valued uses. Still, several contravening public policies, derived from statute or case law, bar enforcement of substantive contract terms when those policies outweigh freedom of contract. For example, courts strike terms that negate long-standing rights of the general population, such as a lessor's disclaimer of liability for negligence in maintaining common areas and an employer's overly broad restriction on employee competition.
Public policy focuses on substantive terms and their effect on public welfare, not on the process of contract formation, which is the province of procedural unconscionability and related policing doctrines. See § 1.11. Still, in balancing freedom of contract against the public policy at issue, courts should not ignore whether an agreement was negotiated or the product of a take-it-or-leave-it standard form. Freedom of contract, of course, is entitled to more weight in the former case.
The guidance of the Restatement Second of Contracts is helpful. In § 178, the Restatement provides a list of factors to weigh in assessing the enforcement or nonenforcement of a term, and in § 179, it provides factors to assist courts in determining sources from which they may derive public policy.
Additionally, as the Restatement Second of Conflict of Laws makes clear, the forum should not use its public policy to strike a defense and proceed to try a case unless choice-of-law principles other than public policy give the forum authority to apply forum law.
b. State public policy and software agreements. Public-policy issues may arise in the context of software agreements. Some terms that would be suspect in software agreements, such as an overly broad exculpatory clause or limitation-of-actions term, cause concern no matter the subject matter of the agreement. Other terms, discussed in Comment *c*, are problematic in the software-agreement setting in particular.
To date, few courts have struck a term or terms in a software agreement on state public-policy grounds. For example, although they will sometimes refuse to enforce forum-selection clauses in the software context for a variety of reasons, courts routinely uphold them when faced with challenges grounded in public policy.

***77 Illustrations:**

1. A, a developer of software that assists mechanical engineers in product development, and B, a manufacturer of mechanical switchboards, enter into an agreement under which A transfers software to B. The software is defective and B seeks damages, including for gross negligence in developing the software. The agreement includes a term barring damages for gross negligence. The term may be unenforceable because unconscionable or unenforceable on state public-policy grounds.
2. Company A makes its software generally available to the public. A's standard-form contract prohibits transferees from criticizing the performance of the software. The term may be unenforceable on public-policy grounds because it interferes with the transferee's First Amendment rights and also hampers competition by restricting the availability of information about the product. In contrast, where Company A's software is an early version distributed to only a few customers for

testing, a provision barring criticism of performance would be unlikely to implicate public-policy concerns.

3. See Illustration 7 in § 1.09, discussing boilerplate provisions against benchmarking. Such terms may be void as against public policy because they hamper the dissemination of relevant product information to consumers, frustrating competition.

c. Federal intellectual property policy and state public policy. Public policy also polices terms that may contradict federal intellectual property law. Federal patent and copyright law seek to balance the rights of owners to exploit their property, which creates incentives for further invention, and the rights of copyholders to build on already existing works. See § 1.09 of these Principles. When federal law clearly prohibits enforcement of a term in an agreement, a state court, of course, may not enforce that provision. When federal law clearly does not preclude enforceability of a provision, state law may nevertheless refuse to enforce it on public-policy grounds, if those grounds reflect a state interest other than effectuating the intellectual property balance. When federal law is unclear (likely the bulk of the cases), state law may refuse to enforce a provision based on state public policy, including consideration of the intellectual property balance. Indeed, some commentators argue that in such cases, assessing the term under a public-policy analysis is preferable to addressing it under an inquiry like that of § 1.09.

d. Guidance for state public policy derived from federal policy. Terms in software agreements can expand or narrow the rights of copyholders. A term that allows a copyholder to use software on a network, such as the use of WordPerfect on a law-school network, expands the rights of copyholders. Most of the controversy, however, involves terms that narrow copyholders' rights.

(1) First sale. Section 1.09 and its Comment *c* discuss copyright law's first-sale doctrine and why licensors of software might seek to contract around it. Such efforts are not clearly unenforceable and a state public-policy analysis is therefore appropriate.

***78 Illustrations:**

4. B, a consumer, buys a package containing A's word-processing software. A term accompanying the package bars all transfers of the software. B gives her copy of the software to C, a neighbor, after deleting the program from B's computer. Preemption is likely but uncertain (see § 1.09). A state may refuse to enforce the restriction on transfer on public-policy grounds. Public policy disfavors restraints on alienation. The copyright law's first-sale doctrine reflects that policy. In the case of software, however, transfers between parties such as B and C are problematic because the transferor may retain a copy of the software that it also provides to the transferee. Thus, preemption is uncertain, and a public-policy analysis that considers the circumstances—B has deleted the software—may be preferable.

5. A, a software vendor, transfers software to B that is integral to B's small-machine manufacturing business. The agreement bars all transfers of the software. B seeks to sell its business. The restriction on transfer may or may not be enforceable. If A provided source code to B containing trade secrets, A should not be forced to deal with another in B's place. Additionally, A has no obligation to deal with someone other than B as a general matter. If, however, the software is in object-code form and distributed under a standard form, and forbidding its transfer unreasonably impedes the marketability of B's business, the restriction is not enforceable against B.

6. See Illustration 1 in § 1.09 and the accompanying commentary. A state cannot enforce the transfer even if enforcement would accord with the state's public policy.

(2) Fair use. Whether vendors through contract can limit federal first-sale rights constitutes only one of many issues that require balancing the interests of vendors and users of software. Another set of issues involves the narrowing of fair use. See § 1.09. As with the first-sale controversy, all-or-nothing responses are unsatisfactory, and a public-policy analysis may be preferable to preemption. For example, the law should allow vendors to restrict students from using a legal database for commercial purposes, but not teachers from using software for instruction or research.

***79 Illustrations:**

7. See Illustration 3 in § 1.09. The restriction against reverse engineering may be void as against public policy if A does not have a patent whose claims are written in such a way as effectively to bring reverse engineering within the scope of the exclusive rights.

8. A, a software developer, transfers software to B, a consumer. The terms prohibit B from installing multiple copies of the software. Another term prohibits B from using the software for commercial purposes. B challenges the use restrictions as unreasonable under public policy embodied in either the first-sale provision or the fair-use provision of the Copyright Act.

Both terms are likely enforceable. The Copyright Act does not permit B to install multiple copies of the software nor does it prohibit A from limiting use. There is unlikely to exist a relevant overriding state public policy pointing to a different result.

9. A, a manufacturer of legal databases, licenses its search-and-retrieval software and database to law schools for educational purposes only. These Principles likely do not apply because the licensee's primary purpose is to obtain the digital database. If a court were to apply the Principles by analogy, however, the restriction should be held enforceable. The same considerations as in Illustration 8 apply.

e. Models for assessing the interests of the parties. Application of public policy to software-contract issues that intersect federal policy thus requires balancing the interests of parties in a manner consistent with federal law's careful accommodation of those interests. Courts should pay considerable attention to the useful models for such balancing discussed as part of the preemption analysis, namely the judicial treatment of misuse, which has identified modes of overreaching by copyright and patent holders, and antitrust's rule of reason. See § 1.09.

Illustrations:

10. See Illustration 2 in § 1.09.

11. See Illustration 6 in § 1.09. The term barring backup copies is not clearly preempted but seems inconsistent with public policy and unnecessary to protect A.

12. See Illustration 8 in § 1.09. Because of its unreasonable duration and restriction on competition, the term violates public policy.

REPORTERS' NOTES

Comment a. In general. This Section is similar to the Restatement Second of Contracts § 178(1); see also id. § 179; Gomez v. Chua Medical Corp., 510 N.E.2d 191, 195 (Ind. Ct. App. 1987) ("[W]e respect and believe in individual freedom to contract. That freedom, if it is to be real, must necessarily include the freedom to enter into enforceable contracts that are unwise or even foolish. . . . If an individual agrees to be bound by a covenant against competition under circumstances where he is terminated at will, we see no compelling reason to deny enforcement of his promise.").

The Restatement Second of Contracts § 178(2) and (3) provide:

***80** (2) In weighing the interest in the enforcement of a term, account is taken of (a) the parties' justified expectations, (b) any forfeiture that would result if enforcement were denied, and (c) any special public interest in the enforcement of the particular term. (3) In weighing a public policy against enforcement of a term, account is taken of (a) the strength of that policy as manifested by legislation or judicial decisions, (b) the likelihood that a refusal to enforce the term will further that policy, (c) the seriousness of any misconduct involved and the extent to which it was deliberate, and (d) the directness of the connection between that misconduct and the term.

The Restatement Second of Contracts § 179 provides in part:

. . . A public policy against the enforcement of promises or other terms may be derived by the court from (a) legislation relevant to such a policy, or (b) the need to protect some aspect of the public welfare, as is the case for the judicial policies against, for example, (i) restraint of trade (§§ 186-188), (ii) impairment of family relations (§§ 189-191), and (iii) interference with other protected interests (§§ 192-196, 356)".)

The Restatement Second of Conflict of Laws § 90 states that "No action will be entertained on a foreign cause of action the enforcement of which is contrary to the strong public policy of the forum." Its Comment *a* states,

The rule of this Section does not justify striking down a defense good under the otherwise applicable law on the ground that this defense is contrary to the strong public policy of the forum. Such action involves more than a mere denial of access to the court. Rather, it is a preliminary step to the rendition of a judgment on the merits. It involves application of the local law of the forum to determine the efficacy of a defense and thus to decide the ultimate rights of the parties. The Supreme Court . . . has held that it is a violation of due process for a State to strike down a defense under a foreign law as being contrary to its public policy if the State has no reasonable relationship to the transaction and the parties.

Restatement Second, Conflict of Laws § 90.

Comment b. State public policy and software agreements. For a general discussion see J. H. Reichman & Jonathan A. Franklin, Privately Legislated Intellectual Property Rights: Reconciling Freedom of Contract with Public Good Uses of

Information, 147 U. Pa. L. Rev. 875, 926, 930 (1999) (Public policy could apply when standard forms conflict with longstanding federal and state intellectual property policies, including the protection of the "public interest in education, science, research, technological innovation, freedom of speech, and the preservation of competition"); UCITA § 105(b) and Comment 3.

For cases refusing to enforce forum-selection clauses for reasons other than public policy, see § 1.14. Cases enforcing forum-selection clauses in the face of a public-policy challenge include AC Controls Co., Inc. v. Pomeroy Computer Resources, Inc., 284 F. Supp. 2d 357 (W.D. N.C. 2003) (out-of-state agreement does not implicate public policy of North Carolina); ePresence, Inc. v. Evolve Software, Inc., 190 F. Supp. 2d 159, 164 (D. Mass. 2002) (stating that "[p]ublic policy considerations, no matter how compelling, do not alter the plain language of the Agreement"); Laserdynamics, Inc. v. Acer America Corp., 209 F.R.D. 388, 391 (S.D. Tex. 2002) (upholding forum-selection clause in part on the basis that no "stout public policy" was frustrated); Home Products Int'l-North America, Inc. v. PeopleSoft USA, Inc., 201 F.R.D. 42 (D. Mass. 2001) (dismissing public-policy concerns in upholding validity of forum-selection clause); Huntingdon Eng'g & Envtl. Inc. v. Platinum Software Corp., 882 F. Supp. 54 (W.D.N.Y. 1995) (rejecting plaintiffs' argument based on public policy in enforcing forum-selection clause). But see America Online, Inc. v. Superior Court of Alameda County, 108 Cal. Rptr. 2d 699, 710 (Cal. Ct. App. 2001) (refusing to enforce choice of Virginia law and venue provision on public-policy grounds; California law provided broader protection for consumers).

***81** One court upheld restrictions in a software agreement that lasted for the life of a software copyright. See Astrolabe, Inc. v. Esoteric Technologies PTY, Ltd., 2002 WL 511520, 2 (D. Mass. 2002). The court intimated, however, that if the restrictions were of indefinite duration, the result might have been different. See id. at 4-5.

Another court held that contractual limitations on tort damages and the statute of limitations on tort claims violated public policy. See NMP Corp. v. Parametric Technology Corp., 958 F. Supp. 1536, 1544 (N.D. Okl. 1997).

Comment c. Federal intellectual property policy and state public policy. For an argument that a state public-policy approach is preferable to an approach focusing on preemption, see Reichman & Franklin, supra.

Comment d. Guidance for state public policy derived from federal policy. See Cem Kaner, Why You Should Oppose UCITA, 17 Computer Lawyer 20, 27 (2000) (arguing that certain transfers in violation of transfer restrictions would violate UCITA).

For a discussion of the ability to contract around fair use, see Charles R. McManis, The Privatization (or "Shrink-Wrapping") of American Copyright Law, 87 Cal. L. Rev. 173 (1999) (discussing an ALI vote when that organization was contemplating UCITA's forerunner); Nim Razook, The Politics and Promise of UCITA, 36 Creighton Law Rev. 643, 653 n.36 (2003); Joel R. Wolfson, Contract and Copyright are Not at War: A Reply to "The Metamorphosis of Contract into Expand," 87 Cal. L. Rev. 79, 92 (1999).

Comment e. Models for assessing the interests of the parties. See § 1.09, Reporters' Note to Comment *c*.

Illustration 1. Cf. NMP Corp. v. Parametric Technology Corp., 958 F. Supp. 1536, 1544 (N.D. Okl. 1997).

Illustration 2. See UCITA § 105(c), which holds unenforceable a contractual term that "prohibits an end-user licensee from engaging in otherwise lawful public discussion relating to the computer information." This provision applies when "a copy of computer information in its final form is made generally available." UCITA § 105(c). As the comments to UCITA note, the public interest in discussion outweighs the licensor's interest in enforcing a restrictive contractual provision when the software has been generally distributed. Id. Comment 4.

Illustrations 2-3. See Annalee Newitz, *Dangerous Terms*, available at http:www.eff.org/wp/eula.php (visited Feb. 11, 2006) (describing standard forms prohibiting public criticism).

Illustrations 4-6. See the discussion of the first-sale doctrine in Step-Saver Data Systems, Inc. v. Wyse Technology, 939 F.2d 91, 96 (3d Cir. 1991).

§ 1.11 Unconscionability

(a) If the court as a matter of law finds the agreement or any term of the agreement to have been unconscionable at the time it was made, the court may refuse to enforce the agreement, or it may enforce the remainder of the agreement without the unconscionable term, or it may so limit the application of any unconscionable term to avoid any unconscionable result.

(b) When it is claimed or appears to the court that the agreement or any term thereof may be unconscionable, the parties shall be afforded a reasonable opportunity to present evidence as to its commercial setting, purpose, and effect to aid the court in making the determination.

***82 Comment:**

a. In general. This Section is based on § 2-302 of the Uniform Commercial Code. This Section is also consistent with § 208 of the Restatement Second of Contracts.

b. Unconscionability generally. Unconscionability is intended to permit courts to police overreaching contractual behavior without having to contort other doctrines, such as those of offer and acceptance or rules on contract interpretation, to arrive at a just result. With some exceptions, courts usually require a showing of both procedural (defects in the contract-formation process) and substantive (the agreement or term unfairly surprises or oppresses one party) unconscionability before refusing to enforce an agreement or term thereof.

Examples of conduct that have been held procedurally unconscionable include conduct approaching misrepresentation and duress, as well as hidden or obscure terms. Examples of substantively unconscionable terms include a virtually incomprehensible cross-collateral clause and a clause unreasonably limiting the time within which a buyer must notify the seller about claims involving latent defects.

In short, the doctrine of unconscionability is not intended to correct disparities in bargaining power but rather to avoid oppression and unfair surprise. Some courts, do, however, require a lesser showing of procedural unconscionability when the term at issue is grossly unfair.

Standard-form agreements present difficult questions because, while they allow both the drafter and the other party to realize efficiencies, they may also provide an opportunity for the drafter to foist unfavorable terms on transferees who are unlikely to read or understand the standard form. Reputational concerns, however, may limit the drafter's ability to exploit transferees in this way. See Chapter 2, Topic 1, Summary Overview.

This Section adopts the U.C.C.'s approach to the allocation of responsibility between the judge and jury. Unconscionability is a decision for the court, and if evidence under subsection (b) is admitted, it is for the court's rather than the jury's consideration. If fact issues remain after the unconscionability determination, the court should present to the jury the agreement resulting from the court's action under this Section.

c. Unconscionability and software agreements. Traditional unconscionability law should apply in the context of software agreements, and will likely be most relevant in retail standard-form transfers. Even if an agreement is enforceable under Chapter 2 of these Principles because it meets the formation requirements set forth there, it should not be sheltered from challenge. Requiring a lesser degree of procedural unconscionability when terms are particularly onerous may help to counteract the market reality that licensees do not read terms, often do not understand them when they are aware of them, and underestimate the probability that the product will be defective. Additionally, in the clickwrap context, consumers often do not consider the click as signifying the same assent as a signature. Thus, when a term is particularly onerous, the court should require a lesser showing of procedural unconscionability or, if a term is outrageous, even none at all.

***83** The European Union in its 1993 Directive on Unfair Contract Terms took the approach of enumerating a nonexclusive list of terms that may be considered unfair when not individually negotiated. The relevant question is similar to that of a substantive unconscionability inquiry, namely whether a term creates a significant imbalance in the bargain to the consumer's detriment. The European Union, however, takes a more pro-regulatory stance to consumer protection generally and contract terms specifically than U.S. law. Indeed, as a practical matter, firms doing business in Europe may find it less expensive to develop standard forms that comply with European law for use worldwide than to use different forms in the U.S. and Europe. Nevertheless, these Principles opt to rely on traditional unconscionability doctrine rather than defining which terms are enforceable and which are not. A court may, however, find the Directive's list useful in evaluating unconscionability claims. Indeed, terms that authorize the transferor to add spyware to a transferee's computer, that allow the transferor to modify the contract without notice or an opportunity to contest, that extend obligations automatically and without notice, that allow the transferor to change the nature of the software unilaterally, and that authorize cancellation without notice are suspect under these Principles.

Illustrations:

1. B, a consumer, buys a computer with loaded software from A, a direct marketer, by telephone. A includes its standard form with the software, and displays the form on its website. The form includes 26 paragraphs, and paragraph 25 provides for arbitration in Chicago under the rules of the International Chamber of Commerce. Even assuming the transaction complies with § 2.02 of these Principles, a court might nonetheless hold the arbitration provision unconscionable if the

arbitration clause is hidden in small print and arbitration in Chicago is unduly burdensome because, for example, Chicago is a distant forum and arbitration there or with the selected arbitrator is unduly expensive.

2. Company A markets software for preparing construction bids. In a negotiated exchange, Company B acquires the software and uses it to submit a bid. B loses a business opportunity because the software is defective and causes an inaccurate bid. The standard-form agreement limits consequential damages to the price of the software. The agreement is likely enforceable between the two commercial parties. See also § 4.01(c) of these Principles.

3. Company A makes software available for download via a clickwrap agreement that satisfies § 2.01 of these Principles. The agreement provides, "Except for any refund Company A decides to give you, YOU ARE NOT ENTITLED TO ANY DAMAGES, INCLUDING BUT NOT LIMITED TO CONSEQUENTIAL DAMAGES, if the software does not meet Company A's limited warranty and even if any troubleshooting by us fails of its essential purpose." A court might hold such a term unconscionable because it leaves to Company A's discretion whether to refund the software's price (so that there is no minimum adequate remedy, see § 4.01 of these Principles) and it provides no relief if the limited remedy (if there is one) fails of its essential purpose. Id.

***84** 4. Company A includes in an otherwise enforceable software agreement a provision stating, "You agree to every change in future versions of this agreement. This agreement is subject to change without notice." A court might hold such a term unconscionable because it attempts to bind the transferee to terms of which it is not and cannot be aware at the time of contracting.

5. Company A provides movie-making software that includes third-party software. The agreement states that the transferee agrees that Company A and/or the third-party software providers may "automatically download updates on your computer that relate to security. Such security related updates may impair the software (and any other software on your computer that depends on the software we provide) including by disabling your ability to use the software." A court might hold such a term unconscionable because the transferee bears the risk of an inability to use the downloaded software as well as other software already on its computer and must grant access to its personal computer to Company A and third parties on an ongoing basis. Likewise, a term that permits the software transferor to install software without notice to the transferee raises issues of unconscionability. For example, if, without the transferee's knowledge, the transferor installs software, including spyware, that monitors the transferee's browsing habits, results in pop-up ads appearing, or damages the transferee's computer, a court may find such a clause unconscionable.

6. Same facts as Illustration 5. Instead of providing a term permitting it to install software without notice, Company A simply installs software as part of the initial installation process. This software includes hidden files that can damage other software, report back to Company A, or otherwise compromise the security and usability of the transferee's system. There is no term in the agreement to which a court could apply the unconscionability doctrine. The failure to disclose the installation of hidden files may, however, be actionable under tort or other law.

7. Company A provides software on a subscription basis. Its standard terms provide, "Upon expiration of your subscription, Company A may automatically renew your subscription at the then prevailing price using credit-card information you have previously provided." A court might hold such a term unconscionable because it largely deprives the transferee of the ability to refuse to enter into a subscription extension. It might also hold a term that provides for cancellation without notice unconscionable.

REPORTERS' NOTES

Comment a. In general. See U.C.C. § 2-302 (2000); see also Restatement Second, Contracts § 208.

Comment b. Unconscionability generally. For a discussion of the purposes of unconscionability doctrine and how courts apply it, see U.C.C. § 2-302, Comment 1. See also Robert A. Hillman, The Richness of Contract Law 129-143 (1997); infra § 2.01, Reporters' Note to Comment *h*.

Most courts entertaining an unconscionability or related claim, including those involving e-commerce, look for both procedural and substantive unconscionability. See § 1.11 of these Principles; e.g., In re RealNetworks, Inc., Privacy Litigation, No. 00 C 1366, 2000 WL 631341 (N.D. Ill., May 8, 2000); Strand v. U.S. Bank National Association ND, 693 N.W.2d 918, 924 (N.D. 2005); Comb v. PayPal, Inc., 218 F. Supp. 2d 1165, 1172-1176 (N.D. Cal. 2002); Arthur Allan Leff, ***85** Unconscionability and the Code—The Emperor's New Clause, 115 U. Pa. L. Rev. 485, 487-488 (1967); Russell Korobkin, Bounded Rationality, Standard Form Contracts, and Unconscionability, 70 U. Chi. L. Rev. 1203, 1254 (2003) ("Courts usually search for 'substantive unconscionability' only when there is evidence of a procedural defect in the bargaining process.") Substantive unconscionability focuses on whether the transfer is grossly imbalanced. Arthur Allan Leff, Unconscionability and the Code—The Emperor's New Clause, 115 U. Pa. L. Rev. 485, 487 (1967). Procedural unconscionability deals with the manner in which a contract was formed and polices conduct approaching duress, misrepresentation, or, most important here, an unfair presentation of the terms. Id. "[T]he more substantively oppressive the contract term, the less evidence of procedural unconscionability is required to come to the conclusion that the term is unenforceable, and vice versa." Armendariz v. Foundation Health Psychare Servs., Inc., 6 P.3d 669, 690 (Cal. 2000).

Generally, courts in California adopt the view that "the more substantively oppressive the contract term, the less evidence of procedural unconscionability is required to come to the conclusion the term is unenforceable, and vice versa." Davidson & Assocs., Inc. v. Internet Gateway, 334 F. Supp. 2d 1164, 1179 (E.D. Miss. 2004), citing Freeman v. Wal-Mart Stores, Inc., 111 Cal. App. 4th 660, 3 Cal. Rptr. 3d 860, 866-867 (2003), aff'd, Davidson & Assocs. v. Jung, 422 F.3d 630 (8th Cir. 2005); see also Armendariz v. Foundation Health Psychare Servs., Inc., 6 P.3d 669, 690 (Cal. 2000).

"[G]ross inequality of bargaining power, together with terms unreasonably favorable to the stronger party, may confirm indications that the transaction involved elements of deception or compulsion, or may show that the weaker party had no meaningful choice, no real alternative, or did not in fact assent or appear to assent to the unfair terms." Restatement Second, Contracts § 208, Comment *d*.

See, e.g., Williams v. Walker-Thomas Furniture Co., 350 F.2d 445 (D.C. Cir. 1965) (involving a cross-collateral clause drafted in nearly incomprehensible language); Faber v. Menard, Inc., 267 F. Supp. 2d 961 (N.D. Iowa 2003) (noting that the clarity of a term's language and its location in the agreement is relevant in assessing procedural unconscionability); Scheele v. Mobil Oil Corp., 510 F. Supp. 633 (D. Mass. 1981) (relevance of duress); Maxwell v. Fidelity Fin. Servs., 184 Ariz. 82, 907 P.2d 51 (1995) (relevance of grossly excessive price); Davis v. Kolb, 563 S.W.2d 438 (Ark. Sup. Ct. 1978) (holding a timber deed unconscionable when the buyer misrepresented his experience and knowledge regarding timber, and the seller relied on the buyer's estimate); Kansas City Wholesale Grocery Co. v. Weber Packing Corp., 94 Utah 414, 73 P.2d 1272 (1937) (holding clause limiting time for inspection and making claims for defects unenforceable in case involving a latent defect).

For the proposition that unconscionability is a matter for the judge, see U.C.C. § 2-302, Comment 3; amended U.C.C. § 2-302, Comment 3 (2004) [hereinafter "Revised U.C.C."]; Restatement Second, Contracts § 208, Comment *f*.

Comment c. Unconscionability and software agreements. For a discussion of the EU's Directive on Unfair Contract Terms, see Jane K. Winn, Contracting Spyware by Contract, 20 Berk. Tech. L.J. 1345, 1358-1361 (2005). The list of terms that may be considered unfair is extensive, and includes, for example, unreasonable limitations on remedies, lack of notice of various material terms, and generally granting excessive power to the seller to determine conformity and other contractual terms. See id. at 1359-1360 n.58. See also Jane K. Winn & Mark Webber, The Impact of EU Unfair Contract Terms Law on US Business-to-Consumer Internet Merchants (July 24, 2006 draft, on file with Reporters); Aral v. Earthlink, Inc., 36 Cal. Rptr. 3d 229 (Cal. Ct. App. 2005).

Illustration 1 is based on Brower v. Gateway 2000, Inc., 246 A.D.2d 246, 676 N.Y.S.2d 569 (1998) (holding that substantive unconscionability alone may justify an unconscionability finding, and that the expense of arbitrating before the ICC rendered an arbitration term in a standard-form agreement unconscionable). See also In re RealNetworks, Inc. Privacy Litigation, 2000 WL 631341, *6 (N.D. Ill. 2000) (upholding an arbitration provision in a clickwrap agreement against an unconscionability challenge where the user had an opportunity to review and understand it and despite the distance of the forum).

***86** *Illustration 2* is based on M.A. Mortenson Co. v. Timberline Software, 998 P.2d 305 (Wash. 2000).

Illustrations 3-5 and *7* are based on terms described in Annalee Newitz, Dangerous Terms, available at http:www.eff.org/wp/eula.php; see also John Borland & Rachel Konrad, PC Invaders, c/net News.com, Apr. 18, 2002, available at http://news.com.com/2009-1023-885144.html; Lydia Pallas Loren, Slaying the Leather-Winged Demons in the Night: Reforming Copyright Owner Contracting with Clickwrap Misuse, 30 Ohio N.U. L. Rev. 495 (2004). See also Sony BMG Ends Legal Nightmare, Bus. Wk. Online, Dec. 30, 2005 (describing Sony's settlement of a class-action suit brought by consumers over a hidden file Sony had installed on many of its music CDs). The file, designed to prevent making multiple copies of the CD, was "secretly installed" and opened computers on which it was installed to attacks by hackers. Id.

In Comb v. PayPal, Inc., 218 F. Supp. 2d 1165, 1172 (N.D. Cal. 2002), the court held that the clause in *Illustration 4* contributed to the agreement's substantive unconscionability.

§ 1.12 Relation to Other Law

Other applicable law supplements the Principles.

Comment:

a. Scope. The purpose of the Principles is to set forth rules that have particular relevance in the software-contracting context, not to replace other applicable law. For example, general principles of common-law contract and equitable principles may supplement the Principles. These Principles include, but are not limited to, the duty of good-faith performance, cumulative remedies, mitigation of damages, choice of law (other than standard-form transfers of generally available software), promissory estoppel, capacity to contract * * *. Federal and state consumer-protection law also supplement these Principles. However, these Principles take the position that contracts for the transfer of non-embedded software, except for any medium that stores the software, are not within the scope of Article 2 of the Uniform Commercial Code, which governs transactions in goods, and hence Article 2 is not "applicable law" except by analogy. See § 1.06.

REPORTERS' NOTES

Comment a. Scope. This Section is loosely based on U.C.C. § 1-103 and UCITA § 104, which provides that UCITA does not displace consumer-protection law.

§ 1.13 -Choice of Law in Standard-Form Transfers of Generally Available Software

(a) The parties to a standard-form transfer of generally available software may by agreement select the law of a domestic or foreign jurisdiction to govern their rights and duties with respect to an issue in contract if their transaction bears a reasonable relationship to the selected jurisdiction. However, if application of the selected law would lead to a result that is repugnant to public policy as expressed in the law of the jurisdiction that would otherwise govern under subsection (b), then the law of the jurisdiction chosen by subsection (b) governs with respect to the issues relating to that law.
(b) In the absence of an enforceable agreement on choice of law, the rights and duties of the parties to a standard-form transfer of generally *87 available software with respect to an issue in contract are determined by the law of the jurisdiction where the software is or should be delivered under the agreement.

Comment:

a. Parties' choice of law. This Section governs choice of law in standard-form transfers of generally available software. All other transactions continue to be governed by otherwise applicable law, including, for example, the Restatement Second of Conflict of Laws § 187.
For standard-form transfers of generally available software, subsection (a) adopts the "reasonable relationship" approach of U.C.C. § 1-105 prior to its revision. This approach acknowledges the special problems raised by standard-form contracts that are relevant to both businesses and consumers. Thus, the distinction here is between standard-form transfers of generally available software and other transfers rather than between consumer and non-consumer transactions. For an explanation of the reasons for including businesses, even large ones, within the treatment of transferees of standard-form transfers of generally available software, see § 2.01, Comment *a*.
Principles of contract formation and interpretation apply to choice-of-law issues. For example, if, under these Principles, a contract was not formed, then the choice-of-law provision has no effect. Additionally, this Section is subject to the limiting provisions of the Principles, including unconscionability.
The parties cannot circumvent the public policy of the jurisdiction whose law would otherwise govern. A court must disregard the parties' agreement and use the law of the default jurisdiction if the application of the chosen law would lead to a result that is repugnant to the public policy as expressed in the law of the "default" jurisdiction.

***88 Illustrations:**

1. A, a software manufacturer, located in State X, transfers software to B, a consumer, whose principal residence is in State

Y. The transfer is a standard-form transfer of generally available software. The agreement states that the law of State X governs the transaction. A ships a software package or delivers the software online to B in State Y. Subsequently, an issue arises with respect to the quality of the software. The law of State Y differs from the law of State X in that State Y has a mandatory consumer-protection provision that is not variable by agreement. According to § 1.13(a), the law selected by the parties cannot lead to a result that contradicts the public policy of the jurisdiction whose law would govern in the absence of the choice-of-law provision. In the absence of an agreed choice of law, the law of State Y would govern this transaction, because State Y is the place where A delivers the software. See § 1.13(b). The law of State X would therefore not apply to this transaction in so far as it conflicts with law reflecting important public policy of State Y.

2. Same facts as Illustration 1, except that the agreement states that the law of State Z governs the transaction. This law would not apply because the transaction does not bear a reasonable relationship to State Z. The law of State Y would govern this transaction because State Y is the place where A delivers the software. See § 1.13(b).

b. Default choice of law. The rule of subsection (b) provides that the law of the state where the software is or should be delivered applies whether the delivery is of a tangible disk, CD-ROM, or the like, or the delivery is by electronic means.

Subsection (b) avoids ambiguity over what law applies and is consistent with the reasonable expectations of retail-like transferees. Further, although software vendors must become acquainted with the substantive law of all of the jurisdictions in which they transact business, this responsibility is no different than that assumed by merchants who sell goods or services over the Internet. In addition, transferees in retail-like transfers download software most often at their place of residence, minimizing the problem of ascertaining the place where the software is delivered even in Internet transactions. Finally, technology continues to develop that allows vendors to control who can receive their information on the Internet. Such technology allows vendors to limit their exposure.

Illustration:

3. A, a software vendor, whose principal place of business is in State X, offers software for download over the Internet. B, a traveling salesperson, downloads the software in State Y for personal use. B's principal place of business is in State Z. The court should apply the law of State Y where B downloaded the software. In most instances, however, transferees in retail-like transfers download software at their place of residence.

REPORTERS' NOTES

Comment a. Parties' choice of law. For choice of law in transfers that are not standard-form transfers of generally available software, see Restatement Second, Conflict of Laws § 187(1) ("The law of the state chosen by the parties to govern their contractual rights and duties will be applied if ***89** the particular issue is one which the parties could have resolved by an explicit provision in their agreement directed to that issue.") The Second Restatement places limits on the parties' freedom to choose the law that governs an issue that could not have been resolved in the agreement by permitting the chosen law to govern unless "the chosen state has no substantial relationship to the parties or the transaction and there is no other reasonable basis for the parties' choice," id. at § 187(2)(a), or "application of the law of the chosen state would be contrary to a fundamental policy of a state which has a materially greater interest than the chosen state . . . and which . . . would be the state of the applicable law in the absence of an effective choice of law." Id. § 187(2)(b).

Note also that some states have adopted legislation permitting parties to choose their law to govern even when the parties and the transaction have no connection to their states. See, e.g., Cal. Civ. Code § 1646.5 (West 2002); Del. Code Ann. tit. 6, § 2708 (1999); Fla. Stat. Ann. § 685.101 (West 1990); 735 Ill. Comp. Stat. Ann. 105/5-5 (West 2002); N.Y. Gen. Oblig. Laws § 5-1401 (McKinney 2001); Or. Rev. Stat. § 81.120 (2001); Tex. Bus. & Com. Code Ann. § 35.51 (Vernon 2002). Most of these statutes contain limitations. For example, the California statute applies only to agreements of $250,000 or more and does not apply to consumer agreements, agreements for labor or personal services, or agreements governed by U.C.C. § 1-105(2). Cal. Civ. Code § 1646.5 (West 2002). The Florida statute is similar.

States enacting Revised U.C.C. Article 1 but retaining the former choice-of-law provision requiring a reasonable relationship include Alabama, Arizona, Arkansas, Colorado, Connecticut, Delaware, Hawaii, Idaho, Kentucky, Louisiana, Minnesota, Montana, Nebraska, Nevada, New Hampshire, New Mexico, Oklahoma, Texas, Virginia, and West Virginia. See S.B. 68, 2004 Leg., 524th Sess. (Al. 2004) (enacted); 2006 Ariz. Legis. Serv. Ch. 53 (S.B. 1250) (West); H.B. 1497, 85th Gen. Assembly, Reg. Sess. (Ar. 2005); 2006 Colo. Legis. Serv. Ch. 133 (H.B. 06-1247) (West); H.B. 6985, 2005 Leg. (Ct. 2005) (enacted); Del. Code Ann. Tit. 6 § 1-301 (2005); H.B. 1259, 22d Leg., Reg. Sess. (Hi. 2004) (enacted); S.B. 1228, 57th Leg., 2d Reg. Sess. (Id. 2004) (enacted); 2006 Kentucky Laws Ch. 242 (S.B. 154); 2006 La. Sess. Law. Serv. Act 533 (S.B. 533) (West); H.B. 1983, 83d Leg., Reg. Sess. (Mn. 2004) (enacted); S.B. 401, 2005 Leg. (Mt. 2005) (enacted); L.B. 570, 99th Leg., 1st Reg. Sess. (Nb. 2005) (enacted); S.B. 201, 2005 Leg., 73rd Sess. (Nv. 2005) (enacted); 2006 N.H. Laws Ch. 169 (H.B. 719); H.B. 834, 47th Leg., Reg. Sess. (N.M. 2005) (enacted); H.B. 2028, 2005 Leg., 1st Reg. Sess. (Ok. 2005); 2003 Texas Sess. L. Serv. Ch. 542 (H.B. 1934) (West); Va. Code Ann. § 8.1A-301 (West 2006); 2006 W. Va. Laws S.B. 742. But see VI ST T. 11A § 1-301 (2005) (enacting the permissive choice-of-law provision in the Virgin Islands). Software vendors including Apple, Macro-Media, Microsoft, Oracle, and Red-Hat all select the law of the state in which they are located in their standard-form agreements.

Both federal and state courts have enforced choice-of-law provisions in software agreements. See, e.g., Davidson & Assocs., Inc. v. Internet Gateway, 334 F. Supp. 2d 1164 (E.D. Mo. 2004) (holding that under Missouri law, choice-of-law provisions in software end-user license were enforceable), aff'd, Davidson & Assocs. v. Jung, 422 F.3d 630 (8th Cir. 2005); In re Professional Video Ass'n, Inc., No. 95-016, 2000 WL 33712295 (Bankr. D. Del. 2000) (noting that choice-of-law clauses in software agreements are "routinely enforced by Delaware courts"); Vision Graphics, Inc. v. E.I. Du Pont de Nemours & Co., 41 F. Supp. 2d 93 (D. Mass. 1999) ("Absent serious conflict with public policy, Massachusetts courts will respect a contractual choice of law provision"); Dart Energy Corp., Inc. v. Vogel, No. 91-184, 1991 WL 11010342 (W.D. Mich. July 18, 1991) (choice-of-law provision in software license agreement enforceable under Michigan law); Perkins v. CCH Computax, Inc., 423 S.E.2d 780 (N.C. 1992); Groff v. America Online, Inc., No. 97-0331, 1998 WL 307001 (R.I. Super. Ct. May 27, 1998) (unpublished opinion); In re J.D. Edwards World Solutions Co., 87 S.W.3d 546 (Tex. 2002) (enforcing choice-of-law provision because chosen law had a "substantial relationship to the parties or the underlying transaction").

For cases not enforcing choice-of-law provisions, see Mudd Lyman Sales & Service Corp. v. UPS, Inc., 236 F. Supp. 2d 907 (N.D. Ill. 2002) (refusing to enforce choice-of-law provision on grounds of federal preemption); Sunbelt Veterinary Supply, Inc. v. IBM United States, Inc., 985 F. Supp. 1352 (M.D. Ala. 1997) (choice-of-law provision deemed too narrow to encompass plaintiffs' ***90** tort claims); In re El Int'l, 123 B.R. 64 (Bankr. D. Idaho 1991) (applying federal bankruptcy law rather than enforcing choice-of-law provision); America Online, Inc. v. Superior Court of Alameda County, 108 Cal. Rptr. 2d 699, 710 (Cal. Ct. App. 2001) (refusing to enforce choice of Virginia law and venue provision on grounds that California law provided broader protection for consumers).

The limitation on choice of law in subsection (a) draws on the Second Restatement of Conflicts § 187 and § 322 of Intellectual Property: Principles Governing Jurisdiction, Choice of Law, and Judgments in Transnational Disputes (Proposed Final Draft, 2007). The notion is that a court should disregard the parties' choice of law only when a fundamental policy of the otherwise applicable law is implicated, and that policy is expressed in the substantive law of that jurisdiction. The Second Restatement does not permit the parties' choice of law to govern when the choice would conflict with a "fundamental policy of a state which has a materially greater interest . . . in the determination of the particular issue" and whose law would govern in the absence of the parties' agreement. Restatement Second, Conflict of Laws § 187(2)(b). Revised U.C.C. § 1-301 adopts a similar approach. The Principles Governing Jurisdiction state: "The application of particular rules of foreign law is excluded if such application leads to a result in the forum State that is repugnant to [its] public policy" (Proposed Final Draft, 2007). Cf. Larry E. Ribstein, From Efficiency to Politics in Contractual Choice of Law, 37 Ga. L. Rev. 363, 451 (2003) (advocating a rule like the Second Restatement's and providing generally that a contractual choice of law will not apply if "enforcement is prohibited by a statute that explicitly applies to the specific type of contract, or a judicial rule that explicitly applies to the specific type of contract").

Comment b. Default choice of law. Subsection (b) is derived from UCITA § 109(b)(2), but applies the law of the state where the software is or should be delivered regardless of the medium of delivery.

For a thoughtful analysis of the evolution of choice-of-law principles in UCITA, see Amelia Boss, The Jurisdiction of Commercial Law: Party Autonomy in Choosing Applicable Law and Forum Under Proposed Revisions to the Uniform Commercial Code, 32 Int'l Law. 1067, 1088-1105 (1998) (criticizing generally the contention that contracting on the Internet for intangibles requires fundamentally different rules than for conventional agreements). Another helpful article is Kathleen Patchel, Choice of Law and Software Licenses: A Framework for Discussion, 26 Brook J. Int. 117, 170 (2000) (questioning why a software licensor "should not be subject to the law of jurisdictions in which it licenses software, just as a seller of goods or the publisher of a newspaper may be subject to the law of all states in which the goods are sold or the paper is distributed."). See also F. McConnell and Sons, Inc. v. Target Data Systems, Inc., 84 F. Supp. 2d 961 (N.D. Ind. 1999).

For a discussion of technological controls on Internet dissemination of information, see Jack L. Goldsmith, Against

Cyberanarchy, 65 U. Chi. L. Rev. 1199, 1228 (1998) ("The techniques and technologies for controlling cyberspace information flows will continue to develop in scope and sophistication, and will play an important role in resolving the jurisdictional quandaries presented by the 'borderless' medium.").
Illustration 1. Illustration 1 is based on Revised U.C.C. § 1-301, Comment 3, example 3 (2004).

§ 1.14 Forum-Selection Clauses

The parties may by agreement choose an exclusive forum unless the choice is unfair or unreasonable. A court may consider the agreed forum unfair or unreasonable if:
(a) the forum is not a reasonably convenient place for trial of the action;
(b) the agreement as to the forum was obtained by misrepresentation, duress, the abuse of economic power, or other unconscionable means;
(c) the forum does not have power under its domestic law to entertain the action or to award remedies otherwise available; or
***91 (d) enforcement of the forum-selection clause would be repugnant to public policy as expressed in the law of the forum in which suit is brought.**

Comment:

a. Choice of forum. Although courts generally enforce forum-selection clauses, such agreements are more controversial than consensual choice of governing law in part because a party may be unable to vindicate its legal rights by resorting to the courts if the forum is inconvenient. The approach here adopts a unitary standard that applies to all transfers because courts should not enforce a choice-of-forum provision that is unfair or unreasonable regardless of whether the term appears in a negotiated or standard-form agreement. Nevertheless, courts should be more willing to enforce negotiated forum-selection clauses between sophisticated businesses.
An alternative would be to require conspicuous choice-of-forum terms in standard-form agreements to enhance the probability that the transferee has seen and knowingly assented to the clause. Contracting parties may be more likely to appreciate the ramifications of having to litigate in a particular state than the consequences of selection of a particular state's law.

Illustrations:

1. A enters into an agreement to provide software and updates to B. The agreement contains a forum-selection clause that states: "A has the option of pursuing any action under this agreement in any court of competent jurisdiction and the customer [B] consents to jurisdiction in the state of our choice." Several months later, B terminates the agreement after experiencing repeated difficulties with the software. A brings suit in State X for breach of contract. The court of State X should not honor the forum-selection clause because the clause is too broad and provides no notice of the forum contemplated or evidence of the parties' intent.
2. B resides in State X. A and B enter into a software agreement containing a forum-selection clause selecting State Y as the exclusive forum. B brings suit against A in State X and asserts that the forum-selection clause is invalid because it violates a statute in State X that protects a plaintiff's right to exercise its contractual rights "by the usual proceedings in the ordinary tribunals." The forum-selection clause acts as a restraint upon B's ability to exercise its rights in violation of a mandatory rule of State X. The clause is therefore invalid.

REPORTERS' NOTES

Comment a. Choice of forum. For cases upholding forum-selection clauses, see, e.g., Digital Envoy, Inc. v. Google, Inc., 319 F. Supp. 2d 1377 (N.D. Ga. 2004); Infinite Technology, Inc. v. Rockwell Elec. Commerce Corp., No. 01-1025, 2001 WL 527357 (N.D. Ill. May 16, 2001) (in context of software-development contract, "[i]t is well-settled that contractual forum selection clauses are prima facie valid"); Koch v. America Online, Inc., 139 F. Supp. 2d 690 (D. Md. 2000) (enforcing forum-selection clause in AOL online agreement); Smith v. Professional Claims, Inc., 19 F. Supp. 2d 1276 (M.D. Ala. 1998); Double A Home Care, Inc. v. Epsilon Systems, Inc., 15 F. Supp. 2d 1114 (D. Kan. 1998) (plaintiff failed to demonstrate that presenting its action on a software license agreement in Minnesota, as specified in the agreement's forum-selection clause, was clearly unreasonable or unjust, or that the defendant unfairly obtained the forum-selection clause); ***92** Texas Source Group, Inc. v. CCH, Inc., 967 F. Supp. 234 (S.D. Tex. 1997) (in context of software transaction, forum-selection clause in nondisclosure agreement was enforceable); BAAN, U.S.A. v. USA Truck, Inc., 105 S.W.3d 784 (Ark. App. 2003); America Online, Inc. v. Booker, 781 So. 2d 423 (Fla. Dist. Ct. App. 2001); Caspi v. Microsoft Network, L.L.C., 732 A.2d 528 (N.J. Super. Ct. App. Div. 1999) (choice-of-forum clause in online agreement enforced). See also § 1.10, Reporters' Note to Comment *b* for cases upholding forum-selection clauses against public-policy challenges.

For cases holding forum-selection clauses unenforceable, see Mudd-Lyman Sales & Service Corp. v. United Parcel Service, Inc., 236 F. Supp. 2d 907 (N.D. Ill. 2002) (forum-selection clause preempted by federal common law on interstate agreements of carriage); Harvard Eye Assocs. v. Clinitek Int'l, Inc., No. 98-302, 1998 WL 248916 (E.D. Pa. May 5, 1998) (clause not enforceable because of ambiguity); CooperVision, Inc. v. Intek Integration Technologies, Inc., 794 N.Y.S.2d 812 (2005) (failure to incorporate the relevant clause into the agreement) Agreementor's Management Systems of NH, Inc. v. Acree Air Conditioning, Inc., 799 So. 2d 320 (Fla. Dist. Ct. App. 2001) (claims asserted did not arise out of the relevant agreement).

The Principles adopt the "unfair or unreasonable" test of the Restatement. Restatement Second, Conflict of Laws § 80. UCITA uses the similar standard of enforcing a choice of forum unless that choice is "unreasonable or unjust." UCITA § 110(a). These standards are derived from the Supreme Court's decisions in Bremen v. Zapata Offshore Co., 407 U.S. 1, 10 (1972) (adopting the view in the context of an agreement negotiated by two commercial parties, that forum-selection clauses "are prima facie valid and should be enforced unless enforcement is shown by the resisting party to be 'unreasonable' under the circumstances"), and Carnival Cruise Lines, Inc. v. Shute, 499 U.S. 585, 595 (1991) (holding a forum-selection clause in a standard-form agreement between a consumer and a cruise line enforceable: "[F]orum-selection clauses contained in form passage contracts are subject to judicial scrutiny for fundamental fairness. In this case, there is no indication that petitioner set Florida as the forum in which disputes were to be resolved as a means of discouraging cruise passengers from pursuing legitimate claims . . . . Similarly, there is no evidence that petitioner obtained respondents' accession to the forum clause by fraud or overreaching. Finally, respondents have conceded that they were given notice of the forum provision . . . ."). States, however, may adopt a different standard for assessing forum-selection clauses because both *Bremen* and *Shute* were admiralty cases decided under federal law. Boss, supra § 1.13, at 1086.

The *Bremen* analysis is well accepted; the *Shute* holding less so:

> Following *Bremen*, both state and federal courts adopted its rule of decision, not only in admiralty cases, but in virtually all forum selection settings, and it now clearly represents the weight of authority in the United States. . . . Perhaps not too surprisingly, given the relative positions of the plaintiffs and the defendant in *Carnival Cruise*, it has not been as warmly received as was *Bremen*; . . . [Courts] have been somewhat more reluctant than was the Supreme Court to uphold such clauses when the litigants are unequally situated or there is a significant suggestion of inconvenience or judicial ineconomy, although they have uniformly enforced such clauses when the parties are bargaining equals or the transaction is commercial, and the clause is otherwise reasonable.

Richard A. Lord, Williston on Contracts, Bargains Obstructing Administration of Justice, § 15:15 (West Group 2003).

The limitations are from the Uniform Law Commissioners' Model Choice of Forum Act, but (b) also appears in the Comments to the Restatement. Restatement Second, Conflict of Laws § 80, Comment *c*. Comment *c* notes that it is relevant to the analysis "but not of itself controlling, [whether] the provision was contained in an adhesion or take-it-or-leave-it contract whose provisions the party bringing the action was compelled to accept without argument or discussion." Id. See also Laserdynamics, Inc. v. Acer America Corp., 209 F.R.D. 388, 391 (S.D. Tex. 2002) (forum-selection clause enforceable because the parties were "sophisticated global entities."). The Restatement also notes that although a refusal to enforce a forum-selection clause might be justified because of the ***93** inconvenience of the forum, such a finding is unlikely when the forum selection was "in the minds of the parties at the time that they entered into the contract" as, for example, when the dispute existed at the time of contracting. Restatement Second, Conflict of Laws § 80, Comment *c*.

The Restatement also treats as significant whether the parties have entered an enforceable choice-of-law provision. Id. "This might be thought to suggest that the parties would have wished to have the action brought in the chosen state even in the case of substantial inconvenience. It is usually easier for both court and counsel to apply their own local law rather than that of another state. Also, the best way of assuring that the chosen law will be applied, and applied correctly, is to have the action brought in the state where this law is in force." Id. Indeed, some states have enacted legislation explicitly approving the maintenance of an action in their courts when the parties have entered an enforceable agreement selecting the particular state's law as governing. See, e.g., Cal. Civ. Code § 1646.5 (West 1997); Del. Code Ann. tit. 6 § 2708 (1999); Fla. Stat. Ann. § 685.102 (West 1990).

Illustration 1. See Central Ohio Graphics, Inc. v. Alco Capital Resource, Inc., 221 Ga. App. 434, 435-446, 427 S.E. 2d 2, 4 (1996):

> [The clause's] lack of specificity impugns a fundamental purpose of such clauses: to eliminate uncertainties by agreeing in advance on a forum acceptable to both parties. . . The forum selection clause would permit Alco to bring this action in any state in the country. This is unreasonable. Because the forum selection clause at issue is overbroad and so lacking in specificity that it fails to provide any indicia of the parties intent, enforcing it would be unreasonable and unjust.

Illustration 2. Illustration 2 is based on Montana ex rel. Polaris Industries, Inc. v. District Court, 695 P.2d 471 (Mont. 1985); see also Morris v. Towers Financial Corp., 916 P.2d 678 (Col. Ct. App. 1996).

[FN1]. See, e.g., Gregory J. Maier, Software Protection-Integrating Patent, Copyright and Trade Secret Law, 69 J. Pat. & Trademark Off. Soc'y, 151, 151 (1987) ("It is the hybrid nature of software that causes its failure to fit neatly into any one existing category of intellectual property, resulting in seemingly endless confusion as to how it may best be protected."); William H. Neukom & Robert W. Gomulkiewicz, Licensing Rights to Computer Software, 354 PLI/Pat 775 (1993) (discussing the need for different types of software licenses for different categories of intellectual property); Pamela Samuelson, Randall Davis, Mitchell D. Kapor, & J.H. Reichman, A Manifesto Concerning the Legal Protection of Computer Programs, 94 Colum. L. Rev. 2308, 2421 (1994) (discussing the inadequacy of existing laws to govern computer programs); see generally John C. Phillips, Sui Generis Intellectual Property Protection for Computer Software, 60 Geo. Wash. L. Rev. 997 (1992); J.H. Reichman, Toward a Third Intellectual Property Paradigm: Legal Hybrids Between the Patent and Copyright Paradigms, 94 Colum. L. Rev. 2432 (1994).

[FN2]. See Samuelson et al., A Manifesto, supra note 1, at 2335-2339 ("The hard-won insights and innovations embodied in surface design are prominently displayed by the program in operation . . . . The crucial concern is whether it is trivially easy and quick to copy a software innovation that was very expensive to develop."); see also In re CNB Intern., Inc., 307 B.R. 363, 372 (Bkrtcy. W.D.N.Y. 2004).

[FN3]. See, e.g., U.S. Senate, Committee on the Judiciary, "Protecting Creative Works in a Digital Age," available at http://judiciary.senate.gov/special/feature.cfm (last accessed Sept. 13, 2004).

[FN4]. See, e.g., Adobe Systems Inc. v. Stargate Software, Inc., 216 F. Supp. 2d 1051, 1059 (N.D. Cal. 2002).

[FN5]. See Mark A. Lemley & Lawrence Lessig, The End of End-to-End: Preserving the Architecture of the Internet in the Broadband Era, 48 U.C.L.A. L. Rev. 925, 940 (2001) (discussing the increasing importance of the software "level" of the architecture of the Internet and other networks); see also Dan L. Burk, Patents in Cyberspace: Territoriality and Infringement on Global Computer Networks, 68 Tul. L. Rev. 1, 41 (1993) (noting that much network activity involves the use of remote software); Jane Winn, Memorandum to Lance Liebman, June 21, 2004 (highlighting the uniqueness of software) (on file with author).

[FN6]. Winn, supra note 5; see also Elaine M. La Flamme, Licensing of Content on the Internet: Concerns and Considerations, SH087 ALI-ABA 61, 64-67 (2003) (discussing the need for coherence in the legal framework of network issues).

[FN7]. See Deborah Tussey, UCITA, Copyright, and Capture, 21 Cardozo Arts & Ent. L.J. 319 (2003).

[FN8]. Winn, supra note 5.

[FN9]. See, e.g., ProCD, Inc. v. Zeidenberg, 86 F.3d 1447 (7th Cir. 1996).

[FN10]. For example, the Supreme Court has held that a telephone directory's "white pages" cannot be copyrighted because the alphabetical arrangement of names, telephone numbers, and street addresses are not original. Feist Publications, Inc. v. Rural Telephone Service Co., 499 U.S. 340, 348 (1991).

[FN11]. Id. (discussing the copyrightability of a database where the compiler has, in an original way, "chosen facts to include, in what order to place them, and how to arrange the collected data so that they may be used effectively by readers.").

[FN12]. *ProCD*, 86 F.3d 1447.

[FN13]. Mark A. Lemley et al., Software and Internet Law 382 (2d ed. 2003).

[FN14]. American Bar Association Working Group Report on the Uniform Computer Information Transactions Act, Jan. 31, 2002, at 11.

*95 Chapter 2

FORMATION AND ENFORCEMENT

Topic 1, Section A, treats the enforcement of "standard-form transfers of generally available software." Such a transfer is defined in § 1.01(j) as a transfer of small quantities of software or of the right to access software to an end user. The software must be available to the public under substantially the same standard terms. The reasons for including some business end users in Topic 1 are discussed in Comment *a* to § 2.01.

Topic 1, Section B, takes up software transfers when one or both parties use standard forms but the transaction is not a "standard-form transfer of generally available software."

The formation and enforcement of custom-written software agreements are the subject of Topic 2 of this Chapter.

TOPIC 1 STANDARD-FORM AGREEMENTS A. STANDARD-FORM TRANSFERS OF GENERALLY AVAILABLE SOFTWARE

Summary Overview

Standard-form contracting is pervasive and familiar to virtually everyone. [FN1] By utilizing a standard form, the drafter can use its knowledge and experience to allocate each of the various risks of contracting to the party who can bear it most efficiently and can avoid the costs of bargaining with its customers. [FN2] At least in theory, drafters can charge lower prices for their products because of these savings. [FN3] However, although some analysts' portrayal of drafters who seek at every instance to take advantage of their customers is overblown, standard-form contracting nonetheless creates legal issues, especially in retail markets. Beyond a few salient terms such as price and description of the software, few people in these markets read and process their standard forms and market incentives therefore may fail to motivate drafters to draft reasonable terms. [FN4]

The software industry is no stranger to standard forms for the same reasons they are so common in the paper world. In fact, the predominance of standard-form licensing of software with terms that negate or narrow transferee rights is a principal complaint of critics of current practices. [FN5]

As with any party presented with a standard form, software transferees in retail-like markets, especially consumers, fail to read their standard forms for many reasons. [FN6] Boilerplate is often incoherent. Transferees have little bargaining power and few alternatives because vendors have few competitors or because competitors offer similar terms. Transferees have only a limited capacity to digest information and often rely on strategies that simplify decisionmaking or even rely on intuition and hunches. [FN7] They also often underestimate the probability (although low) of adverse events. Although many transferees who are downloading software or opening a software package have the luxury of reading the terms in their homes in the evening, and are therefore free of distractions not of their own making and of ***96** manipulative sales agents, transferees may not assign the same significance to a mouse click or terms presented after payment as they do to a signature on a paper standard form presented prior to payment. [FN8] E-transferees who are using their computers to download software expect speed and instant gratification when using their computers, and therefore may be especially unlikely to read or shop for favorable terms. [FN9] However, perhaps the most serious problem that deters reading in the software retail context, singled out by commentators and highlighted in litigation, is the manner of presentation of terms. [FN10]

Three modes of presentation of terms stand out. Software vendors present standard forms as part of “shrinkwrap” transactions, in which the vendor delivers terms printed inside the software packaging or delivers terms electronically on a computer screen during the installation of the previously packaged software. The transferee, who purchases the software by telephone, via the Internet, or in a retail store, can read the terms only after payment and opening the software package. [FN11] Vendors also present terms electronically as part of “browsewrap” transactions. The transferee, who purchases and downloads the software electronically, views a screen that refers to terms that can be found elsewhere. Browsewrap therefore allows e-transferees to bypass the boilerplate and to “agree” to the terms without ever seeing them. [FN12] Finally, vendors may employ a “clickwrap” presentation, in which the end-user, again who purchases and downloads software electronically, must click “I agree” to terms presented on the website in order to complete the transaction. [FN13]

Each type of presentation of terms creates legal issues. Shrinkwrap transactions, in which vendors can create a “situation-specific monopoly” by providing the standard terms after download or payment, raise the issue of unequal bargaining power. [FN14] In browsewrap transactions, vendors can experiment with modes of presentation of terms, including with graphics and font sizes, can determine the effects of various presentations, and can utilize the most effective deterrent to finding the terms or reading them. [FN15] Businesses can also use strategies taken from advertising to influence purchasing decisions, including deflecting attention from the terms. [FN16] Clickwrap transactions most closely resemble paper standard-form procedures, but even the clickwrap process raises the question of whether transferees are likely to read and digest terms in a medium conducive to speed, instant gratification, and manipulation.

Notwithstanding the high probability that few transferees will read standard forms beyond a few salient terms, and regardless of the mode of presentation, some analysts assert that a small number of readers may be sufficient representatives in competitive markets to deter overreaching by vendors. [FN17] If these analysts are correct, software vendors will draft reasonable terms and will present them fairly in order to establish good reputations and to preserve a market share. In fact, the Internet may increase competition because readers and watchdog groups can easily spread the word about the content of standard forms. [FN18] Further, e-businesses should want to establish good reputations so that transferees do not mistake them for one of the many disreputable businesses with homepages on the Internet. [FN19]

But market pressure may be insufficient to discipline vendors. Most obviously, the numbers of readers of terms may be too small and watchdog groups may be ineffectual. Further, vendors lacking competition may not care about losing the few readers of terms, while vendors in competitive industries, through new information-gathering technologies, can isolate readers and offer them better terms: “Careful ***97** segregation of consumers on the basis of their willingness to read and shop for terms would ensure that the small number of careful consumers would not discipline businesses concerning terms they offer to the rest of the consumers and would allow businesses to take advantage of the latter.” [FN20] In addition, e-commerce provides vendors with new, relatively inexpensive strategies for manipulating transferees. [FN21] Vendors can experiment with styles of presentation of terms and determine which best discourage reading. [FN22] Finally, in the context of shrinkwrap, the costs in time and effort of returning software because of unfavorable terms may outweigh the benefits even if transferees would receive a full refund.

For these reasons, and because case reports and the websites of watchdog groups already evidence vendors’ use of unsavory terms, [FN23] these Principles assume that market pressure is insufficient in software retail markets to assure the production of reasonable standard terms, both in presentation and substantive content. Still, if the cost of legal intervention exceeds the benefit, regulation is not advisable. Therefore, it is important to consider the likely costs and benefits of possible solutions and compare them with each other and against the status quo.

Cooling-off period. Many states’ consumer-protection laws regulate door-to-door sales by allowing the purchaser to change his or her mind. The theory behind these laws is that purchasers may be unable to resist the sales promotion and need time to “cool off.” [FN24] At first blush, standard-form transfers of generally available software also seem like good candidates for a cooling-off period. When downloading software from the Internet, e-transferees may fail to read, despite the absence of time constraints or social pressure, in large part because of exuberance and impatience. [FN25] After acquiring software from a store, e-transferees may fail to read the terms when they open the shrinkwrap package at home for the same reasons. The e-environment creates an atmosphere in which users expect almost instant gratification. Why not let transferees cool off?

There are significant problems with the establishment of a cooling-off period for both electronic transfers of software and shrinkwrap transactions, however. A major concern, for example, is that transferees would not remove already-downloaded software from their computers. This and other costs to vendors of the lack of finality of transactions would yield little gain. Transferees are as unlikely to read the terms after their purchase and before the cooling-off period expires, as before a transaction. [FN26] Ironically, establishment of a cooling-off period may even discourage reading by lulling transferees into believing they can always return or remove the product from their computer if something goes wrong.

On the other hand, in the case of shrinkwrap, a right to return the software for a reasonable period of time makes sense if transferees have no access to the terms prior to opening the software package. Otherwise, transferees have no opportunity to accept or reject the terms after opening the package and reviewing the terms. However, unless the software and terms are wrapped separately inside the package, transferees can easily make and keep a copy of the software before returning it. Further, monitoring the transferee to detect such conduct is not feasible. Instead of an unconditional right to return opened software, § 2.01 of these Principles therefore requires software vendors to disclose terms on their websites prior to a transaction and to give reasonable notice of and access to the terms upon initiation of the ***98** transfer, whether initiation is by telephone, Internet, or selection in a store. Shrinkwrap transferees, therefore, have an opportunity to read terms and accept or reject them before making a commitment or, at least, before opening the software package. Transferees should be able to return opened software only if opening the package is the only way to see the terms accompanying the package.

Mandatory terms. So long as the formation process is reasonable, an important philosophy of these Principles is freedom of contract. The view that vendors understand their products and the risks of contracting better than lawmakers underscores this philosophy. In addition, regulators may misidentify the class of terms that are the product of market failures. These Principles therefore reject, in large part, adopting substantive mandatory rules for software agreements. An exception, in limited circumstances, is certain terms that apply to contract breakdown, such as forum selection, choice of law, [and arbitration]. See, e.g., §§ 1.13 and 1.14. Overconfident and overburdened transferees often ignore such terms, and courts have already identified them as problematic. These Principles also adopt policing tools such as public policy and unconscionability, as do every set of contract principles. Suspect terms under these doctrines (discussed and illustrated in §§ 1.10 and 1.11) include (but are not limited to) terms that authorize the transferor to add spyware to a transferee's computer, that allow the transferor to modify the contract without notice or an opportunity to contest, that extend obligations automatically, that allow the transferor to change the nature of the software unilaterally, that authorize cancellation without notice, and that unreasonably restrict transfer of the software copy.

Promoting reading and the opportunity to read terms. The preferred strategy of these Principles is to establish vendor best practices that promote reading of terms before a transferee commits to a transfer, which, in turn, should decrease the instances of market failure. A secondary strategy is to increase the *opportunity* to read, even if transferees continue not to read all or most of the terms, for all of the heretofore discussed reasons. Increasing the opportunity to read supports autonomy reasons for enforcing software standard forms and substantiates Karl Llewellyn's conception of transferees' blanket *assent* to reasonable standard terms, so long as they have had a reasonable opportunity to read them. [FN27] Blanket assent means that transferees have delegated to the drafter the duty of drafting reasonable boilerplate terms, just as they delegate to software vendors and engineers the duty of creating the appropriate software for the task at hand. [FN28]

The following approaches may increase reading or at least the opportunity to read:

1. Continue the current legal direction. Current contract law, as applied to both the paper and e-worlds, recognizes the value of standard forms, but also the potential for market failure. Current law follows Llewellyn's conception of blanket assent and the policing of overreaching by striking unreasonable terms in presentation and content. [FN29] These Principles could follow the current judicial approach without more, but problems would remain.

As mentioned, much of the attention concerning the enforcement of standard forms for software transactions focuses on methods of presenting terms. For example, the shrinkwrap mode of doing business is useful, and courts often support ***99** it provided that the transferee can return the software if not satisfied with the terms. [FN30] Critics worry, however, that unscrupulous vendors can take advantage of transferees who must pay before reading the terms. In addition, transferees may not return software simply because of unhappiness with terms because they will not read the terms at home or will delay opening the package or will conclude that the costs of returning the software are too high. [FN31] In addition, retailers often do not accept opened software, despite claims to the contrary.

Many vendors transferring software electronically employ the browsewrap approach, [FN32] but the judicial reaction has been mixed. [FN33] The concern is that browsewrap insufficiently calls terms to the transferee's attention. [FN34] In addition, critics of the Uniform Computer Information Transactions Act (UCITA) claim that the law invites courts to approve of browsewrap terms, presumably because UCITA does not *require* presentation of terms before contract formation. [FN35] Courts generally enforce "clickwrap" agreements, on the other hand, because a transferee must agree to the terms on a screen before completing the transaction. [FN36] But even clickwrap raises concerns over the presentation of the terms (for example, must the terms be available on the same page as the "I agree" icon or will a nearby scroll box or hyperlink do?) and whether transferees actually read the terms when they are presented during the excitement of an actual transaction. [FN37]

In light of the issues raised by current judicial and critical reaction to the modes of presentation of terms, these Principles opt for creating additional incentives and opportunities for transferees to read terms.

2. Adopt more specific rules about what terms become part of the standard-form agreement. These Principles could adopt stricter rules for determining what terms become part of standard-form agreements. For example, with respect to electronic delivery of software, the Principles could enforce terms only when a transferee clicked "I agree" at the end of the terms, or even at the end of *each* term. [FN38] A less cumbersome approach than the latter would be to require the transferee to click next to terms that transferees often fail to read, such as forum-selection and dispute-resolution terms, but which can become contentious after a contract breakdown. [FN39] A third strategy would be to require particular text to be conspicuous, either by requiring bold print or a particular size print or font. [FN40] This last strategy assumes that the page containing the term is not hidden so that the transferee never sees it. Obviously, these approaches for increasing reading and the opportunity to read would have no effect on the shrinkwrap problem of terms presented after payment.

3. Best practices focusing on disclosure of terms. For the reasons discussed in the Comments to § 2.01, these Principles focus on this approach. Still, a cost-benefit analysis of the disclosure strategy presents a mixed picture. See the discussion in Comments *e* through *h* of § 2.01.

Section 2.01 applies to electronic downloads of software from the Internet (browsewrap and clickwrap) under the conditions specified in the Section. The Section also applies to the transfer of software in prepackaged containers (shrinkwrap). Section 2.01 cannot capture every possible type of transfer of generally available software. The rules stated in § 2.01 can be applied by analogy, however, when appropriate.

***100 § 2.01 -Standard-Form Transfers of Generally Available Software; Enforcement of the Standard Form**

(a) This Section applies to standard-form transfers of generally available software as defined in § 1.01(j).

(b) A transferee adopts a standard form as a contract when a reasonable transferor would believe the transferee intends to be bound to the form.

(c) A transferee will be deemed to have adopted a standard form as a contract if

(1) the standard form is reasonably accessible electronically prior to initiation of the transfer at issue;

(2) upon initiating the transfer, the transferee has reasonable notice of and access to the standard form before payment or, if there is no payment, before completion of the transfer;

(3) in the case of a standard form presented electronically, the transferee signifies agreement at the end of or adjacent to the standard form, or in the case of a standard form printed on or attached to a package or separately wrapped from the software, the transferee does not return the software unopened within a reasonable time after the transfer; and

(4) the transferee can store and reproduce the standard form if presented electronically.

(d) A standard term is enforceable if a reasonable person of average intelligence and education can understand the language.

(e) If the transferee asserts a failure to comply with subsection (c) or (d), the party seeking to enforce the standard form has the burden of production and persuasion on the issue of compliance with the subsection.

Comment:

a. Scope. Section 2.01 applies to standard-form transfers of generally available software (defined in § 1.01(j)) only. These include electronic and prepackaged software transfers. Section 2.02 [to be written] applies to transfers of software loaded on or delivered with a new computer.

Section 2.01(b) adopts the general contract-law objective test of contract formation. See Comment *b*. Subsection (c) enumerates factors that ensure enforcement of a standard form under the objective test of formation. Subsection (d) requires clarity of standard terms, and subsection (e) deals with burdens of proof.

Section 2.01 applies whether the transferee is a consumer or a large or small business end-user, so long as the software is available to the general public under substantially the same terms and the quantity transferred is small, meaning consistent with a retail sale. See §1.01(j), Comment *a*. Restricting the reach of this Section to consumers would create hardship for many small businesses, who essentially are in the same position as consumers downloading software over the ***101** Internet. Even large businesses (who less regularly shop for software in a retail market) may have difficulty overseeing their employees' processing of small-quantity software transactions, especially if there is no opportunity to peruse the terms prior to a transaction. Further, drawing lines between what constitutes a large or small business or between businesses in the same

position as consumers and businesses with a better bargaining position would be difficult and largely arbitrary. In addition, enlarging the scope of the Section to include businesses should increase the incentive of drafters to write reasonable terms because businesses are more likely to read disclosed terms. Perhaps most important, because the elements of § 2.01 are largely in the nature of disclosure and not onerous for vendors, a “one size fits all” approach is sure to reach all of those worthy of disclosure protection without unduly burdening software vendors.
Transferees that acquire large quantities of software pursuant to a standard form do not receive the protections of § 2.01. However, § 2.03, governing large-quantity standard-form transfers, asks courts to be especially vigilant about the formation process and the substantive terms on the theory that even in large-quantity standard-form transactions transferees may have little or no bargaining power and the standard form may contain suspect terms.

Illustrations:

1. B, a consumer, downloads and installs a single copy of a software vendor’s word-processing software. The software is available to the general public for retail sale via the Internet. B clicks “I agree” on a computer screen presenting a standard-form licensing agreement prior to the download. Section 2.01 applies to the transaction. Same result if B purchases a copy of the software at a retail store and the software package contains a paper copy of the standard form.
2. B, a small general contractor with 18 employees, downloads three copies of software from a software developer’s website to assist in assembling construction bids. An officer of B clicks “I agree” on a computer screen presenting a standard-form licensing agreement. Section 2.01 applies because the software is available to the general public and three copies of the software is consistent with a retail sale. See § 1.01(j), Comment *a*. If B had arranged to download 100 copies of the software or to download one copy after agreeing to a large or unlimited multiple-user license agreement, § 2.03 would apply, not § 2.01. The magnitude of the transfer would be inconsistent with a retail sale. In addition, in the case of a multiple-user agreement, the terms would be different from a typical retail sale.

b. General rule. Section 2.01(b) adopts the flexible contract-law approach to contract formation that bases formation on the objective test of when a reasonable transferor would believe the transferee intends to be bound. Notwithstanding this approach, in many instances, failure to satisfy subsection (c), which consists of best practices, may mean that the standard form will not be enforceable because a reasonable transferor would not believe the transferee intends to be bound to the form. In such cases, if the transfer has not been terminated, the terms of the contract consist of those terms in which the parties agree, the terms supplied by these Principles, and outside-law default rules.
***102** Subsection (b) also applies subject to other Sections of these Principles, such as § 1.11 (unconscionability), and outside law also may bar the formation of a contract or enforcement of some of its terms. Nor does subsection (b) preempt consumer-protection law. See § 1.12.

Electronic transfers

Section 2.01(b) is consistent with the general emerging approach to e-standard forms that allows for various kinds of acceptable electronic presentations of the standard form. For example, under current technology, if a transferee clicks on an “I agree” icon located at the end of a standard form, a reasonable transferor would believe the transferee intends to adopt the standard form as a contract. The same result may follow even if the terms are accessible via a hyperlink or a scroll-down window located near the “I agree” icon provided that the transferee must click “I agree” or the like. Other presentations may be more problematic. For example, mere reference to standard terms found on another page (browsewrap) may be insufficient under the “reasonable transferor” test unless the transferee is already well-acquainted with the terms, for example, from previous notices and transactions.
For several reasons, these Principles do not establish a bright-line rule for enforcement requiring, for example, clicking “I agree” at the end of an electronic standard form. First, as already mentioned, case law already presents a wide variety of formation types that are not easily captured by a narrow rule and, for the most part, handle the issues in an effective manner. These include situations in which the transferee is aware of the terms because of a course of dealing or because the software transferred is an update of previously downloaded software. In neither case does the safeguard of requiring a click at the end of the form seem necessary. Second, open-source transfers rarely follow the current click-wrap model, and these Principles should not upset an established custom unless problematic. Third, certain publishers of software, such as shareware, may have difficulty ensuring that Internet distributors of their software abide by bright-line formation requirements. Fourth, some

transactions simply may be too cumbersome yet sufficiently insignificant to require scrolling through a standard form to the end before agreeing to the form. Nevertheless, in the usual case, transferors should adopt the best practices of subsection (c) to ensure enforcement of the form, which include presenting the standard form in a manner that requires clicking "I agree" or the like at the end of or adjacent to the standard form. See Comment *c*.

Transfers of Packaged Software

In a typical transfer of packaged software, often called a "shrinkwrap transaction," the transferee acquires the packaged software either at a store or by placing an order on an Internet site or over the telephone, and pays with a credit card. The first opportunity to read the terms, usually contained in the package or presented electronically upon downloading and installing the software, occurs after the transferee brings the software package home or the software is delivered. Shrinkwrap agreements obviously exacerbate the problem of standard forms by requiring payment before the transferee sees the terms.

Courts first considering the shrinkwrap process (many of the cases, both old and recent, involve hard goods such as computers) did not favor shrinkwrap terms ***103** because of their unavailability until after payment. Commentators criticized UCITA for taking a contrary position. Under UCITA § 112(a), shrinkwrap terms are enforceable if a person "manifests assent" after an "opportunity to review" the terms. Under § 112(e)(1), "[a] person has an opportunity to review" a term if it is "made available in a manner that ought to call it to the attention of a reasonable person and permit review." Under § 112(e)(3), in shrinkwrap situations, with some exceptions, a "person has an opportunity to review only if it has a right to a return if it rejects the record." Writers thought that copyholders who brought their software home might delay opening the package or returning the software, or might decide not to return it because of their needs, the cost of returning it, or their unhappiness with only a few terms. In any of these situations, a copyholder probably would be bound to the terms under UCITA's test. Despite these criticisms of shrinkwrap presentations, many courts and commentators note the value and popularity of the shrinkwrap method of doing business.

As with electronic transfers of software, subsection (b) allows for various methods of packaged software contract formation, based on when a reasonable transferor would believe the transferee intends to be bound. For example, if a printed standard form is not separately wrapped from the software, a transferee may adopt the standard form as a contract by failing to return the software opened or unopened within a reasonable time after the transfer. If the transferee can read the standard form before opening the software because, for example, the standard form is printed on or attached to the package or the standard form and the software are separately wrapped within the package, a reasonable transferor may believe that the transferee intends to be bound upon opening the software wrapper.

Methods of notice and presentation of a printed standard form that fall between these examples require a case-by-case judicial analysis of what is reasonable under the circumstances. Notwithstanding the open-endedness of subsection (b), subsection (c) prescribes best practices that ensure enforcement of the standard form.

***104 Illustration:**

3. B, a consumer, purchases a copy of a word-processing program at a retail store. A is the manufacturer of the software. The software package contains a paper copy of the standard form attached to the package that is accessible without opening the software. A court may find that a reasonable transferor would believe that B intends to be bound to the standard form if B opens the software wrapper. A can ensure enforcement by following the requirements of subsection (c).

c. Best practices. Subsection (c) prescribes best practices and constitutes a safe-harbor provision for transferors. Compliance with subsection (c) should assure a transferor of the enforcement of the standard form, but failure to comply does not absolutely bar a transferor from otherwise proving assent. Unsophisticated transferors who may not have knowledge of the requirements of subsection (c) or cannot prove whether or what form of a standard form was posted at the time of contracting should not be precluded from establishing assent based on subsection (b). Further, as a Principles project, when appropriate, the goal is to present courts with perspectives on best practices, not to prescribe flat rules. Notwithstanding the nature of subsection (c), in many instances, failure to comply with the subsection should mean that the standard form will not be enforceable as failing the reasonable-transferor test of subsection (b).

Subsection (c) presents several requirements. The standard form must be reasonably accessible electronically prior to any particular transaction; upon initiation of a transaction, the transferee must receive reasonable notice of and access to the standard form prior to payment or completion of the transaction; the transferee must signify agreement at the end of or next to an e-standard form or, in the case of a standard form printed on or attached to a package or separately wrapped from the software, fail to return packaged software unopened within a reasonable time; the terms must be reasonably comprehensible; and electronic terms must be capable of storage and reproduction, such as by printing a hard copy.

Under subsection (c)(1), a standard form must be reasonably accessible electronically prior to initiation of the transaction at issue. Initiation of a transfer occurs when, viewed objectively, the transferee intends to contract and begins that process, such as by clicking on a "purchase" icon that precedes elicitation of payment information or by bringing packaged software to the check-out line in a retail store. Based on current technology, a transferee therefore can satisfy this aspect of subsection (c)(1) by maintaining an Internet presence and by posting its terms prior to the initiation of any particular transfer so that transferees can read and compare terms without entering a transaction at all. Accessibility issues under subsection (c)(1) also include the sufficiency of notice on the website of the standard form's availability, who must display the standard form, the manner of presentation, and when the standard form is available to read. For example, notice on the vendor's homepage of the availability of the standard form should satisfy (c)(1) if a visitor to the site could not help but see the notice.

Based on current technology, the standard form must be reasonably accessible from the website of the party asserting enforcement of the standard form against the transferee. This will usually be the software manufacturer or access provider, but it ***105** also may be a retail vendor with a web presence. It is hard to imagine that a software manufacturer would not already have a presence on the Internet but, at any rate, creating and maintaining a homepage should not be costly. Nor should disclosure of terms on the website be expensive.

Based on current technology, reasonable accessibility with respect to the manner of presentation means, for example, that the standard form must not disappear after appearing on a computer screen and must be conspicuously displayed. In addition, terms should be on the homepage or only a few clicks away because transferees may lose interest if they must search too far to reach their Internet destination.

Reasonable accessibility with respect to time means that the standard form is on display for a reasonable time prior to initiation of a transaction. A "reasonable time" depends on the circumstances, but would ordinarily mean that the terms are available during the period a typical shopper would look for them if interested in reading them prior to a transaction.

In an electronic transfer of software, subsection (c)(2)'s notice and access requirements require first that the notice is conspicuous both in terms of placement and size so that a transferee cannot help but see the notice. Further, the notice should constitute a hyperlink that leads directly to the standard form or, at minimum, the standard form should be only a few clicks away from the notice. The standard form itself also must be conspicuously displayed.

In a packaged transfer of software, subsection (c)(2) would be satisfied in the case of telephone orders by an announcement of the form's availability on the Internet. Although a transferee is unlikely to terminate the telephone call to access and read the standard form, a transferee should be made aware of that opportunity before payment. As mentioned in the Summary Overview to Topic 1, "[i]ncreasing the opportunity to read supports autonomy reasons for enforcing software standard forms . . . ." If the transferee is physically present in a store, the store can satisfy the requirements of subsection (c)(2) by posting or distributing the standard form or by making a computer available to view the terms online. Reasonable accessibility also requires the store to furnish adequate notice of the availability of the terms. Adequate notice requires that a reasonable shopper would understand that the terms are available on paper or by using a store computer prior to a purchase. Standard forms printed on or attached to the software package ordinarily are reasonably accessible as well. In the case of orders placed over the Internet for packaged software, the provider can adopt a clickwrap presentation of terms.

Under current technology, subsection (c)(3) would be satisfied by a clickwrap presentation of e-terms *after* the initiation of a transfer if an "I accept" icon appears at the end of the electronic standard form or next to it. The latter would be satisfied, for example, if the icon is adjacent to a scroll-down window that contains the standard form. This form of clickwrap closely resembles traditional modes of agreeing to paper standard forms. To signify acceptance and to complete a transaction, a transferee must click "I agree" or the like after terms are presented on a screen, just as a transferee must sign a paper standard form. Under (c)(3), a mere screen reference to terms that can be found somewhere else on the site would be insufficient as would a scroll-down window containing the standard form if the "I agree" icon is not on the same screen.

***106** In the case of packaged software, under current marketing processes, at least in theory, a transferee in a shrinkwrap transaction can return software after opening the software package and reviewing the terms. However, in reality many, perhaps most, retailers refuse to accept returns of software if the package is opened, presumably at least in part because transferees can easily make a copy of the software before returning it. Further, monitoring and policing the transferee to deter copying is problematic. In addition, some retailers have begun charging a "restocking fee" for returns.

To satisfy subsection (c)(3), the standard form must be accessible without opening the software package. In fact, under §

2.01(c), a transferee has several opportunities to read the standard form before opening the software package. Therefore, a transferee can return packaged software for a reasonable time, but only if the package is unopened. Under this approach, the transferor does not have to monitor and to police against transferee copying before returning the software. Further, the subsection should create incentives for transferors to make their standard forms separately accessible. Section 2.01(b) governs the question of a transferee's adoption of a standard form if the transferee opens a software package in which the standard form is not separately accessible on or in the package.
Under current technology, subsection (c)(4) is satisfied if the transferee can print a hard copy of the electronic terms and save them on the transferee's hard drive.

Illustrations:

4. B, a consumer, downloads a single copy of word-processing software from A, a software vendor. The standard form is reasonably accessible on the homepage of A's website prior to B's selection of A's software. B clicks "I agree" at the bottom of a standard form presented on a computer screen before the download begins. Section 2.01(c)(1) through (3) are satisfied.
5. B, a consumer, downloads a single copy of word-processing software from A, a software vendor. The standard form is reasonably accessible on the homepage of A's website prior to B's selection of A's software. B clicks "I agree to the terms" on a computer screen that states: "Please read the License because it includes important terms governing your use of the software." The quoted language constitutes a hyperlink that takes the transferee to the terms. Section 2.01(c)(3) would not be satisfied.
6. B, a merchant in business for herself, downloads from A, a software manufacturer, a single copy of a software "plug in" that serves to enhance the user's browser capabilities. The standard-form licensing agreement is available on A's homepage prior to the transaction. However, the license appears in a scroll-down window for two minutes and then disappears. Further, the standard form occupies such a small part of the screen that the form is not readable without special attention. The standard form is not reasonably accessible for both reasons, and § 2.01(c)(1) is not satisfied.
7. B, a small mortgage lender with three employees, telephones A, a software manufacturer, and orders one copy of computer software to assist in the preparation and management of loan closing documents. B pays by credit card. The software is available to the general public. The packaged software ***107** delivered to B includes a paper copy of the standard-form licensing agreement that is accessible without opening the software. The terms are not reasonably accessible on A's website prior to the transfer. A has not satisfied § 2.01(c)(1) of these Principles.

d. Comprehensibility. Subsection (d) follows current law in striking incomprehensible terms. Incomprehensible terms are "unintelligible" or ambiguous, use "obscure terminology," conflict with each other, or lack certainty, even after the admission of extrinsic evidence. General contract law asks whether a reasonable person of average intelligence and education can understand the language, and this test is applied here.

Illustration:

8. B, a merchant with three employees, downloads a single copy of word-processing software from A, a software vendor. The standard form is reasonably accessible on the homepage of A's website prior to B's purchase of A's software. B clicks "I agree" at the bottom of a standard form presented on a computer screen before the download begins. Nevertheless, the standard form, in garbled language, fails to clarify that A has conditioned B's access to the word-processing software on B accepting another program consisting of spyware that will monitor B's Internet activity and supply information to a third party. Under § 2.01(d), the spyware terms are not reasonably comprehensible and therefore not enforceable.

e. Benefits of website disclosure. These Principles adopt website disclosure as part of a package of best practices because it may be the best strategy for minimizing the problem of market failures in the retail-like software standard-form market. Vendors should follow the set of best practices to ensure enforcement of their standard forms and because disclosure is inexpensive. At the same time, at least in theory, vendors will be unable to ignore the increased number of readers of standard forms and shoppers for terms. Vendors will also be mindful of watchdog groups that can easily access the standard form and can spread the word about the use of unsavory terms. Vendors therefore may be moved to write fair terms to preserve their reputations and market shares. Further, website disclosure enables transferees to read and compare terms before the excitement of a particular purchase deflects their focus from the terms. Software vendors will be unable to segregate readers and offer them better terms because of the numbers of readers. Businesses in noncompetitive industries also may want to write reasonable terms because of the volume of readers. In theory, prices should adequately reflect the quality of the terms.

Section 2.01(c) also supports economic liberty reasons for enforcing contracts. The idea of individual assent is obviously more robust when transferees have an opportunity to read and compare terms. As Karl Llewellyn suggested, such transferees have given their blanket assent to reasonable standard terms, regardless of whether they decide to read and shop for terms.

As the primary strategy for dealing with market failures, website disclosure also avoids difficult questions, such as the need to distinguish transferees who should be relieved of their standard-form obligations from those who should remain ***108** bound. It is no surprise that transferees exhibit many different emotions and attitudes when they are e-shopping. The law cannot effectively distinguish those software shoppers who are capable of fending for themselves from those who, because of emotional or cognitive deficiencies, may fail to understand adverse terms.

f. Costs of website disclosure. Website disclosure should be relatively inexpensive. The costs of maintaining a web homepage and displaying a standard form should be insignificant, especially because virtually all software vendors have or soon will have a web page. Nor should enforcement costs be high. See Comment *g*.

g. Burden of production and persuasion. To minimize the cost of proving vendor compliance with § 2.01(c), § 2.01(e) allocates the burden of production and persuasion to the party asserting enforcement of the standard form. Evidence that the vendor displayed its standard form on its website for a reasonable time prior to the immediate transfer should not be too expensive.

Many vendors already maintain archival records of website content, including when material was introduced, modified, and removed. Server logs also indicate when and if a web page was modified. Under § 2.01(e), vendors must produce such evidence to disprove the claim that the vendor did not comply with § 2.01(c). The problem is that, under current technology, fraudulent vendors who control their digital records may be able to alter them. The trier of fact must evaluate the validity of the proof just as in the paper-contracting world juries must weed out fraudulent documents. Helpful corroborative evidence would include, for example, the testimony of visitors to the vendor's website at or near the time of the contested transaction. Vendors can locate these visitors through their web logs. In the longer term, improvements in technology and entrepreneurial activity will create new methods of proving website content over time. For example, entrepreneurs are already establishing independent archiving services that can lend credibility to a vendor's proof of web content.

***109 Illustration:**

9. B, a consumer, downloads a single copy of word-processing software from A, a software vendor. B clicks "I agree" at the end of a computer screen presenting the standard form before the download begins. The standard form disclaims all warranties. After a dispute develops over the quality of the software, B brings an action and alleges that the standard form was not available on A's website prior to the initiation of B's download of A's software. On this issue, A has the burden of producing evidence that the standard form was available on its homepage for a reasonable time prior to B's downloading the software. If A meets the burden of production, but the evidence is in equipoise after the court hears all of the evidence, A has failed to satisfy the burden of persuasion on this issue.

h. Will website disclosure succeed? The website disclosure provisions of subsection (c) will fail to motivate transferors to write reasonable standard terms if transferees still do not read and shop for terms or watchdog groups fail to spread the word or are otherwise ineffectual. Many commentators are not optimistic about disclosure as a remedy for market failures in standard-form contracting. They have observed the relative failure of truth-in-lending and other disclosure legislation. In addition, they have noted that, notwithstanding disclosure, people still have rational reasons for failing to read their forms, decisionmaking processes that deter careful reading, and a limited ability to process all of the information they do read. In the software-contract setting, transferees also exhibit impatience and exuberance that stand in the way of a measured response to disclosed terms. In fact, when a transferee is not contemplating an immediate purchase, she may find reading terms especially tedious and worthless. Further, the barrage of new information that disclosure will make available on the Internet may only increase the problem of information overload.

In addition, watchdog groups may be ill-equipped to police unsavory terms, either because they fail to identify particularly problematic terms or because they fail to spread the word adequately because of their lack of influence or the lack of exposure of their websites.

Perhaps the most ominous possibility is that website disclosure will fail to increase transferee reading of terms, but will create a safe haven for businesses to draft marginal ones. Most courts contemplating the enforcement of standard terms under doctrines such as unconscionability look for problems with the bargaining process and with the substantive unfairness of the terms. The more outrageous the bargaining process, the more likely a court will strike a substantive term, and vice versa. In light of the judicial acceptance of such a sliding scale, marginal terms that do not quite meet the test of substantive abuse may be enforceable because of their disclosure on the website. In fact, there may be some justice to this approach, especially in situations in which competitors of the transferor offered better terms so that the transferee had a choice. After all, if a term is not substantively unconscionable, is fully disclosed, and the transferee had options, on what grounds should it be stricken? Indeed, § 1.11 of these Principles adopts the traditional sliding-scale approach of unconscionability because of its soundness.

***110** Nonetheless, increasing the enforcement of some marginal terms is a real concern. Still, affording transferees the opportunity to read and compare terms prior to a transaction as well as during or, sometimes in the case of shrinkwrap, even after one is likely the most promising of many imperfect solutions. Other methods of dealing with market failures run into numerous problems of their own. See supra the Summary Overview to Topic 1 of this Chapter. Further, disclosure is inexpensive and unlikely to impede commerce even if it fails to resolve market imperfections. In addition, including businesses in the coverage of § 2.01 should increase the incentive of drafters to write reasonable terms because businesses are more likely to read disclosed terms. And even if, in the short run, software vendors rely on § 2.01(b) instead of (c) or benefit from disclosure more than transferees, eventually the word should get out about a vendor who fails to disclose terms on its website and who continues to employ unsavory terms. Such a vendor's incentives should change as it loses market share.

Illustration:

10. B, a consumer, downloads a single copy of virus-protection software from A, a software vendor. The governing standard form is reasonably accessible on the homepage of A's website prior to B's selection of A's software. B clicks "I agree," at the end of a computer screen presenting the standard form before the download begins. A standard term allows the software vendor to "collect non-personal information about B's web surfing and computer use." The term may be substantively suspect, but its disclosure prior to the transaction makes a determination of unconscionability problematic. Nevertheless, in the long run, A may replace the provision because of adverse publicity and the loss of market share.

REPORTERS' NOTES

Comment a. Scope. For a discussion of contract law's treatment of small businesses, see generally Larry T. Garvin, Small Business and the False Dichotomies of Contract Law, 40 Wake Forest L. Rev. 295 (2005) (If a firm already must disclose some types of information to consumers, the marginal cost of disclosing it to small businesses is slight."); see also Nim Razook, The Politics and Promise of UCITA, 36 Creighton L. Rev. 643, 655 (2003) (small businesses cannot bargain but have more to lose than consumers); Alan Schwartz & Robert E. Scott, Contract Theory and the Limits of Contract Law, 113 Yale L.J. 541, 545 (2003) (exempting businesses with less than 5 employees from proposed legal treatment of business contracts).

The requirements of a "standard-form transfer of generally available software" that the software must be available to the public and in a quantity consistent with a retail sale, are derived from UCITA's definition of a "mass-market transaction." Mass-market transactions are roughly transactions aimed at a broad market and governed by a standard form. See UCITA § 102(a)(44) (1999). "The prototypical retail context . . . does not include transactional contexts, whether online or otherwise, that center on the business-business trade. . . . While retail merchants make transactions with other businesses, the predominant type of transaction involves consumers. Transactions in a retail market involve relatively small quantities, non-negotiated terms, and transfers to an end user rather than one who plans to resell or re-license the product." UCITA § 102, Comment 38 (1999). See generally Jean Braucher, The Failed Promise of the UCITA Mass-Market Concept and its Lessons for Policing of Standard-Form Contracts, 7 J. Small & Emerging Bus. L. 393 (2003).

Comment b. General rule. Subsection (b) is based on general rules of contract formation. See, e.g., Restatement Second, Contracts §§ 20 and 50. Courts generally enforce clickwrap terms and similar processes on the theory that a transferee's clicking on an "I agree" icon forms a contract. See, ***111** e.g., ESL Worldwide.com, Inc. v. Interland, Inc., 06-CV-2503 (S.D.N.Y. 2006); Person v. Google Inc., 2006 WL 2884444 (S.D.N.Y. 2006); Recursion Software, Inc. v. Interactive Intelligence, Inc., 425 F. Supp. 2d 756 (N.D. Tex. 2006); Hotels.com, L.P. v. Canales, 195 S.W.3d 147 (Tex. Ct. App. 2006); Seibert v. Amateur Athletic Union of U.S., Inc., 422 F. Supp. 2d 1033 (D. Minn. 2006); Salco Distributors, LLC v. iCode, Inc., 2006 WL 449156 (M.D. Fla. 2006); Davidson & Associates, Inc. v. Internet Gateway, 422 F.3d 630 (8th Cir. 2005);

Motise v. America Online, Inc., 346 F. Supp. 2d 563 (S.D.N.Y. 2004); Mortgage Plus, Inc. v. DocMagic, Inc., 2004 U.S. Dist. LEXIS 20145 (D. Kan. 2004); Novak v. Overture Services, 309 F. Supp. 2d 446 (E.D.N.Y. 2004) (entire form not visible in scroll box without scrolling down); De John v. TV Corp., 245 F. Supp. 2d 913 (N.D. Ill. 2003) (terms available through hyperlink); i.LAN Systems, Inc. v. Netscout Service Level Corp., 183 F. Supp. 2d 328 (D. Mass. 2002); In re Realnetworks, Inc., Privacy Litigation, No. 00 C 1366, 2000 WL 631341, at *5-6 (N.D. Ill., May 8, 2000); Caspi v. Microsoft Network, 732 A.2d 528 (N.J. Super. Ct. App. Div. 1999); Moore v. Microsoft Corp., 741 N.Y.S. 2d 91, 92 (N.Y. App. Div. 2002); Barnett v. Network Solutions, Inc., 38 S.W.3d 200 (Tex. Ct. App. 2001); M.A. Mortenson Co. v. Timberline Software Corp., 998 P.2d 305, 313 (Wash. 2000) (en banc).

Browsewrap is more problematic because it does not require transferees to see the terms before "agreeing" to them. In Specht v. Netscape Communications Corp., 306 F.3d 17 (2d Cir. 2002), the court held that Netscape's presentation of terms failed reasonably to notify Specht of the standard terms because Specht could download the software without seeing the terms. Netscape's presentation included a hyperlink labeled, "Please review and agree to the terms of the . . . software license agreement before downloading and using the software," but according to the court, this hyperlink constituted merely an invitation to peruse the terms, not a notice that enforceable contract terms would follow. Nevertheless, businesses continue to use similar hyperlinks, such as "terms and conditions" or even "legal." See America Online, Inc. v. National Health Care Discount, Inc., 121 F. Supp. 2d 1255, 1261 (N.D. Iowa 2000); Ticketmaster Corp. v. Tickets.com, Inc., 2003 WL 21406289 (C.D. Cal., 2003). Further, some courts continue to enforce such a presentation:

> The conclusion of the terms paragraph states "[b]y submitting this query, you agree to abide by these terms." . . . Verio does not argue that it was unaware of these terms, only that it was not asked to click on an icon indicating that it accepted the terms. However, in light of this sentence at the end of Register.com's terms of use, there can be no question that by proceeding to submit a WHOIS query, Verio manifested its assent to be bound by Register.com's terms of use, and a contract was formed and subsequently breached.

Register.com, Inc. v. Verio, Inc., 126 F. Supp. 2d 238, 248 (S.D.N.Y. 2000), aff'd, 356 F.3d 393 (2d Cir. 2004); see also Hubbert v. Dell Corp., 296 Ill. Dec. 258 (Ill. App. 2005) ("statement that the sales were subject to the defendant's 'Terms and Conditions of Sale,' combined with making the 'Terms and Conditions of Sale' accessible online by blue hyperlinks, was sufficient notice to the plaintiffs that purchasing the computers online would make the 'Terms and Conditions of Sale' binding on them."); Ticketmaster Corp. v. Tickets.com, Inc., 2003 WL 21406289 (C.D. Cal. 2003) (notice of terms prominent, so that Tickets.com said the terms "couldn't be missed."). The Ticketmaster court merely denies summary judgment for Tickets.com, it does not pronounce the enforcement of browsewrap. In short, browsewrap may be acceptable, according to some courts, when the transferee should have knowledge of the standard form from previous visits to a site or based on reasonable notice.

"'Shrinkwrap licenses' are pre-printed forms, self-designated as 'licenses,' that appear under the plastic wrap of a box, or inside a box of prepackaged software." Pamela Samuelson, Intellectual Property and Contract Law for the Information Age: The Impact of Article 2B of the Uniform Commercial Code on the Future of Information and Commerce, 87 Cal. L. Rev. 1, 4 (1999); see also ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1449 (7th Cir. 1996) ("The 'shrinkwrap license' gets its name from the fact that retail software packages are covered in plastic or cellophane 'shrinkwrap'. . . .").

***112** For cases unfavorable to shrinkwrap terms (some involving hard goods), see, e.g., Licitra v. Gateway, Inc., 734 N.Y.S.2d 389, 391-394 (N.Y. Civ. Ct. 2001); Klocek v. Gateway, Inc., 104 F. Supp. 2d 1332 (D. Kan. 2000); United States Surgical Corp. v. Orris, Inc., 5 F. Supp. 2d 1201, 1205-1207 (D. Kan. 1998); Step-Saver Data Systems v. Wyse Technology, Inc., 939 F.2d 91 (3d Cir. 1991); Arizona Retail Systems, Inc. v. The Software Link, Inc., 831 F. Supp. 759 (D. Ariz. 1993); Lively v. IJAM, Inc., 2005 Okla. Civ. App. LEXIS 18 (Okla. Civ. App. 2005); see also Mark A. Lemley, Intellectual Property and Shrinkwrap Licenses, 68 S. Cal. L. Rev. 1239, 1288-1289 (1995).

Step-Saver, a leading case, involves special facts. A business transferee of software first telephoned an order and then sent a purchase order. The software developer then shipped the software with an invoice including terms essentially the same as in the purchase order. It was no surprise, therefore, when the court treated the additional terms of the license that were printed on the package of the software as unenforceable proposals that materially altered the agreement. See U.C.C. § 2-207(2). The case is therefore weak support for the proposition that shrinkwrap terms should not be enforceable in general-market transactions where a transfer of forms does not precede the standard-form license, especially when the transferee knows the terms are on or in the box.

Other courts support shrinkwrap as a valuable method of doing business: "Notice on the outside, terms on the inside, and a right to return the software for a refund if the terms are unacceptable (a right that the license expressly extends), may be a means of doing business valuable to buyers and sellers alike.” ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1451 (7th Cir. 1996) (citing E. Allan Farnsworth, I Farnsworth on Contracts § 4.26 (1990)). In fact, the judicial trend may be turning in favor of enforcing shrinkwrap terms after Judge Easterbrook’s opinions in *ProCD* and Hill v. Gateway 2000, Inc., 105 F.3d 1147 (7th Cir. 1997). In *Hill*, Easterbrook emphasized the value and frequency of terms-after-payment transactions, and held that a contract to purchase a computer was formed after the purchaser kept the computer for 30 days without returning it. By keeping the computer for 30 days, after having had the opportunity to review the terms and return the computer, the purchaser accepted the terms after payment, including an arbitration clause.

Many recent decisions evaluating shrinkwrap, dealing either with goods or software, follow *ProCD* and *Hill*. See, e.g., Meridian Project Systems, Inc. v. Hardin Const. Co., LLC, 426 F. Supp. 2d 1101, 1105-1107 (E.D. Cal. 2006); Arizona Cartridge Remanufacturers Ass’n, Inc. v. Lexmark Intern., Inc., 421 F.3d 981 (9th Cir. 2005) (shrinkwrap on printer ink cartridge); Davidson & Assoc. v. Jung, 422 F.3d 630 (8th Cir. 2005); Novell, Inc. v. Unicom Sales, Inc., 2004 WL 1839117 at *11 (N.D. Cal. 2004) (“[C]ontracts contained in software boxes, which are sometimes referred to as ‘shrink wrap licenses,’ are no less enforceable than any other type of contract.”); i-Systems, Inc. v. Softwares, Inc., 2004 WL 742082 (D. Minn. 2004); 1-A Equipment Co. v. Icode, Inc., 2000 Mass. App. Div. 30 (Mass. App. Ct. 2003) (upholding a standard-form agreement between businesses printed on the outside of the box containing the software and displayed on the screen during downloading); O’Quin v. Verizon Wireless, 256 F. Supp. 2d 512 (M.D. La. 2003); M.A. Mortenson Co. v. Timberline Software Corp., 998 P.2d 305 (Wash. 2000) (en banc); Bischoff v. Direct TV, Inc., 180 F. Supp. 2d 1097 (C.D. Cal. 2002); Lozano v. AT&T Wireless, 216 F. Supp. 2d 1071 (D. Cal. 2002), overruled in part on other grounds by Ingle v. Circuit City Stores, Inc., 328 F.3d 1165, 1176 (9th Cir. 2003); Peerless Wall and Window Coverings, Inc. v. Synchronics, Inc., 85 F. Supp. 2d 519 (W.D. Pa. 2000); Westendorf v. Gateway, 2000 WL 307369 (Del. Ch. 2000), aff’d, 763 A.2d 92 (Del. 2000); Brower v. Gateway 2000, Inc., 676 N.Y.S. 2d 569 (N.Y. App. Div. 1998); Stenzel v. Dell, Inc., 870 A.2d 133, 140 (Me. 2005); Chandler v. AT&T Wireless Services, Inc., 358 F. Supp. 2d 701 (S.D. Ill 2005).

The court in Defontes v. Dell Computers Corp., 2004 WL 253560 at *7 (R.I. Super. 2004), failed to enforce a shrinkwrap contract, but distinguished *ProCD*: “[T]he instant case can quickly and easily be distinguished from ProCD. A very significant difference lies in the fact that the agreement in ProCD contained an express disclaimer which indicated that if the customer was unwilling to agree to the terms and conditions as presented, the customer could reject those terms by simply returning the product. . . . Accordingly, this Court finds that Plaintiffs did not “knowingly consent” to the terms ***113** and conditions of the agreement because they were not given sufficient notice of the method to reject those terms.” See also Rogers v. Dell Computer Co., 127 P.3d 560 (Okla. 2005).

Technology may have rendered *ProCD*’s approval of terms after payment obsolete because the decision was based in part on the difficulty of providing notice of and access to a standard form. Today pre-transaction disclosure on the Internet is not difficult or expensive.

In many early shrinkwrap cases, too much hinged on a court’s finding of when a contract was formed. If a court found that a contract was formed before the transferee received the software, the shrinkwrap terms, which the transferee received later, dropped out. See, e.g., Arizona Retail Systems, Inc. v. The Software Link, Inc., 831 F. Supp. 759 (D. Ariz. 1993). On the other hand, if a court found that a contract was formed only after the transferee kept the software for more than a prescribed period, the shrinkwrap terms were enforceable. See Hill v. Gateway 2000, Inc., 105 F.3d 1147 (7th Cir. 1997). But the time of formation should not determine whether shrinkwrap terms are enforceable. For one thing, parties to a transfer rarely think about the precise time in which they become bound, so that formation, which depends on the parties’ intentions, only confuses the analysis. Furthermore, even if a court found that the parties formed a contract at the time of payment, a court could find that a transferee’s use of software after the prescribed return period constitutes an agreement to modify the contract to include the terms. See Robert A. Hillman, Rolling Contracts, 71 Fordham L. Rev. 743, 754-755 (2002). These Principles therefore do not hinge their best practices on when a contract was formed, but on whether there was reasonable disclosure prior to and during the transaction. See Comment *c*.

Comment c. Best practices. See generally Robert A. Hillman, On-Line Boilerplate: Would Mandatory Website Disclosure of E-Terms Backfire?, 104 Mich. L. Rev. 837 (2006). The American Bar Association, in its review of UCITA, recommended that the law require publishers of software to make their forms available before purchase. American Bar Association Working Group Report on the Uniform Computer Information Transactions Act (“UCITA”), Jan. 31, 2002, at 8; see Sandy T. Wu, Uniform Computer Information Transactions Act: Failed to Appease its Opponents in Light of the Newly Adopted Amendments, 33 Sw. U. L. Rev. 307 (2004).

Under current technology, people lose interest if their search proves fruitless after a few clicks. “There are design prescriptions gleaned from empirical studies of web-searching behavior that claim that if in three clicks users do not find information that at least suggests they are on the right track, they will leave the site." Gary M. Olson & Judith S. Olson, Human-Computer Interaction: Psychological Aspects of the Human Use of Computing, 54 Annual Review of Psychology 491, 500 (2003). Subsection (c)(1) therefore requires terms that are reasonably accessible, which should deter vendors from requiring long searches for the terms.

A clickwrap presentation of terms during a transfer should satisfy subsection (c)(2). As noted in Comment *b*, courts generally enforce "clickwrap" agreements. See, e.g., Barnett v. Network Solutions, Inc., 38 S.W.3d 200, 204 (Tex. Ct. App. 2001) ("Parties to a written contract have the obligation to read what they sign; and, absent actual or constructive fraud, . . . they are not excused from the consequences attendant upon a failure to read the contract. The same rule applies to contracts which appear in an electronic format."); Caspi v. Microsoft Network, 732 A.2d 528, 532 (N.J. Super. Ct. App. Div. 1999); supra Reporters' Note to Comment *b* to this Section. But some courts are wary of browsewrap. See, e.g., Specht v. Netscape Communications Corp., 306 F.3d 17, 32 (2d Cir. 2002) ("[W]here consumers are urged to download free software at the immediate click of a button, a reference to the existence of license terms on a submerged screen is not sufficient to place consumers on inquiry or constructive notice of those terms."); but see Register.com, Inc. v. Verio, Inc, 356 F.3d 393 (2d Cir. 2004).

On retail return policies, see, e.g., Deborah Tussey, UCITA, Copyright, and Capture, 21 Cardozo Arts & Ent. L. J. 319, 329 n.51 (2003) ("Apparently, neither Judge Easterbrook, who wrote the ProCD opinion, nor NCCUSL's drafters, buy their own software from retail outlets. Any consumer could have informed them that software retailers refuse to accept returns of opened software packages."); Glen O. Robinson, Personal Property Servitudes, 71 U. Chi. L. Rev. 1449, 1475 n.92 (2004) ("A class action suit has been filed against Microsoft and various retailers claiming ***114** a conspiracy to defraud the public on the grounds that the retailers have refused to accept return of opened software packages by customers who refuse to accept the license terms.").

Subsection (c)(4) is partially taken from Electronic Commerce (EC Directive) Regulations 2002 (2002) SI 2013, available at http:// www.opsi.gov.uk/si/si2002/20022013.htm.

The Electronic Signatures in Global and National Commerce Act, 15 U.S.C. § 7001 et. seq. (2000) ensures that electronic contracts, signatures, and records are enforceable.

Comment d. Comprehensibility. Subsection (d) follows traditional contract law. See, e.g., U.S. v. Data Translation, Inc., 984 F.2d 1256, 1259 (1st Cir. 1992) ("When a single portion of a lengthy contract is unintelligible, but yet severable from the remainder, a court may strike that portion itself without affecting the enforceability of the remainder."); John Deere Leasing Company v. Blubaugh, 636 F. Supp. 1569, 1574 (D. Kan. 1986) ("Moreover, the court is convinced that even if he had read it, he would not have understood it. The lease was preprinted and so complex by virtue of its legalistic language that a party with no training in law or finance could not possibly decipher the potential for disadvantage.").

The claim of incomprehensibility is frequently made, but quite often not successful in reported decisions. See, e.g., Kuehn v. Stanley, 91 P.3d 346, 353 (Ariz. Ct. App. 2004) ("The disclaimer was not incomprehensible nor did it bind the Kuehns to an unconscionable term≡."). Nevertheless, comprehensibility is one of the components of unconscionability. See, e.g., Wille v. Southwestern Bell Tel. Co., 549 P.2d 903, 906-907 (Kan. 1976) ("[C]ourts have identified a number of factors or elements as aids for determining [unconscionability's] applicability to a given set of facts. These factors include: . . . (7) phrasing clauses in language that is incomprehensible to a layman or that divert his attention from the problems raised by them or the rights given up through them. . . .").

A term is "unintelligible" or "uncertain" when a court "cannot decide what the promise means, even by looking to other parts of the writing or to admissible parol evidence." Bayside Gardens Apartment Ventures v. Security Pacific Savings Bank, 1996 WL 442689, at *3-4 (Wash. Ct. App. 1996). A party must have a "reasonable opportunity to understand the terms of the contract" based on the party's background and the technicality of the terms. Williams v. Walker-Thomas, 350 F.2d 445, 449 (D.C. Cir. 1965). See also M.A. Mortenson Co., Inc. v. Timberline Software Corp., 140 Wash. 2d 568, 588 (Wash. 2000) (en banc) ("Mortenson is . . . not an inexperienced retail consumer, but a nationwide construction contractor that has purchased licensed software from Timberline in the past."); Melvin A. Eisenberg, The Limits of Cognition and the Limits of Contract, 47 Stan. L. Rev. 211, 241 (1995) ("Terms are often written in exceedingly technical prose.").

Comment e. Benefits of website disclosure. See generally Christian J. Meier-Schatz, A Fresh Look at Business Disclosure, 51 Am. J. Comp. L. 691 (2003) (book review). For a discussion of the benefits of website disclosure, see Robert A. Hillman, On-Line Boilerplate: Would Mandatory Website Disclosure of E-Terms Backfire?, 104 Mich. L. Rev. 837 (2006).

For a general discussion of watchdog groups, see Ronald Chen & Jon Hanson, The Illusion of Law: The Legitimating

Schemas of Modern Policy and Corporate Law, 103 Mich. L. Rev. 1, 53-54 (2004) ("Consumer-oriented groups, such as the Consumers Union, act as informers and watchdogs on behalf of consumers."). E-watchdog groups include the Electronic Frontier Foundation, which lists "dangerous terms" commonly found in licensing agreements, including those that bar criticism of products, permit monitoring of a transferee's computer, and allow modification of agreements without notice or consent. See Annalee Newitz, Dangerous Terms: A User's Guide to EULAs, Electronic Frontier Foundation, available at http://www.eff.org/wp/eula.php (last accessed May 5, 2005). See also Larry Magid, It Pays to Read License Agreements, PC Pitstop, available at http://www.pcpitstop.com/spycheck/eula.asp (last accessed March 28, 2005), discussing the licensing agreement that accompanies Gain Publishing's eWallet software, which authorizes the collection of data about a consumer's reading behavior, TV interests, and communication partners, effectively allowing the company to "follow [the transferee] around."

***115** Llewellyn's concept of blanket assent is discussed and criticized in Todd D. Rakoff, Contracts of Adhesion: An Essay in Reconstruction, 96 Harv. L. Rev. 1174 (1983). For a discussion of reasons for enforcing standard forms after notice and an opportunity to read them, see James J. White, Contracting Under Amended 2-207, 2004 Wis. L. Rev. 723, 749 (2004) ("we still cling to the fiction that printed forms become contracts upon the parties' agreement.").

See Michael J. Trebilcock, The Limits of Freedom of Contract 163 (1993), for a useful discussion of the challenges in determining who should be entitled to relief from contractual obligations. According to one study, e-shoppers may be confident or apprehensive, and highly involved or apathetic. Letecia N. McKinney, Internet Shopping Orientation Segments: An Exploration of Differences in Consumer Behavior, 32 Family and Consumer Sciences Research Journal 408, 418-421 (2004).

Comment f. Costs of website disclosure. Businesses have failed to mount an effective argument against the requirement of website disclosure, although few software vendors presently display their terms on their website. See Jean Braucher, Delayed Disclosure in Consumer E-Commerce as an Unfair and Deceptive Practice, 46 Wayne L. Rev. 1805, 1806-1807 (2000) (reporting the author's finding that 87.5% of software companies did not make pre-contract disclosures of their terms).

For a discussion of methods of implementing effective e-disclosure, see Christina L. Kunz et al., Browse-Wrap Agreements: Validity of Implied Assent in Electronic Form Agreements, 59 Bus. Lawyer 279 (2003).

Comment g. Burden of production and persuasion. For a discussion of burden of production and persuasion as they apply to commercial law, see Ronald J. Allen & Robert A. Hillman, Evidentiary Problems In—And Solutions For—The Uniform Commercial Code, 1984 Duke L.J. 92, 95 (1984) ("The party with the burden of production must adduce sufficient evidence on an issue to raise a jury question, or, in other words, to avoid a directed verdict."); id. at 105 ("A burden of persuasion is a requirement that a party convince the finder of fact to a previously specified level of certainty of the truth of an issue."). See generally Robert A. Hillman, On-Line Boilerplate: Would Mandatory Website Disclosure of E-Terms Backfire?, 104 Mich. L. Rev. 837 (2006).

For a discussion of web-archiving activity in the context of a recent lawsuit, see Tom Zeller, Jr., Keeper of Expired Web Pages is Sued Because Archive was Used in Another Suit, N.Y. Times, July 13, 2005, at C9 ("The Internet Archive was created in 1996 as the institutional memory of the online world, storing snapshots of ever-changing Web sites and collecting other multimedia artifacts. . . . The Internet Archive uses Web-crawling "bot" programs to make copies of publicly accessible sites on a periodic, automated basis. Those copies are then stored on the archive's servers for later recall using the Wayback machine.").

Comment h. Will website disclosure succeed? See generally Robert A. Hillman, On-Line Boilerplate: Would Mandatory Website Disclosure of E-Terms Backfire?, 104 Mich. L. Rev. 837 (2006). For an evaluation of disclosure in consumer markets, see William Whitford, The Functions of Disclosure Regulation in Consumer Transactions, 1973 Wis. L. Rev. 400 (1973). For the view that people will not read terms disclosed prior to a transaction, see Clayton P. Gillette, Rolling Contracts as an Agency Problem, 2004 Wis. L. Rev. 679, 687-688 ("It is unlikely that the Internet buyer will devote more time to reading text on the website than more traditional buyers devote to reviewing the terms of tangible [standard forms]."). See also Alan M. White & Cathy L. Mansfield, Literacy and Contract, 13 Stan. L. & Pol'y Rev. 233, 261 (2002) ("Consumer disclosures retain their appeal for lawmakers despite the growing realization that they do not work. Existing disclosure forms, meant to remedy the incomprehensibility of consumer transactions, are viewed widely as inadequate to the task.").

Some commentators believe disclosure laws such as truth-in-lending are or could be effective. See, e.g., Colin Camerer et al., Regulation for Conservatives: Behavioral Economics and the Case for "Asymmetric Paternalism," 151 U. Pa. L. Rev. 1211, 1233 (2003) ("The [Federal Truth in Lending] Act provides potentially substantial benefits to those who are less than rational . . . ."); Christopher L. Peterson, ***116** Truth, Understanding, and High-Cost Consumer Credit: The Historical Context of the

Truth In Lending Act, 55 Fla. L. Rev. 807, 815 (2003) ("With aggressive and practical reform, Truth in Lending may blossom into a much more effective strategy . . . .").
Most courts entertaining an unconscionability or related claim, including those involving e-commerce, look for both procedural and substantive unconscionability. See § 1.11 of these Principles.
Illustration 1 is loosely based on In re Realnetworks, Inc., Privacy Litigation, No. 00 C 1366, 2000 WL 631341 (N.D. Ill., May 11, 2000).
Illustration 2 is loosely based on M.A. Mortenson Co. v. Timberline Software Corp., 998 P.2d 305 (Wash. 2000).
Illustration 5 is taken from UCITA § 112 Comment 5, Illustration 1 (1999), but reaches a different result.
Illustration 7 is loosely based on Mortgage Plus, Inc. v. DocMagic, Inc., 2004 U.S. Dist. LEXIS 20145 (D. Kan. 2004).
Illustration 10 is based on the discussion in Jane K. Winn, Spyware: Contracting Spyware by Contract, 20 Berkeley Tech. L.J. 1345, 1353 (2005).
Illustration 8 is based on Larry Magid, It Pays to Read License Agreements, PC Pitstop, available at http://www.pcpitstop.com/spycheck/eula.asp (last accessed March 28, 2005). Magid quotes the licensing agreement that accompanies Gain Publishing's eWallet software, which includes a term which allows the software vendor to "collect[] certain non-personally identifiable information about [a consumer's] web surfing and computer usage." See also Christina L. Kunz, et al., Browse-Wrap Agreements: Validity of Implied Assent in Electronic Form Agreements, 59 Bus. Lawyer 279, 280-281 (2003) ("[T]he terms most commonly providing the impetus to challenge the validity of electronic standard form agreements are dispute resolution clauses, forum selection clauses, disclaimers of warranty, limitations of liability, and prohibitions on the commercial use of the data or software available on the site."); People v. Network Associates, Inc., 758 N.Y.S.2d 466 (N.Y. Sup. Ct. 2003).

B. OTHER STANDARD-FORM AGREEMENTS [to be written]

TOPIC 2 CUSTOM-WRITTEN SOFTWARE AGREEMENTS [to be written]

[FN1]. For a discussion, see Robert A. Hillman & Jeffrey J. Rachlinski, Standard-Form Contracting in the Electronic Age, 77 N.Y.U. L. Rev. 429 (2002). The classic article is Friedrich Kessler, Contracts of Adhesion— Some Thoughts About Freedom of Contract, 43 Colum. L. Rev. 629 (1943).

[FN2]. E. Allan Farnsworth, Farnsworth on Contracts [] 4.26, at 533 (Aspen Law & Business 2d ed. 1998).

[FN3]. See Clayton P. Gillette, Rolling Contracts as an Agency Problem, 2004 Wis. L. Rev. 679, 698-703 (2004).

[FN4]. Hillman & Rachlinski, supra note 1, at 475-476.

[FN5]. See, e.g., Mark A. Lemley, Beyond Preemption: The Law and Policy of Intellectual Property Licensing, 87 Cal. L. Rev 111 (1999); Jean Braucher, The Failed Promise of the UCITA Mass-Market Concept and Its Lessons for Policing of Standard-Form Contracts, 7 J. Small & Emerging Bus. L. 393, 410 (2003).

[FN6]. See Robert A. Hillman, On-Line Boilerplate: Would Mandatory Website Disclosure of E-Terms Backfire?, 104 Mich. L. Rev. 837 (2006) [hereinafter On-Line Boilerplate] and Robert A. Hillman, On-Line Consumer Standard-Form Contracting Practices: A Survey and Discussion of Legal Implications, in "Is Consumer Protection an Anachronism in the Information Economy?" 283, Ashgate Press (2006) [hereinafter Survey].

[FN7]. See Hillman & Rachlinski, supra note 1, at 452-453. See also Russell Korobkin, Bounded Rationality, Standard-form Contracts, and Unconscionability, 70 U. Chi. L. Rev. 1203, 1222-1223 (2003). James Maxeiner reports on the contracts listserve, June 27, 2006, that the "World of Warcraft's" terms of use agreement, license agreement, and privacy policy consist of a total of 10,000 words. The site is found at http:// www.worldofwarcraft.com/legal/termsofuse.html.

[FN8]. "The requirement of a signature is nothing less than the law's signal to transferees that the document in front of them is important and that they should be cautious about agreeing to it." Hillman & Rachlinski, supra note 1, at 481.

[FN9]. Id. at 479-480. See also Hillman, On-Line Boilerplate, supra note 6.

[FN10]. See, e.g., Mark A. Lemley, Intellectual Property and Shrinkwrap Licenses, 68 S. Cal. L. Rev. 1239 (1995); Michael Dessent, Browse-Wraps, Click-Wraps and Cyberlaw: Our Shrinking (Wrap) World, 25 T. Jefferson L. Rev. 1 (2002). See also Specht v. Netscape Communications Corp., 306 F.3d 17, 32 (2d Cir. 2002) (refusing to enforce a browse-wrap agreement).

[FN11]. Robert A. Hillman, Rolling Contracts, 71 Fordham L. Rev. 743, 744 (2002).

[FN12]. Hillman & Rachlinski, supra note 1, at 464. See, e.g., Specht v. Netscape Communications Corp., 306 F.3d 17, 32 (2d Cir. 2002).

[FN13]. Hillman & Rachlinski, supra note 1, at 464; Juliet M. Moringiello, Signals, Assent and Internet Contracting, 57 Rutgers L. Rev. 1307 (2005).

[FN14]. Korobkin, supra note 7, at 1264.

[FN15]. Hillman & Rachlinski, supra note 1, at 481-482. "Studies of e-commerce confirm the suspicion that the Internet is not yet a consumer's paradise. In theory, the easy access to information that the Internet provides should reduce prices and reduce price dispersion between businesses that supply similar goods. Although e-commerce has had this effect on some commodities, wide dispersions in prices can be found. In some cases, the disparities are no lower on the Internet than in the real world. These results indicate that e-consumers have yet to exploit the full benefits of the electronic environment. Despite the Internet's apparent benefits for consumers, these findings reveal that businesses still have many opportunities to exploit consumers' lack of information about goods and services." Id. at 473-474.

[FN16]. See Jon D. Hanson & Douglas A. Kysar, Taking Behavioralism Seriously: Some Evidence of Market Manipulation, 112 Harv. L. Rev. 1420, 1439-1450 (1999).

[FN17]. See Alan Schwartz & Louis L. Wilde, Imperfect Information in Markets for Contract Terms: The Examples of Warranties and Security Interests, 69 Va. L. Rev. 1387, 1409 (1983).

[FN18]. See Hillman & Rachlinski, supra note 1, at 469-470 & n.222; Avery Katz, Standard Form Contracts, 3 New Palgrave Dictionary of Economics and the Law 505 (Peter Newman ed., 1998) ("If reputational concerns lead drafters of forms to moderate their opportunism, regulation may be largely unnecessary.").

[FN19]. See Hillman & Rachlinski, supra note 1, at 469.

[FN20]. Id. at 472.

[FN21]. Id. at 469-470.

[FN22]. Id. at 481-482; Hillman, Survey, supra note 6.

[FN23]. See, e.g., Larry Magid, It Pays to Read License Agreements, PC Pitstop, available at http://www.pcpitstop.com/spycheck/eula.asp (last accessed March 28, 2005) (discussing the licensing agreement that accompanies Gain Publishing's eWallet software, which authorizes the collection of data about a consumer's reading behavior, TV interests, and communication partners, effectively allowing the company to "follow [the transferee] around"); Annalee Newitz, Dangerous Terms, A User's Guide to EULAs, Electronic Frontier Foundation, available at http://www.eff.org/wp/eula.php (last accessed May 5, 2005).

[FN24]. See, e.g., N.Y. Pers. Prop. § 428 (McKinney 2005).

[FN25]. Hillman & Rachlinski, supra note 1, at 479-480.

[FN26]. Cf. Braucher, supra note 5, at 404; Korobkin, supra note 7, at 1265.

[FN27]. Hillman & Rachlinski, supra note 1, at 492 ("If e-consumers have some opportunity to read the standard terms before deciding whether to enter into the contract, then courts should apply Llewellyn's presumption of enforceability of such terms. Just as in the paper world, consumers understand the existence of standard terms and agree to be bound by them, even though they rarely choose to read them.").

[FN28]. Id. at 461-462; see also Jeffrey E. Thomas, An Interdisciplinary Critique of the Reasonable Expectations Doctrine, 5 Conn. Ins. L.J. 295, 308 & n.63 (1998).

[FN29]. Hillman & Rachlinski, supra note 1, at 455.

[FN30]. See, e.g., ProCD, Inc. v. Zeidenberg, 86 F.3d 1447, 1451 (7th Cir. 1996) ("Notice on the outside, terms on the inside, and a right to return the software for a refund if the terms are unacceptable (a right that the license expressly extends), may be a means of doing business valuable to buyers and sellers alike."). For further discussion of judicial decisions, see § 2.02, Reporters' Note to Comment *a*.

[FN31]. See, e.g., Lemley, supra note 10, at 1288-1289. Cf. James J. White, Contracting Under Amended 2-207, 2004 Wis. L. Rev. 723, 748 ("The buyer has received and spent all evening setting up his computer, and he is sitting in his study in International Falls, Minnesota, in his underwear with a beer when he has to decide whether to agree to the new terms or go out in the negative-thirty-degree temperature and return the computer.").

[FN32]. See Christina L. Kunz et al., Browse-Wrap Agreements: Validity of Implied Assent in Electronic Form Agreements, 59 Bus. Lawyer 279, 280 (2003).

[FN33]. See, e.g., Specht v. Netscape Communications Corp., 306 F.3d 17, 32 (2d Cir. 2002) ("[W]here consumers are urged to download free software at the immediate click of a button, a reference to the existence of license terms on a submerged screen is not sufficient to place consumers on inquiry or constructive notice of those terms."). But see Register .com, Inc. v. Verio, Inc., 356 F.3d 393 (2d Cir. 2004) (finding a contract although Verio had not clicked on an "I agree" button because Verio had knowledge of the terms from previous visits to the website); Hubbert v. Dell Corp., 835 N.E.2d 113, 122 (Ill. App. 2005) ("statement that the sales were subject to the defendant's 'Terms and Conditions of Sale,' combined with making the 'Terms and Conditions of Sale' accessible online by blue hyperlinks, was sufficient notice to the plaintiffs that purchasing the computers online would make the 'Terms and Conditions of Sale' binding on them."). See generally, Moringiello, supra note 13.

[FN34]. Specht, 306 F.3d at 30.

[FN35]. Under UCITA § 112(a), shrinkwrap terms are enforceable if a person "manifests assent" after an "opportunity to review" the terms. Under § 112(e)(1), "[a] person has an opportunity to review" a term if it is "made available in a manner that ought to call it to the attention of a reasonable person and permit review." Presumably, courts could strike browsewrap terms under UCITA's formulation by finding that the terms are not "made available" in a reasonable manner so there is no "opportunity to review."

[FN36]. See Moringiello, supra note 13, at 1323-1326.

[FN37]. See id.; Hillman & Rachlinski, supra note 1, at 478-486.

[FN38]. See Hillman, Survey, supra note 6.

[FN39]. See Kunz, supra note 32, at 280-281.

[FN40]. Certain warranty disclaimers must be conspicuous under Article 2 of the U.C.C. See, e.g., U.C.C. § 2-316 (1998). Google warns users of its terms when downloading its web accelerator applet: "Please read this carefully. This is not the usual Yada Yada and is different from the Google Toolbar Yada Yada you may have seen before." See http://www.webmasterworld.com/forum80/1000.htm, last accessed 9/25/06.

***120 Chapter 3**

PERFORMANCE

TOPIC 1 INTERPRETATION AND PAROL EVIDENCE [to be written]

TOPIC 2 BREACH [to be written]

TOPIC 3 WARRANTIES

Summary Overview

Intellectual Property Warranties [to be written]

Quality Warranties: Software continues to grow in complexity and importance and the ramifications of its failure, not surprisingly, have also become more serious. [FN1] Rules relating to the quality of software therefore are controversial because both software vendors and copyholders have much at stake. Software vendors assert the inevitability of defects [FN2] and the necessity of insulating themselves through disclaimers and remedy limitations from inordinate liability. [FN3] Business copyholders point out the potential for catastrophic losses if defective software grounds their business to a halt. [FN4] Consumers complain about the uselessness of defective software.

Generally, most people agree that software products are complex, with defects almost inevitable, so that the law should not require perfection. [FN5] Some quality protection for copyholders is not unreasonable, however. At present, most courts apply Article 2 warranty law to software exchanges, either directly, on the theory that software constitutes goods, or by analogy. [FN6] Most of these cases involve exchanges of custom software between businesses in situations where the software failed spectacularly. Few of these decisions have focused on the nature of software and its differences from goods. [FN7]

U.C.C. Article 2 enforces express warranties, creates implied quality warranties, and authorizes disclaimers of warranties and limitations of remedy. [FN8] In both consumer- and business-software markets, vendors generally take advantage of the warranty-disclaimer and remedy-limitation tools offered by Article 2, so that copyholders rarely enjoy much quality protection. [FN9] Although debatable, critics of the Uniform Computer Information Transactions Act (UCITA) claim that the law narrows warranty protection still further. [FN10]

These Principles follow the treatment of warranties in Article 2, but with appropriate accommodations for special problems pertaining to software, [FN11] some of which may not yet have but are likely to surface in litigation. For example, the question of the meaning of a warranty and whether the warranty is broken must take into account software's tendency to contain "bugs." [FN12] Further, questions of disclaimer in the software context must accommodate freedom of contract *and* policing for market failures. The latter problem arises most often in consumer or small-business contracts containing take-it-or-leave-it standard terms that nobody ***121** reads, [FN13] but it can also affect deals between software vendors and business copyholders that may lack skills pertaining to and general understanding of software technology. [FN14] The latter businesses may expect disclaimers, but they may be unfairly surprised to learn that all of the representations, promises, and sales documentation presented to them may be worthless if their software is defective.

Although many provisions of UCITA are controversial, its treatment of warranties is helpful in identifying and responding to some of the distinctive issues raised by software contracts. Accordingly, these Principles also adopt what is best and most effective about UCITA's coverage of warranties, while establishing the Principles' own domain. For example, UCITA's treatment of the meaning of the implied warranties of merchantability and fitness for a particular purpose mirrors Article 2, but usefully adapts to software exchanges.

On the other hand, in some respects UCITA is too dependent on Article 2's treatment of warranties. In fact, some Article 2 warranty rules incorporated in UCITA are hopelessly confused and controversial. For example, UCITA adopts the U.C.C.'s "basis of the bargain test" for express warranties, which has created neither uniformity nor clarity in sales-of-goods law. These Principles therefore forge a new approach that drops the basis-of-the-bargain concept in favor of a test based on whether the copyholder could reasonably rely on the words or conduct. [FN15] But the idea is not radical. The original drafters of the U.C.C. probably had this approach in mind when they created the basis-of-the bargain test. [FN16]

These Principles avoid or clarify other Article 2 warranty imbroglios as well. For example, the Principles clarify Article 2's approach to the creation of express warranties in U.C.C. § 2-313 and their negation in U.C.C. § 2-316(1). Under § 2-313, written and oral statements pertaining to the quality of the software, descriptions, samples, and models may create express warranties. Section 2-316 directs courts to construe language or conduct creating such warranties and language or conduct negating them as "consistent" unless unreasonable. [FN17] By directing courts to seek a consistent interpretation of conflicting language, such an approach seems to endorse a seller's practice of creating express warranties on the one hand and disclaiming them on the other. But, in practice, courts have not applied § 2-316 very coherently, which should be no surprise given the vagaries of the statutory language. [FN18]

These Principles clarify the approach when language of warranty and negation exist by enforcing the express warranty in transfers of both custom-designed and general-market software if a reasonable person in the transferee's shoes would not expect a disclaimer. [FN19] Custom software transfers may involve sophisticated business copyholders who can bargain for terms, including those allowing testing of the software before acquiring it. In addition, such businesses may be sophisticated about the nature of software and knowledgeable about how to protect themselves, for example, by insisting on detailed maintenance agreements that may take the place of warranties as the primary mode of recourse for bugs in the software. [FN20] These businesses may expect express-warranty disclaimers, which are therefore enforceable. But, as already noted, some business copyholders may lack the skills and know-how pertaining to software technology and the bargaining power to receive adequate protection. [FN21] These copyholders may be unfairly surprised to learn that their vendor does not intend to stand by its representations, samples, and other express warranties. In addition, advocates of copyholders of generally available ***122** software assert the need for quality protection, especially because these copyholders typically cannot inspect their software and must rely on the vendor's competence and representations. [FN22] These Principles protect such transferees from unexpected disclaimers of express warranties.

Implied warranties. These Principles retain the implied warranty of merchantability in both customized and generally available software exchanges. Vendors argue, however, that the merchantability warranty (warranting that the software is "fit for its ordinary purpose") makes little sense because software programs cannot be compared and resemble a unique service. [FN23] This argument is most persuasive in custom markets where the copyholder's purpose may be unique. Still, even such software should satisfy average standards in the trade in terms of speed, compatibility with hardware and other software, reliability, and functionality. [FN24] When even these indicia are difficult to measure, the merchantability warranty amounts only to an obligation to transfer software of average quality and workmanship. Software that does not operate much of the time, or that corrupts other programs would be easy examples of unmerchantable software. [FN25] Further, vendors can disclaim the warranty if uncomfortable with its unpredictability or potential liability. [FN26]

General-market software, on the other hand, usually has an ordinary purpose shared by its users, such as word processing or virus protection, and the case for an implied warranty of merchantability is strong here. [FN27] However, in response to the concern of software vendors that excessive potential liability would stifle development of new software, including, for example, free software distributed over the Internet, [FN28] vendors can disclaim the warranty under § 3.06. Vendors' disclosure obligations set forth in Chapter 2, Topic 1, of these Principles, the requirements for disclaimers in this Chapter, and the policing tools of unconscionability and public policy help protect copyholders from unfair disclaimers of implied warranties. [FN29]

These Principles also retain the implied warranty of fitness for a particular purpose. [FN30] Under Article 2, an implied- fitness warranty arises if the seller, having reason to know why the buyer wants the goods, "selects or furnishes" the goods for the buyer, who relies on the seller's "skill or judgment." [FN31] This fitness warranty applies both to general-market software selected, for example, by a sale's agent and custom-designed software, but it is especially important in the latter case because copyholders often rely on the transferor's superior skills and expertise. A fitness warranty also may apply when the vendor selects software to run on the copyholder's already existing hardware and the copyholder relies on the vendor's decision. The vendor warrants, not that the software is free from defects, but that it will be compatible with the transferee's already-existing system. The vendor can also disclaim the fitness warranty.

Finally, under these Principles, software vendors are liable for material defects of which they are aware at the time of the transaction if they do not disclose these defects. [FN32] This warranty is mandatory. [FN33] Such liability is comparable to the common-law disclosure duty of contracting parties. Warranties can also arise from a course of dealing or usage of trade.

Other law. Both Article 2 and UCITA defer to federal and state consumer-protection warranty law, although critics of UCITA worry that UCITA's recognition of licensing and software's intangible nature might "pull [] software outside of the scope of the Magnuson-Moss Warranty Act and of analogous" state consumer- ***123** protection laws. [FN34] Magnuson-Moss is important, for example, because sellers governed by it cannot disclaim implied warranties if they make an express one. [FN35] These Principles increase the likelihood that courts will apply Magnuson-Moss to packaged software because nothing turns on vendors labeling their transactions as licenses. [FN36]

Open-source software. These Principles do not carve out special warranty rules for the transfer of open-source software. Nevertheless, several aspects of open-source software might suggest a different approach. For example, many often-dispersed developers frequently contribute to open-source software, including anything from minor and cosmetic changes such as fixing obvious code errors to changes that drastically modify the software's functionality. [FN37] Individual vendors therefore often have little control over its quality. In addition, despite its usefulness for particular tasks, open-source software authors sometimes do not intend an "ordinary purpose" for the software any more than allowing other authors to enhance or change the software. Finally, open-source publishers may consider themselves as engaging in nothing more than a hobby, not releasing commercial software. Despite these differences from proprietary software, open-source transferors can avoid making express warranties and can disclaim implied warranties and limit remedies. Further, open-source vendors can look to course of dealing and usage of trade to support their claim of the absence of warranties. [FN38] The nature of open-source production and distribution should limit the expectations of transferees, which in turn will narrow the reach of warranties. For example, a transferee who downloads open-source software from an Internet site that offers free downloads normally should expect "as is" software, whereas a transferee who purchases open-source software from a proprietary site would have greater expectations in the absence of enforceable disclaimers. Finally, a hobbyist should not be liable for the merchantability warranty of § 3.03 if the hobbyist does not "deal in software of the kind transferred" or "hold itself out by occupation as having knowledge or skill peculiar to the software."

§ 3.01 Intellectual Property Warranties [to be written]

§ 3.02 Express Warranties

(a) In this Section "transferee" includes both an "immediate transferee" that enters a contract with the transferor and a "remote transferee" that receives the software or access to the software from any party in the normal chain of distribution.

(b) Except as provided in (d), the transferor creates an express warranty to the transferee as follows:

(1) An affirmation of fact or promise made by the transferor to the transferee, including by advertising or by a record packaged with or accompanying the software, that relates to the software and on which a reasonable transferee could rely creates an express warranty that the software will conform to the affirmation of fact or promise.

(2) Any description of the software made by the transferor to the transferee on which a reasonable transferee could rely creates an express warranty that the software will conform to the description.

***124 (3) Any sample, model, or demonstration of a final product shown by the transferor to the transferee on which a reasonable transferee could rely creates an express warranty that the software will conform to the sample, model, or demonstration.**

(c) A transferor can create an express warranty without using formal words, such as "warrant" or "guarantee," or without intending to create an express warranty. However, a mere opinion or commendation of the software does not create an express warranty.

(d) A distributor or dealer that merely transfers software covered by a warranty in a record made by another party, which warranty identifies the maker of the record as the warrantor, is not liable for breach of the warranty. The distributor or dealer is liable for any express warranties of its own or if it adopts the maker's warranty.

Comment:

a. In general. Under § 3.02(a), a transferor potentially is liable for express warranties to any transferee in the distributional chain, including intermediates and end users in that chain, or to transferees who download or obtain access to the software directly from the transferor over the Internet. However, under § 3.02(b), before a warranty arises, the transferor must make a warranty, such as by making a promise directly to a party, by including a warranty in a record in a package opened by the end user, or by advertising. In addition, under subsection (d), parties in the distributional chain who do not author a warranty are not liable under it unless they adopt the maker's warranty. A party adopts a warranty when a reasonable transferee would believe the party intends to stand behind or appropriate as one's own the warranty made by another party.

b. "Basis of the bargain" test rejected. Section 3.02(b) drops the "basis of the bargain" requirement of U.C.C. § 2-313(1)(a), (b), and (c) and UCITA § 402. If the transferor makes a statement that constitutes an affirmation of fact, promise, or description, the statement constitutes an express warranty, not if the statement constitutes a "basis of the bargain," but if the transferee could reasonably rely on the statement. Section 3.02(b) does not require actual reliance on the express warranty. The same treatment applies to samples, models, and demonstrations. The foggy "basis of the bargain" test has triggered lots of litigation and numerous attempts by drafting committees to replace or refine it. The approach here adopts the best approximation of what the original U.C.C. drafters and courts applying the test attempt to achieve.

Comment 3 to § 2-313, in explaining the "basis of the bargain" test, states that "no particular reliance on [an affirmation of fact or promise] need be shown in order to weave them into the fabric of the agreement." Although the Code does not require "actual" reliance, "basis of the bargain" must mean something. Section 3.02(b) more succinctly dictates that an affirmation of fact or promise (or sample, model, demonstration, or description) constitutes an express warranty when a reasonable transferee could rely on it. Just as in the Code, the transferee does not have to prove actual reliance. As such, affirmations of fact about the software, descriptions of the software, and other language or conduct indicating commitment ordinarily will ***125** constitute express warranties unless the language or conduct constitutes only puffing. See § 3.02(c) and Comment *f*.

Illustrations:

1. B, a manufacturer of computer products, foresees the need for additional computer capability. B becomes interested in replacing its "Prime" operating system with an "Ultrix" system, but wants to continue using certain business applications software for accounting and inventory tracking needs. This software is not compatible with the Ultrix system. B acquires software called "uniVerse" from vendor A after A tells B that uniVerse will allow B to run its accounting and inventory software on the Ultrix system. A reasonable transferee could rely on A's statement because it responds specifically to B's concerns and needs and is clear and unconditional. If B's accounting and inventory software do not run on the Ultrix system, A has breached an express warranty if all of the other express-warranty requirements have been met. (See also § 3.04, Illustration 3.)
2. B, a manufacturer of sports equipment, negotiates with A to install a new computer system for use in B's business. A suggests the installation of a "turn-key" system—a system that includes all necessary hardware and software, and is ready to function immediately when delivered. During the negotiations, B becomes concerned about the proposed software's response time. A prepares a "Response Time Report" for B. The Report states that the general response time "would likely" be about 2-3 seconds, or, in a "worst case scenario," about 8-9 seconds. B then agrees to acquire the system. After delivery, B discovers that the response time of the software is almost 30 seconds, making it substantially useless for day-to-day business needs. A is in breach of an express warranty because statements in the Response Time Report, although expressing some uncertainty about the response time, promised a "worst case scenario" of an 8-9 second response time. A reasonable transferee could rely on A's promise.

c. Advertising. Under § 3.02(b)(1), an express warranty can arise based on advertising. The test for whether a warranty arises is no different than for any other language: Could a reasonable transferee rely on an advertiser's quality claims or would the reasonable transferee balk because the language is not specific, verifiable, and/or devoid of commitment? In the context of advertising, some degree of skepticism about the information content is in order. Put another way, readers should more readily understand that, in the context of advertising, puffing and sales talk are more likely. Still, publishers' lawyers not infrequently peruse draft advertising for statements that could form express warranties because of the knowledge that reasonable readers could rely on advertising in some circumstances.

***126 Illustration:**

3. B sees an advertisement in a newspaper for A's KT-780 computer system, which includes "compatible" software. B purchases a KT-780 system, but some of the software is not compatible. A's advertisement created an express warranty that A's software would be compatible.

d. Warranty by description. Section 3.02(b)(2) follows § 2-313(1)(b) of the U.C.C. Comment 5 to § 2-313(1)(b) states in part:

A description need not be by words. Technical specifications, blueprints and the like can afford more exact description than mere language . . . . Of course, all descriptions by merchants must be read against the applicable trade usages . . . .

Descriptions include generic names such as "word-processing software" or the like. A vendor that describes the software as capable of word processing or calls the software "word-processing software" has made an express warranty to this effect. The test is whether, in light of the circumstances, a reasonable transferee could rely on the description. Relevant circumstances include any applicable trade custom or course of dealing.

Illustration:

4. B is looking to buy software as a present for her eight-year-old grandson's birthday. She purchases *Number Cruncher*, manufactured by A, from her local store. Number Cruncher's packaging describes it as "fun and exciting software for grownups and kids." However, *Number Cruncher* is a spreadsheet program for accountants. A is in breach of express warranty because B could reasonably rely on A's description of the software as meant for children, and the software does not conform to that description. If, however, the software is neither fun nor exciting, there is no breach of express warranty because a reasonable transferee would not rely on this general statement.

e. Warranty by sample, model, or demonstration. Section 3.02(b)(3) follows U.C.C. § 2-313(1)(c). According to Comment 6 of § 2-313(1)(c), a sample is "actually drawn from the bulk of goods which is the subject matter of the sale . . . ." To create a software warranty, the parties must understand that the sample represents the final product. Comment 6 adds that a model is not drawn from the goods, but the seller offers the model for the buyer's inspection. Again, the model creates a warranty only when the parties understand it to be a representative of the final product. Warranty by "demonstration" comes from UCITA § 402. A comment adds: "Ordinarily the parties understand that what is being demonstrated on small scale or tested on a beta model is not necessarily representative of actual performance or of the eventual product." UCITA § 402, Comment 5.

A transferor can avoid the creation of a software warranty by sample, model, or demonstration by clarifying that the software to be transferred may be different from what the transferor is showing or demonstrating. Further, if a reasonable copyholder would understand that the software may not perform according to the sample, model, or demonstration in light of the manner in which the copyholder will use the ***127** software, no express warranty as to that use would arise because a reasonable copyholder could not rely on the sample, model, or demonstration for that use.

Illustration:

5. B, a manufacturer of movie DVDs, decides to acquire software to "clean" the visuals of old TV shows for purposes of releasing them on DVD in "remastered" form. A, manufacturer of VisuClean software, sends an agent to B's office to demonstrate the software. A shows B a 30-second video clip A produced using a modern digital camera, which VisuClean cleans in five minutes. B purchases multiple copies of VisuClean to use in its business. Later, B brings an action for breach of express warranty, alleging that it takes VisuClean almost 8 hours to clean a 45-minute TV episode recorded in the 1950s, and that its operation is thus materially slower than warranted by the demonstration. B's claim should fail because a reasonable transferee should understand that a demonstration of the speed VisuClean cleans modern digital video does not reasonably create a warranty regarding how quickly it cleans video recorded in the 1950s.

f. Express warranty or opinion. These Principles look to U.C.C. Article 2' s approach to determining whether a statement by the transferor constitutes an "affirmation of fact or promise" or nothing more than the transferor's nonactionable opinion about the software. As with § 2-313 of the U.C.C., the goal of § 3.02(c) is to enforce actual commitments by the transferor, not language that would tip off reasonable listeners or readers that the seller is merely pitching a sale. The challenge in sorting out the transferor's language is no different than ascertaining the legal significance of any communication between contracting parties: What would a reasonable transferee believe is the meaning of the transferor's communication? As such, § 3.02(c) is an iteration of the "reasonable transferee" test of § 3.02(b).

Factors helpful in ascertaining what a reasonable transferee would believe include whether the transferor uses language of commitment, the degree of specificity of the communication, and whether the statement can be verified. For example, an exclamation that software "will work wonders" to increase a business's appeal is vague, unverifiable, and lacks commitment. On the other hand, a vendor that proclaims that software used for sorting data "will cut the time for sorting the data in half," may make an express warranty to that effect.

The circumstances in which a transferor makes a statement are also helpful in determining whether a statement is a warranty or puffing. For example, a statement made during early discussions of the need for custom software, before the nature of the needs are even clear, would not constitute an express warranty. Definitive statements made closer to signing a contract should be treated differently. Further, written statements are more likely definitive than oral ones.

***128 Illustrations:**

6. Same facts as Illustration 1. A tells B that uniVerse will allow B to run its accounting and inventory software on the Ultrix system. A reasonable transferee could rely on A's statement because the statement is clear, specific, and verifiable. If B's accounting and inventory software do not run on the Ultrix system, A has breached an express warranty.

7. B, a flower-selling business, contracts with A, a software manufacturer, to purchase 100 copies of A's Ad-O-Matic software, which creates advertisements for placement in newspapers. Prior to the purchase, A tells B that placing ads generated by Ad-O-Matic will "increase business." A's statement is vague, general, and dependent on factors beyond A's knowledge. If Ad-O-Matic advertisements fail to increase B's business, A will not be liable for breach of an express warranty.

g. Coupling of remedial promises and express warranties. Software vendors often link warranties and remedies by excluding most or all warranties and substituting a particular level of service. For example, a vendor may transfer software "as is," but promise to supply updates or to service error-prone software within a certain time period. The promise of service is a "remedial promise" and not an express warranty. As such, enforcement depends on Chapter 4 of these Principles and general contract law. Nevertheless, factors set forth in this Section for determining the creation of an express warranty (for example, specificity and commitment) and factors set forth in § 3.06(a) for determining whether an express warranty survives a disclaimer (reasonable expectations) are probative of whether the agreement contains an enforceable remedial promise.

Illustration:

8. A, a software vendor, transfers custom-software to B, an automobile manufacturer, for use in the manufacture of B's cars. A warrants that the software will substantially perform according to certain specifications, but not that it is error free. A also promises that it will remedy any nonconformities having a material effect on operation for a period of one year. A has made an express warranty that the software will substantially satisfy specifications and a remedial promise that it will remedy any material nonconformities for one year. Enforcement of the remedial promise depends on the remedy provisions of these Principles and general contract law.

9. Same facts as Illustration 8, except that A promises only that for one year A will fix any errors in the software identified through specific acceptance tests set forth in the contract. The contract also states that A will remedy any errors caused by B's system alterations at A's time and materials rates. A has made a remedial promise that it will fix identified software errors and will remedy other errors for a charge.

h. Makers of warranties. Under § 3.02(d), distributors or dealers that do not author a warranty in a record are not liable for it unless they adopt the maker's warranty. A party adopts a warranty when a reasonable transferee would believe the ***129** party intends to stand behind or appropriate as its own the warranty made by another party. In addition, a distributor or dealer is liable for its own warranties. In the case of a dealer, software displayed for sale as a particular kind of software, for example, means that the dealer has adopted the maker's express warranty by description that the software is the particular kind of software with its average qualities.

Illustration:

10. B, a consumer, purchases Mathlete software for calculating complex mathematic problems from a local retail software store. The software package describes the software as an "e-calculator." A is the manufacturer of Mathlete. Prior to the

purchase, B asked a sales person in the store to explain the warranty offered by A for the software and the sales person complies. The store is not liable for breach of an express warranty offered by A based on the explanation because a reasonable transferee would not believe that the store adopted A's warranty simply by explaining it. By displaying the software with the description as a calculator, the store has adopted A's warranty of description.

REPORTERS' NOTES

Comment a. In general. Sections 3.02(a) and (b) combine U.C.C. Amended Article 2, §§ 2-313, 2-313A, and 2-313B. U.C.C. § 2-313A, Comment 1, states that "[u]se of 'obligation' rather than 'express warranty' [in § 2-313A] avoids any inference that the obligation arises as part of the basis of the bargain as would be required to create an express warranty under section 2-313." But these Principles drop the basis-of-the-bargain test, so no distinction is necessary between express warranties made to the immediate transferee and made to remote transferees. Under § 3.02 the test is whether the transferor directs an affirmation of fact, promise, etc. to the immediate or remote transferee and whether that transferee reasonably could rely on the alleged warranty.

Comment b. "Basis of the bargain" test rejected. A leading treatise on licensing law fails to clarify the "basis of the bargain" test:

> The comments to the Article 2 section indicated that [the basis of the bargain test] was intended to supplant the pure reliance standard, but the language used in effect merely reduces the need for a finding of 'explicit,' 'but for' reliance in the sense that it is the reason that the contract was formed. . . . The basis of the bargain test requires that *a nexus of influence* between warranty and bargain exist. The issue is what that nexus must be. Since the advent of Article 2, debate has raged in both the academy and the courts as to whether the phrase "part of the basis of the bargain" was intended to abrogate the reliance requirement that the predecessor to Article 2 . . . explicitly imposed.

Raymond T. Nimmer & Jeff Dodd, Modern Licensing Law § 8:33 (2005).

Although there is much case law on "basis of the bargain," the cases have failed to create a coherent concept out of an ambiguous statutory term. Far from it, the case law, as recent as 2005, is sufficiently incoherent that the better approach is to abandon the concept altogether. See, e.g., Kelleher v. Lumber, 891 A.2d 477, 500 (N.H. 2005) ("Authorities are divided as to whether a buyer's reliance upon the affirmation is a necessary element of proving that the affirmation was part of the basis of the bargain under section 2-313 of the UCC . . ."); id. at 500 ("The extent to which the law has been changed to remove the reliance requirement is unclear."); Compaq Computer Corp. v. Lapray, 135 S.W.3d 657, 675 (Tex. 2004) ("Although the official comments to section 2-313 provide that 'no particular reliance on such statements need be shown in order to weave them into the fabric of the agreement,' it appears that this suggestion is not uniformly followed.") (internal citation ***130** omitted); id. at 676 ("Still other states have not decided whether reliance is required, nor what the 'basis of the bargain' actually means."); Parkinson v. Guidant Corp., 315 F. Supp. 2d 741, 752 (W.D. Pa. 2004) (quoting Liberty Lincoln-Mercury Inc. v. Ford Motor Co., 171 F.3d 818, 825 (3d Cir. 1999) (". . . it is recognized that '[w]hat constitutes "basis of the bargain" is hard to define' . . ."); McManus v. Fleetwood Enterprises, Inc., 320 F.3d 545, 550 (5th Cir. 2003) ("There is a split of authority as to whether [the "basis of the bargain"] wording (from the UCC) is meant to dispense with the common law's requirement of reliance in express warranty cases."); Torres v. Northwest, 949 P.2d 1004, 1013 (Haw. Ct. App. 1997) (citing 3 M. Foran, *Williston on Sales* § 17-7, at 12 (5th ed. 1994) ("The UCC does not define 'basis of the bargain,' and one scholar has expressed that the term '[m]ost probably . . . is an indefinable concept.' As a result, much litigation has arisen over the years regarding the meaning and proper application of the 'basis of the bargain' test."); Hobco, Inc. v. Tallahassee Assocs., 807 F.2d 1529, 1533 (11th Cir. 1987) ("Under Florida law, an express warranty may arise only where justifiable reliance upon assertions or affirmations is part of the basis of the bargain."); Keith v. Buchanan, 220 Cal. Rptr. 392, 397 (Cal. Dist. Ct. App. 1985) ("Some [commentators] have indicated that [the "basis of the bargain" test] shifts the burden of proving non-reliance to the seller, and others have indicated that the code eliminates the concept of reliance altogether."); see also id. at 397-398 ("It is clear from the new language of this code section that the concept of reliance has been purposefully abandoned."); Allied Fidelity Ins. Co. v. Pico, 656 P.2d 849, 850 (Nev. 1983) ("If, however, the resulting bargain does not rest at all on the representations of the seller, those representations cannot be considered as becoming any part of the 'basis of the bargain' within the meaning of [the code]."); Winston Indus., Inc. v. Stuyvesant Ins. Co., Inc., 317 So. 2d 493, 497 (Ala. Civ. App. 1975) ("As this court perceives it, the determining factor in this case under the newly enacted Uniform Commercial Code is not reliance by the purchaser on the seller's warranty, but whether it is part of the 'basis of the bargain.'").

UCITA retains the "basis of the bargain" test. UCITA § 402, Comment 2 (2002) explains the approach: "In practice, affirmations of fact describing the [software] and made by the licensor about it during the bargaining are ordinarily part of the bargain unless they are mere puffing, predictions, or otherwise not an enforceable commitment. No specific reliance on the specific statement need be shown in order to weave it into the fabric of the agreement."

Comment c. Advertising. "The targets of advertising, all of us, understand that advertising provides a distorted view of reality, depicting what we aspire to, not where we are or what we really expect to happen." Raymond T. Nimmer & Jeff Dodd, Modern Licensing Law § 8:33, n.16 (2005); see also Elliott Alderman, *UCITA: Why Consumers Should Read The Fine Print*, http:// www.aldermanlawoffice.com/indexpage_6/Articles_4.shtml (2002) ("[L]awyers carefully review licensors' advertising copy to ensure that there are no loose factual statements that could form an express warranty."); Note, Uniform Commercial Code: Disclaiming the Express Warranty in Computer Contracts—Taking the Byte Out of the UCC, 40 Okla. L. Rev. 471, 481 (1987) ("Express warranties can . . . be created by advertisements or brochures, prior proposals, or letters, although these more easily approach puffing than specific oral statements.").

Comment d. Warranty by description. Diane W. Savage, Performance Warranties in Computer Contracts, 8 No. 12 Computer Law., 32, 33 (1991) ("A generic product name, such as 'automobile' or 'haybaler,' constitutes an express warranty that the automobile will carry passengers and the haybaler will bale hay."); Paul S. Hoffman, Software Warranties and the Uniform Commercial Code, 4 J. Proprietary Rts. 7, 7 (1994) ("If I agree to sell you my 1984 Volvo in "as is" condition, I have still made several warranties: . . . that it is a Volvo; that it is a 1984 model; and probably that it has an engine and the normal parts necessary to make it a 1984 Volvo . . . .").

Comment e. Warranty by sample, model, or demonstration. See Matthew J. Smith, An Overview of the Uniform Computer Information Transactions Act: Why UCITA Should be Renamed "the Licensors' Protection Act," 25 S. Ill. U. L.J. 389 (2001) (sample, model, or demonstration warranty must take "into account differences that would appear to a reasonable person in the position of the licensee between the sample, model, or demonstration and the [software] as it will be used."); see also ***131** Pioneer Peat, Inc. v. Quality Grassing & Services, Inc., 653 N.W.2d 469, 472 (Minn. App. 2002) ("To constitute a sale by sample, it must appear that the parties contracted solely in reference to the sample or article exhibited, and that both mutually understood they were dealing with the sample with an understanding that the bulk was like it. In determining whether a sample is intended to become a basis of the bargain, the analysis centers on 'whether the seller has so acted with reference to the sample as to make him responsible that the whole shall have at least the values shown by it."' (citing Day v. Raguet, 14 Minn. 273, 282 (1869)); NMP Corp. v. Parametric Technology Corp., 958 F. Supp. 1536, 1545-1546 (S.D. Okla. 1997) ("Apparently [plaintiff] NMP wanted Pro/E to perform highly complex tasks . . . at a certain speed, but never questioned whether the software would perform at the same rate at which it did during the demonstration when utilized on larger assemblies . . . ."); Logan Equipment Corp. v. Simon Aerials, Inc., 736 F. Supp. 1188, 1198 (D. Mass. 1990) ("While plaintiff may well have taken the [demonstration of the] Ontario Hydro boomlift as an example of [defendant] SAI's skill and expertise in the equipment design field, the 42-foot unit cannot have created an express warranty which survived the generation of a new set of agreed-upon specifications for [defendant's] proposed 80-foot machine.").

Comment f. Express warranty or opinion. See Keith v. Buchanan, 220 Cal. Rptr. 392, 395 (Cal. Dist. Ct. App. 1985) ("In deciding whether a statement made by a seller constitutes an express warranty under this provision, the court . . . must determine whether the seller's statement constitutes an 'affirmation of fact or promise' . . . or whether it is rather 'merely the seller's opinion or commendation of the goods' under section 2-313, subdivision (2)."). On sorting out warranties from sales "puffing," see James J. White & Robert S. Summers, Uniform Commercial Code 347 (5th ed. 2000); Boud v. SDNCO, Inc., 54 P.3d 1131, 1135 (Utah 2002) ("To qualify as an affirmation of fact, a statement must be objective in nature, i.e., verifiable or capable of being proven true or false."); see also Keith, 220 Cal. Rptr. at 395 ("Commentators have noted several factors which tend to indicate an opinion statement. These [include] a lack of specificity in the statement made. . . ."); Snow's Laundry & Dry Cleaning Co. v. Georgia Power Co., 6 S.E.2d 159, 162 (Ga. Ct. App. 1993) ("For a representation to be construed as a warranty the statement made must be affirmed as a fact; it must be understood by the parties as having that character; it must be positive and unequivocal and not merely a vague, ambiguous and indefinite statement of the seller regarding the property."); cf. Bologna v. Allstate Ins. Co., 138 F. Supp. 2d 310, 323 (E.D.N.Y. 2001) ("Here, Allstate's assertion, 'You're in good hands with Allstate,' is general, subjective, and cannot be proven true or false. . . . [Defendant's] allegation that Allstate's slogan created an express warranty which Allstate thereafter breached . . . must fall . . . .").

On the time when a statement is made, see Westfield Chemical Corp. v. Burroughs Corp., 21 UCC Rep. Serv. 1293 (Mass. Dist. Ct. 1977), discussed in Note, Uniform Commercial Code: Disclaiming the Express Warranty in Computer Contracts—Taking the Byte Out of the UCC, 40 Okla. L. Rev. 471, 480-481 (1987) ("early planning stages are less

conducive to reasonable reliance”).
On written statements versus oral ones, see White & Summers, supra, at 347 (5th ed. 2000).
Comment g. Coupling of remedial promises and express warranties. See generally Paul S. Hoffman, Software Warranties and the Uniform Commercial Code, 4 J. Proprietary Rts. 7, 13 (1994) (“Software warranties are often defined in a reverse way by specifying the remedy or level of service.”).
Comment h. Makers of warranties. Section 3.02(d) is based on Magnuson-Moss Warranty Act Regulation § 700.4. The regulation looks to state law for the meaning of “adoption.” Generally, “adoption” requires explicit incorporation of a warranty into the sales contract. See, e.g., Felde v. Chrysler Credit Corp., 580 N.E.2d 191, 197 (Ill. App. Ct. 1991). Mere “delivery, presentation, or explanation” of a manufacturer’s warranty by a dealer generally does not constitute “adoption” of that warranty. Lytle v. Roto Lincoln Mercury & Subaru, Inc., 521 N.E.2d 201, 205-206 (Ill. App. Ct. 1988) (dealer’s signing the inside of manufacturer’s warranty booklet not an adoption of the warranty).
Illustration 1 is based on Vmark Software, Inc. v. EMC Corp., 642 N.E.2d 587 (Mass. 1994).
Illustration 2 is based on USM v. Arthur D. Little Systems, Inc., 546 N.E.2d 888 (Mass App. Ct. 1989).
***132** *Illustration 3* is based on Hundred East Credit Corp. v. Eric Shuster Corp., 515 A.2d 246 (N.J. Super. Ct. App. Div. 1986).
Illustration 4 is based on the “automobile and haybaler” example, in Diane W. Savage, Performance Warranties in Computer Contracts, 8 No. 12 COMPUTER LAW. 32, 33 (1991), available at http://library.findlaw.com/1997/Nov/1/128553.html (“computer litigation is on the increase”).
Illustration 5 is based on NMP Corp. v. Parametric Technology Corp., 958 F. Supp. 1536 (S.D. Okla. 1997).
Illustration 6 is based on Vmark Software, Inc. v. EMC Corporation, 642 N.E.2d 587 (Mass. 1994).
Illustration 7 is based on Westfield Chemical Corp. v. Burroughs Corp., 21 UCC Rep. Serv. 1293 (Mass. D. Ct. 1977).
Illustration 8 and 9 are based on examples in Paul S. Hoffman, Software Warranties and the Uniform Commercial Code, 4 J. Proprietary Rts. 7, 12-14 (1994).
Illustration 10 is based on Lytle v. Roto Lincoln Mercury & Subaru, Inc., 521 N.E.2d 201, 205-206 (Ill. App. Ct. 1988).

§ 3.03 Implied Warranty of Merchantability

(a) Unless excluded or modified, a transferor that deals in software of the kind transferred or that holds itself out by occupation as having knowledge or skill peculiar to the software warrants to the transferee that the software is merchantable.
(b) Merchantable software
(1) passes without objection in the trade under the contract description; and
(2) is fit for the ordinary purposes for which such software is used; and
(3) is adequately packaged and labeled.

***133 Comment:**

a. Makers of the merchantability warranty. Transferors that deal in software or whose occupation demonstrates their special knowledge or skill with respect to the software make the implied merchantability warranty. Such parties would qualify as merchants under the definition in U.C.C. § 2-104(1). People who “deal” in software, for example, release or distribute generally available software on the retail market or publish custom-software. People who have “knowledge or skill peculiar” to the software include software troubleshooters, and maintenance craftspeople.
As noted in the Summary Overview to this Topic, the Principles do not carve out exceptions to the warranty provisions for open-source developers on the theory that exceptions are not necessary. Many developers who have little control over quality often contribute to open-source software, and sometimes they do not intend an “ordinary purpose” for the software other than allowing experimentation and development by other authors. These Principles support these developers’ right to avoid making express warranties and, with the exception of § 3.05(b), to exclude implied warranties and limit remedies. Further, the nature of open-source production and distribution should limit the expectations of transferees, which, under the rules of disclaimer pertaining to course of dealing and usage of trade, see § 3.06 of these Principles, will narrow the reach of warranties. Finally, a hobbyist should not be liable for the merchantability warranty of § 3.03 if the hobbyist does not “deal in software of the kind transferred” or “hold itself out by occupation as having knowledge or skill peculiar to the software.” For

example, by definition a "hobbyist's" occupation is not engineering the particular software.

Illustrations:

1. B, a company in the business of condensing news stories into 160-character "digests" for cell-phone subscribers, licenses A's Summarize-Er software for purposes of automatically condensing news stories into digests. A is a leading company in the field of "linguistic technology" that makes Summarize-Er and other similar products available on the retail market. Unless properly excluded, A makes an implied warranty to B that Summarize-Er is merchantable.

2. B, a consumer, takes her broken computer to A, an experienced computer repairperson. After repairing the computer, A suggests that B purchase DataSafe, which is automated "defragmentation" software designed in part by A but published by C, to improve the performance of B's computer. B acquires the software from A. Unless properly excluded, A makes an implied warranty that DataSafe is merchantable, because A holds himself out by occupation as having knowledge or skill peculiar to the software.

3. B, a three-person business that synthesizes antibiotics for animals, downloads and installs an open-source software operating system from A, an Internet site that offers free downloads. The general public license includes a provision excluding the implied warranty of merchantability. The disclaimer is enforceable if it satisfies § 3.06 of these Principles. Even in the absence of such a disclaimer, B reasonably should expect the software to be transferred "as is" ***134** in light of its denomination as open-source software and the absence of any charge for it.

b. Meaning of merchantability. At its most basic, merchantability means quality that is customary or commonly accepted in the trade. Just as an air conditioner must cool air to be merchantable, software must give directions to a computer to perform a function, not cause the computer to crash. Still, in less extreme circumstances, the meaning of "merchantability" in the software context is controversial because of the nature of software and the near inevitability of some "bugs" in newly released software. Further, few cases address, no less delineate, the meaning of software merchantability at least in part because the warranty is so often disclaimed.

Under § 3.03(b)(2), the software must be fit for its ordinary purpose as understood in the trade. Courts generally rely on this test in sale-of-goods cases and similar treatment is likely in the software context. In situations in which a software publisher creates custom software for a rare or unique purpose, or the software is experimental, the notion of "ordinary purpose in the trade" obviously does not work well. It amounts to no more than an obligation that the software fit the description of software, i.e., that it consists of instructions for a computer to reach a result and is of average quality. On the other hand, software generally will have an ordinary purpose in retail markets and the merchantability standard can apply in a fashion similar to hard goods. In either market, merchantability does not require perfection, but only quality equivalent to recognized industry standards with respect to criteria such as reliability, compatibility with other software and hardware, speed, and functionality. Further, the warranty does not apply to unusual uses of software. A comment from UCITA § 403, Comment 3(a) (2002) is helpful in filling out the meaning of merchantability:

> To be fit for ordinary purposes does not require that the program be the best or most fit for that use or that it be fit for all possible uses. To an extent greater than for goods, computer programs are often adapted and employed in unlimited or inventive ways or ways that go well beyond the uses for which they were distributed. The focus of the implied warranty is on the ordinary purposes for which programs are used.

Software is merchantable therefore if it meets average standards, which may well include some defects. The question is whether average software in the industry includes such defects. A helpful analogy comes from the early days of color televisions. New color televisions frequently required removal of the chassis to adjust for color malfunctions. A color television that required adjustment as described may well have been merchantable despite being prone to the malfunction, at least until manufacturers perfected them.

A defect in the software must exist at the time of the transfer. This is important in the software-contracts context because of the commonality of updates and support contracts.

***135 Illustration:**

4. B, a small printing business, purchases DrawRite graphical design software from A, a software manufacturer that regularly sells its products on the open market. B later discovers that DrawRite does not support the .TRO file format, a recent breakthrough in visual quality. Several of DrawRite's competitors support .TRO without sacrificing other features.

A has not breached an implied warranty of merchantability because DrawRite is fit for its ordinary purpose even though it is not "the best" software available.

Sections 3.03(b)(1) and (3) follow U.C.C. § 2-314(2). Under § 3.03(b)(1), the software, as described in the contract, must satisfy the requirements of the particular trade. UCITA § 403(a)(2)(A) includes a separate implied warranty of adequate packaging and labeling running to distributors. UCITA's reasoning is straightforward: "If the transfer is to a person acquiring the program for re-distribution, the program must be . . . capable of re-distribution." UCITA § 403, Comment 3b. Software inadequately packaged or labeled ordinarily cannot be distributed successfully. Adequacy should be measured by "ordinary commercial expectations." Id. Section 3.03(b)(3) refers to the software's packaging and labeling not to the tangible medium that stores the software, such as a disk or CD-ROM.

c. Privity. Current law is unclear on whether the implied warranty of merchantability applies to consumer claims against manufacturers with whom the consumer has no privity of contract. U.C.C. § 2-314 requires a "contract of sale," suggesting that only the immediate seller, usually a dealer, is liable to the consumer if the goods are not merchantable. In addition, UCITA § 403 provides that a merchant licensor makes a merchantability warranty to the end user but, according to Comment 1, limits coverage to parties in a "contractual relationship" or parties that qualify as third-party beneficiaries under UCITA's rules. However, the Magnuson-Moss Warranty Act, 15 U.S.C. §§ 2301-2312, has increased the reach of the merchantability warranty to include non-privity manufacturers or suppliers in the chain of distribution if the manufacturer or supplier has made an express warranty. Further, some state courts have relaxed the privity requirement.

Many software quality claims do not raise privity issues. Direct transfers of custom-designed software by a publisher to the end user obviously avoid the privity problem. So do transfers between end users and publishers when the end user downloads the software directly from the publisher over the Internet. Even if the transfer involves packaged software that moves through a chain of distribution ultimately to an end user, privity issues may not arise if the publisher supplies a contract to the end user that accompanies the software. In the software case where privity is an issue, the black letter of the Principles retains the privity requirement, but state courts may expand the reach of the merchantability warranty. Further, remote transferees can look to § 3.07 of these Principles dealing with third-party beneficiaries, which may extend warranty coverage.

***136 Illustrations:**

5. B, a consumer, purchases and downloads HyperSpeed, a "download accelerator" from A's website. A is the publisher of HyperSpeed. HyperSpeed fails to function. A and B are in privity of contract. Unless properly excluded, A has breached an implied warranty of merchantability.

6. Same facts as Illustration 5, except that B purchases HyperSpeed at a local software store, and the program contains a "clickwrap" presentation of terms requiring B to accept a contract with A, the publisher of the software, before installing the software. HyperSpeed fails to function. A and B are in privity of contract. Unless properly excluded, A has breached the implied warranty of merchantability.

Comment d. Disclaimers. Section 3.06 recognizes disclaimers of the implied warranty of merchantability in order to balance publishers' concern about excessive liability in light of the nature of software with the end users' reasonable expectation that the software will be fit for ordinary use. Although currently software publishers routinely disclaim the merchantability warranty, market pressure may persuade some to offer merchantability protection to end users.

REPORTERS' NOTES

Comment a. Makers of the merchantability warranty. U.C.C. § 2-104 (1) provides in part: "'Merchant' means a person who deals in goods of the kind or otherwise by his occupation holds himself out as having knowledge or skill peculiar to the practices or goods involved in the transaction . . . ." For elaboration on what constitutes a "merchant," see J. White & R. Summers, Uniform Commercial Code 362 (2002).

Under UCITA, vendors of "free software" make no implied warranties. See § 410, discussed in Matthew D. Stein, Rethinking UCITA: Lessons From the Open Source Movement, 58 Me. L. Rev. 157, 199 (2006).

Comment b. Meaning of merchantability. Merchantability means that "[c]ourts may rely on what is customary in the trade, or what is common among goods of the same price and in the same general class." Robert W. Gomulkiewicz, The Implied Warranty of Merchantability in Software Contracts: A Warranty No One Dares to Give and How to Change That, 16 J. Marshall J. Computer & Info. L. 393, 396 (1997). "The implied warranty of merchantability ensures that the resources

obtained in the contract function consistently with quality standards in the trade." Raymond T. Nimmer & Jeff Dodd, Modern Licensing Law § 8:26 (2005). "Few cases in modern litigation involve standards of merchantability in reference to either software or hardware because the implied warranty is ordinarily disclaimed and replaced by other standards." Id. at § 8:27.
UCITA § 403, Comment 3(a) (2002) provides:

> Merchantability does not require a perfect program, but that the subject matter be generally within the average standards applicable in commerce for programs having the particular type of use. The presence of some defects may be consistent with merchantability standards. Uniform Commercial Code § 2-314 . . . explains the concept in terms of "fair average," i.e., goods that center around the middle of a belt of quality—some may be better and some may be worse, but they cannot all be better and need not all be worse. That approach applies here. While perfection is an aspiration, it is not a requirement of an implied warranty for goods, computer programs or any other property. Indeed, a perfect program may not be possible at all.

***137** See also Raymond T. Nimmer & Jeff Dodd, Modern Licensing Law § 8:26 (2005).
Merchantability criteria include reliability, compatibility with other software and hardware, speed, and functionality. Douglas E. Phillips, When Software Fails: Emerging Standards of Vendor Liability Under the Uniform Commercial Code, 50 Bus. Law. 151, 155-156 (1994) (reliability means "'the probability of failure-free operation of a computer program for a specified time' in a given environment," and software "'failure"' occurs when software "'has not met user requirements in some way."') (quoting Victor R. Basili & John D. Musa, The Future Engineering of Software: A Management Perspective, in Software Management 10 (4th ed. 1993); John D. Musa et al. Software Reliability: Measurement, Prediction, Application 15 (prof. ed. 1990)).
For a discussion of the wisdom of applying merchantability standards to unique software, see Ajay Ayyappam, UCITA: Uniformity at the Price of Fairness?, 69 Fordham L. Rev. 2471, 2488-2489 (2001).
Cases on the meaning of merchantability include Vision Graphics v. El du Pont de Nemours, 41 F. Supp. 2d 93 (D. Mass. 1999) ("The computer software system and upgrades, to be merchantable, must have been capable of passing without objection in the trade under the contract description, and fit for the ordinary purposes for which they were intended.") In *Vision Graphics*, the plaintiff, Vision Graphics, complained that the computer system at issue would not accept certain "raw" files. Although plaintiff alleged that defendant promised to support and upgrade the system so that it would accept the files, the court found that such a feature was not

> an ordinary purpose for which such system was intended. While it may be true that Vision Graphics' long-term objective was to have the system [accept the files], this feature was certainly not part of the ordinary purpose of the system at the time when the contract was executed. The ordinary purpose of the system was to handle tasks relating to computer graphics. There is no evidence in the record showing that the system failed to accomplish such tasks.
>
> Some evidence of the existence of a defect at the time of delivery is an essential element of a cause of action for breach of the implied warranty of merchantability. . . . Vision Graphics does not allege that the system was defective at the time of delivery, and the system continues to perform as it did at the time of installation.

Id. at 99. See also Montgomery County v. Microvote Corp., 320 F.3d 440 (3d Cir. 2003) (vote-tracking software not merchantable when it miscounted votes and incorrectly selected winners); Kaczmarek v. Microsoft Corp., 39 F. Supp. 2d 974, 977 (N.D. Ill. 1999) ("[N]othing inherently wrong" with software that is not fully Y2K compliant); Neilson Business Equipment Center, Inc. v. Monteleone, 524 A.2d 1172 (Del. 1987) (computer system for record keeping not merchantable).
The following software merchantability cases were collected by Gomulkiewicz, supra at 397 n.24, in 1997:

> L.S. Heath & Son, Inc. v. AT&T Info. Sys., Inc., 9 F.3d 561 (7th Cir. 1993); Mesa Bus. Equip., Inc. v. Ultimate Southern California, Inc., 1991 WL 66272 (9th Cir. 1991); Step-Saver Data Sys., Inc. v. Wyse Tech., 939 F.2d 91 (3rd Cir. 1991); Sierra Diesel Injection Servs, Inc. v. Burroughs Corp., 874 F.2d 653 (9th Cir. 1989); Neilson Bus. Equip. Ctr., Inc. v. Italo V. Monteleone, 524 A.2d 1172 (Del. 1987); McCrimmon v. Tandy Corp., 414 S.E.2d 15 (Ga. Ct. App. 1991); Harris v. Sulcus Computer Corp., 332 S.E.2d 660 (Ga. Ct. App. 1985); Communications Groups, Inc. v. Warner Communications, Inc., 527 N.Y.S.2d 341 (N.Y. Civ. Ct. 1988); Microsoft Corp. v. Manning, 914 S.W.2d 602 (Tex. Ct. App. 1995).

Few recent cases involve merchantability issues because software publishers almost universally disclaim the warranty. For cases finding successful disclaimers, see, e.g., ***138** Performance Chevrolet, Inc. v. Market Scan Information Systems, Inc., 402 F. Supp. 2d 1166 (D. Idaho 2005); M. Block & Sons, Inc. v. International Business Machines Corp., 2004 WL 1557631 (N.D. Ill. 2004). Lewis Tree Service, Inc. v. Lucent Technologies Inc., 239 F. Supp. 2d 322 (S.D.N.Y. 2002); Telecom Intern. America, Ltd. v. AT & T Corp., 280 F.3d 175 (2d Cir. 2001); Hou-Tex, Inc. v. Landmark Graphics, 26 S.W.3d 103 (Tex. Ct. App. 2000); Against Gravity Apparel, Inc. v. Quarterdeck Corp., 267 A.D.2d 44 (N.Y. App. Div. 1999).

For a discussion of problems with early color televisions, see Wilson v. Scampoli, 228 A.2d 848 (D.C. Ct. App. 1967) (seller allowed to cure even though the seller expressly warranted that the television would be free from all defects because of the frequency of the need for adjustment of new color televisions).

With respect to § 3.03(b)(3), UCITA § 403(a)(2)(A) (2002) set forth an implied warranty specific to distributors:

(a) Unless the warranty is disclaimed or modified, a licensor that is a merchant with respect to computer programs of the kind warrants:

* * *

(2) to the distributor that:

(A) the program is adequately packaged and labeled as the agreement requires * * *.

Comment c. Privity. See Magnuson-Moss Warranty Act, 15 U.S.C. § 2308 (a supplier, which, under § 2301(4), includes "any person engaged in the business of making a consumer product directly or indirectly available to consumers," who makes an express warranty cannot disclaim implied warranties).

Many states still require privity to recover for economic loss in implied-warranty cases. See, e.g., Harris Moran Seed Co., Inc. v. Phillips, 2006 WL 1719936 at *5 (Ala. Civ. App. 2006) ("In Alabama, a vertical nonprivity purchaser who has suffered only direct or consequential economic loss cannot recover from a remote manufacturer under an implied warranty theory."); Anunziato v. eMachines, Inc., 402 F. Supp. 2d 1133, 1141 (C.D. Cal. 2005) ("In California, a plaintiff alleging breach of warranty claims must stand in vertical privity with the defendant.") (internal quotations omitted); Mydlach v. DaimlerChrysler Corp., 846 N.E.2d 126, 140 (Ill. App. Ct. 2005) ("In order for a plaintiff to file a claim for economic damages under the UCC for the breach of an implied warranty, he or she must be in vertical privity of contract with the seller."); Monticello v. Winnebago Industries, Inc., 369 F. Supp. 2d 1350, 1361 (N.D. Ga. 2005) ("In Georgia, a warranty of merchantability clearly arises out of a contract of sale of goods, [and] can only run to a buyer who is in privity of contract with the seller.") (internal quotations omitted); Haugland v. Winnebago Industries, 327 F. Supp. 2d 1092, 1097 (D. Ariz. 2004) ("[V]ertical privity of contract between Plaintiff and Defendants is required to assert a UCC implied warranty of merchantability claim . . . ."); Tex Enterprises, Inc. v. Brockway Standard, Inc., 66 P.3d 625, 628 (Wash. 2003) ("[A] plaintiff may not bring an implied warranty action under the UCC without contractual privity.").

But other states do not require privity. See, e.g., Pack v. Damon Corp., 434 F.3d 810, 820 (6th Cir. 2006) ("[W]e conclude that Michigan has abandoned the privity requirement for implied-warranty claims. . . ."); Goodman v. PPG Industries, Inc., 849 A.2d 1239, 1246 n.6 (Pa. Super. Ct. 2004) ("[U]nder the Pennsylvania Commercial Code, privity of contract is not required between the party issuing a warranty and the party seeking to enforce the warranty."); Paramount Aviation Corp. v. Agusta, 288 F.3d 67, 74 (3d Cir. 2002) ("[W]hat is called 'vertical privity' is not a requirement of a warranty claim under New Jersey UCC law.").

Comment d. Disclaimers. See Cem Kaner, Why You Should Oppose UCITA, 17 Computer Lawyer 20, 23 (2000) (acknowledging need to "reduce publisher risk for losses caused by previously undiscovered defects or defects that were disclosed . . . ."); see also Michael L. Rustad, Making UCITA More Consumer Friendly, 18 J. Marshall J. of Computer & Information Law 547, 550-551, 583-584 (1999) (suggesting minimum adequate remedy for breach of warranty).

***139** *Illustration 1* is based on Teragram Corp. v. Marketwatch.com, Inc., 444 F.3d 1 (1st Cir. 2006).

Illustration 2 is based on Lively v. IJAM, Inc., 114 P.3d 487, 492 (Okla. Civ. App. 2005) (plaintiff who is "knowledgeable in computers and computer software and, additionally, work[s] as a computer technician for local businesses" may be a merchant under the U.C.C.).

Illustration 4 is based on Vision Graphics v. El du Pont de Nemours, 41 F. Supp. 2d 93 (D. Mass 1999).

Illustrations 5 and 6 are based on Moore v. Microsoft Corp., 741 N.Y.S.2d 91 (N.Y.A.D. 2002).

§ 3.04 Implied Warranty of Fitness for a Particular Purpose

(a) Unless excluded or modified, if a transferor at the time of contracting has reason to know any particular purpose for which the transferee requires the software and the transferee relies on the transferor's skill or judgment to select, develop, or furnish the software, the transferor warrants that the software is fit for the transferee's purpose.

(b) Unless excluded or modified, if an agreement requires a transferor to provide or select a system of hardware and software and the transferor at the time of contracting has reason to know that the transferee is relying on the skill or judgment of the transferor to select the components of the system, the transferor warrants that the software provided or selected will function together with the hardware as a system.

***140 Comment:**

a. In general. Section 3.04(a) follows U.C.C. § 2-315 and UCITA § 405(a). Under § 2-315, an implied-fitness warranty arises if the seller warrants that goods are fit for a particular purpose, the seller has reason to know the buyer's purpose for wanting the goods, and the buyer relies on the seller's "skill or judgment" to "select or furnish" the goods. The goal of § 2-315 is to protect the buyer's reasonable reliance. Under Article 2, goods can be merchantable (fit for their *ordinary* purpose), but not fit for a *particular* purpose. The key to the fitness-for-a-particular-purpose warranty, reliance, is not necessary for a merchantability claim to succeed. UCITA § 405(a) is comparable to U.C.C. § 2-315.

Illustration:

1. B, a retailer, tells A, a software developer, that B seeks to purchase software that would facilitate inventory record-keeping, billing, and invoicing. B desires a "single-entry system" that automatically would delete items from inventory when B enters a sales invoice. The market did not offer such software initially, but A represents to B that A's new software constitutes a "single-entry system." B therefore purchases the software, but then discovers that the software requires "double-entry." A has breached the implied warranty of fitness for a particular purpose (and also an express warranty).

Section 3.04(a) applies both to general-market software selected by a software publisher or retailer and custom-designed software. However, publishers of general-market software and retailers reasonably may fail to comprehend a transferee's purpose. Further, transferees often do not rely on a retail agent's skill or judgment in selecting software. Nevertheless, the implied-fitness warranty can arise even in retail transactions if the retailer reasonably should know the transferee's purpose and the transferee relies on the retailer in selecting the particular software.

Illustration:

2. B, owner of a printing business, purchases a copy of Grafix software from A, a retail store, for use in B's business. Prior to the purchase, B informs A's sales agent that B wants software that will produce images equal in quality to PhotoCam, the leading software of its type. Further, B tells the agent that the software must run on B's Ultra95 operating system. A recommends Grafix to B and assures B that the software will run on Ultra95. B discovers that Grafix is incompatible with Ultra95. Unless validly excluded, A has breached an implied warranty of fitness for a particular purpose.

Section 3.04(a) is especially important in the context of custom-designed software because transferees, often lacking in software expertise, frequently rely on the transferor's skill and judgment. If the transferee is educated about software issues, and does not rely on the transferor, however, no implied warranty of fitness arises. As an exception, a sophisticated transferee may rely on the transferor's representations about functions, features, and operation of particular software. In such a case an implied warranty of fitness may arise.

***141 Illustrations:**

3. B, a manufacturer of computer products, foresees the need for additional computer capability. B becomes interested in replacing its "Prime" operating system, but wants to continue using certain business-applications software for accounting and inventory tracking needs. B explains its needs to A, a software manufacturer, and requests assistance. A produces operating-system software that it claims will allow B to run its accounting and inventory software. If B's accounting and inventory software do not run on the new operating-system software, B has a claim for breach of the implied warranty of fitness for a particular purpose.

4. B, a supermarket, purchases custom software from A, a developer, for performing B's cash-register functions on hardware already owned by B. B describes its needs to A, and A writes the software and loads it on the machine. If the software is not compatible with the computer and does not function properly, A has broken the implied warranty of fitness for the particular system.

b. Software and hardware selected by the transferor as a system. Section 3.04(a) sets forth a warranty that the software is fit for the transferee's purpose. Section 3.04(b), on the other hand, creates a warranty only that software acquired with the hardware will work with the hardware as a system. The Section follows UCITA § 405(c). The transferor does not warrant that the system satisfies any quality needs, only that the software is compatible with the hardware. For example, a "turn-key" system" is a package of hardware, software, and services sold together as a package or unit. A transferor selects or develops the software and loads the software on the computer hardware. The transferee may rely on the transferor for the delivery of a working system. If the software is not compatible with the hardware, the implied warranty in § 3.04(b) is broken. In addition, if the software is otherwise materially defective, § 3.04(a) may apply.

***142 Illustration:**

5. B, a supermarket, purchases from A a turn-key system consisting of a special-purpose computer and non-embedded software for performing B's cash-register functions. A selected the computer and software and loaded the software on the machine before delivery. If the software does not function properly on the cash register, A has broken the implied warranty that the software is compatible with the hardware. If the software is otherwise defective, A may have broken the implied warranty of fitness for a particular purpose.

c. The transferor's reasonable efforts. UCITA § 405(a)(2) provides: "If from all the circumstances it appears that the licensor was to be paid for the amount of its time or effort regardless of the fitness of the resulting information, the warranty . . . is that the information will not fail to achieve the licensee's particular purpose as a result of the licensor's lack of reasonable effort." These Principles do not include a comparable provision. If fitness of the software was not a condition precedent to payment, then no warranty of fitness would arise—the transferee was not relying on the transferor to furnish software that is fit. Nevertheless, under common law, the transferor must make reasonable efforts to reach the desired results. Further, the transferor has a duty to act in good faith, which duty incorporates the obligation to make reasonable efforts.

REPORTERS' NOTES

Comment a. In general. Reliance on the transferor is "especially common in the computer industry where many transactions involve custom products and buyers with less experience, or no experience, with the technology. If the buyer is unable or unwilling to obtain outside advice, the seller may undertake the role of consultant and trigger the fitness warranty." Raymond T. Nimmer & Jeff Dodd, Modern Licensing Law § 8:28 (2005). "While the buyer might rely on the sales agent in a general sense, the retail setting seldom supports an implied warranty of fitness and never supports such a warranty in the classic or straightforward retail sale. The sales environment itself refutes any claim of reasonable reliance on the seller's expertise. The seller's interest in limiting its obligations is strongest here because there are no means to assess thoroughly the buyer's needs and this is apparent to both parties." Id.

Cases decided under Article 2 of the U.C.C. that set forth the purpose and direction of § 2-315 include Metowski v. Traid Corp., 104 Cal. Rptr. 599, 604 (Cal. Ct. App. 1972) (implied warranty of fitness "arises only where the purchaser at the time of contracting intends to use the goods for a particular purpose; the seller at the time of contracting has reason to know of this particular purpose; the buyer relies on the seller's skill or judgment to select or furnish goods suitable for the particular purpose; and the seller at the time of contracting has reason to know that the buyer is relying on such skill or judgment."); see also Wallman v. Kelley, 976 P.2d 330, 334 (Colo. Ct. App. 1998) (no implied-fitness warranty where purchaser decided to buy before conversation with seller); Keith v. Buchanan, 220 Cal. Rptr. 392, 399 (Cal. Ct. App. 1985) ("The major question in determining the existence of an implied warranty of fitness for a particular purpose is the reliance by the buyer upon the skill and judgment of the seller to select an article suitable for his needs.").

Comment b. Software and hardware selected by the transferor as a system. Commentary on UCITA § 405(c) captures the distinction sought here: § 3.04 "is limited to an assurance that the system components will function together as a system. This warranty does not, in itself, serve as a warranty that the system will meet the licensee's needs." Raymond T. Nimmer & Jeff Dodd, Modern Licensing Law § 8:28 (2005).

***143** *Comment c. The transferor's reasonable efforts*. For cases delineating the obligation to use best efforts, see, e.g., Mergentime Corp. v. Washington Metropolitan Area Transp. Authority, 400 F. Supp. 2d 145, 228 (D.D.C. 2005) (failure to use "best efforts" by contractor constitutes default); New Valley Corp. v. U.S., 119 F.3d 1576, 1584 (Fed. Cir. 1997) ("The waiver provision was intended to immunize the government from a claim for non-performance only where it had complied with its contractual duty to use its best efforts"); USM v. Arthur D. Little Systems, Inc., 546 N.E.2d 888, 896 (Mass. App. Ct. 1989) (obligation to use "best efforts" should be construed as in addition to, not in lieu of, transferor's other warranties).

Illustration 1 is based on Hollingsworth v. The Software House, Inc., 32 Ohio App. 3d 61, 513 N.E.2d 1372 (Ohio Ct. App. 1986).

Illustration 2 is based on Innovative Office Systems, Inc. v. Johnson, 906 S.W.2d 940 (Tex. Ct. App. 1995).

§ 3.05 Other Implied Warranties

(a) Unless modified or excluded, implied warranties may arise from course of dealing or usage of trade.
(b) The transferor warrants to any party in the normal chain of distribution and to the end user that the software contains no material hidden defects of which the transferor was aware at the time of the transfer. This warranty may not be excluded. In addition, this warranty does not displace an action for misrepresentation or its remedies.

Comment:

a. Course of dealing and usage of trade. Section 3.05(a) follows U.C.C. § 2-314(3). The purpose of the Section is to clarify that software warranties may arise based on the parties' past dealings or based on a trade practice. These warranties are implied warranties and can be excluded. The definition of course of dealing and usage of trade may be found in U.C.C. § 1-205.

Illustration:

1. Over the past 15 years, B, a small business, regularly has purchased various software products from A, a small software publisher. During that time, as is customary, A's technicians have resolved many compatibility issues with B's system at A's own cost. The parties' course of dealing and the trade custom establish an implied warranty that A's software is compatible with B's system and a remedial promise that A will resolve any problems at its own cost.

b. Hidden defects. Subsection (b) applies when a transferor fails to disclose material hidden defects of which it is aware. A hidden defect means that the defect would not surface upon any testing that was or should have been performed by the transferee. See § 3.06(e). Negligence on the part of transferors in failing to discover defects is not covered by the Section and is the subject of product-liability law. Nor does the subsection displace the law of misrepresentation, which applies to affirmative statements meant to deceive. Under general contract principles, the mere failure to disclose may not be actionable as fraud or a misrepresentation, but inroads in the common law support the approach in subsection (b).

The nature of software means that end users should not expect perfection. Several Sections of these Principles shield publishers from inordinate liability, such ***144** as by enforcing disclaimers and remedy limitations. However, software transferors should have a duty to disclose known material hidden defects in order to allocate those risks to the party best able to accommodate or avoid them. Hidden material defects, known to the software transferor but not disclosed, shift their costs to the transferee who cannot learn of the defects for itself until it is too late and therefore cannot protect itself.

A material defect consists of a software error serious enough to constitute a material breach of the contract. As such, §*** and the common-law material-breach cases, which ask whether the injured party received substantially what it bargained for, inform the court's decision on whether a defect is material. Software that causes long periods of downtime or requires major workarounds to achieve contract-promised functionality ordinarily would constitute a material defect.

Unlike other implied warranties, the warranty of no hidden material defects may not be excluded. This too is in accord with common law. Disclosure duties generally cannot be controlled by contract. In addition, presumably software publishers, influenced by market concerns, would hesitate to exclude liability for defects of which they are aware. Instead, they would post a list of known defects on their website to insulate themselves from liability under subsection (b).

Illustrations:

2. B, a manufacturer of computer products, foresees the need for additional computer capability. B becomes interested in replacing its "Prime" operating system with an "Ultrix" system, but wants to continue using certain business-applications software for accounting and inventory tracking needs. This software is not compatible with the Ultrix system, so B acquires software from A called "uniVerse" that A claims in advertising and in statements to B will allow B to run its accounting and inventory software on the Ultrix system. At the time of the transfer of the uniVerse software, A knew of a defect in uniVerse that caused several previous problems with its use on an Ultrix system. In fact, B encountered difficulties using uniVerse almost immediately and A was not able to fix the problems. A has breached an express warranty and has misrepresented the capabilities of its product. A also has breached the implied warranty of no material hidden defects.

3. Same facts as Illustration 2, except that A has made no express warranties nor misrepresented the capabilities of "uniVerse." Nevertheless, if A knew that uniVerse does not run on Ultrix systems because of a hidden defect in the software, A has breached the implied warranty of no material hidden defects. A did not breach the implied warranty of fitness for a particular purpose because B did not rely on A in selecting uniVerse.

4. Company A markets software for preparing construction bids. In a negotiated exchange in which A disclaims all warranties, Company B acquires the software and uses it to submit a bid. B loses a business opportunity because the software is defective and causes an inaccurate bid. An internal memo of A, written prior to the transfer, notes that an important bug exists in the software. A knew of the bug and fails to disclose it. A has breached the implied warranty of no material hidden defect. If the memo indicated that the bug was minor and that is all A knew, A has not breached the warranty.

***145 REPORTERS' NOTES**

Comment a. Course of dealing and usage of trade. U.C.C. § 2-314(3), Comment 12, states in part that course of dealing and trade custom "can create warranties . . . that . . . are implied rather than express warranties and thus subject to exclusion or modification under Section 2-316."

Comment b. Hidden defects. See Cem Kaner, Why You Should Oppose UCITA, 17 Computer Lawyer 20, 23 (2000). "[L]et the new law reduce publisher risk for losses caused by previously undiscovered defects or defects that were disclosed to the customer, but reduce the customer's risk of losses caused by defects that were known and left hidden." Id. at 24. According to Kaner, "[i]n mass-market software, a large proportion of defects (often the vast majority of them) that reach customers are discovered and intentionally left unfixed by the publisher before the product is released." Id. at 23. See also M.A. Mortenson Co. v. Timberline Software Corp., 998 P.2d 305, 313 (Wash. Sup. Ct. 2000) (internal memo of software publisher notes that a "bug has been found").

Under the common law, a contracting party must disclose facts if they are under the party's control and the other party cannot reasonably be expected to learn the facts. See, e.g., Bear Hollow, L.L.C. v. Moberk, L.L.C., 2006 WL 1642126 (W.D. N.C. 2006) ("[A] party negotiating at arm's length has a duty to disclose . . . where one party has knowledge of a latent defect in the subject matter of the negotiations of which the other party is ignorant and which it is unable to discover through reasonable diligence."); Everts v. Parkinson, 555 S.E.2d 667, 672 (N.C. Ct. App. 2001) ("[W]here a material defect is known to the seller, and he knows that the buyer is unaware of the defect and that it is not discoverable in the exercise of the buyer's diligent attention or observation, the seller has a duty to disclose the existence of the defect to the buyer.") (quoting Carver v. Roberts, 337 S.E.2d 126, 128 (N.C. Ct. App. 1985)); Shapiro v. Sutherland, 76 Cal. Rptr. 2d 101, 107 (Cal. Ct. App. 1998) ("Generally, where one party to a transaction has sole knowledge or access to material facts and knows that such facts are not known or reasonably discoverable by the other party, then a duty to disclose exists."); Johnson v. Davis, 480 So. 2d 625, 629 (Fla. 1985) ("[W]here the seller of a home knows of facts materially affecting the value of the property which are not readily observable and are not known to the buyer, the seller is under a duty to disclose them to the buyer.") For a discussion of materiality, see Restatement Second, Contracts § 241.

Illustration 1 is based on Gindy Mfg. Corp. v. Cardinale Trucking Corp., 268 A.2d 345 (N.J. Super. Ct. Law Div. 1970).

Illustrations 2 and 3 are based on Vmark Software, Inc. v. EMC Corporation, 642 N.E.2d 587 (Mass. 1994) ("Delivery of a defective product without revealing the defects, to the extent they are known and material, is surely market disruptive . . . .").

Illustration 4 is based on M.A. Mortenson Co. v. Timberline Software Corp., 998 P.2d 305, 313 (Wash. Sup. Ct. 2000) (internal memo of software publisher notes that a "bug has been found").

§ 3.06 Disclaimer of Warranties

(a) A statement intending to exclude or modify an express warranty is unenforceable if a reasonable transferee would not expect the exclusion or modification.

(b) Unless the circumstances suggest otherwise, all implied warranties other than the warranty of no material hidden defects (§ 3.05(b)) are excluded by language in a record such as "as is," "with all faults," or other language that a reasonable transferee would believe excludes all implied warranties.

(c) The implied warranty of merchantability is excluded if the exclusion is in a record, is conspicuous, and mentions "merchantability."

***146 (d) The implied warranty of fitness for a particular purpose is excluded if the exclusion is in a record, is conspicuous, and mentions "fitness for a particular purpose."**
(e) If before entering an agreement a transferee has tested the software, sample, or model as fully as desired or unreasonably has refused to test it, there are no implied warranties with regard to defects that a test should have or would have revealed.
(f) An implied warranty may be excluded or modified by course of performance, course of dealing, or usage of trade.
(g) Remedies for breach of warranty may be limited in accordance with § 4.01 of these Principles.

Comment:

a. Disclaiming express warranties. Section 3.06(a) clarifies the approach of U.C.C. § 2-316(1), which governs the exclusion or modification of express warranties in the sale-of-goods context. Section 2-316(1) directs courts to attempt to construe language creating and nullifying express warranties consistently. Failing that, courts must find the seller responsible for any inconsistencies between words or conduct creating and negating warranties. This approach causes confusion: How can language or conduct of warranty ever be "consistent" with language of disclaimer? The approach of § 2-316(1) is better understood by reading the explanation in § 2-316, Comment 1: Section 2-316(1) is meant to "protect a buyer from unexpected and unbargained language of disclaimer . . . ." Section 3.06(a) follows this comment, but omits the superfluous "unbargained" language.
The relative clarity, distinctiveness, and conspicuousness of language or acts of warranty and language of disclaimer help determine whether a disclaimer should be unexpected. For example, a disclaimer may be unexpected notwithstanding its conspicuousness if the warranty is clear and definitive. If a contract states definitively that software is "free of all bugs," but also disclaims all express and implied warranties, a reasonable transferee would not expect the disclaimer to apply to the statement and the disclaimer falls out of the contract. Similarly, if the transferor clearly describes the software as "word-processing software," a reasonable transferee would not expect a disclaimer to absolve the transferor of responsibility if the software consists of a low-level word game. On the other hand, if the transferor made statements during negotiations that would otherwise constitute express warranties, but the transferor takes pains to explain to the transferee that the transferor has decided not to make warranties and includes terms in the contract to that effect, a reasonable transferee would believe the transferor has disclaimed any express warranties.
Additional factors in determining whether a disclaimer is reasonably unexpected include whether the transferee drafted or helped draft the contract, and whether the transferee had actual knowledge of the disclaimer. As to the latter, if the transferor points out the disclaimer and the transferee therefore has actual knowledge of it before committing to the transfer, a reasonable transferee standing in the shoes of the transferee would not be surprised by the disclaimer.
***147** Section 3.06(a) renders disclaimers of express warranties unenforceable if reasonably unexpected, but first there must be an express warranty. Thus, as with sales law, these Principles require a determination of what a reasonable transferee would believe about the sum-total of words and conduct of the transferor of software to see whether an express warranty has arisen. See § 3.02. Further, as with U.C.C. § 2-316(1), evidence of an express warranty must be admissible under the parol-evidence rule. Suppose, for example, the transferee alleges that the transferor made a "free of all bugs" warranty orally before the parties signed a contract that disclaims all warranties express or implied. The parol-evidence rule may bar the admissibility of the express oral warranty. On the other hand, a transferor should not be able to use the parol-evidence rule as part of a strategy to confuse or surprise a transferee. See § 3. * * of these Principles.

Illustrations:

1. B, a consumer, purchases Old Word, a packaged word-processing program published by A. The back of the box contains the line, "Contains an amazing number of fun fonts to get your creative juices flowing!" The electronic standard form states: "A DISCLAIMS ALL EXPRESS WARRANTIES OTHERWISE CREATED ON THE PACKAGING OF THIS PROGRAM. A uses the program for a month, and then brings a breach-of-express-warranty claim, arguing that the program came with only 25 fonts, while its competitors each had at least 50 fonts. The explicit and plain-English disclaimer excludes any express warranty that potentially arose from the box's vague and casual representation.
2. After testing, B, the largest manufacturer of hot-dog buns in the U.S., negotiates with A, one of the leading software

manufacturers in the U.S., for the purchase of 1000 copies of its RecipeTracker program. Subsequently, over several months, a team of lawyers from each company hammer out a contract, which includes the following provision: "SELLER SPECIALLY DISCLAIMS ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY REGARDING THE COMPATIBILITY OF RECIPETRACKER WITH THE ULTRA95 OPERATING SYSTEM." Subsequently, B brings an action for breach of express warranty, arguing that the "test" copy of RecipeTracker ran on B's Ultra95 system, whereas the program ultimately furnished by A does not. B argues that RecipeTracker is therefore unsuitable for use in its operation. B's claim should fail because B is a sophisticated business with significant bargaining power and B negotiated the terms of the contract. The disclaimer should not be unexpected and is therefore enforceable.

b. Disclaiming implied warranties. Sections 3.06(b) through (f) clarify the approach of U.C.C. § 2-316(2) and (3). The U.C.C. sections set forth various methods of disclaiming implied warranties. According to § 2-316(2), to disclaim the implied warranty of merchantability, the seller must mention the term merchantability by name, and, if in a writing, the disclaimer must be conspicuous. The seller's disclaimer of the implied warranty of fitness for a particular purpose under § 2-316(2) must be in a conspicuous writing, but the seller does not have to use the words "fitness for a particular purpose." But U.C.C. § 2-316(3) offers additional avenues of disclaimer, less detailed than subsection (2): A seller can ***148** disclaim all implied warranties by including language such as "as is," "with all faults," or the like. The seller does not have to mention merchantability or disclaim conspicuously after all. Confusion about modes of disclaimer may arise primarily because of the order of presentation of disclaimers in the U.C.C. Instructions are particular in subsection (2), suggesting that these are the sole strategies of disclaimer, and general in subsection (3). For clarity, § 3.06 reverses the order, first setting forth general modes of disclaimer and then proceeding to the specific.

Section 3.06(b) follows the principle that a transferee should not receive implied-warranty protection if the transferee should have known from the language of a disclaimer that the contract affords no such protection. In addition, some courts have enforced implied-warranty disclaimers in sale-of-goods cases, even if inconspicuous or vague, if the purchaser had actual knowledge of the transferor's intent to disclaim. Such a result is possible under the "unless the circumstances suggest otherwise" preamble of § 3.06(b). The preamble also means that in some situations "as is" or similar language is not sufficient to exclude implied warranties, such as where the contract contains language that contradicts the disclaimer of implied warranties.

Section 3.06(c) sets forth a safe harbor for transferors, so long as the merchantability disclaimer is in a record, mentions merchantability, and is conspicuous. Section 3.06(d) also is a safe harbor. Unlike U.C.C. § 2-316(2), however, the disclaimer must mention "fitness for a particular purpose." The "conspicuous" requirement is well-rehearsed in the jurisprudence of Article 2 and no elaboration is necessary here. For example, the U.C.C.'s definition of "conspicuous" suffices here: "A term or clause is conspicuous when it is so written that a reasonable person against whom it is to operate ought to have noticed it. A printed heading in capitals . . . is conspicuous. Language in the body of a form is 'conspicuous' if it is in larger or other contrasting type or color." U.C.C. § 1-201(10). Section 1-201(b)(10) of Amended Article 1 elaborates, but the thrust is the same.

In a software transfer governed by an electronic contract, the transferor can bury a disclaimer of warranties several screens into the contract. In this instance, the location of the disclaimer weighs heavily in determining whether it is conspicuous. The test is nonetheless the same: Would the placement call the disclaimer to a reasonable transferee's attention? The likely answer is "no" if the disclaimer is not displayed on one of the first few screens.

Sections 2-316(3)(b) and 2-316(3)(c) of the U.C.C. set forth disclaimers based on the buyer's inspection of (or unreasonable refusal to inspect) the goods, and based on "course of dealing," "course of performance," or "usage of trade." Under § 2-316(3)(b), a seller must demand that the buyer inspect the goods, mere availability of the goods is insufficient. Further, the demand must put a reasonable buyer on notice that the buyer assumes the risk of defects the inspection should reveal. In addition, the section accounts for the relative skill level of the buyer: "A professional buyer examining a product . . . will be held to have assumed the risk as to all defects which a professional in the field ought to observe, while a nonprofessional buyer will be held to have assumed the risk only for such defects as a layman might be expected to observe." U.C.C. § 2-316, Comment 8. Finally, the ***149** failure to inspect must be unreasonable on the part of the buyer. Section 3.06(e) of these Principles adopts all of these considerations in determining whether software implied warranties are excluded due to a test or failure to test the software.

Under U.C.C. § 2-316(3)(c), if a seller and buyer repeatedly enter "as is" contracts prior to the transaction at issue, they may have established a course of dealing. If so, a court should interpret a new sale also "as is," unless the parties expressly draft otherwise. Section 3.06(f) of these Principles follows this approach as well.

Illustrations:

3. B, a high-school math teacher, purchases packaged software manufactured by A. The written agreement contains an "as is" disclaimer and a disclaimer of the implied warranties of merchantability and fitness for a particular purpose. The disclaimers of the implied warranties are in the same font size, type, and color as the rest of the contract. These disclaimers are not conspicuous and thus ineffective under §§ 3.06(c) and 3.06(d), but the § 3.06(b) disclaimer may be effective. An "as is" disclaimer is not a safe harbor, however, because of the preamble to § 3.06(b), "unless the circumstances suggest otherwise." The preamble means that in some situations "as is" or similar language is not sufficient to exclude implied warranties, such as where the contract contains language that contradicts the disclaimer of implied warranties.
4. B, a carpenter, purchases packaged software manufactured by A. The written contract contains the following instruction on the front of the contract in capital letters: "ADDITIONAL TERMS ON BACK." The back of the contract contains a disclaimer of implied warranties of merchantability and fitness in the eighth (of sixteen) paragraphs, with no heading, and in 7-point font, compared to 12-point font on the front and 5-point font on the rest of the back of the contract. The disclaimer of warranties is not conspicuous and thus ineffective under §§ 3.06(c) and 3.06(d).

c. Modification of software negates all warranties. UCITA § 407 provides that a "licensee that modifies a computer program . . . invalidates any warranties, express or implied, regarding performance of the modified copy." These Principles do not include an equivalent rule in the black letter on the theory that such a rule is unnecessary. Unless the transferor warrants that the software will achieve the represented purposes even if modified, the transferor has not broken any express warranty when the copyholder modifies or reverse engineers the software and it does not work. Similarly, the merchantability warranty applies to software that the transferor delivers, not to modified software, unless the particular software's ordinary purpose includes modification. Finally, the fitness-for-a-particular-purpose warranty would not be broken if the copyholder alters the software so that it does not achieve its purposes.

***150 Illustrations:**

5. B, a major accounting firm, orders custom accounting software from A. After taking delivery of source code, B modifies the source code to add several new features and integrate them into the features of the accounting software. The modified software proves unreliable on B's computers. B's modification has invalidated all warranties from A.
6. B, a high-school math teacher, purchases packaged spreadsheet software manufactured by A. After using the software for several days, B creates a number of templates as described in the software documentation and alters a variety of the software's default preferences to make the software function more efficiently. The software stops working. B's modification of the default preferences does not constitute modification of the software, and any applicable warranties continue to apply.

REPORTERS' NOTES

Comment a. Disclaiming express warranties. An early U.C.C. Article 2 draft denied enforcement to disclaimers of express warranties. See J. White & R. Summers, Uniform Commercial Code 425 (5th ed. 2000). White and Summers also remark that under the current version of Article 2 "[i]f the factfinder determines that a seller's statement created an express warranty, words purportedly disclaiming that warranty will still be 'inoperative,' for the disclaiming language is inherently inconsistent." Comment 1 to § 2-316 states that § 2-316(1) is supposed to "protect a buyer from unexpected and unbargained language of disclaimer by denying effect to such language when inconsistent with language of express warranty . . . ." Many cases follow the comment. See, e.g., Manitowoc Marine Group, LLC v. Ameron Intern. Corp., 424 F. Supp. 2d 1119, 1132-1133 (E.D. Wis. 2006); Morningstar v. Hallett, 858 A.2d 125, 130 (Pa. Super. 2004); Southern Energy Homes, Inc. v. Washington, 774 So. 2d 505, 512-513 (Ala. 2000).
Case law generally favors express warranties over disclaimers. See, e.g., Bell Sports, Inc. v. Yarusso, 759 A.2d 582, 593 (Del. 2000) ("The restrictive provision of [§ 2-316(1)] renders Bell's effort to disclaim any express warranties in the manual's 'Five Year Limited Warranty' ineffective as a matter of law. . . ."); James River Equipment Co. v. Beadle County Equipment, Inc., 646 N.W.2d 265, 271 (S.D. 2002) ("The UCC contemplates that only implied warranties can be disclaimed by use of 'as is' clauses. . . . The official comment to that section confirms its plain meaning, i.e., that '[o]nly implied—not express—warranties are excluded in 'as is' transactions.'"); Hercules Machinery Corp. v. McElwee Bros., Inc., No. Civ.A.

01-3651, 2002 WL 31015598 (E.D. La. 2002) ("[Section 2-316] expressly provides that negation or limitation of an express warranty is 'inoperative' if inconsistent with the seller's representation of an express warranty. . . . The Court finds it impossible to read Hercules' express warranty and Hercules' waiver of an express warranty as consistent with each other. . . . [T]his conflict renders Hercules' waiver of express warranties inoperative."); Bushendorf v. Freightliner Corp., 13 F.3d 1024, 1027 (7th Cir. 1993) ("[Section 2-316(1)] has been understood to forbid the complete negation of an express warranty. . . . [I]f the parties have negotiated an express warranty, a clause in the same contract disclaiming it . . . suggests some deep confusion which may warrant reparative efforts by the court."); Providence & Worcester R. Co. v. Sargent & Greenleaf, Inc., 802 F. Supp. 680, 688 (D. R.I. 1992) ("Generally a seller may not disclaim an express warranty."); Duffin v. Idaho Crop Imp. Ass'n, 895 P.2d 1195, 1205 n.8 (Idaho 1995) ("[E]xpress warranties are virtually impossible to disclaim under the Code."); Hartman v. Jensen's, Inc., 289 S.E.2d 648, 649 (S.C. 1982) ("[P]lacing alleged disclaimer under the bold heading of 'Terms of Warranty' created an ambiguity and was likely to fail to alert the consumer that an exclusion of the warranty was intended."); Ritchie Enterprises v. Honeywell Bull., 730 F. Supp. 1041 (express warranties hard to disclaim); Consolidated Data Terminals v. Applied Digital Data Systems, Inc., 708 F.2d 385 (9th Cir. 1983) (specific express warranty prevails over general disclaimer); see also Sierra Diesel Injection Service, Inc. v. Burroughs Corp., 874 F.2d 653 (9th Cir. 1989).

***151** Notwithstanding this trend, sufficient confusion in the case law suggests the need for clarification in the black letter. For example, some courts seem not to understand the charge of § 2-316. See, e.g., Kolle v. Mainship Corp., No. 04CV711 (TCP) (MLO), 2006 WL 1085067, at *3 (E.D.N.Y. 2006) ("UCC § 2-316, however, authorizes the exclusion of both express and implied warranties so long as the exclusion is specific, clear, and timely."); Naftilos Painting, Inc. v. Cianbro Corp., 713 N.Y.S.2d 626, 627 (N.Y. App. Div. 2000) ("The court further erred in failing to dismiss the fourth and fifth causes of action, predicated upon the breach of express and implied warranties of fitness of use for a particular purpose. Each of the invoices reflecting the sale of paint and paint thinner by defendant to plaintiff contained a conspicuous and thus effective disclaimer of all warranties . . . ."); Travelers Ins. Companies v. Howard E. Conrad, Inc., 649 N.Y.S.2d 586, 587 (N.Y. App. Div. 1996) ("The type size of the waiver provision is larger than that contained elsewhere on the back of the agreement, and it stands out in capital letters. In our view, a reasonable person would notice the provision 'when its type is juxtaposed against the rest of the agreement.' Thus, the provision waiving all warranties, express and implied, is conspicuous and therefore enforceable."); Ekizian v. Capurro, 444 N.Y.S.2d 361, 362 (N.Y. Just. Ct. 1981) (suggesting an "inconsistent" disclaimer would have trumped express warranty); Bernstein v. Sherman, 497 N.Y.S.2d 298, 300-301 (N.Y. Just. Ct. 1986) (written disclaimer trumps express warranty).

For sales cases delineating the meaning of "expected" or "unexpected" disclaimers, see, e.g., Bell Sports, Inc. v. Yarusso, 759 A.2d 582, 593 (Del. 2000) ("While [seller's] manual contains disclaimers warning potential users that the helmet cannot prevent all injuries, other representations were made to assure a potential buyer that the helmet's liner was designed to reduce the harmful effects of a blow to the head. Those representations constituted essential elements of a valid express warranty that may not be effectively disclaimed as a matter of law."); Betaco, Inc. v. Cessna Aircraft Co., 103 F.3d 1281, 1287-1289 (7th Cir. 1996) (expected disclaimer was conspicuously "highlighted by capitalized lettering"; further purported warranties were "ambiguous" and "casual."); Klickitat County Public Utility Dist. No. 1. v. Stewart & Stevenson Services, Inc., No. CY-03-3175-LRS, 2006 WL 908042, at 11 n.5 (E.D. Wash. 2006) ("Given the sophistication of the parties and extensive negotiations which occurred, KPUD is not the sort of buyer [2-316(1)] was meant to protect." Hayes v. Bering Sea Reindeer Products, 983 P.2d 1280, 1286 (Alaska 1999) ("A seller cannot negate express warranties through generalized disclaimers. But the clear, forceful, specific disclaimer in this contract defeats . . . any [claim of] enforceable express warranty. This is not a fine-print boilerplate disclaimer which NCI could not have negotiated or understood; it is a conspicuous, clearly written provision in a two-page contract between parties with equal bargaining power."); Appalachian Ins. Co. v. McDonnell Douglas Corp., 262 Cal. Rptr. 716, 736 (Cal. Ct. App. 1989) ("[I]t cannot be said the disclaimer language in the written contract with McDonnell Douglas was 'unexpected,' 'unbargained for' or a 'surprise' since Western Union negotiated the language contained in article 7 and itself drafted article 14 which waived claims against McDonnell Douglas's contractors and subcontractors, including claims against Morton Thiokol.").

Comment b. Disclaiming implied warranties. See generally U.C.C. § 2-316(2) and (3) and UCITA § 4.06 on which § 3.06 is based.

Software publishers almost universally disclaim the implied warranty of merchantability. See, e.g., Performance Chevrolet, Inc. v. Market Scan Information Systems, Inc., 402 F. Supp. 2d 1166 (D. Idaho 2005); M. Block & Sons, Inc. v. International Business Machines Corp., 2004 WL 1557631 (N.D. Ill. 2004). Lewis Tree Service, Inc. v. Lucent Technologies Inc., 239 F. Supp. 2d 322 (S.D.N.Y. 2002); Telecom Intern. America, Ltd. v. AT & T Corp., 280 F.3d 175 (2d Cir. 2001); Hou-Tex, Inc.

v. Landmark Graphics, 26 S.W.3d 103 (Tex. Ct. App. 2000); Against Gravity Apparel, Inc. v. Quarterdeck Corp., 267 A.D.2d 44 (N.Y. App. Div. 1999).

Some states preclude exclusion of implied warranties in consumer contracts. For example, Maryland's version of UCITA contains the following amendment: "Any oral or written language used in a consumer contract, which attempts to exclude or modify any implied warranties of merchantability of a computer program . . . or implied warranties of fitness for a particular purpose . . . or exclude or modify the consumer's remedies for a breach of those warranties, is unenforceable." See Raymond T. Nimmer, Uniform Computer Information Transactions Act, Part 4. Warranties, 406. Official Text and Comments; major variations; 2000 text (2006).

As to what is conspicuous, Amended U.C.C. § 1-201(b)(10) offers some examples:

> ***152** [A] heading in capitals equal to or greater in size than the surrounding text, or in contrasting type, font, or color to the surrounding text of the same or lesser size; and language in the body of a record or display in larger type than the surrounding text, or in contrasting type, font, or color to the surrounding text of the same size, or set off from surrounding text of the same size by symbols or other marks that call attention to the language.

Case law on what is conspicuous includes Recursion Software, Inc. v. Interactive Intelligence, Inc., 425 F. Supp. 2d 756 (N.D. Tex. 2006); Sierra Diesel Injection Serv. v. Burroughs Corp., 874 F.2d 653 (9th Cir. 1989) (disclaimer not conspicuous if on the back of the contract even though in capital letters, at least when the transferee is unsophisticated); Myrtle Beach Pipeline Corp. v. Emerson Elec. Co., 843 F. Supp. 1027, 1038 (D. S.C. 1993) (factors include: "(1) the color of print in which the purported disclaimer appears; (2) the style of print in which the disclaimer is written; (3) the size of the disclaiming language, particularly in relation to other print in the document; (4) the location of the disclaimer in the contract; (5) the appearance of the term 'merchantability' with respect to color, style, size, and type of print in the disclaimer clause; and (6) the status of the parties contesting the validity of the disclaimer, namely whether they be consumers or commercially sophisticated entities.").

For cases enforcing nonconspicuous disclaimers because of actual knowledge of the party asserting the warranty, see, e.g., Twin Disc, Inc. v. Big Bud Tractor, Inc., 772 F.2d 1329, 1334 n.2 (7th Cir. 1985) ("There is therefore no need to determine whether a disclaimer is conspicuous, such that the buyer's knowledge of disclaimer can be inferred, when the buyer has actual knowledge of the disclaimer."); Fargo Mach. & Tool Co. v. Kearney & Trecker Corp., 428 F. Supp. 364, 372 (E.D. Mich. 1977) ("[S]ophisticated business buyer experienced in commercial dealings" who reviewed, understood and apparently approved of a warranty paragraph containing a disclaimer clause cannot then argue its inconspicuousness even though the disclaimer sentence itself was in standard small print.).

For cases construing the "unless the circumstances indicate otherwise" language of U.C.C. § 2-316(3)(a) to defeat otherwise effective disclaimers, see, e.g., Murray v. D & J Motor Co., Inc., 958 P.2d 823, 829-830 (Okla. Civ. App. 1998) ("Section 2-316(3) addresses the use of the terms 'as is' and 'with all faults'. . . . This Court holds that among the circumstances that could render a purported 'as is' or 'with all faults' disclaimer unreasonable and ineffective are fraudulent representations or misrepresentations concerning the condition, value, quality, characteristics or fitness of the goods sold that are relied upon by the Buyer to the Buyer's detriment.") (emphasis in original); Alpert v. Thomas, 643 F. Supp. 1406, 1417 (D. Vt. 1986) ("[C]lause 9(i) fails under § 2-316(3) to adequately disclaim plaintiffs' implied warranty that Raxx was merchantable as a breeder. First, subsection (3)(a) provides that implied warranties may be excluded by expressions like 'as is' or other expressions which would normally call the buyer's attention to the fact that the implied warranty is excluded, 'unless the circumstances indicate otherwise.' In this case, the circumstances indicate otherwise. The course of negotiations between Mallory and Thomas indicates that, despite the presence of clause 9(i) in the purchase and sale agreement, the parties intended that Raxx would be merchantable as a breeder, as is the custom in the Arabian horse trade when the seller knows that the buyer intends to use the horse for breeding purposes.").

For a discussion of the placement of disclaimers on web pages, see Stephen J. Davidson, Scott J. Bergs & Miki Kapsner, Open, Click, Download, Send . . . What Have you Agreed to? The Possibilities Seem Endless, 765 PLI/Pat 139 (Sept. 2003) ("conspicuousness on web pages should take into account how "deep into" the site is the disclaimer"). For criticism of the use of the "conspicuousness" standard in software contracts, see Stephen E. Friedman, Text and Circumstances: Warranty Disclaimers in a World of Rolling Contracts, 46 Ariz. L. Rev. 677 (2004).

Illustration 1 is based on Betaco, Inc. v. Cessna Aircraft Co., 103 F.3d 1281 (7th Cir. 1996) ("Vague" and "casual" representations defeated by explicit and clear disclaimer).

Illustration 2 is based on Hayes v. Bering Sea Reindeer Products, 983 P.2d 1280 (Alaska 1999) (negotiated disclaimer effective against sophisticated business with equal bargaining power) and ***153** Appalachian Ins. Co. v. McDonnell Douglas

Corp., 262 Cal. Rptr. 716 (Cal. Ct. App. 1989) (party cannot claim "surprise" when it participated in drafting disclaimer). *Illustration 4* is based on Sierra Diesel Injection Serv. v. Burroughs Corp., 890 F.2d 108 (9th Cir. 1989).

§ 3.07 Third-Party Beneficiaries of Warranty

(a) A transferee's warranty right extends to any person for whose benefit the transferor intends to supply the software if the person uses the software in a manner contemplated or that should have been contemplated by the transferor.
(b) A consumer's warranty right extends to the consumer's immediate family, household members, or guests if the transferor reasonably should expect such persons to use the software.
(c) Except as provided in (b), a contractual term that excludes or limits the third parties to which a warranty extends is enforceable.
(d) An exclusion or modification of a warranty that is effective against the transferee is also effective against third parties to which the warranty extends under this Section.

Comment:

Comment a. In general. Section 3.07(a) follows UCITA § 409 and the common-law development of third-party-beneficiary law. But § 3.07(b) expands the parties who can sue to include guests of the family or household if the transferor reasonably should expect such use. Nevertheless, § 3.07(d) enforces disclaimers against the third-party beneficiaries if they are effective against the transferee. Section 3.07 should be read in conjunction with the discussion of privity in § 3.03, Comment *c*.
Decisions involving sales of goods have not settled whether plaintiffs can sue as third-party beneficiaries if they claim only economic loss. Section § 3.07 applies both to economic and personal injuries suffered by a third party. In the consumer context, personal injury from defective software should be less frequent, of course.
Comment b. Person for whose benefit the transferor intends to supply the software. This requirement roughly follows the Restatement Second of Contracts § 302. That Section provides that if (1) both contracting parties intend to recognize the beneficiary's right to performance and (2) the promisee "intends to give the beneficiary the benefit of the promised performance" then the beneficiary is an "intended beneficiary." Under the Restatement Second of Contracts § 304, only "intended beneficiaries" can sue. Section 3.07(a) of these Principles distills from the Restatement the requirement that the transferor must intend to benefit the third party. According to UCITA, "[t]his requires a conscious assumption of risk or responsibility for particular third parties." UCITA § 409, Comment 2. A transferor may clarify in the contract whether it intends for the warranty to extend to a third party or whether it specifically intends the opposite. See § 3.07(c).

***154 Illustration:**

1. For tax reasons, B, a medical practice, arranges for a hospital to acquire medical software and a computer system from A, a vendor. B supplies the funding for the software and system. The contract between A and the hospital expressly states that the turn-key system is for the benefit of B and that B will use the system exclusively. In case of a breach of warranty, B can sue A.

Comment c. Third-party beneficiaries of consumer transferees. Under § 3.07(b) the transferor is liable to the transferee's immediate family, household, or guests only if the transferor reasonably should expect these parties to use the software. This approach follows UCITA § 409, Comment 4.

Illustration:

2. B, a consumer, downloads from A's website an "all-in-one" software package for creating audio, video, photo, and data projects. Among other things, the software allows picture editing, screen-saver designing, and movie displaying. Members of B's household who lawfully use B's copy of the software can sue for breach of warranty as third-party beneficiaries.

Comment d. Limitations. Under subsections (c) and (d), transferors can limit their exposure to third-party liability. Under subsection (c), a transferor can narrow the reach of subsection (a) by expressly delineating for whom the transferor intends to supply the software and for whom it does not. Subsection (d) makes clear that effective warranty disclaimers apply to third parties.

Illustration:

3. Same facts as Illustration 2, except that the contract between A and B includes an effective disclaimer of the warranty of merchantability. The disclaimer shields A from merchantability warranty liability to B's household members.

REPORTERS' NOTES

Comment a. In general. On the importance of extending protection to guests of the household, see Jean Braucher, Uniform Computer Information Transactions Act (UCITA): Objections from the Consumer Perspective, 6 Cyberspace Law. 2 (2000) ("[UCITA] restricts responsibility to third party beneficiaries more narrowly than UCC Article 2: UCITA adopts an extremely narrow definition of third party beneficiaries of warranties. This definition excludes guests of the licensee even if they could have been reasonably expected to use the product. . . . . Even the narrowest alternative in UCC 2-318 covers family, household members and guests if their use was reasonably expected. UCITA section 409 eliminates guests altogether.").

As with UCITA, § 3.07 applies to both personal and economic injury caused by the software. See Holly K. Towle, Mass Market Transactions in the Uniform Computer Information Transactions Act, 38 Duq. L. R. 371 (2000) ("Note that unlike UCC Alternatives A and B, there is no limitation in UCITA to personal injury damages."). Potential liability for personal injury may include "diet software, exercise control software, first aid software, recipe-creating software and the like . . . ." Richard Raysman & Peter Brown, Computer Law: Drafting and Negotiating Forms, Volume 2, Chapter 12. Software Publishers and Work for Hire, § 12.11A Potential Liabilities in Mass Market Software. For a comparison of approaches to interpreting "injury" under Alternative C of U.C.C. § 2-318, see, e.g., Hyundai Motor America, Inc. v. Goodin, 822 N.E.2d 947, 955-956 (Ind. 2005).

***155** *Comment b. Person for whose benefit the transferor intends to supply the software*. The Restatement Second of Contracts § 302 provides:

Intended and Incidental Beneficiaries

(1) Unless otherwise agreed between promisor and promisee, a beneficiary of a promise is an intended beneficiary if recognition of a right to performance in the beneficiary is appropriate to effectuate the intention of the parties and either

(a) the performance of the promise will satisfy an obligation of the promisee to pay money to the beneficiary; or

(b) the circumstances indicate that the promisee intends to give the beneficiary the benefit of the promised performance.

Section 3.07 overturns some cases in the software context that required privity. See, e.g., Downriver Internists v. Harris Corporation, 929 F.2d 1147 (6th Cir. 1991), discussed in L. J. Kutten, Computer Software Protection-Liability-Law-Forms, Chapter 12. Problems of Defective Software, § 12:35. Privity Issues. Kutten writes:

> Before a "purchaser" can sue for breach of warranty, it may have to show that it has privity with the seller. This is not always easy since many times computer systems are leased through third parties. For example, in Downriver Internists v. Harris Corporation, [929 F.2d 1147 (6th Cir. 1991)] a medical practice used a hospital to purchase the system in order to obtain tax benefits. When the system did not work, and the medical practice sued, the Court ruled that it could not claim a third-party beneficiary status, since it was neither a party to the contact nor mentioned in it. The Court said:
>
>> In both cases, the negotiations prior to signing of the contracts did not involve Downriver. Although the contracts indicate that the equipment was to be shipped to Downriver, they clearly state that the equipment was sold to Lynn. Downriver's only apparent role in the contracts was as a provider of financing in order for Downriver to claim tax benefits. Downriver was not bound by the terms of the contracts, and was not a party to the performance obligations spelled out in the contracts. The district court properly found that privity of contract did not exist between Downriver and Harris or HRI [the sellers]. [Id. at 1149-1150.]
>
> Conversely in Spagnol Enterprises, Inc. v. Digital Equipment Corp., [390 Pa. Super. 372, 568 A.2d 948 (1989)] the Court held that a "lessor" of a computer system could sue the manufacturer even though there was no contractual relationship (privity) between them. There, the "lease" had been arranged through an authorized reseller and the seller attended meetings with both the lessor and lessee. The Court interpreted Pennsylvania's enactment of U.C.C. § 2-318, to mean that privity is not required for any warranty claim where the buyer is the person who is reasonably and foreseeably injured by the defective goods.

Illustration 1 is based on Downriver Internists v. Harris Corporation, 929 F.2d 1147 (6th Cir. 1991).

[FN1]. Douglas E. Phillips, *When Software Fails: Emerging Standards of Vendor Liability Under the Uniform Commercial Code*, 50 Bus. Law. 151, 151-155 (1994). See also Diane W. Savage, *Performance Warranties in Computer Contracts*, 8 No. 12 Computer Law. 32, 32 (1991), available at http:// library.findlaw.com/1997/Nov/1/128553.html ("computer litigation is on the increase").
The *Wall Street Journal* reports that a Malaysia Airlines jetliner "suddenly took on a mind of its own, and zoomed 3000 feet upward." It took the crew 45 seconds to regain control of the plane. The cause was defective software that provided the wrong data about the plane's speed. Daniel Michaels & Andy Pasztor, *Incidents Prompt New Scrutiny of Airplane Software Glitches*, Wall St. J., May 30, 2006, at A1.

[FN2]. See, e.g., Lorin Brennan, *Why Article 2 Cannot Apply to Software Transactions*, 38 Duq. L. Rev. 459, 506-508 (2000). See also Vmark Software, Inc. v. EMC Corp., 642 N.E.2d 587, 596 (Mass. App. Ct. 1994) (a "seasoned user of computer systems" should know that customized technology requires some "debugging."); Lovely v. Burroughs Corp., 527 P.2d 557, 560 (Mont. 1974) (malfunction after "debugging").

[FN3]. Phillips, supra note 1, at 151.

[FN4]. Nim Razook, *The Politics and Promise of UCITA*, 36 Creighton L. Rev. 643, 655 (2003).

[FN5]. Cem Kaner, *Why You Should Oppose UCITA*, 17 Computer Lawyer 20, 23 (2000), available at http://www.kaner.com/pdfs/ComputerLawyer.pdf. ("Clearly, it is impossible to test software products exhaustively or to prove by testing that a product is defect free."); Paul S. Hoffman, *Software Warranties and the Uniform Commercial Code*, 4 J. Proprietary Rts. 7, 11 (1994) (discussing software's uniqueness and complexity"). But Kaner also asserts that defect-free software is not so pie-in-the-sky. Kaner, supra at 24.

[FN6]. See Barkley Clark & Christopher Smith, The Law of Product Warranties § 2:23 (Database update June 2005); Savage, supra note 1.

[FN7]. See, e.g., Robert W. Gomulkiewicz, *The Implied Warranty of Merchantability in Software Contracts: A Warranty No One Dares to Give and How to Change That*, 16 J. Marshall J. Computer & Info. L. 393, 398 (1997) ("In the software contract warranty cases that have arisen, the courts have made no attempt to tailor their construction of the warranty to the unique nature of software or software transactions."). But see Carl Beasley Ford, Inc. v. Burroughs Corp., 361 F. Supp. 325, 330-331 (E.D. Pa. 1973), aff'd, 493 F.2d 1400 (3d Cir. 1974) (while software often requires debugging, 8 months of attempts to make the software work are enough).

[FN8]. UCITA creates two implied warranties for software: the warranty of non-infringement, and the warranty of quiet enjoyment. Uniform Computer Information Transactions Act, § 401 (2002).

[FN9]. Clark & Smith, supra note 6. Transferees generally win warranty cases only when the transferor has neglected to include disclaimers or has failed to follow accurately the roadmap for disclaiming in Article 2. For a recent case narrowing the warranty to substantial conformance to the documentation within 30 days of delivery of the software, see Teragram Corp. v. Marketwatch.com, Inc., 444 F.3d 1 (1st Cir. 2006).

[FN10]. Kaner, supra note 5, at 27-28.

[FN11]. U.C.C. Article 2A, governing leases, follows a similar strategy.

[FN12]. Hoffman, supra note 5, at 11 ("Software of any sophistication is rarely bug-free even after years of use.").

[FN13]. See these Principles, supra Chapter 2, Summary Overview to Topic 1A and § 2.01.

[FN14]. See, e.g., AMF, Inc. v. Computer Automation, Inc., 573 F. Supp. 924, 929 (S.D. Ohio 1983) (enforcing disclaimers because of the "commercial sophistication" of the businesses).

[FN15]. See infra § 3.02(b)(1).

[FN16]. See infra § 3.02, Comment *b*.

[FN17]. U.C.C. § 2-316(1) (West, Westlaw through 2005 NCCUSL/ALI meeting) ("Words or conduct relevant to the creation of an express warranty and words or conduct tending to negate or limit warranty shall be construed wherever reasonable as consistent with each other . . . negation or limitation is inoperative to the extent that such construction is unreasonable."); see also Ajay Ayyappan, *UCITA: Uniformity at the Price of Fairness?*, 69 Fordham L. Rev. 2471, 2478-2485 (2001).

[FN18]. See infra § 3.06, Comment *a*, of these Principles, and the corresponding Reporters' Note.

[FN19]. See infra § 3.06. See also Hoffman, supra note 5, at 16 ("[C]ustomized software involves some modification to standard software, custom software implies the creation of a new program or set of programs from scratch.").

[FN20]. H. Ward Classen, A Practical Guide to Software Licensing for Licensees and Licensors: Analyses and Model Forms 71-74 (American Bar Association 2006).

[FN21]. See, e.g., Omri Ben-Shahar & James J. White, *Boilerplate and Economic Power in Auto Manufacturing Contracts*, 104 Mich. L. Rev. 953, 962 (2006) (auto industry defers to software suppliers).

[FN22]. Razook, supra note 4, at 663. See also Matthew D. Stein, Rethinking UCITA: Lessons From the Open Source Movement, 58 Me. L. Rev. 157, 179 (2006).

[FN23]. Ayyappan, supra note 17, at 2488-2489; Edward G. Durney, *The Warranty of Merchantability and Computer Software Contracts: A Square Peg Won't Fit in a Round Hole*, 59 Wash. L. Rev. 511, 521-523 (1984); Hoffman, supra note 5, at 7.

[FN24]. Phillips, supra note 1, at 155-156 (reliability means "'the probability of failure-free operation of a computer program for a specified time' in a given environment," and software "'failure"' occurs when software "'has not met user requirements in some way."') (quoting Victor R. Basili & John D. Musa, *The Future Engineering of Software: A Management Perspective*, in Software Management 9, 10 (Donald J. Reifer ed., 4th ed. 1993); John D. Musa et al., Software Reliability: Measurement, Prediction, Application at 5, 15 (prof. Ed. 1990)). See also Savage, supra note 1 ("A standard software warranty would provide that the software 'performs substantially in accordance' with an identifiable set of functional specifications.").

[FN25]. Hoffman, supra note 5, at 9 ("Sometimes errors are graded in severity from Class 1 (unable to use the software productively) through Class 2 (significant interference with operation of the software) to Class 3 (interferes with but does not prevent productive use of the software).")

[FN26]. See, e.g., Gomulkiewicz, supra note 7, at 399 ("[C]omputer programs are essentially diverse collections of ideas that cannot reasonably be compared to one another.").

[FN27]. Id. at 400 ("[M]ost mass-market software products are neither experimental nor custom-made.").

[FN28]. Free Software Foundation, Why We Must Fight UCITA, http:// www.gnu.org/philosophy/ucita.html (last visited 8/14/06).

[FN29]. See Chapter 2, Topic 1, on disclosure.

[FN30]. Section 3.04(a). The Section follows U.C.C. § 2-315 (West, Westlaw through 2005 NCCUSL/ALI meeting) and UCITA § 405(a) (2002).

[FN31]. U.C.C. § 2-315 (West, Westlaw through 2005 NCCUSL/ALI meeting).

[FN32]. Kaner, supra note 5, at 23-24. ("[L]et the new law reduce publisher risk for losses caused by previously undiscovered defects or defects that were disclosed to the customer, but reduce the customer's risk of losses caused by defects that were known and left hidden.") Braucher claims that "[b]ugginess of software is a choice of producers that externalizes huge costs." Memorandum of Jean Braucher, March 14, 2003.

[FN33]. Cf. Kaner, supra note 5, at 23.

[FN34]. Id. at 28. See Magnuson-Moss Warranty Act, 15 U.S.C. §§ 2301-2312 (West, Westlaw through May 2006).

[FN35]. 15 U.S.C. § 2308(a)(1).

[FN36]. The Magnuson-Moss Act applies to sales of "consumer products," which are defined as "any *tangible* personal property which is distributed in commerce and which is normally used for personal, family or household purposes." 15 U.S.C. § 2301(1) (emphasis added). Thus, "it seems clear that computer hardware and software which is sold through retail outlets . . . will constitute 'consumer products,' and, as such, will be subject to the warranty disclosure requirements of the Magnuson-Moss Act." Savage, supra note 1. Magnuson-Moss may not apply to software downloads, however. See Raymond T. Nimmer, Uniform Computer Information Transactions Act, Part 4 Warranties, 406. Official Text and Comments; major variations; 2000 text (2006).

[FN37]. See Stein, supra note 22, at 199 ("Because of the collaborative nature of the open source development model, hundreds or even thousands of programmers contribute source code to open source projects. Liability for infringement and implied warranties of merchantability and fitness for a particular purpose are potentially substantial disincentives to contribution to open source projects.").

[FN38]. See § 3.06(f).

*159 Chapter 4

REMEDIES

Summary Overview

Chapter 4 addresses the issue of the appropriate remedies for breach of an agreement governed by the Principles. Remedial issues are, of course, central to contract law and, in software agreements as in other contracts, expectation damages are appropriate. As in the case of warranty, courts often apply U.C.C. Article 2 remedial provisions in software disputes. Also as with warranty, UCITA depended in large part on adapting Article 2 remedies to software. [FN1] As in other areas, the Principles here generally do not replicate otherwise applicable law. For example, the Principles do not contain provisions restating such accepted doctrine as the duty of the nonbreaching party to mitigate damages and the cumulative nature of remedies so long as they remain nonduplicative. The Principles do, however, restate settled law when expanded commentary helps to explain the relevance of certain rules or why they may be of particular concern in the software context.

Some commentators criticized UCITA's remedial provisions. In particular, some objected to its adaptation of U.C.C. § 2-719 on limitation of remedies [FN2] and, in its 1999 version, provisions permitting electronic self-help. [FN3] These Principles seek to take that which is helpful in UCITA and the U.C.C. and clarify the rules as appropriate, recognizing that, as the U.C.C. states in the context of sales, "it is of the very essence of a . . . contract that at least minimum adequate remedies be available." [FN4]

What a "minimum adequate remed[y]" is in the context of software transactions is highly contextual. Software agreements, while raising some questions common to sales and other transactions (for example, limitations of liability), also raise some issues that, while not necessarily unique, assume greater importance than in usual sales-of-goods agreements. For example, software publishers often provide open-source software without charge under terms that disclaim all responsibility for performance and provenance. Under the circumstances, no remedy at all may be the appropriate result when the software does not perform or infringes a third party's intellectual property right. In other words, the transfer of open-source software may be a case in which, essentially, there can be no breach by the transferor that supports the grant of a remedy to the transferee.

In cases in which the software or access thereto is provided for a price, however, many different types of breaches may occur that justify the provision of a remedy to the nonbreaching party. For example, when the agreement calls for periodic payments, and the transferee fails to pay when due, the transferor may seek to terminate the transferee's right to use the software. Other types of transferee breaches might include engaging in more use than what is authorized or violating an enforceable provision against reverse engineering. Transferor breaches include failure to deliver conforming software within the times specified by the agreement. If the agreement is at the initial delivery stage, an award of damages to the transferee may suffice. In other cases, however, an award of specific performance may be the only way in which to make the transferee whole.

Topic 1 of this Chapter deals with the enforcement of parties' agreed remedial terms. Topic 2 covers default remedial rules.

***160** *Software agreements governing remedies*. Some transferors seek to terminate their transferees' rights by using remote electronic means to disable functionality. This is a particularly attractive option when the transferor lacks confidence that the transferee will remove or disable software resident on the transferee's system or when continued use threatens irreparable harm. [FN5] Remote disablement, however, raises a number of issues. Indeed, it was one of the most controversial areas of UCITA, with the drafters eventually deciding to prohibit remote disablement as a self-help remedy altogether. [FN6] Here, we balance the interests of transferors and transferees by permitting remote disablement of functionality under certain limited conditions, but not as a self-help remedy or in standard-form transfers of generally available software or consumer transactions.

In many cases, including in the standard-form transfer of generally available software, parties will "agree" to exclusive remedies. Generally, the Principles respect these agreed-to remedies, with safeguards in particular contexts. The Principles seek to clarify the law under the U.C.C. with respect to limitations of remedies by adopting the majority rule holding that a consequential-damages exclusion is enforceable unless unconscionable, even if a limited remedy fails of its essential purpose. Of course, a consequential-damages limitation often may be unconscionable if the limited remedy fails. For example, if the transferor refuses to repair or replace defective software pursuant to the contract with knowledge that the transferee faces large consequential damages, the consequential-damages limitation is likely unconscionable. A consequential-damages exclusion also would be unconscionable if the limited remedy is itself unconscionable.

Default remedial rules. When the parties have not concluded an enforceable agreement on remedies, but one of them has breached, § 4.05 of the Principles calls for the award of expectancy damages. The Section offers extensive commentary on appropriate damages formulations in various contexts based on the U.C.C. and the Restatement Second of Contracts, with adjustments as necessary for software situations. However, the Principles do not offer black letter on the measurement of damages. There are simply too many variations in types of software, manner of breach, types of parties, and time of breach (before, during, after delivery) to craft generic rules that would simplify and clarify damages in the software context. UCITA's remedies provisions are difficult to read and understand precisely because the statute attempts to codify damages formulas. Instead, the Principles offer guidance, but leave to the courts crafting appropriate rules in the particular context.

Section 4.06 of the Principles governs equitable remedies. The Section follows U.C.C. § 2-716, with appropriate special rules and commentary when called for by the software subject matter. For example, the commentary explains how courts can apply the "other proper circumstances" of § 2-716 in the software context. Section 4.06 also sets forth equitable remedies that may be relevant to a transferor.

TOPIC 1 AGREEMENTS WITH RESPECT TO REMEDY

§ 4.01 Contractual Modification or Limitation of Remedy

(a) Subject to the provisions of subsections (b) and (c) of this Section and of § 4.02 (liquidation and limitation of damages),

***161 (1) the agreement may provide for remedies in addition to or in substitution for those provided in these Principles and, except for damages for breach of the warranty provided in § 3.05(b), may limit or alter the measure of damages recoverable under these Principles, as by limiting the transferee's remedy to return of the software and repayment of the price or to repair and replacement of nonconforming software; and**

(2) resort to a remedy as provided is optional unless the remedy is expressly agreed to be exclusive, in which case it is the sole remedy.
(b) If circumstances cause an exclusive or limited remedy to fail of its essential purpose, the aggrieved party may recover a remedy as provided in these Principles or applicable outside law.
(c) Except for damages for breach of the warranty provided in § 3.05(b), consequential damages may be limited or excluded unless the limitation or exclusion is unconscionable at the time of contracting or operates in an unconscionable way. This rule applies even if circumstances cause an exclusive or limited remedy to fail of its essential purpose under subsection (b). Limitation of consequential damages for personal injury in a consumer transaction is prima facie unconscionable.

Comment:

a. Generally. This Section is based primarily on U.C.C. § 2-719 and its comments, with reference also to § 803 of UCITA.
b. Scope. As with U.C.C. § 2-719, this Section contemplates that once a transferor has breached, the transferee is entitled to at least a minimum adequate remedy. The Section therefore balances contractual freedom to limit remedies with safeguards should the limited remedy fail of its essential purpose. Contractual freedom, however, is inappropriate in the case of the implied warranty of no hidden material defects in § 3.05(b). Section 4.01(c) therefore does not permit limitation or alteration of damages in the case of breach of that warranty. Of course, under § 1.12, other remedies may apply to breaches of the § 3.05(b) warranty such as those sounding in tort.
c. Failure of essential purpose. The focus of § 4.01(b) is not on the bargaining process that produced the remedial term, but on application of the limited remedy when the software is defective. A limited remedy fails of its essential purpose when the transferor is unable or unwilling to provide the transferee with conforming software within a reasonable time regardless of the transferor's best or good-faith efforts. For example, when the limited remedy calls for repair of the software, if the transferor attempts in good faith to repair and is willing to continue attempting repair, the limited remedy nevertheless fails of its essential purpose after a commercially reasonable time.
In negotiated as well as standard-form agreements, parties sometimes provide for "backup" remedies if the primary remedy fails. For example, the agreement may provide for a refund of the purchase price if the primary repair or replacement remedy fails of its essential purpose. Cases generally find that such an alternative prevents failure of essential purpose.

***162 Illustrations:**

1. Company A transfers securities-trading software to Company B under terms that warrant compliance with accompanying documentation, and provide for an exclusive remedy limited to repair or replacement and a disclaimer of liability for consequential damages. A delivers the software, but it does not contain all of the functionality warranted. Over a six-month period, A continues diligently to try to repair the software but never succeeds. The limited remedy has failed of its essential purpose because A is unable to deliver conforming software within a reasonable time. B may recover damages. The limitation on recovery of consequential damages is enforceable unless unconscionable.
2. Same facts as Illustration 1, except that A never attempts to repair the software. B brings an action for damages after three months. The results are the same. The limited remedy fails, however, not because of A's inability to repair but A's unwillingness to do so.
3. In a standard-form transfer of generally available software, A transfers software for income-tax preparation to B, a consumer. The terms warrant the software's compliance with its documentation, provide for an exclusive remedy limited to repair or replacement, and disclaim liability for consequential damages. B purchases the software from A for preparation of his 2006 taxes. B discovers that the program was designed for the 2005 tax year and immediately notifies A. A may replace the software with the 2006 version unless it is too late because, for example, the deadline for submission of the tax return has passed. In such a case, the exclusive remedy fails of its essential purpose and B is entitled to all remedies. The limitation on consequential damages is enforceable unless unconscionable. Regardless of the contractual cause of action, B may have remedies under tort law, for example, for misrepresentation or fraud.
4. Same facts as Illustration 3. A delivers the 2006 software package to B. It contains several errors that render it useless, and A is unable to fix the software. The exclusive remedy fails of its essential purpose because A is unable to repair the software. B is entitled to all remedies. The limitation on consequential damages is enforceable unless unconscionable.

5. Company A licenses software that assists mechanical engineers in product development and manufacturing. Company B acquires software from A to help it design mechanical switchboards. The software works for almost a year, but problems arise when B seeks to design more complex systems. The license provides that the program will conform to its documentation for a 90-day period after delivery, limits remedies to repair or replacement, and disclaims liability for consequential damages. The provisions are enforceable unless unconscionable. In particular, A has no obligation to repair the software because the warranty period covered only defects that appeared within 90 days after delivery.

6. Company A licenses die-making software to Company B under an agreement that provides for an exclusive remedy of repair of the software should it not function in accord with the applicable warranty. The agreement also provides that if A cannot repair the software, B's damages are limited to ***163** return of the amounts paid under the agreement. A cannot fix the software. B is entitled only to a return of the amounts it paid.

d. Treatment of incidental- and consequential-damage limitations. Some inconsistency exists in judicial interpretations of U.C.C. §§ 2-719(2) and 2-719(3). Section 2-719(2) provides that when a limited remedy fails of its essential purpose, "remedy may be had as provided in this Act." Remedies under the Act include consequential damages for aggrieved buyers. Section 2-719(3) states that a consequential-damages limitation is enforceable unless unconscionable, raising the question whether an aggrieved buyer is entitled to consequential damages whenever a limited remedy fails of its essential purpose or only if the consequential-damages limitation is unconscionable. The majority of courts follow the latter approach, and the Principles explicitly adopt it in subsection (c) to avoid confusion. Of course, a consequential-damages limitation may well be unconscionable when the limited remedy fails, such as when the transferor refuses to repair or replace defective software despite a contractual obligation to do so and with full knowledge that the transferee is suffering large consequential damages as a result. A consequential-damages provision also would be unconscionable if the limited remedy is itself unconscionable.

Confusion also exists over the appropriate time to assess unconscionability under U.C.C. § 2-719(3). The U.C.C.'s primary section on unconscionability, § 2-302, assesses unconscionability "at the time [the contract] was made." These Principles take the same approach in § 1.11. Comment 3 to U.C.C. § 2-719, however, states that, "[s]ubsection (3) recognizes the validity of clauses limiting or excluding consequential damages but makes it clear that they may not *operate* in an unconscionable manner." U.C.C. § 2-719, Comment 3 (emphasis added). The Principles incorporate the approach of Comment 3 in the text to make clear that a consequential-damages limitation is unenforceable if unconscionable at the time of contracting or at the time of operation.

The Principles depart from UCITA, which provides that "[f]ailure or unconscionability of an agreed exclusive or limited remedy makes a term disclaiming or limiting consequential damages or incidental damages unenforceable unless the agreement expressly makes the disclaimer or limitation independent of the agreed remedy." UCITA § 803(c) (2002). UCITA's approach rejects the majority rule that treats the clauses as independent unless stated otherwise. Further, it leaves open the possibility that a consequential-damages limitation could be enforced even when the exclusive or limited remedy is unconscionable, an approach these Principles reject.

The Principles adopt the longstanding U.C.C. provision that a consequential-damages limitation is prima facie unconscionable in the case of personal injury to the consumer. Because unconscionability issues are for the judge, see § 1.11 of these Principles and § 2-302 of the U.C.C., this means that the party seeking enforcement of the consequential-damages limitation must produce enough evidence of the limitation's reasonableness to escape an adverse decision and to require the other party to produce its own evidence.

***164 Illustrations:**

7. Company A, a software firm, transfers software to Company B to assist B in its business of designing integrated circuits. The negotiated agreement disclaims liability for consequential damages. The software malfunctions and causes B's business to come to a halt for a day, resulting in lost profits. The disclaimer is most likely enforceable because A and B are both knowledgeable, informed parties. The disclaimer is neither procedurally nor substantively unconscionable.

8. Company A, a software firm, transfers payroll software to Company B under an agreement that disclaims liability for consequential damages. A knows of a latent defect in the software that causes miscalculations in rare circumstances. B uses the software successfully for some time until the latent defect causes the payroll to be miscalculated. As a result, B misstates its earnings and incurs financial liability to the state and federal governments. The disclaimer may be unconscionable because A knew of the defect and B could not discover it easily. B can also proceed under § 3.05(b) of these Principles.

9. Assume the same facts as in Illustration 3. Assume that B does not discover the nonconformity until after it submits its tax return. As a result B incurs additional tax liability and penalties. A court might find the limitation on consequential damages unconscionable given A's superior bargaining power and knowledge regarding the product and the reasonable foreseeability of such damages accruing because of the defect.
10. Assume the same facts as in Illustration 4. If as a result of A's failure to fix the 2006 software package, B uses the 2005 package and incurs additional tax liability and penalties, A is not liable for those damages. B knew that the software was not appropriate for preparing the 2006 return.
11. B flies a private airplane in his spare time. He buys a software navigational system that he installs correctly. The software malfunctions, causing the plane to crash and injure B. A disclaimer of liability for consequential damages in the software agreement is prima facie unconscionable.
12. Same facts as in Illustration 11, except that B is a commercial pilot. A disclaimer of liability for consequential damages in the software agreement is not prima facie unconscionable.

REPORTERS' NOTES

Comment a. Generally. See U.C.C. § 2-719 (2005); UCITA § 803 (2002). See also U.C.C. § 2-719, Comment 1 ("[I]t is of the very essence of a sales contract that at least minimum adequate remedies be available.").
Comment c. Failure of essential purpose. For cases discussing when a limited remedy fails of its essential purpose, see RRX Indus., Inc. v. Lab-Con, Inc., 772 F.2d 543, 547, 549 (9th Cir. 1985) (where the defendants were unable to keep the software "bug" free, limited remedy failed); Amsan, LLC v. Prophet 21, Inc., 45 UCC Rep. Serv.2d 1089 (E.D. Pa. 2001) (repair or replacement limited remedy failed of essential purpose when the defendant refused to repair or replace the software); Piper Jaffray & Co. v. Sungard Sys. Int'l, Inc., 2004 WL 2222322 (D. Minn.) (assuming a limited (repair or replacement) remedy failed of its essential purpose when the licensor could not fix bugs in ***165** the software to enable it to conform to its documentation). See also James J. White & Robert S. Summers, 1 Uniform Commercial Code § 12-10, at 660-665 (4th ed. 1995 & Supp. 2006) (explaining that cases of failure of essential purpose often involve (i) a seller's unwillingness or inability to repair in a timely manner; or (ii) the remedy itself requiring "the buyer to perform an act that cannot be performed because of the seller's breach"); Michael L. Rustad, *Making UCITA More Consumer Friendly*, 18 J. MARSHALL J. COMPUTER & INFO. L. 547, 582 (1999) (citing New York Law Revision Commission statement that § 2-719(2) "'is not concerned with arrangements which were oppressive at their inception, but rather with the application of an agreement to novel circumstances not contemplated by the parties.'").
Courts routinely enforce remedy limitations in software license agreements. See, e.g., Taylor Investment Corp. v. Weil, 169 F. Supp. 2d 1046 (D. Minn. 2001) (upholding remedy limitation where even if repair or replacement failed, purchaser could return the software for a refund); NMP Corp. v. Parametric Tech. Corp., 958 F. Supp. 1536 (N.D. Okla. 1997) (upholding a remedy limitation and term limit of 90 days on a warranty); Hi Neighbor Enters., Inc. v. Burroughs Corp., 492 F. Supp. 823 (N.D. Fla. 1980) (involving sale of hardware and software); M.A. Mortenson v. Timberline Software, 970 P.2d 803 (Wash. App. Div. 1 1999) (upholding limited remedy appearing in shrink-wrap).
Cases in the computer context (hardware and software) holding no failure of essential purpose when the aggrieved party was entitled to a refund of amounts paid or other financial compensation even though the primary limited remedy was unsuccessful include Dowty Communications, Inc. v. Novatel Computer Sys. Corp., 817 F. Supp. 581 (D. Md. 1992), aff'd, 33 F.3d 390 (4th Cir. 1994), cert. denied, 115 S. Ct. 1254 (1995); Ritchie Enters. v. Honeywell Bull, Inc., 730 F. Supp. 1041 (D. Kan. 1990); Int'l Talent Group, Inc. v. Copyright Mgmt, Inc., 76 S.W.2d 217 (Tenn. App. 1988). For additional cases, see White & Summers, supra § 12-10, at 665-666 & n.25.
Comment d. Treatment of incidental- and consequential-damages limitations. For cases discussing the relationship between the failure of a limited remedy and a limitation on recovery of consequential damages, see Colonial Life Ins. Co. v. Electronic Data Sys., Corp., 817 F. Supp. 235 (D. N.H. 1993) (treating the 2 clauses as independent); Harper Tax Servs., Inc. v. Quick Tax Ltd., 686 F. Supp. 109 (D. Md. 1988) (consequential-damages limitation remains unless unconscionable); Piper Jaffray, 2004 WL 2222322 at *5-*7 (same); but see RRX Indus., Inc., 772 F.2d at 547 (where "fundamental" breach, consequential-damages limitation void); Amsan, LLC (when exclusive remedy fails, damages limitation is inoperative, and buyer may recover consequential damages). According to White & Summers, treating the limited warranty and consequential-damages limitation as independent clauses is the preferable approach. White & Summers, supra at 666-667. See also Diane W. Savage, *Performance Warranties in Computer Contracts*, 8 No. 12 COMPUTER LAW. 32 (1991),

available at http://library.findlaw.com/1997/Nov/1/128553.html (discussing when a limited remedy fails of its essential purpose and finding courts protect parties' expectations about remedies and require the breaching party to comply with its obligations). For a discussion of the time at which unconscionability should be measured, see Roy Ryden Anderson, Damages Under the Uniform Commercial Code § 12.20 (Westlaw 2006).
Illustrations 1-2. See generally Piper Jaffray & Co. v. Sungard Sys. Int'l, Inc., 2004 WL 2222322 (D. Minn.).
Illustrations *3-4* are loosely based on Harper Tax Servs., Inc. v. Quick Tax Ltd., 686 F. Supp. 109 (D. Md. 1988).
Illustration 5 is based on NMP Corp. v. Parametric Tech. Corp., 958 F. Supp. 1536 (N.D. Okla. 1997).
Illustration 6 is loosely based on Ritchie Enters. v. Honeywell Bull, Inc., 730 F. Supp. 1041 (D. Kan. 1990). See also Diane Wilkins Savage, Performance Warranties in Computer Contracts, 8 No. 12 The Computer Lawyer, Dec. 1991, at 32-39 (discussing Ritchie).
Illustration 7 is based loosely on AES Tech. Sys, Inc. v. Coherent Radiation, 583 F.2d 933 (7th Cir. 1978).
***166** For *Illustration 11*, cf. Daniel Michaels & Andy Pasztor, Incidents Prompt New Scrutiny of Airplane Software Glitches, Wall St. J., May 30, 2006, at A1 (reporting that defective software provided the wrong data about an airplane's speed, causing the plane to "suddenly [take] on a mind of its own, and zoom[] 3000 feet upward").

§ 4.02 Liquidation and Limitation of Damages

> **(a) Damages for breach by either party may be liquidated in the agreement but only at an amount which is reasonable in light of the anticipated or actual harm caused by the breach, the difficulties of proof of loss, and the inconvenience or nonfeasibility of otherwise obtaining an adequate remedy. Section 4.01 determines the enforceability of a term that limits but does not liquidate damages.**
> **(b) If a term liquidating damages is unenforceable under this Section, the aggrieved party may recover a remedy as provided in these Principles, except as limited by other terms of the agreement.**

Comment:

a. Generally. This Section is based on U.C.C. § 2-718 (both original and amended), UCITA § 804, and § 356(1) of the Restatement Second of Contracts. The rule of subsection (a) is the traditional one: Liquidated-damages provisions are enforceable if reasonable. As with amended U.C.C. Article 2, this Section does not explicitly state, "A term fixing unreasonably large liquidated damages is void as a penalty." Amended Article 2 eliminated this provision as "unnecessary and misleading." Amended U.C.C. § 2-718, Comment 3. It is unnecessary because it is redundant with the reasonableness requirement for enforcement, and misleading because it focuses only on unreasonably large damages—a liquidated damages provision calling for unreasonably small damages would likewise be unenforceable. Id.

Illustration:

> 1. Company A transfers software to Company B under an agreement that calls for licensing fees of $5000 per year for three years, and includes a liquidated-damages clause of $15,000. Within 90 days after receiving the software, B wrongfully cancels and returns the software to A, certifying that it has permanently eliminated the software from its system. A seeks the liquidated damages of $15,000. The liquidated-damages clause is void as a penalty because of the absence of a sliding scale to reflect the variety of potential breaches and the failure of $15,000 to reflect a reasonable estimate of A's actual loss.

b. Remedies if liquidated-damages clause is unenforceable. Subsection (b) clarifies that if a court strikes down a liquidated-damages clause, the aggrieved party has recourse to the remedies that would have been available had the clause not been included. The last clause of subsection (b) makes clear that other terms of the contract may affect what those remedies are. For example, the contract may exclude consequential damages. The exclusion would be enforceable unless unconscionable under § 4.01(c).
***167** *c. Restitution of payments*. This Section follows the Principles' general approach of not restating settled law unless it has particular relevance in the software context or if, in fact, courts have interpreted "settled" law differently. Thus, this Section does not include a counterpart to U.C.C. § 2-718(2) and (3) on restitution. Current law should suffice. Thus, if a transferor justifiably withholds delivery of copies or withholds access under an access contract because of the transferee's

breach, the transferee is nonetheless entitled to restitution of any amount by which the sum of the payments it made for the copies or the access exceeds the amount of the liquidated (or other) damages payable to the aggrieved transferor.

REPORTERS' NOTES

Comment a. Generally. See U.C.C. § 2-718 (1999); U.C.C. § 2-718 (2006); UCITA § 804; Restatement Second, Contracts § 356(1) (1981 & Supp. 2006). For a collection of cases under the U.C.C., see Kristine Cordier Karnezis, Contractual Liquidated Damages Provisions Under UCC Article 2, 98 A.L.R.3d 686 (1980 & Supp. 2006). For a discussion of the policy issues involving liquidated-damages provisions, see Robert A. Hillman, The Limits of Behavioral Decision Theory in Legal Analysis: The Case of Liquidated Damages, 85 Cornell L. Rev. 717 (2000).
Comment b. Remedies if liquidated-damages clause is unenforceable. See UCITA § 804(b) and Comment 3.
Illustration 1 is based on Syncsort, Inc. v. Indata Servs., 7 UCC Rep. Serv. 2d 642, 14 Conn. App. 481, 541 A.2d 543 (1988).

§ 4.03 -Right to Use Remote Disablement to Discontinue Use

(a) "Remote disablement" means the use of remote electronic means to disable or materially impair the functionality of software resident on the transferee's computer. If the transferor has a right to cancel under § 4.04, it may do so using remote disablement only if such authorization is provided for in the agreement and under the following circumstances:
(1) The agreement is not a standard-form transfer of generally available software; and
(2) The transaction is not a consumer transaction; and
(3) The term authorizing remote disablement is conspicuous; and
(4) The transferor complies with § * regarding notice and an opportunity to correct the breach; and**
(5) The transferor has obtained a court order permitting it to use remote disablement.
(b) A transferee may recover direct, incidental, and consequential damages caused by wrongful use of remote disablement notwithstanding any agreement to the contrary.
(c) Obligations of the transferor and rights of the transferee under this Section may not be waived.

***168 Comment:**

a. Generally. This Section draws from and modifies UCITA §§ 814-816 (1999 & 2002).
Transferors sometimes argue that the ability to discontinue the transferee's use of the software remotely is an important remedy when the transferee has materially breached the agreement. Remote disablement can be particularly important when the transferee is harming the transferor's reputation or otherwise using the product in a way that can cause serious harm to person or property. It is also necessary if the transferee resides in a foreign jurisdiction that will not enforce a duly issued injunction.
At the same time, though, a wrongful denial of use may result in great harm to the transferee who depends on access to and use of the software for its business. Further, when a transferor reaches into the transferee's computer remotely to disable software residing on the transferee's computer, the transferor may damage other files, and the existence of the disabling code itself on the transferee's computer may make it vulnerable to security breaches.
Indeed, the question of remote disablement by transferors was one of the most controversial of UCITA's remedial provisions. The 1999 draft of UCITA permitted electronic self-help provided that the licensor give notice of its intent to exercise that remedy. The draft provided the licensee with a right to an expedited hearing and for damages in the event of wrongful self-help. Despite these safeguards, substantial opposition remained, and the 2002 version of UCITA prohibits electronic self-help.
These Principles attempt to balance the interests involved. They permit the use of remote disablement in limited circumstances, but not as a self-help remedy, and provide more extensive protection than the 1999 draft of UCITA. In particular, the Principles require a court order before a transferor may employ remote mechanisms to disable the software rather than entitling the transferee to an expedited hearing to stop electronic self-help. This requirement along with all of the other limits on remote disablement may make it an unattractive strategy for transferors. It may be simpler and less costly for transferors to seek an injunction against continued use. Since compliance with an injunction may be difficult to monitor and

enforce, however, some vendors may still seek electronic assistance.

On balance, the provisions here represent a reasonable compromise between principles of freedom of contract that would support enforcing a bargained-for right to electronic self-help and the legitimate concerns of transferees even when they have agreed to permit electronic self-help. Additionally, they are consistent with copyright law which, after enactment of the Digital Millennium Copyright Act, permits vendors to protect their copyright rights by employing technological measures restricting access and use.

Certainly, another approach would be to permit self-help based on freedom of contract at least in nonconsumer, non-standard-form transfers. Even in the case of negotiated agreements, however, concerns about remote disablement as a self-help measure remain. The question of material breach is a highly contextual one and arguably merits some judicial consideration before permitting a transferor to employ a drastic remedy like remote disablement. Additionally, firms vary in size and ***169** bargaining power. An ability to disable the software remotely without resort to a court creates some potential for mischief if not outright extortion. An ex post award of damages for wrongful exercise of self-help may be insufficient to repair the damage to a firm whose business has been crippled by an inability to use the software for some period of time.

This Section applies to remote disablement as defined. Thus, it does not apply to a situation in which a transferor does not access software resident on the transferee's computer remotely. If, for example, the agreement provides for a limited period of use, the transferor may build a "time bomb" into the software that disables its operation at the end of that limited period. Since there is no remote disablement, this Section does not apply. In other cases, the parties may agree to a period of limited use that may be renewed by the transferee's initiating a remote transaction with the transferor to, for example, obtain a "key" to continue using the software. This Section does not apply to such arrangements again because no remote disablement is involved.

b. Limitations. Section 4.03 places meaningful limitations on the ability to disable the software remotely, and these protections may not be waived by agreement. Vendors may not disable software remotely in the non-negotiated context of the standard-form transfer of generally available software or against consumers in any context. Remote disablement is a viable option only in other agreements in which the transferee is on notice of the provision. Further, under the Principles' standards for notice and an opportunity to correct the breach (see § ***), remote disablement is unavailable if the transferee cures the material breach. Finally, the requirement of a court order ensures that the transferee will have an opportunity to be heard before its software is disabled remotely.

Courts are familiar with the standards for a temporary restraining order, and should apply those standards in addressing a transferor's request to disable software remotely. For example, the court may require the transferor to post a bond, and may refuse to grant permission to disable the software remotely if the court finds that (i) the use of remote disablement is likely to cause substantial injury affecting third parties not involved in the dispute; (ii) the use of remote disablement is likely to cause irreparable harm to the transferee; or (iii) the transferee is more likely than not to succeed in defending against the transferor's claim of material breach.

***170 Illustrations:**

1. Company A, unbeknownst to Company B, includes a "drop-dead" device in software that A licenses to B for B's use in its transportation business. The device disables the software and would cause B to lose track of its entire fleet of trucks (about 90) across the U.S. and Canada, and leave it unable to compute drivers' compensation. A and B enter into a dispute, and A activates the drop-dead device remotely. A's use of the device is wrongful because it did not disclose the device's existence to B conspicuously in the agreement. Had A done so, its use of the device would still be wrongful because it must obtain a court order before activating the device. Even if A had applied to a court, the court may still refuse to grant the order because of the possibility of irreparable harm to B.

2. Company A licenses software to Company B to process invoices. The agreement contains a conspicuous term permitting A to deactivate the software remotely if B fails to pay. B fails to pay amounts due under the license and does not cure its default. A seeks a court order to deactivate the software remotely and the court grants its request. The remote disablement is rightful.

3. Same facts as Illustration 2, except that the transaction is a standard-form transfer of generally available software. Regardless of whether the term is conspicuous, it is unenforceable because the agreement is a standard-form transfer of generally available software.

4. Company A licenses software to B, a consumer, under a negotiated agreement. The agreement contains a conspicuous

term permitting A to disable the software on B's computer if B breaches the contract. If A seeks a court order to activate the disabling software upon B's material breach, the court must deny its request because remote disablement is not available in a consumer transaction.

5. Company A licenses software to Company B and the agreement is silent on remote disablement. The companies dispute whether the software complies with the obligations of the agreement. A sends its representative to B ostensibly to work on fixing bugs but, in fact, A's representative installs a "time bomb" on B's computer that disables the software in one week. This conduct does not implicate this Section because it does not involve remote disablement. The time bomb resides on B's computer and is not triggered remotely by A. B may have recourse under tort law or for bad faith.

c. Damages/relation to § 4.01. Wrongful exercise of remote disablement (i.e., exercise of the remedy not in accordance with the requirements of § 4.03) entitles the aggrieved party to direct, incidental, and consequential damages despite an otherwise enforceable remedy limitation under § 4.01. This will further deter overreaching by transferors.

REPORTERS' NOTES

Comment a. Generally. Sharon Marsh Roberts & Cem Kaner, Self Help Under UCITA, available at http://www.badsoftware.com/shelp.htm (last visited Aug. 1, 2006) (discussing the balancing of interests involved in drafting a self-help section, noting the utility of self-help in the face of serious harm to reputation and when an ***171** injunction cannot be enforced in a foreign jurisdiction but also emphasizing the risk to the security of the transferee's system, and concluding that the compromise reached in UCITA's 1999 version met neither licensors' nor licensees' needs); see also Cem Kaner, Why You Should Oppose UCITA, 17 No. 5, The Computer Lawyer, 20, 26 (2000) (stating that "disabling codes create a hole in the customer's system security," and arguing that small licensors do not in fact desire self-help but rather an ability to "proceed by injunction and recover attorney's fees"); Raymond T. Nimmer, Technology Licensing and Computers, § 7.183 ("Disabling software may cause damage that goes beyond merely enforcing a contract . . . In some cases, data loss, system failure, and other consequences may ensue from this form of repossession, and it is not clear that contract law should permit this risk. On the other hand, if there has been disclosure and actual agreement to allowing the procedure, principles of freedom of contract provide strong support for allowing the parties to use all of the rights that they have negotiated for their relationship."); Stephen L. Poe & Teresa L. Conover, Pulling the Plug: The Use and Legality of Technology-Based Remedies by Vendors in Software Contracts, 56 Alb. L. Rev. 609 (1993) (discussing, inter alia, privacy and performance concerns associated with electronic self-help); Note, Craig Dolly, The Electronic Self-Help Provisions of UCITA: A Virtual Repo Man?, 33 John Marshall L. Rev. 663 (2000) (arguing in favor of UCITA's 1999 provisions); Comment, Gary J. Edwards, Self-Help Repossession of Software: Should Repossession be Available in Article 2B of the UCC?, 58 U. Pitt. L. Rev. 763 (1997) (arguing against self-help disablement of software and noting that injunctive remedies offer sufficient protection to software vendors); Note, Timothy P. Heaton, Electronic Self-Help Software Repossession: A Proposal to Protect Small Software Development Companies, 6 B.U. J. Sci. & Tech. L. 205 (2000) (reviewing UCITA's history and noting, contra Kaner supra, that small software firms in particular depend on the availability of self-help remedies).

See 17 U.S.C. § 1201 (2005) for the Copyright Act's provisions regarding technological measures controlling access to a work and protecting a copyright owner's statutory rights.

Comment b. Limitations. See generally UCITA § 816 (1999).

Comment c. Damages/relation to § 4.01. The 1999 version of UCITA contained a similar provision but awarded consequential damages only if the licensee gave notice of their nature and magnitude and the licensor had reason to know such damage could result. UCITA § 816(e).

Illustration 1 is based on Franks & Sons, Inc. v. Information Solutions, Inc., 1988 U.S. Dist. LEXIS 19356 (N. D. Okla.).

Illustration 2 is based on American Computer Trust Leasing v. Jack Farrell Implement Co., 763 F. Supp. 1473 (D. Minn. 1991).

Illustration 5 is based on Clayton X-Ray Co. v. Professional Sys. Corp., 812 S.W.2d 565 (Mo. App. 1991) and North Texas Preventive Imaging, L.L.C. v. Eisenberg, 1996 WL 1359212 (C.D. Cal.).

TOPIC 2 REMEDIES IN THE ABSENCE OF AGREEMENT

§ 4.04 Cancellation

(a) An aggrieved party may cancel a contract on a material breach of the whole contract if the breach has not been corrected under § * or waived.**
(b) Cancellation is not effective unless the canceling party gives reasonable notice of cancellation to the party in breach.
(c) Except as otherwise provided in the agreement, on cancellation by the transferor:
***172 (1) of an access contract, any rights of access are discontinued; and**
(2) all rights of the transferee in the software provided under the agreement terminate and the transferee must either destroy any physical copies of the software or seasonably return them to the transferor and delete all electronic copies on its systems.
(d) Except as otherwise provided in the agreement, on cancellation by either party, all executory obligations of both parties are discharged except those based on a previous breach or performance or those that the parties agreed would survive termination or cancellation.
(e) A cancellation is ineffective if it fails to meet the standard of subsection (a) or the requirements of subsection (b).

Comment:

a. Generally. This Section draws from UCITA § 802, but seeks to simply and clarify the rules. It gives the aggrieved party the option to cancel the contract in the event of a material breach of the whole contract if the breach has not been corrected or waived. The concept of material breach of the whole contract may be relevant when the agreement calls for repeated performance as, for example, when the transferor provides periodic updates to software. The intent of subsection (a) is analogous to that of U.C.C. § 2-612, which governs breach of installment contracts and provides: "Whenever non-conformity or default with respect to one or more installments substantially impairs the value of the whole contract there is a breach of the whole." U.C.C. § 2-612(3) (2002).
b. Material breach. Because cancellation results in termination of rights, it may occur only in the event of a material breach. Factors relevant in determining the materiality of breach include those stated in § *** of these Principles and § 241 of the Restatement Second of Contracts.
The aggrieved party must provide a reasonable notice of cancellation. The notice must be reasonable both as to time and content and should take into account whether the party giving the notice is a business or consumer. The breaching party may have a right to correct the breach promptly under § ***. Notice gives content to that right. Notice should not be required if it would cause or threaten material harm or loss to the aggrieved party.

Illustrations:

1. Company A provides software to Company B under terms that require B to pay $100,000 annually over three years, with payments due 30 days after A's initial delivery and on the anniversaries of that date. B fails to make the first payment on time. This may constitute a material breach of the agreement depending on application of the factors set forth in § *** of these Principles and § 241 of the Restatement Second of Contracts.
2. Company A provides software to Company B under an agreement in which B agrees to "use best efforts to aggressively market and promote" the software. B never undertakes substantial marketing efforts, lacking the resources to do so. B is likely in material breach of the agreement.
***173** 3. See Illustrations 1-2 to § 4.01. The remedy's failure of its essential purpose is a material breach of the agreement.
c. Effect of cancellation. Cancellation discharges executory rights and obligations of both parties except those relating to breach and any that the agreement provides survive termination. For example, the agreement will likely provide that obligations of confidentiality survive termination. In addition, cancellation ends all rights of access and use of the software.
The Principles consider ineffective both a substantively wrongful cancellation and a procedurally ineffective one. Thus, if the transferor wrongfully cancels the agreement, that cancellation is ineffective, and the transferee may continue to exercise the rights granted under the agreement without fear of infringement liability.

REPORTERS' NOTES

Comment a. Generally. See UCITA § 802 (2002).

Comment b. Material breach. See Restatement Second, Contracts § 241 ("In determining whether a failure to render or to offer performance is material, the following circumstances are significant: (a) the extent to which the injured party will be deprived of the benefit which he reasonably expected; (b) the extent to which the injured party can be adequately compensated for the part of that benefit of which he will be deprived; (c) the extent to which the party failing to perform or to offer to perform will suffer forfeiture; (d) the likelihood that the party failing to perform or to offer to perform will cure his failure, taking account of all the circumstances including any reasonable assurances; (e) the extent to which the behavior of the party failing to perform or to offer to perform comports with standards of good faith and fair dealing.")
Comment c. Effect of cancellation. See UCITA § 616 (setting forth types of provisions that likely survive cancellation); see also U.C.C. § 2A-505 (cancellation of a lease contract).
Illustration 1 is based on Teragram Corp. v. Marketwatch.com, Inc., 444 F.3d 1, 12 (1st Cir. 2005) ("[The defendant] admitted that it never made any payment to Teragram at any time during the course of their contractual relationship. [This] failure to pay, the *only* obligation . . . under the contract, constitutes a material breach.") (emphasis in original).
Illustration 2 is based on In re Amica, Inc., 17 UCC Rep. Serv. 2d 11 (Bankr. N.D. Ill. 1992).

§ 4.05 Expectation Damages

Unless otherwise agreed, damages under these Principles should put the aggrieved party in as good a position as if the other party had fully performed. Damages for lost expectancy include direct, incidental, and consequential damages, less expenses saved in consequence of the breach.

***174 Comment:**

a. Generally. The goal of expectation damages is to put the injured party in the same position as if there had been no breach. In other words, the injured party gets what it expected under the contract. Section 4.05 makes clear that recovery is limited to expectation damages. These damages encourage contract-making because the parties can be confident of performance or damages that will make them whole. Economists also favor expectation damages, believing that this is the economically efficient result. Awarding more than lost expectancy would discourage breach even when the breaching party could pay the injured party's expectancy damages and still realize a net benefit by pursuing a better opportunity. Awarding less than expectancy would encourage a breach even when the breaching party's gain would be less than the injured party's loss.
These Principles decline to offer black letter on the measurement of damages in specific instances. Too many divergent contexts involving different kinds of software (custom, general-market), types of breach (material, immaterial), types of parties (consumer, small or large business), and time of breach (before, during, after delivery) make problematic drafting helpful generic rules. Instead, the Principles offer guidance in these Comments and leave for the courts the job of implementing expectancy damages in the particular context.
b. Transferors' direct damages. The remedies formulations of U.C.C. Article 2, §§ 2-706 and 2-708, UCITA § 808 (2002), and the Restatement Second of Contracts §§ 344-355 provide guidance. As with these provisions, damages formulations must distinguish between cases in which the transferee has not received the software and those in which it has and the transferor has opted not to cancel the agreement. In the former case, except when the transferor loses volume (see Comment *c*), the transferor may be made whole by resort to the difference between the unpaid contract price and the market or resale price; in the latter, the transferee remains in possession of the software and the court should award the transferor the price.

Illustrations:

1. Company A transfers software to Company B under an agreement that calls for licensing fees of $5000 per year for three years. Within 90 days after receiving the software, B wrongfully cancels, A accepts return of the software, and B certifies that it has permanently eliminated the software from its system. A sues B for the contract price. A is not entitled to the full contract price, but may recover the contract price less the resale or market price.
2. Company A agrees to provide Company B with database management software for $250,000, payable in two installments of $125,000. A agrees to modify the software to run on B's system and, pursuant to the contract, B plans to provide the modified software to the IRS to fulfill a contract it has with the IRS. A transfers the software to B, and B uses it for 11 months, which is beyond any warranty or remedial protection, before complaining about defects. During this period,

B also provides the software to the IRS. B is liable to A for the price.

c. Transferors' market-based remedies and a reasonable substitute transaction. In transactions for goods, it is often a simple matter to compute an aggrieved seller's ***175** damages. The seller can set them either by pointing to a market price, often objectively determined by an index, or by reselling the goods. Circumstances in which the seller is entitled to recover the profit because it cannot otherwise be compensated are relatively rare and somewhat controversial, arising generally in cases involving lost-volume sellers or jobbers and component sellers.

Because of the intangible, inexhaustible nature of software, the transferor, at least at first glance, resembles a lost-volume seller. If, after a breach, a transferor transfers the software to another transferee, the transferor may have literally "lost" a transaction because in the absence of breach, it would have made two transfers. Because of the breach, it has now made only one. Application service providers are even more likely to lose volume upon a breach by a customer.

As UCITA recognizes, the "product" in the case of software includes the terms of use. For example, a transfer that permits the transferee to make copies is different from a transfer that does not so permit even if the software itself is identical. Thus, in determining whether a reasonable substitute transaction has occurred (so that the transferor has not lost volume), courts must look to the entire transaction. Unlike UCITA, the Principles do not attempt to define "reasonable substitute transaction," leaving that for development by courts. Generally, the reasonable substitute transaction has a "but for" element to it: but for the breach, the transferor would not have entered into the transaction. In contrast, in determining whether a transferor meets the requirements of, essentially, a lost-volume seller, a court should determine whether the new transaction (i) involves a transferee who would have been solicited by the transferor in the absence of breach under substantially the same terms as the original transaction; (ii) the transferee would have agreed to the transfer; and (iii) the transferor would be able to provide the software.

d. Transferees' direct damages. U.C.C. §§ 2-712 through 2-714, UCITA § 809, and the Restatement Second of Contracts §§ 344-355 fill out transferees' direct-damages recoveries. Transferee remedies generally mirror those of the transferor. When an injured transferee has not received or has rightfully cancelled and returned the software, it is entitled to a refund of what it has paid plus damages set by the market price-contract price differential or the cover price-contract price differential. When it has retained the software despite the breach, it may seek damages for breach of warranty. Generally, courts measure damages for breach of warranty by the difference in value between the product as warranted and as it is, and permit recovery for incidental and consequential damages. Finally, the transferee's counterpart to the transferor's action for the price is specific performance under § 4.06.

The aggrieved transferee is often concerned about matters in addition to damages. For example, if the transferor breaches an enforceable obligation to correct material defects in the software, the transferee may wish to reverse engineer the code to correct defects. If the agreement contains an enforceable provision banning reverse engineering, the aggrieved transferee cannot engage in such conduct without breaching the contract and also risking liability under the federal intellectual property statutes. To address this issue, a transferee may wish to negotiate a source-code escrow agreement that will permit it to access the code in the event of the transferor's material breach. Otherwise, the transferee will have little recourse if the transferor is obligated to provide bug fixes and refuses to do so. In such cases, the transferee may reverse engineer the code despite an otherwise ***176** enforceable provision to the contrary because it needs the software to run its business and the transferor refuses to meet its obligation to correct bugs. If the transferor were to sue for intellectual property infringement based on the reverse engineering, the court should consider whether it is appropriate to imply a license granting the transferee the right to reverse engineer in the circumstances.

Illustrations:

3. Company A transfers software to Company B. The software, called Armor, implements a single-entry inventory system. B pays A $10,700 for the software. Soon after B receives the software, it discovers that the software is defective. B complains immediately to A, indicating that the system is unacceptable, but A fails to correct the problems in a reasonable time. B can cancel the agreement and is entitled to a refund of the $10,700. B must destroy the software or seasonably return it to A and delete all electronic copies on its systems.

4. Company A provides software to B, a hospital, that is specifically tailored to B's specifications. A warrants to B that the software meets the reporting requirements of state regulators and health-care insurers. It does not. B purchases another system and seeks to recover damages from A for breach of warranty. In determining the value of the software as warranted, the jury may consider whether the replacement cost incurred for the new system would be a reasonable measure of that

value.

5. Company A transfers software to Company B for B's use in its business. Certain utility programs included in the software have bugs, which constitute a breach of warranty. Nevertheless, the defects do not prevent B from using the system and retrieving usable data. In fact, there is no difference between the value of the software as warranted and as delivered. B can recover only consequential and incidental damages, if any.

e. Transferees' reasonable substitute transaction. The question has occasionally arisen under the U.C.C. whether an aggrieved party may receive more than its expectancy. This could occur, for example, if an aggrieved seller's resale price exceeded the market price and the seller sought to recover the contract-market differential. It could also occur if an aggrieved buyer's cover price was less than the market price and the buyer recovered the market-contract differential. Aggrieved buyers, however, would be less likely to recover more than their expectancy than aggrieved sellers because the U.C.C.'s commentary indicates that a buyer's market-based remedy is "completely alternative" to cover. U.C.C. § 2-713, Comment 5. Permitting aggrieved sellers ostensibly to do better than their expectancy might be appropriate if sellers were systematically under-compensated by, for example, the U.C.C. not awarding them consequential damages. However, under these Principles, transferors can recover consequential damages (see Comment *f*), and, in any case, § 4.05 makes clear that an aggrieved party should recover no more than its expectancy. The expectation principle ensures that an aggrieved party cannot "game" its recovery by obtaining more than its expectancy in a case, for example, of an aggrieved transferee in which the cover price was less than the market price.

Illustration:

***177** 6. Assume the same facts as in Illustration 3. Assume also that Company B makes a reasonable substitute purchase for $12,000 and the relevant market price was $12,500. B's damages under a cover theory are $1300 ($12,000-$10,700) and $1800 under a contract-market theory ($12,500-$10,700). Because B is limited to its expectancy, it is entitled to $1300.

f. Incidental and consequential damages and expenses saved. As with the U.C.C., courts should award incidental and consequential damages and deduct expenses saved from the recovery. The Principles adopt the meaning of incidental and consequential damages set forth in U.C.C. § 2-715 and the cases construing the section.

Unlike Article 2, but consistent with UCITA, aggrieved transferors should be able to recover consequential damages. The exclusion of a seller's recovery of consequential damages under Article 2 has been controversial and may have occurred simply because the drafters did not think sellers would incur consequential damages. To realize fully expectation damages, however, sellers, and here transferors, should be entitled to recover them. Thus, we adopt here what we view as the better rule. The transferor of software might incur consequential damages if, for example, the transferee were to breach a confidentiality provision in the agreement and publish the program's source code. In addition, if the transferee fails to pay when due, the transferor may suffer interest charges because it is unable to pay its own debts when due, or it may lose investment opportunities.

Illustration:

7. Company A transfers software to Company B and breaches a warranty. B expends money and resources attempting to make the software work correctly but is unsuccessful. Assuming that B's attempt to repair the software was reasonable, B is entitled to recover consequential damages for the money and resources used in attempting to make the system work as warranted. B can also recover direct damages.

REPORTERS' NOTES

Comment a. Generally. See U.C.C. § 1-106 (providing for liberal administration of remedies "to the end that the aggrieved party may be put in as good a position as if the other party had fully performed . . . ."); see U.C.C. § 2-703 (seller's remedies in general); U.C.C. § 2-706 (seller's resale); § 2-708 (seller's damages for nonacceptance or repudiation); § 2-708(1) (aggrieved seller's contract-market damages); § 2-711 (buyer's remedies in general); § 2-712 (cover); § 2-713 (buyer's damages for nondelivery or repudiation). For a discussion of damages generally, see, e.g., Richard Craswell, Contract Remedies, Renegotiation, and the Theory of Efficient Breach, 61 S. Cal. L. Rev. 629 (1988); Lewis A. Kornhauser, An

Introduction to the Economic Analysis of Contract Remedies, 57 U. Colo. L. Rev. 683 (1986).
Comment b. Transferors' direct damages. See, e.g., U.C.C. §§ 2-706, 2-708(1); James J. White & Robert S. Summers, Uniform Commercial Code 254-304 (5th ed. 2000).
Comment c. Transferors' market-based remedies and a reasonable substitute transaction. For the test for a lost-volume seller, see White & Summers, supra, at 289 (citing the three-part test for a lost-volume seller, quoting Professor Harris); see also Alan Schwartz & Robert E. Scott, Commercial Transactions Principles & Policies 380-385 (2d ed. 1991) (discussing questions raised by the lost-volume-seller analysis); James J. White & Robert S. Summers, Uniform Commercial Code, Vol. 1 at 403-406 (4th ed. 1995 & Supp. 2006); Charles J. Goetz & Robert E. Scott, ***178** Measuring Sellers' Damages: The Lost-Profits Puzzle, 31 Stan. L. Rev. 323 (1979); Victor P. Goldberg, An Economic Analysis of the Lost-Volume Retail Seller, 57 S. Cal. L. Rev. 283 (1984); Robert E. Scott, The Case for Market Damages: Revisiting the Lost Profits Puzzle, 57 U. Chi. L. Rev. 1155 (1990).
Neri v. Retail Marine Corp., 285 N.E.2d 311, 314 (N.Y. 1972) explains the lost-volume concept:

> If the dealer has an inexhaustible supply of cars, the resale to replace the breaching buyer costs the dealer a sale, because, had the breaching buyer performed, the dealer would have made two sales instead of one. The buyer's breach, in such a case, depletes the dealer's sales to the extent of one, and the measure of damages should be the dealer's profit on one sale.

Comment d. Transferees' direct damages. See, e.g., What Constitutes "Cover" Upon Breach by Seller Under U.C.C. § 2-712(1), 79 A.L.R.4th 844 (1990 & Supp. 2006); § 2-712 (aggrieved buyer's cover remedy); § 2-713 (aggrieved buyer's market-contract damages); see also Restatement Second, Contracts § 344(a) (1981 & Supp. 2006).
Comment e. Transferees' reasonable substitute transaction. For thoughts on the pros and cons of permitting an aggrieved party to recover more than its expectancy, see, e.g., White & Summers, supra at 285-288; Robert E. Scott, The Case for Market Damages: Revisiting the Lost Profits Puzzle, 57 U. Chi. L. Rev. 1155 (1990).
Comment f. Incidental and consequential damages and expenses saved. For a description of incidental damages, see, e.g., U.C.C. § 2-710. For a discussion of Article 2's exclusion of consequential damages for sellers, see White & Summers, supra at 300-303 (stating, "It is conceivable that an omission of any reference to seller's consequential damages is attributable not to any intention to prohibit, but to a failure to contemplate their possibility," noting that to avoid the limitation, sellers "dress their large and hairy consequential damage claims into the petite garb of 'incidental damages"' to ensure their recovery, and arguing that U.C.C. §§ 1-103 and 1-106 provide authority for courts to award sellers consequential damages).
Illustration 1 is based on Syncsort, Inc. v. Indata Servs., 7 UCC Rep. Serv. 2d 642, 14 Conn. App. 481, 541 A.2d 543 (1988).
Illustration 2 is loosely based on Micro Data Base Sys. v. Dharma Sys., Inc., 148 F.3d 649 (7th Cir. 1998).
Illustration 3 is based on Hollingsworth v. The Software House, Inc., 513 N.E.2d 172 (Ohio App. 1986).
Illustration 4 is based on Hosp. Computer Sys. v. Staten Island Hosp., 788 F. Supp. 1351 (D. N.J. 1992).
Illustration 5 is based on Gross v. Sys. Engineering Corp., 36 UCC Rep. Serv. 42 (E.D. Pa. 1983).
Illustration 7 is based on Sharrard, McGee & Co. v. Suz's Software, Inc., 396 S.E.2d 815 (N.C. App. 1990).

§ 4.06 Specific Performance

> **(a) Specific performance may be decreed when the software to be transferred or to which access is to be provided is unique, or in other proper circumstances. Specific performance is not available if it would require the performance of personal services or if an award of damages would be adequate to protect the expectation interest of the transferee.**
> **(b) The decree for specific performance may include such terms and conditions as to payment of the price, damages, confidentiality, and rights in the software as the court may deem just.**
> ***179 (c) An aggrieved transferor who does not cancel may be entitled to a decree requiring adherence to the terms of the agreement as against a breaching transferee, but not if it would require the performance of personal services or if an award of damages would be adequate to protect the expectation interest of the transferor.**

Comment:

a. Generally. This Section is based on U.C.C. § 2-716, UCITA § 811, and the Restatement Second of Contracts § 359(1). As with UCITA, it states the accepted rule that specific performance is not available in cases that would require personal services. In the software context, this might occur if the agreement required support by a programmer.

Uniqueness is one test for specific performance under Articles 2 and 2A of the U.C.C. and UCITA. Software is not unique simply because it is protected by one or more intellectual property rights such as copyright and patent. Indeed, courts should remain sensitive to the transferor's property right, which includes the right not to deal, in deciding when software is unique. It may be unique, for example, when it is custom published and not available on a general market, substitute software cannot be reconfigured to meet the transferee's needs, or the software performs functions unavailable with other software.

This Section also follows U.C.C. § 2-716(1)'s "other proper circumstances" language in creating a second test for specific performance. Comment 2 of the U.C.C. section states that "uniqueness is not the sole basis [for specific performance] . . . for the relief may also be granted 'in other proper circumstances' and inability to cover is strong evidence of 'other proper circumstances."' For example, a transferee with insufficient resources to purchase substitute custom software may be entitled to specific performance. But inability to cover may not be the only example of "other proper circumstances." Even if software available on the market can be reconfigured to meet an aggrieved transferee's needs, specific performance may be appropriate if the transferee reasonably cannot accomplish the reconfiguration itself or find the appropriate technician to do the work.

Illustrations:

1. Company A agrees to license its software that monitors networks to Company B. The agreement includes a requirement that A periodically provide updated versions of the software to B. When A breaches the agreement, B sues for specific performance. B is not entitled to specific performance merely because the software is copyrighted or because B relies on it. If reasonable competing software packages are available on the market, B may not be entitled to specific performance.

2. Same facts as Illustration 1, except there are no reasonable competing software packages available. B may be entitled to specific performance if A can deliver conforming software with reasonable effort and there are no alternative nonsoftware solutions available. For example, if C markets hardware that provides essentially the same functionality as A's software, B is not entitled to specific performance if the hardware is a reasonable substitute purchase.

***180** *b. Transferors' equitable remedies*. Often agreements contain enforceable restrictions on the transferee's use and distribution of the software. The transferor may seek an order requiring the transferee to observe all restrictions in the agreement if a transferee ignores a restriction and the transferor does not cancel the agreement.

REPORTERS' NOTES

Comment a. Generally. See U.C.C. § 2-716(1) ("Specific performance may be decreed where the goods are unique or in other proper circumstances."); UCITA § 811(a) ("Specific performance may be ordered: . . . (2) if the contract was not for personal services and the agreed performance is unique; or (3) in other proper circumstances."); Id. Comments 2-3 (stating, inter alia, "The test of uniqueness requires that a court examine the commercial situation. . . . Despite the often unique character of information, respect for a licensor's property rights and confidentiality interests will often preclude specific performance of an obligation to create or a right to use the informational property unless the need is compelling."); see also Restatement Second, Contracts § 359(1) ("Specific performance or an injunction will not be ordered if damages would be adequate to protect the expectation interest of the injured party.").

According to the U.C.C.'s comments, "inability to cover is strong evidence of 'other proper circumstances."' U.C.C. § 2-716, Comment 2.

Illustration 1 is based on I.Lan Sys., Inc. v. Netscout Serv. Level Corp., 183 F. Supp. 2d 328, 334 (D. Mass. 2002):

> i.LAN makes three arguments why NextPoint's software is unique. First, i.LAN argues that the software is copyrighted and took years to design. The same could be said of any mass-produced item, however, and certainly a mass-produced item is the antithesis of the word "unique." More importantly, NextPoint's software is one of several competing software packages in the market; all run on ordinary computers and perform substantially the same functions. Although these software packages may be copyrighted and the product of intense labor, they are interchangeable as a practical matter and thus none is unique. Second, i.LAN argues that *it* has tailored its business around NextPoint's software, thus making the software unique to *it*. The UCC is sensitive to this consideration, but at the same time this Court will not conflate reliance with uniqueness. Much as i.LAN may not want to, it certainly *could* purchase comparable software on the open market and reconfigure its systems to run that software, just as any person could buy such software and run it. Finally, i.LAN argues that it does not know the number of software licenses it will need in the future to provide its rental services, so money

damages would not adequately compensate it. This argument is not that NextPoint's goods are unique, but that i.LAN had struck what it thought to be a unique contract: for a mere $85,231.42 it would have unlimited copies of all of NextPoint's software forever. The UCC, however, looks to the uniqueness of the goods, not the contract.

[FN1]. Charles Cheatham et al., Report on the Uniform Computer Information Transactions Act (UCITA), 57 Consumer Fin. L.Q. Rep. 37, 43-44 (2003).

[FN2]. See, e.g., Jean Braucher, Uniform Computer Information Transactions Act (UCITA): Objections from the Consumer Perspective, 5 No. 6 Cyberspace Law. 2 (2000) (objecting, inter alia, to UCITA's providing for survival of an incidental- and consequential-damages disclaimer even when a limited remedy was so narrow as to be unconscionable); Michael L. Rustad, Making UCITA More Consumer-Friendly, 18 J. Marshall J. of Computer & Info. L. 547, 551 (1999) (arguing that the lack of a minimum adequate remedy in mass-market licenses under UCITA was inadvisable); see also generally Leo L. Clarke, Performance Risk, Form Contracts and UCITA, 7 Mich. Telecomm. & Tech. L. Rev. 1 (2000); Cem Kaner, Why You Should Oppose UCITA, 17 No. 5, The Computer Lawyer, 20 (2000).

[FN3]. See Braucher, supra note 2; Julie E. Cohen, Copyright and the Jurisprudence of Self-Help, 13 Berk. Tech. L.J. 1089 (1998); Kaner, supra note 2, at 26.

[FN4]. U.C.C. § 2-719, Comment 1.

[FN5]. See, e.g., Sharon Marsh Roberts & Cem Kaner, Self Help Under UCITA, available at http://www.badsoftware.com/shelp.htm (last visited Aug. 1, 2006) (explaining that a licensor needs to use self-help when an injunction will not suffice because, for example, the licensee is in a foreign jurisdiction not amenable to enforcing it or when the licensee's continued use will cause severe damage).

[FN6]. Compare UCITA § 816 (1999) (setting forth a limited right to use electronic self-help) to UCITA § 816(b) (2000) ("Electronic self-help is prohibited.").

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