SOFTWARE ENGINEERING AND UCITA[1]

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I. INTRODUCTION

In 1995, a joint committee of the National Conference of Commissioners on Uniform State Laws and the American Law Institute began meeting to write Article 2B, a proposed amendment to the U.C.C.

Starting with the second Article 2B drafting committee meeting, in February 1996, I attended all of the meetings of the Article 2B and UCITA drafting committees. The discussion polarized early[2] and the debate became progressively polarized and bitter.[3] In 1997, the American Law Institute passed a

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1. There are continuing changes to UCITA. This article cites the draft dated February 9, 2000 and posted at <www.law.upenn.edu/bll/ulc/ucita/ucita200.doc.> The proposed amendments cited are those described as "Amendments Approved By NCCUSL Executive Committee Pending Ratification Of The Conference" and posted at <www.law.upenn.edu/bll/ulc/ucita/approvedamend.doc>. The Comments are described as "March 2000 Final Comments" and posted at <www.law.upenn.edu/bll/ulc/ucita/ucitacom300.htm>. References to Uniform Commercial Code Article 2 are to the 1995 Official Text. Also note that references to www.2bguide.com might be obsolete in the near future. The intended replacement site is named www.ucitaonline.com. All sites referenced in this article were visited in the week of March 20, 2000.

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2. From the first UCITA/Article 2B drafting committee meeting (Feb., 1996) that I attended forward, I did not see (and never became aware of) an open review of the core values being promoted within UCITA that had any chance of influencing the committee. Policy-level discussions took place because participants insisted on speaking to policy, but they were discouraged and they had minimal impact. NCCUSL Commissioner Stephen Y. Chow confirmed my impression and pointed out that the fundamentals of UCITA were settled as far back as 1992. Electronic Mail message from Stephen Y. Chow, member of the UCITA Drafting Committee, to the 4CITE mailing list (Jan. 31, 2000) (on file with the author).

3. Even the Article 2B drafts reflected the polarity. For example, this statement appeared in Uniform Commercial Code Article 2B – Licenses, *Annual Meeting draft* (July 1998) <www.law.upenn.edu/bll/ulc/ucc2b/ucc2bamg.htm>: "[i]n the political process that surrounds any new law, many public statements have been made about the effect of Article 2B on consumer protection. Most are political efforts to mislead." *Id.*
    At a few points in this paper, I make a point of referring to the polarization and to the harshness of some of the discourse. I am not doing this out of personal animus—somehow I managed to escape being the target of the worst of this. Rather, I think that there's historical value in recording my observations as a participant in a flawed but influential process. There have been several critical articles on the NCCUSL process. *See, e.g.,* Norman J. Silber's, *Substance Abuse at U.C.C. Drafting Sessions*, 75 WASH. U. L.Q. 225 (1997). In addition, there were several other papers and viewpoints in the same issue of that Journal, which presented a symposium on *Consumer Protection and the Uniform Commercial Code. See also* RALPH NADER & WESLEY J. SMITH, NO CONTEST: CORPORATE LAWYERS AND

resolution that would have required substantial change to Article 2B's approach to intellectual property.[4] The drafting committee rejected this.[5] In 1998, the American Law Institute passed another resolution, calling for "fundamental revision" of Article 2B's approach to contracting.[6] Shortly thereafter, then-Executive Director of the American Law Institute, Geoffrey Hazard, attended a meeting of the Article 2B drafting committee, and discussed the ALI vote in terms of the history of contract law. He stated that UCITA's approach was far removed from traditional notions of contracting.[7] In response, an anonymous personal attack on Hazard was circulated at the meeting the next morning[8] and soon thereafter published on the Article 2B web site.[9] The Article 2B drafting committee did not make the revisions. Ultimately, the American Law Institute withdrew from the Article 2B process, effectively killing it as an amendment to the Uniform Commercial Code ("U.C.C.").[10] NCCUSL chose to go forward alone[11] and renamed the

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THE PERVERSION OF JUSTICE IN AMERICA (1996). The NCCUSL process is sometimes spectacularly well run—I attended some drafting meetings of the Uniform Electronic Transactions Act and felt that the process was excellent, in their hands—but it varies from committee to committee. As a Professor of Software Engineering, rather than a Professor of Law, I do not expect to record my notes on the UCITA process anywhere else. This paper provides a vehicle for making some of them accessible to other scholars.

4.   *See* Charles R. McManis, *Motion and Supporting Memorandum* (May 9, 1997) <http://www.ali.org/ali/mcmanis.htm>; Carol Kunze, *Summary* <www.2bguide.com/ ali.html#mcm>. *See also infra* Part II and note 214.

5.   The response in Article 2B was what is now UCITA § 105(a): "A provision of this [Act] which is preempted by federal law is unenforceable to the extent of the preemption." *See* Uniform Commercial Code Article 2B – Licenses*, Reporter's Notes on section 105* (Sept. 25, 1997) <www.law.upenn.edu/bll/ ulc/ucc2/ucc2b997.htm>; (Nov. 1, 1997) <www.law.upenn.edu/bll/ulc/ucc2/2bnov97.htm>. This section of UCITA merely restates the Supremacy Clause of the United States Constitution and so neither adds nor takes away any rights, nor settles any issues. *See also infra* note 216.

6.   Jean Braucher & Peter Linzer, *Assent issues in Proposed U.C.C. Article 2B* (May 5, 1998) <www.ali.org/ALI/Braucher.htm> (motion and supporting memorandum). "The current draft of proposed U.C.C. Article 2B has not reached an acceptable balance in its provisions concerning assent to standard form records and should be returned to the Drafting Committee for fundamental revision of the several related sections governing assent." *Id. See infra* Part I.B.4 (providing quotations from the supporting memo).

7.   Reporting on Professor Hazard's statement of May 2, 1998, Cem Kaner and David Pels stated:

Some lawyers have stopped talking about 'agreement' as the basis of contract because contracts have so many standard clauses that no one reads, let alone agrees to. But the replacement phrase is the 'voluntary assumption of obligations.' At a recent meeting of the Uniform Commercial Code Article 2B drafting committee (St. Louis, May 1-3, 1998), Geoffrey C. Hazard, Jr., the Chair of the Permanent Editorial Board of the Uniform Commercial Code, made this point and said that the process of presenting nonnegotiable, post-sale notifications of the seller's terms that come with software is far from the notion of a voluntary assumption of obligations and, generally, from traditional notions of contracting.

CEM KANER & DAVID PELS, BAD SOFTWARE 195 (1998).

8.   *A Firefly on the Wall: The U.C.C.2B Experience* (May 3, 1998) <www.2bguide.com/ docs/afotw.html>.

9.   *Id.*

10.   American Law Institute, *Article 2B Is Withdrawn from U.C.C. and Will Be Promulgated by NCCUSL as Separate Act*, THE ALI REPORTER (Spring 1999) <http://207.103.196.3/ali/ r2103%5Fart2b.htm>; Jean Braucher, *Why UCITA, Like U.C.C. Article 2B, Is Premature And Unsound*, U.C.C. BULLETIN, July 1999, at 1, *available at* <www.2bguide.com/docs/0499jb.html>; David Bartlett, et al., *Memo to Uniform Computer Transactions Act Drafting Committee* (May 7, 1999) <www.2bguide.com/ docs/50799dad.html> (stating

bill as the Uniform Computer Information Transactions Act ("UCITA") a stand-alone draft law. (Hereinafter I'll refer to all of the Article 2B and UCITA drafting committee meetings as meetings of the UCITA drafting committee).

At time of writing, UCITA has passed the Virginia legislature but will be studied (and perhaps amended) over a year and a half, until its effective date in July 2001.[12] The bill has been proposed in a few other legislatures[13] and will show up in many others over the next year.

The dispute over UCITA is often positioned as a fight between software publishers and their customers, large (especially insurance companies) and small (consumers).[14] This oversimplifies the issue in important ways.

First, though it is true that many software publishers, and perhaps all of the publishers' trade associations, do like UCITA,[15] the support is somewhat broader. For example, online information publishers, such as West Publishing and Lexis attended UCITA drafting committee meetings and expressed their support for it.[16] Another example: UCITA's scope includes computers.[17] The drafting

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that the three ALI members of the Article 2B drafting committee chose not to join the UCITA drafting committee); American Law Institute Ad Hoc Committee on Article 2B, *Proposed Article 2B* (Dec.1998) <http://www.2bguide.com/docs/1298ali.pdf > (concluding that UCITA will not be satisfactorily completed by the summer of 1999).

11. National Conference of Commissioners on Uniform State Laws & American Law Institute, *Press Release: NCCUSL to Promulgate Freestanding Uniform Computer Information Transactions Act: ALI and NCCUSL Announce that Legal Rules for Computer Information Will Not Be Part of U.C.C.* (Apr. 7, 1999) <www.nccusl.org/pressrel/2brel.html>; Fred H. Miller & Carlyle C. Ring, *Article 2B's New Uniform: A Free-Standing Computer Information Transactions Act,* U.C.C. BULLETIN, Jun. 1999, at 1, *available at* <www.2bguide.com/docs/nuaa.html>.

12. S. 372 (2000) <http://leg1.state.va.us/cgi-bin/legp504.exe?001+ful+SB372ER> (adding in Title 59.1 a chapter numbered 43, consisting of sections numbered 59.1-501.1 through 59.1-509.2)

13. UCITA Online, *What's Happening to UCITA in the States* <www.ucitaonline. com/whathap.html> (providing the most current list).

14. The leading proponents of UCITA position the opposition as primarily coming from consumers. *See* Carlyle C. Ring, et al., *Uniform Law For Computer Info Transactions Is Offered*, NAT'L L.J., Aug. 30, 1999 at B07; and Carlyle C. Ring, Jr. & Raymond T. Nimmer, *Series of Papers on UCITA Issues* (1999) <www.nccusl.org/pressrel/UCITAQA.HTM> [hereinafter Ring & Nimmer].

15. *E.g.,* Letter from General Counsels / Officers of 18 Companies, to Gene N. Lebrun, President of NCCUSL (Jul. 13, 1999) <www.2bguide.com/docs/71399gcs.html>; Letter from Digital Commerce Coalition, letter to Gene N. Lebrun, President of NCCUSL (Jul. 13, 1999) <www.2bguide. com/docs/dcc.html> (American Stock Exchange, Compaq, DaimlerChrysler Corporation, Business Software Alliance, Fisher-Rosemount group of companies, The Dun & Bradstreet Corporation, Pittsburgh Technology Council, Software and Information Industry Association, Information Technology Association of America); Letter from Kaye Caldwell, President, Silicon Valley Software Industry Coalition, to Gene N. Lebrun, President of NCCUSL (Jun. 2, 1999) <http://www.2bguide. com/docs/svsic6299.pdf>.

Some software and hardware vendors oppose UCITA. For example, the American Committee for Interoperable Systems and the Computer & Communications Industry Association are members of the 4CITE coalition, which was formed to oppose UCITA. *See* 4CITE <www.4CITE.org>.

16. Note the relevance of *Matthew Bender & Co. v. West Publishing Co.*, 158 F.3d 693 (2nd Cir. 1998), which settled the issue that West cannot assert copyright-based ownership over what the court ruled to be public domain. If database protection legislation is not adopted federally, UCITA may be the only legal foundation for database publishers' use restrictions on public domain materials downloaded from their systems.

committee for UCC Article 2 has repeatedly refused to write *Hill v. Gateway 2000*[18] into Article 2. [19] On the other hand, UCITA adopts the key holding of the case[20] and introduces a wide range of customer-unfriendly rules.[21] Thus, several computer manufacturers have expressed support for the bill. Finally, a few other manufacturers have supported UCITA, such as Chrysler.[22] Other traditional manufacturers, such as Reynolds Metals in the Virginia debates, have come out against UCITA.[23]

On the other side, there certainly is consumer opposition to UCITA, including every consumer organization that has spoken on the matter.[24] Other critics include the Attorneys General of Arizona,

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17. The software embedded in the computer or shipped with the computer is within UCITA under section 103(b)(1)(A). As long as that software is a material part of the transaction, section 104 allows the vendor to bring the computer (the rest of the mixed transaction) within UCITA as well.

18. On its facts, the case of Hill v. Gateway 2000, 105 F.3d 1147 (7th Cir. 1997), is a decision about enforcement of a shrink-wrapped arbitration clause. However, it has been more broadly interpreted as validating post-sale contract terms generally. *See, e.g.,* Peerless Wall & Window Coverings, Inc. v. Synchronics, Inc., 2000 U.S. Dist. LEXIS 1952 (W.D. Penn. Feb. 25, 2000); Rinaldi v. Iomega Corp., 1999 Del. Super. LEXIS 563 (Del. Super. Ct. Sep. 3, 1999).

19. There was extensive discussion of this at two of the three Article 2 meetings that I have attended. The agenda for the February 5 – 7, 1999 drafting committee meeting says "The so-called 'Gateway' problem is now treated in 2-207(d)" <www.law.upenn.edu/bll/ulc/U.C.C.2/agenda.htm>; The January 5-7, 2000 meeting discussion of the Gateway problem was also quite spirited. *See* The December 1999 draft on UCITA § 2-207, *available at* <www.law.upenn.edu/bll/ulc/U.C.C.2/21299.htm>.

20. Post-sale terms govern so long as the customer has a right of return. *See* UCITA §§ 112, 208, and 209. In fact, post-sale terms govern without a right of return if the customer is not "mass market" or if a prior mass-market contract specified that future contracts between the vendor and the customer would not include a right of return. *See also infra* Part VI.B.

21. *See infra* Part VI.

22. DaimlerChrysler is listed as a cosigner of the Letter from Digital Commerce Coalition, letter to Gene N. Lebrun, President of NCCUSL (Jul. 13, 1999) <www.2bguide.com/docs/dcc.html>. Disputes between consumers and car manufacturers regularly top the Better Business Bureau's list of complained-about industries. To the extent that UCITA either covers part of the automotive industry directly (see the discussion of embedded software, below) or sets a precedent for revision of U.C.C. Article 2, it might relieve a level of consumer-protective pressures on the industry.

23. Well-known manufacturers who have joined the 4CITE coalition (which opposes UCITA) include Caterpillar Inc., McDonalds, and Reynolds Metals Corporation.

24. *See, e.g.,* Jean Braucher, *Proposed Uniform Computer Information Transactions Act* (UCITA): James E. Rogers, *Proposed Uniform Computer Information Transactions Act (UCITA):*
Objections From The Consumer Perspective (Dec. 3, 1999) <www.nclc.org/ucita/jean_braucher.html>; Letter from Members of the Working Group on Consumer Protection, American Bar Association Business Law Section, Committee on the Law of Cyberspace, Subcommittee on Electronic Commerce, to Gene Lebrun, President of NCCUSL (June 10, 1999) <www.2bguide.com/docs/jbmb699.html>; Letter from Steve Brobeck, Consumer Federation of America, Todd Paglia, Consumer Project on Technology, Linda Golodner, National Consumers League, Edmund Mierzwinski, U.S. Public Interest Research Group to Charles Alan, Wright American Law Institute, and Gene N. Lebrun (Nov. 10, 1998) <www.cptech.org/ucc/sign-on.html>; *Consumer Project on Technology's Protest Page on Article 2B* <http://www.cptech.org/ucc/>; Todd J. Paglia, *Consumer Project on Technology Re: Uniform Commercial Code Article 2B* (Mar. 10, 1998) <www.cptech.org/ucc/ali3-10.html> (Paglia's attendance at Article 2B meetings was partially funded by the American Law Institute, in order to ensure a consumer presence); Cem Kaner & Todd Paglia, *Consumer Issues and Article 2B* (Dec. 5, 1997) <www.badsoftware.com/alidec97.htm> (memo to the American Law Institute); Letter from Gail Hillebrand, Consumers Union, to members of NCCUSL (June 21, 1999) <www.2bguide.com/docs/cu699.html>;

Arkansas, California, Connecticut, Florida, Idaho, Indiana, Iowa, Kansas, Maryland, Minnesota, Mississippi, Missouri, Nevada, New Jersey, New Mexico, North Dakota, Oklahoma, Pennsylvania, Tennessee, Vermont, Washington, West Virginia, Wisconsin and the Administrator of the Georgia Fair Business Practices Act.[25] The staff of the Federal Trade Commission has written two reports that are highly critical of UCITA.[26]

Larger customers are also in opposition, such as the Society for Information Management,[27] as are several retailers.[28]

Letter from Gail Hillebrand, Consumers Union, to Geoffrey C. Hazard, Jr., Director of ALI (Oct. 7, 1997) <www.2bguide.com/docs/a.html>; Letter from Gail Hillebrand, Consumers Union, to members of ALI (Apr. 28, 1997) <www.ali.org/ali/hillga.htm>; National Consumer Law Center, *Uniform Computer Information Transactions Act* <www.nclc.org/ucita /index.html>.

25. Letter from Attorneys' General to Gene Lebrun, President of NCCUSL (July 23, 1999) <www.badsoftware.com/aglet1.htm> (Cosigned by 11 additional Attorneys General (July 28, 1999) <www.badsoftware.com/aglet2.htm>) [hereinafter Letter from Attorneys General].

26. Letter of Joan Z. Bernstein, Adam G. Cohn, William J. Baer, David A. Balto, Susan S. DeSanti, Michael S. Wroblewski, Federal Trade Commission*,* to John L. McClaugherty, Chair, Executive Committee, NCCUSL (Jul. 9, 1999) <www.ftc.gov/be/v990010.htm>; Letter of Joan Z. Bernstein, Adam G. Cohn, Jonathan A. Smollen, William J. Baer, David A. Balto, Susan S. DeSanti, & Nancy Dickinson, Federal Trade Commission, to Carlyle C. Ring, Jr., Chairman, NCCUSL Article 2B Drafting Committee & Professor Geoffrey Hazard, Jr., Director of ALI (Oct. 30, 1998) <www.ftc.gov/be/v980032.htm>.

27. Letter from John P. Connors, Senior VP for Government Affairs, American Hotel & Motel Assn to John McLaugherty, President-Elect of NCCUSL (July 22, 1999) (UCITA is "overly broad, unclear, unbalanced, and, therefore, unlikely to be uniformly enacted. We have serious concerns about the negative impact UCITA may have on American business in general") (on file with the author); Society for Information Management, *What is UCITA, Why Should I Care and What Should I Do????* <http://adv.onewebsystems.com/scripts/oneweb.nl/sim_global?UID=LTKKVVQ2I5B5UM4A8D97&Page= Article_Display&312=3750&333=5061>; Society for Information Management, *The Trouble with UCITA – A Brief Introduction* <http://adv.onewebsystems.com/scripts/oneweb.nl/sim_global?UID= LTKKVVQ2I5B5UM4A8D97&Page=Article_Display&312=3750&333=5062>; Society for Information Management, *UCITA: Why the Controversy* <http://adv.onewebsystems.com/scripts/ oneweb.nl/sim_global?UID=LTKKVVQ2I5B5UM4A8D97&Page=Article_Display&312=3750&333=5069>; Society for Information Management, *UCITA: Key Problems for the Business User* <http://adv.onewebsystems.com/sim/library/doc/ucitakeyproblems.doc>; Letter from John Stevenson, Society for Information Management to Carlyle C. Ring, Jr., Chairman NCCUSL Article 2B Drafting Committee (Oct. 8 1998) <www.jamesshuggins.com/html/tek1/ucita_sim_19981008_letter.htm>. Other large software customers who have joined the 4CITE coalition, which opposes UCITA, include John Hancock Mutual Life Insurance Company, McDonalds, McLane Company Inc., Principal Financial Group, and Prudential Insurance Company of America. Note that the Society for Information Management has about 2700 member companies. *See* Patrick Thibodeau, *SIM seeks to quash pending legislation*, Computerworld (Nov. 29, 1999) <www.computerworld.com/home/print.nsf/all/ 991129CF62>.

28. Circuit City is a member of the 4CITE Coalition. *See* Letter of opposition to NCCUSL from Retail Federation of America (July, 1999) (written for the annual meeting) ("NRF members represent an industry that encompasses more than 1.4 million U.S. retail establishments, employs more than 20 million people—about 1 in 5 American workers—and registered 1998 sales of $2.7 trillion. NRF's international members operate stores in more than 50 nations."). Many independent retailers are distressed now that they realize what UCITA contains. *See* Chris Barnett, *Resellers, Users in the Crosshairs,* 198 Microtimes (Oct. 6, 1999) <www.softshop.com/ucita.html> (a slightly different version is at <www.microtimes.com/198/industry.htm#chris1>) ("Perhaps UCITA should be renamed LFEA for the Lawyers' Full Employment Act. RGOOBA, or the Resellers Going Out of Business Act, is another option.")

But the opposition to UCITA is much broader than this. Many intellectual property specialists oppose UCITA, including 50 intellectual property law professors,[29] the American Intellectual Property Law Association,[30] the Committee on Copyright and Literary Property, the Communications and Media Law Committee, and the Entertainment Law Committee of the Association of the Bar of the City of New York.[31] According to their analyses, UCITA will have profound effects on the balance of rights among intellectual property creators, publishers, and users in the United States, allowing publishers to virtually wipe out users' fair use and first sale rights and the doctrine of exhaustion.[32]

The libraries[33] oppose UCITA because of its impact on fair use and first sale. The library community fears that UCITA will: destroy the public (free to all users) library system, cut off libraries' ability to receive donations of used literary works (including software and electronic books), make archiving more difficult or more expensive, limit the ability of libraries to collect materials into comprehensive collections on areas of specific research interest, force university libraries to curtail access to non-student, non-faculty library patrons, and limit the libraries' ability to raise funds by selling outdated used materials.[34]

Trade associations representing the entertainment industry and the press,[35] that have spoken in

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29. Letter from 50 Professors of Intellectual Property Law to Carlyle C. Ring, Jr., Chairman, NCCUSL Article 2B Drafting Committee, Gene N. Lebrun, President, NCCUSL, Professor Geoffrey Hazard, Jr., Director, American Law Institute (Nov. 17, 1998) <www.2bguide.com/docs/1198ml.html>.

30. Letter from Margaret A. Boulware, President, American Intellectual Property Law Association to Gene Lebrun, President of NCCUSL (July 16, 1999) <www.2bguide.com/docs/799aipla.html>.

31. Committee on Copyright and Literary Property of the Association of the Bar of the City of New York (co-sponsored by the Communications and Media Law Committee and the Entertainment Law Committee), *Report on a proposal of the National Conference Of Commissioners on Uniform State Laws to adopt a proposed Uniform Computer Information Transactions Act* (June 21, 1999) <www.2bguide.com/docs/Copy.Comm1.pdf>.

32. *See infra* Part II.

33. Letter from Duane E. Webster, Association of Research Libraries, Roger H. Parent, American Association of Law Libraries, David Bender, Special Libraries Association, Carol Henderson, American Library Association, Carla Funk, Medical Library Association (July 12, 1999) <www.mlanet.org/government/ucita/lebrumlttr.html >; Letters from the Robert Oakley, American Association of Law Libraries, Carol C. Henderson, American Library Association, Duane E. Webster, Association of Research Libraries, David Bender, Special Libraries Association to the Article 2B drafting committee (Oct. 8, 1998) <www.arl.org/info/letters/libltr.html>; Letter to Gene Lebrun, President of NCCUSL (Oct. 13, 1998) <http://www.arl.org/info/letters/Lebrun_NCCUSL_letter.html>; The American Association of Law Libraries, American Library Association, Art Libraries Society of North America, Association of Research Libraries, Special Libraries Association and the Virginia Association of Law Libraries are members of the 4CITE coalition <www.4CITE.org>.

34. *See also* Medical Library Association, Association of Research Libraries, American Library Association, American Association of Law Libraries, and the Special Libraries Association, *UCITA Fact Sheet* (July 15, 1999) <www.mlanet.org/government/ucita/factsheet.html>; Carolyn L. Barkley, President, Virginia Library Association Testimony on Behalf of the Virginia Library Association, American Library Association, Virginia Association of Law Libraries, and the American Association of Law Libraries, before the Advisory Committee #5 of the Virginia Joint Commission on Technology and Science, on the Uniform Computer Information Transactions Act (UCITA) (Dec. 7, 1999) <www.ll.georgetown.edu/aallwash/tm120799.html>; and *see infra* Part II.B.3.

35. Letter from Jack Valenti, Motion Picture Association of America, Eddie Fritts, National Association of Broadcasters, Decker Anstrom, National Cable Television Association, Hilary Rosen, Recording

opposition to UCITA though the recently proposed amendments,[36] may achieve the neutrality of the Motion Picture Association, just as amendments to exclude a wide range of transactions from UCITA in 1999 convinced the Recording Industry Association to drop its opposition.[37]

Finally, the software development community has come out strongly against UCITA. In drafting committee meeting after meeting, UCITA was presented as having the support of "The Industry." The claim was challenged several times by many software developers, but the myth continues.

Think of this analogy: West Publishing is an important publisher within the legal community and it employs a lot of lawyers. Suppose that all of the primary publishers of legal materials supported UCITA. Would it be fair or rational to say that, therefore, the legal industry supports UCITA? Wouldn't we want to hear from some groups of *lawyers*, perhaps the American Bar Association, the State Bars, and so forth?

Before you conclude, based on statements from associations representing software publishers, that the software industry supports UCITA, you must read the letters of criticism of UCITA from the President of the Association for Computing Machinery[38] and from the Institute for Electrical and

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Industry Association of America , John Sturm, Newspaper Association of America, Don Kummerfeld, Magazine Publishers of America to John McClaugherty, President of NCCUSL, Geoffrey Hazard, Jr., Director of ALI, Connie Ring, Jr., Chairman of NCCUSL UCITA Drafting Committee (May 10, 1999) <www.2bguide.com/docs/coalit5.html>, (*also* letter of Dec. 7, 1998) <www.2bguide.com/docs/1298mpaa.html>; Letter from National Writers Union to Carlyle C. Ring, Jr., Chair, Raymond T. Nimmer, Reporter Article 2B Drafting Committee (Oct. 9, 1998) www.nwu.org/pic/ucc1009a.htm; Letter from Victor S. Perlman, American Society of Media Photographers to the Task Force on Scope of U.C.C. Article 2B, (Jul. 14, 1998) <www.2bguide.com/docs/vpjy98.html>; Science Fiction and Fantasy Writers of America, *Electronic Rights Issues* <www.sfwa.org/beware/electronic.html>. Also, InfoWorld and the International Communications Association are members of the 4CITE coalition opposing UCITA, www.4CITE.org.

36. *Available at* <www.law.upenn.edu/bll/ulc/ucita/approvedamend.doc>.

37. The Recording Industry Association of America ("RIAA") was in opposition to UCITA but stopped fighting it when NCCUSL excluded their transactions from UCITA. *See* Letter from Cary Sherman, RIAA to Carlyle C. Ring, Jr. and Raymond T. Nimmer, UCITA Drafting Committee (Jul. 14, 1999) <www.2bguide.com/docs/71499ria.html> (neutrality); Letter from Cary Sherman, RIAA to NCCUSL, Carlyle C. Ring, Jr., Chair of Article 2B Drafting Committee and Geoffrey Hazard, ALI (Oct. 9, 1998) <www.2bguide.com/docs/riaa1098.html> (opposition). The key amendment was to UCITA section 103(d), which excludes (2)(B) "a motion picture, sound recording, musical work, or phonorecord as defined or used in Title 17 of the United States Code as of July 1, 1999, or an enhanced sound recording." Under UCITA section 103(e):

> [a]s used in subsection (d)(2)(B), enhanced sound recording" means a separately identifiable product or service the dominant character of which consists of recorded sounds but which includes (i) statements or instructions whose purpose is to allow or control the perception, reproduction, or communication of those sounds or (ii) other information so long as recorded sounds constitute the dominant character of the product or service despite the inclusion of the other information.

Id. This takes enhanced sound recordings out of UCITA. Then, section 104 lets sellers bring them back in, if and when they want to: "The parties may agree that this [Act], including contract-formation rules, governs the transaction . . . if a material part of the subject matter to which the agreement applies is . . . subject matter excluded by Section 103(d)(1) or (2)."

38. Letter from Barbara Simons, President of the Association for Computing Machinery to NCCUSL Commissioners (July 12, 1999) <www.acm.org/usacm/copyright/usacm-ucita.html>; Barbara Simons, *From the President: Melissa's Message*, 42 COMM. ACM 25 (June, 1999) <www.acm.org/ usacm/copyright/p25-simons.pdf>; Letter from Charles N. Brownstein, US Public Policy Committee,

Electronic Engineers (USA).[39] These are the two main professional societies in the field of software engineering. Software Engineering, by the way, is a licensed profession in Texas, Ontario, and British Columbia.[40]

The American Society for Quality opposes UCITA, at the encouragement of its Software Division.[41] This is the main professional society for quality control workers in the United States.

The Independent Computer Consultants Association, which represents individual software developers and small software service providers, sent a representative to several UCITA / Article 2B drafting committee meetings. It proposed changes (which were not adopted) and eventually came out in opposition to UCITA.[42]

The Free Software Foundation, which supports the development of open source software products like Linux, opposes UCITA.[43]

The Software Engineering Institute, which was formed by the U.S. Department of Defense to further the state of software practice, and which is highly influential in the field, opposes UCITA.[44]

These are substantial organizations. They are not wild-eyed consumer advocates. They are major players in the software industry. They all, along with several smaller developers' groups,[45] oppose

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Association for Computing Machinery to Carlyle C. Ring, Jr., *Chairman*, NCCUSL Article 2B Drafting Committee, Geoffrey Hazard, Jr., Director, American Law Institute (Oct. 7, 1998) <www.acm.org/ usacm/copyright/usacm-ucc2b-1098.html>.

39. IEEE UCITA, *UCITA Grassworks Network* <www.ieeeusa.org/grassroots/ucita>; IEEE-USA, *Positions Statement Opposing Adoption of the Uniform Computer Information Transactions Act (UCITA) By the States*, <www.ieeeusa.org/forum/positions/ucita.html>; Letter from Paul J. Kostek, President, IEEE-USA, to Gene Lebrun, President of NCCUSL (Jul. 20, 1999) <www.ieeeusa.org/ forum/POLICY/1999/99july20.html>; Letter from John R. Reinert, President, IEEE-USA, to Carlyle C. Ring, Jr., Chair and Raymond T. Nimmer, Reporter of the Article 2B Drafting Committee (Oct. 9, 1998) <www.ieeeusa.org/forum/POLICY/1998/98oct09.html>.

40. Steve McConnell & Leonard Tripp, *Professional Software Engineering: Fact or Fiction?* IEEE SOFTWARE, Nov./Dec. 1999, at 13, 16.

41. American Society for Quality, *ASQ Opposes Law on Computer Software Transactions* (Jul. 26, 1999) <www.asq.org/articles/publicaffairs/072699state.html>.

42. Sharon Marsh Roberts, *Position Statement of the Independent Computer Consultants Association* (Jul. 20, 1998) (on file with the author).

43. Richard Stallman, *Why We Must Fight UCITA,* LINUX TODAY (Feb. 6, 2000) <linuxtoday.com/stories/15948.html>; Free Software Foundation, *Help defeat UCITA* (Jul. 7, 1999) <commons.somewhere.com/rre/1999/RRE.campaign.against.abu.html>; *see also* Roblimo, *Lobbying Against UCITA: A Practical Guide*, SLASHDOT (Feb. 17, 2000) <http://slashdot.org/features/00/ 02/17/0038235.shtml>.

44. Letter from Stephen E. Cross, Director, Software Engineering Institute, to the NCCUSL Commissioners (Jun 1, 1999) < www.badsoftware.com/sei.htm>.

45. *See, e.g.,* Letter from Danny Faught, on behalf of the 408 members of the Software-Test Discuss mailing list to Carlyle C. Ring, Jr. Article 2B Drafting Committee, and Geoffrey Hazard, Jr. American Law Institute (Nov. 20, 1998) <www.badsoftware.com/swtest.htm>. The Computer Professionals for Social Responsibility oppose UCITA. *See* <www.cpsr.org/program/UCITA/ucita-fact.html>. In addition, one should reference the developers whose notes were posted at www.2bguide.com, or at the discussants at <www.slashdot.org>, or the several other pages that are popping up on the name, such as <www.troubleshooters.com/ucita/ucitacar.htm> and <www.james huggins.com/html/tek1/ucita1.htm> and

UCITA.

This paper explores the opposition of the software engineering community to UCITA. In summary, our (software engineers') objections can be outlined as follows. The rest of this paper will follow this outline.

I. UCITA changes the economics of defective software in ways that will encourage software publishers and large custom software development firms to deliver shoddier products faster. This will interfere with the ongoing development of professionalism in our field, reduce the international competitive advantages of the American software development community, and endanger the safety and well being of the public. Here are some examples:

A. Reduced support costs associated with defective[46] products.

1. UCITA does not deal reasonably with the problem of known defects.

2. Customers can be required to pay for support, even for help with known defects.

3. UCITA pulls consumer software out of the scope of significant consumer protection laws.

4. A contract can be made non-cancelable, even in the event of a material breach.

5. Support promises and other material terms of a service contract can be changed without the customer's consent.

6. A customer can be required to do extensive testing of a product, and be barred from rejecting the product as defective if they weren't discovered and reported soon enough to satisfy the vendor.

7. A publisher's contract to correct defects does not require it to correct defects.

B. Reduced competitive impact (threat of lost sales) for larger publishers who ship low grade merchandise.

1. Publishers can ban publication of benchmarks and negative reviews.

2. Publishers can limit your ability to seek third party support.

3. Publishers can restrict reverse engineering done for the purpose of developing competitive products.

<oriez.org/ucita.html>.

46. Note a divergence in terminology. Lawyers typically distinguish between "design defects" and "manufacturing defects" and would call most software defects "design defects" because the same defect will occur in all copies of the product. For an extended discussion in the design defect literature, see James A. Henderson, *Judicial Review of Manufacturers' Conscious Design Choices: The Limits of Adjudication,* 73 COLUM. L. REV. 1531, 1973. Software engineers distinguish between "design defects" and "coding defects." In the design defect situation, the product works as the designer intended (or specified in a document), but the design is flawed. In the coding defect situation, the programmer made a mistake. The program does not behave as intended. *See, e.g.,* CEM KANER, ET AL., TESTING COMPUTER SOFTWARE 68 (1993).

4. Publishers can hide the terms of their contracts until after the customer has committed to the sale and paid for it.

5. Publishers can eliminate competition from the used software market by barring customers from transferring used copies of the software they buy.

6. UCITA's default rules threaten the livelihoods (and thus competitive future) of tiny software publishers and independent software developers.

C. Limited accountability for issues involving public safety.

1. Self-help creates serious security risks: publishers can bury back doors in the software that allow them to send a message shutting down the software. A publisher is not liable to the customer if a third party takes advantage of this back door, creating denial of service attacks (forced system shutdowns) on all or some customers of that publisher, even though it created this vulnerability and even if it did not reveal it to the customer.

2. Publishers can probably force products liability suits into arbitration, thereby probably avoiding punitive damages, class actions, and public notoriety.

3. To the extent that UCITA is applied to embedded software, or to software that under normal engineering practice would be embedded, it limits the manufacturers' liability.

D. Limited legal accountability for defective products.

1. The implied warranty of merchantability is essentially gone.

2. The rules governing express warranties are relaxed, making it easier to claim that no warranty was formed by demonstration.

3. There is no longer a concept of a customer's right to a "minimum adequate remedy."

4. The perfect tender right is repealed for most business software customers, including small businesses who buy software through non-negotiable contracts.

5. UCITA redefines "material breach" in a seller-protective way.

6. The publisher can easily set up a waiver of liability (you "agree" to not sue the publisher for defects that you have complained about) by including the waiver in the click-wrapped "license" that comes with a bug-fix upgrade that the publisher sends you.

7. Publishers can escape repaying incidental expenses (such as reimbursing customers for the costs of returning a defective product), even in the event of complaints about unrevealed but known defects.

8. In the event of failure of an agreed exclusive remedy, the customer can no longer collect incidental or consequential damages.

9. The publisher is under no duty take reasonable measures in an attempt to release the product without viruses.

10. The publisher can select the law of any state or country.

11. The publisher can choose the forum, making it difficult and expensive to bring an action.

II. UCITA interferes with basic rules governing intellectual property, affecting us as users and creators of intellectual property.

A. UCITA essentially wipes out the fair use doctrine.

1. We lose our ability to read or write benchmark studies of competitive products.

2. We lose our right to publish criticisms of products.

3. We lose our right to reverse engineer products.

4. We lose some or all of our rights to make limited copies of materials for the purpose of instruction.

5. We lose our freedom to decide what purpose we use the software for.

B. UCITA essentially wipes out the first sale doctrine.

1. We lose our right to transfer copies when we are done with a product.

2. We lose our ability to limit costs by buying used software.

3. We lose our right to borrow or lend copies or to share a copy.

4. We lose our ability to look up materials in a public library.

5. We lose our ability to buy a library card and do research in a university library, unless we are students or faculty there.

C. UCITA will allow publishers to enforce surprise terms, such as those that unexpectedly transfer all rights to our work products to vendors of our tools.

D. UCITA appears to wipe out the traditional distinctions between patent, copyright and trademark.

III. UCITA's rules for sending and receipt of electronic communications create new risks and impose substantial and wasteful transaction costs associated with e-mail.

A. The definition of receipt is seriously ambiguous.

B. Receipt occurs even if the intended recipient never receives it.

C. Failure of *actual* receipt allows for double charging. Someone who orders a copy of a computer program or other online information can be made to pay for it and then to pay full price for a replacement copy, if the copy sent was lost or garbled in transmission.

D. Notification (receipt by the customer, as a matter of law) can be mere publication on the licensor's website or delivery to an account that the allegedly intended recipient never uses and may not even realize exists.

E. Notification occurs even if the recipient cannot read the message.

F. Notification occurs even if the recipient never receives the message.

G. Notification occurs even if the message is delivered to an account that was closed by the intended recipient.

H. Notification occurs at time of delivery to the intended recipient's internet service provider even if the intended recipient rarely checks e-mail and does not see the message for another month.

I. Notification occurs even if the message is formatted or routed in a way that makes it a target for destruction by a reasonably configured spam filter (such as an anti-pornography filter).

IV. UCITA interferes with traditional, reasonable engineering practices.

A. UCITA allows publishers to ban reverse engineering, which will have many different negative consequences.

B. UCITA treats the user interface of software as "published information content" and user interface design defects as equivalent to typographical mistakes in a book. This insertion of a legal decision into the middle of an ongoing and longstanding controversy within software engineering may set the field back by decades.

C. UCITA draws a distinction between embedded and non-embedded software that has no rational basis within engineering. Whereas today, the decision to embed or not embed software in hardware is based on a technologically-driven cost/benefit analysis, under UCITA the decision will be heavily influenced by whether the manufacturer wants to place its products under the protection of UCITA. If so, software that would otherwise be embedded will be packaged and sold separately.

D. In general, the havoc that UCITA creates within the intellectual property field throws our rights and constraints into chaos. Our work products are intellectual property. Until UCITA is resolved, our basic rights and practices are open to question.

V. UCITA interferes with the practices of independent software engineers and small consulting firms.

A. UCITA limits our ability to control costs by buying used software and used computers.

B. UCITA limits our ability to create and disband consulting partnerships by limiting transfer of software and computers.

C. UCITA creates new default rules that govern our services, such as an implied warranty of merchantability. These default rules will be nondisclaimable for most small service providers, exposing them to risks that no larger company would dream of operating under.

D. UCITA limits the ability of companies who buy software or computers to retain independent service providers to do maintenance of the software.

E. UCITA writes a new implied term into contracts for submission of ideas that will often

have the effect of saying that a software engineer or content creator who fulfills a written submission contract still does not have to be paid for his work.

F. UCITA creates a new implied term into contracts for inclusion of works into a collection that invalidates transfer restrictions that were written into the black letter of the contract.

G. UCITA creates such a technically precise set of rules for self-help that it creates a trap for independents. The independent will probably know that she has the right to exercise self-help, but unless she retains specialized counsel, she will not know exactly how to exercise UCITA section 816 and is at great risk of making a technical error that subjects her to enormous liability.

H. UCITA is drafted with many ambiguities and issues that will have to be litigated. The result will be a lot of new business for lawyers, at the expense of the businesses.

VI. UCITA generally works to the disadvantage of small businesses.

A. Many non-negotiable small business transactions are non-mass-market.

B. The mass-market "protections" are generally take-aways from non-mass-market customers.

II. UCITA CHANGES THE ECONOMICS OF DEFECTIVE SOFTWARE

Commercial law provides a foundation for commerce. The essence of commercial law is that it should facilitate commerce.[47] Five key factors that facilitate commerce are clarity, uniformity, stability, freedom of contract and appropriate allocation of accountability: [48]

- *Clarity* makes it easier for parties to understand the rules themselves, or with relatively simple instruction. They spend their time and money on commerce, rather than on lawyers.

- *Uniformity* helps buyers and sellers avoid the misunderstandings that are caused by conflicting rules.

- *Stability* allows parties time to develop a thorough understanding of the rules and to rely on what they already know. Buyers and sellers do not have to hire lawyers to reanalyze the same old issues. They know what risks they're taking and who has to buy the insurance. Laws that tilt too much toward one side of a transaction do not promote stability. If one side is shabbily enough treated, it will bring political pressure to bear to get a fairer shake. Maneuvering for significant short-term advantages might be successful over the short term, but the backlash is inevitable.

- *Freedom of Contract* allows the parties to make the agreements that they choose to make. Of course, there are assumptions underlying this freedom.[49]

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47. *See, e.g.,* Letter from Attorneys General, *supra* note 25. "The overriding purpose of any commercial code is to facilitate commerce by reducing uncertainty and increasing confidence in commercial transactions." *Id.*

48. There are undoubtedly others.

49. For example, the opportunity to make an informed choice is fundamental to this paradigm. For a thought-provoking analysis, see MICHAEL J. TREBLICOCK, THE LIMITS OF FREEDOM OF CONTRACT (1993).

- *Appropriate Allocation of Accountability.* If a product is defective, who should pay how much? There are several approaches to risk/accountability allocation, depending on which policies are most important to serve.[50] One approach is to allocate accountability purely according to fault. If the product is defective, the seller pays.[51] But I do not think we know how to make defect-free software.[52] UCITA takes this issue seriously.[53] If we create too much pressure on software developers to make perfect products, we will kill the industry. A second approach allows the contracting parties to allocate the risks as they see fit. This is UCITA's approach, except that in practice the UCITA seller will write the contract and allocate all of the risk to the buyer. A third approach uses risk allocation to drive technology, essentially a least cost avoider approach—a company is held accountable for a defect if the cost to repair it is less than the losses that would be caused by it.

These factors are probably familiar to legally oriented readers. I summarized them in order to provide a backdrop for a different approach, the one that will dominate the rest of this paper: *quality/cost*

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50. Three useful discussions of the economics of accountability are in TREBLICOCK, *supra*; 1 DAN B. DOBBS, LAW OF REMEDIES (1993), 3 DAN B. DOBBS, LAW OF REMEDIES (1993), and W. PAGE KEETON, ET AL., PROSSER AND KEETON ON TORTS (5th ed., 1984). I raise the general issue here briefly, as a background to quality/cost analysis

51. One problem with this is that UCITA does not define "defect" and the word is surprisingly slippery. I ventured a definition that took into account the variation in relationships between buyers and sellers in a paper that I wrote for the UCITA drafting committee, responding to Ray Nimmer's request for help with the definition. *See* Cem Kaner, *What is a Serious Bug? Defining a "Material Breach" of a Software License Agreement* (1997) <www.badsoftware.com/uccdefect.htm> [hereinafter Kaner, *What is a Serious Bug*].

52. . At significant expense, we can dramatically reduce the number of *coding* errors. For powerful recent results, see Pat Ferguson et al., *Results of Applying the Personal Software Process*, 30 IEEE COMPUTER, May 1997, at 24; Watts S. Humphrey, *Comments on Software Quality* (summer, 1997) <http://www.2bguide. com/docs/whsq.html>. Professor Humphrey comments on these results as follows: "When you consider all the costs, it actually costs substantially less to produce essentially defect-free code than to produce the poor quality of today. Further, while the manufacturers of most products cannot prove that their products are defect free, software can have as high quality as any other product category. Continued pressure to improve software quality would be good for the user and for the industry." (personal communication to the author, March 28, 2000).

53. For example, UCITA comment 3(a) on section 403 states that:

[i]n the late 1990's, a popular operating system program for small computers used by both consumers and commercial licensees contained over ten million lines of code or instructions. In a computer, these instructions interact with each other and with code and operations of other programs. This contrasted with a commercial jet airliner that contained approximately six million parts, many of which involved no interactive function. Of course, the market price of the airliner and the program are materially different. Typical consumer goods contain fewer than one hundred parts and a typical book has fewer than one hundred fifty thousand words. Most computer programs not only have many lines of code, but must utilize and interact with code in third-party programs, further multiplying the possible interactions. It is often literally impossible or commercially unreasonable to guarantee that software of any complexity contains no errors that might cause unexpected behavior or intermittent malfunctions, so-called 'bugs.' The presence of such minor errors that is fully within common expectation. The question for merchantability is not whether errors exist but whether, the program still comes within the middle belt of quality in the applicable trade or industry, i.e., whether it is reasonably fit for the ordinary purposes for which such programs are used.

Id.

analysis.[54]

The objective behind quality/cost analysis is to minimize the manufacturer's total cost of quality associated with a product. Under this analysis, a manufacturer is seen as spending quality–relevant money in four ways:

- Prevention of defects

- Appraisal (looking for problems)

- Internal failure costs (defects that cost the manufacturer money in its own use or development of the product), and

- External failure costs (the cost of coping with the customer's responses to defects).

Table 1 provides software examples of quality costs.[55]

As one example of a tradeoff among the factors, it is usually cheaper to prevent a defect than to face the external failure costs caused by it. As another example, the greater the external failure cost that could be caused by a defect, the more money a company can reasonably afford to prevent or find and fix it.

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54. Joseph Juran developed cost of quality analysis as a persuasive technique. *See* Frank M. Gryna, *Quality Costs* in JURAN'S QUALITY CONTROL HANDBOOK, 4.1, 4.2 (Joseph M. Juran, & Frank M. Gryna, eds., 1988, 4th Ed). "Because the main language of [corporate management] was money, there emerged the concept of studying quality-related costs as a means of communication between the quality staff departments and the company managers." *Id.; see also* J. CAMPANELLA, PRINCIPLES OF QUALITY COSTS (1990).

55. In quality cost analysis, external failure costs reflect the company's costs, not the customer's. This approach sets companies up to ignore or underestimate the losses that products cause their customers. Examples of customers' losses include wasted time, lost data, lost business, embarrassment, staff turnover when frustrated employees quit, expensive failures when the customer has only one chance to do a task correctly (such as a software error that disrupts a sales demonstration), cost of replacing product, cost of reconfiguring the system, cost of recovery software, cost of tech support (cost of calls, support charges), cost of third-party technical consultation, cost of legal consultation, cost of litigation, and injury or death. For additional examples, see KANER & PELS, *supra* note 7. There are interesting problems associated with these *externalized* failure costs. For a discussion, see Cem Kaner, *Quality Costs Analysis: Benefits and Risks*, 3 SOFTWARE QA, 1996, at 23 [hereinafter Kaner, *Quality Costs*].

TABLE 1. EXAMPLES OF QUALITY COSTS ASSOCIATED WITH SOFTWARE PRODUCTS.

Prevention	Appraisal
• Staff training • Requirements analysis • Code inspection (as a peer-to-peer training technique) • Early prototyping • Fault-tolerant design • Defensive programming • Usability analysis • Clear specification • Accurate internal documentation • Evaluation of the reliability of development tools (before buying them) or of other potential components of the product	• Design review • Code inspection (as a defect finding technique) • Glass box testing • Black box testing • Training testers • Beta testing • Test automation • Usability testing • Pre-release out-of-box testing by customer service staff
Internal Failure	**External Failure**
• Bug fixes • Regression testing • Wasted in-house user time • Wasted tester time • Wasted writer time • Wasted marketer time • Wasted advertisements • Direct cost of late shipment • Opportunity cost of late shipment	• Technical support calls and preparation of support answer books • Investigation of customer complaints • Discounts to resellers to encourage them to keep selling the product • Refunds and recalls • Coding / testing of interim bug fix releases • Shipping of updated product • Added expense of supporting multiple versions of the product in the field • PR work to soften drafts of harsh reviews • Lost sales • Lost customer goodwill • Warranty costs • Litigation costs and damages • Government investigations • Penalties and all other costs imposed by law

We can group the external failure costs into four categories:

- Cost associated with customer complaints and product support

- Lost sales, lost market share

- Liability or recalls associated with public safety

- Liability or recalls associated with (economic loss) defects.

The effect of UCITA is to reduce all of these costs. Even if the product does not change at all, the external failure costs associated with it will drop, probably substantially, under UCITA. To the extent that the risks of external failure costs drive investments in higher quality, the effect of UCITA will be to slash the software company's incentive to invest in the quality of its products. In the urgent tradeoff

between speed and quality, UCITA makes it less risky for the manufacturer to bring lower quality products to market sooner.

Here are UCITA's impacts on quality-related costs in more detail:

1*. Reduced support costs associated with defective products*

There *is* significant customer dissatisfaction with software and there have been significant costs to customers and vendors. David Pels and I presented detailed data on this to the UCITA drafting committee.[56] Some of the statistics that we presented include:

- Computers became a "real" consumer product in 1994, when they outsold television sets. By the end of 1995, computers and software ranked #8 in the top 10 list for complaints to the Better Business Bureau, outdoing used car dealers. The consumer market continues to grow. About 40% of American households have computers.[57]

- In 1996, there were 200 million calls for technical support. At an average of about $23 per call, the industry spent about $4.6 billion on these calls. Over the past seven years, the ratio of support to total employees in hardware and software companies has grown from 1 in 12 to 1 in 6. The average amount of training for technical support staff before they are put on independent telephone answering duty is only 40 hours.[58]

- In 1996, the industry left these callers on hold for about 3 billion minutes. The software industry has been one of the worst for leaving callers on hold. One study found that software companies leave callers on hold longer than any other industry studied, worse than government agencies, computer hardware companies, airlines, banks, utility companies, and others. Once you get off hold, you often reach a first-level person who can not answer your question. Wait some more for a "specialist." The Software Support Professionals Association estimates that the average time to reach the right support technician is 30 minutes for PC/Shrink-wrap products. (This "right" person may not know the answer, but she is the right person to ask the question of).[59]

- Customer satisfaction with software companies' technical support dropped steadily from 1987 through 1997.[60]

Despite the trend toward web-based support, 84% of survey respondents in the Software Support Professionals Association's 1998 Support Practices Survey reported increasing telephone call volumes.[61]

According to the International Data Corporation, information technology companies spent $2 billion building electronic support infrastructure in 1998, with an expected increase to $14 billion in 2003.[62]

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56. Cem Kaner & David Pels, *Article 2B and Software Customer Dissatisfaction* (May 30, 1997) <www.badsoftware.com/stats.htm> [hereinafter Kaner & Pels, *Article 2B*]. *See* also Kaner & Pels, supra note 7 (providing extensive discussion).

65. See Kaner & Pels, Article 2B, supra.

58. Id.

59. Id.

60. Id.

61. Software Support Professionals Association, *1998 Support Practices Survey,*<www.supportgate.com>.

62. International Data Corporation, *IDC Declares Spending to Build eSupport Operations will Cash In at Over $14 Billion by 2003* (Dec. 8, 1999) <www.supportindustry.com at member archives>.

This is just infrastructure spending, not the cost of support operations.

I have not found good summary data for recent operations costs associated with web support. The picture that I get at support-related conferences is inconsistent. The cost of supporting a technical support web site seems to run around $2 per call-equivalent, but there are many more visits.[63] The cost of calls (per call) has risen dramatically, with reported averages as high as $150 or $400 per incident, probably because the simple issues have been siphoned off to the web.

For our purposes, it suffices to say that software companies spend a lot of money on customer support infrastructure and operations.

a. The Problem of Known Defects

One of the fundamental assumptions of UCITA is that "[t]he complexity of software products makes them inherently imperfect."[64] "Minor flaws ('bugs') are common in virtually all software."[65] Also, "the idea of perfect software is a goal or aspiration not presently attainable, at least not without exorbitant costs that would drive many thousands of small companies out of the business."[66]

This is a straw man. In the UCITA drafting committee meetings, the debate about accountability for defective software was not about whether software should be perfect. For example, even though I have advocated for holding software vendors accountable for known but undisclosed defects, I wrote a memo for the UCITA drafting committee explaining in detail that it is impossible to exhaustively test software products or to prove by testing that a product is defect free.[67]

But what about known defects? It might be impossible to find all the defects, but that issue does not apply to the defects that were actually found. In 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.[68] Several representatives of the software engineering

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63. According to data from Microsoft, they are able to handle web "transactions" at 8.5 cents apiece, and it takes 8 to 10 transactions to replace a telephone call. Association of Support Professionals, *Web Support Economics* (1999) <www.asponline.com/websupport.html>. In contrast, estimates of cost per incident ("total web costs by total Web [problem] resolutions") are $58.33 (median), but drop to an average of $2.20 for companies that do more than 50% of their support online. Soft-Letter & The Association of Support Professionals, *The Economics of Web-Based Support* (Nov. 1999) < http://www.asponline.com/economics.html >. To compare this to cost-per-call, some calls have multiple incidents (people complain about 3 or 4 things sometimes) but more incidents take multiple calls to resolve. As a very rough approximation, think of a cost-per-call as equivalent to a cost-per-incident. Across companies, the average cost per call or per incident is thus usually somewhere between $1 and $400, lower per call when the company gets lots and lots of calls.

64. Ring & Nimmer, *supra* note 14 (referring to the section on Perfect Tender/ Material Breach of Substantial Performance).

65. *Id.* n. 10. "An A.B.A. Software Contract Task Force recommended that the perfect tender rule be abolished with respect to software contracts because of the complexity of the software product and the fact that minor flaws ("bugs") are common in virtually all software." UCITA (Article 2B), Jan. 20, 1997 Draft, Reporter's Note 8 to § 2B-108.

66. Ring & Nimmer, *supra* note 14 (referring to the UCITA drafts).

67. Cem Kaner, *The Impossibility of Complete Testing*, 4 SOFTWARE QA, 1997, at 28 <www. kaner.com/imposs.htm> [hereinafter Kaner, *Impossibility*].

68. KANER & PELS, *supra* note 7, at 23.

community, and Ralph Nader's representative (Todd Paglia) and I repeatedly proposed that software companies should be held accountable for defects that they knew about at the time of sale and chose not to disclose.[69] These proposals typically barred consequential damages for defects that were unknown or that were revealed to the customer in the product documentation (which makes it possible for customers to avoid or mitigate losses caused by known defects). Additionally, some of us suggested that damages for known defects in mass-market products could be limited to demonstrable out-of-pocket expenses and capped, perhaps at $500 per customer. These proposals were rejected.

One of the arguments made by UCITA proponents was that failure to disclose a known defect should be dealt with under the law of fraud.[70] Sometimes, such a failure might be fraudulent—as when the seller knowingly makes a false statement about the product. But to the best of my knowledge, in the sale of goods, mere failure to mention a known defect, even a material defect, does not give rise to fraud liability. We did not ask for fraud liability. We asked that software publishers be held accountable for *breach of contract* if they knowingly delivered a defective product without revealing the defect.

Our proposal grew out of the special recognition in UCITA that software companies need a break because of the alleged inevitability of defects. UCITA's handling of that break includes the de facto elimination of the requirement that warranty disclaimers and damage limitations be conspicuous and made available to the customer before the sale, elimination of the principle of minimum adequate damages, the adoption of a rule that excludes incidentals and consequentials for defects even when the agreed remedy fails, and the adoption of a more seller-favorable definition of material breach. Our proposal was a tradeoff—let 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. Disclosure gives the customer a chance to avoid or mitigate damages, by avoiding a feature or by buying a different product (whose defects seem more palatable).

I believe that within the current state of software engineering, it is usually commercially unreasonable to attempt to create a defect-free software. Based on that belief, I agree that we should limit the liability risk of publishers and other software developers for defects that they did not know about or that they were honest enough to disclose, even if those defects cause substantial losses. But what if the state of the art improves?

Watts Humphrey raised this issue at meetings of the UCITA drafting committee. Professor Humphrey is a former vice-president of IBM, co-author of the industry's first software license (at IBM), author of seven books on software engineering, and widely respected in the field. He presented data to the drafting committee that showed that new development methods were succeeding in producing large,

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69. Kaner & Paglia, *supra* note 24; Letter from John R. Reinert, IEEE-USA President to NCCUSL (Feb. 23, 1998) <www.ieeeusa.org/FORUM/POLICY/1998/98feb23.html>; Barbara Simons, *From the President: Melissa's Message*, 42 Comm. ACM June, 1999, at 25; Sharon Marsh Roberts, *Position Statement of the Independent Computer Consultants Association* (Jul. 20, 1998) (on file with the author).

70. *See* Ring & Nimmer, *supra* note 14.

Is it true that UCITA takes away protections that I have under current law where the licensor knows that the software contains serious defects? No. Under Article 2, common law, and UCITA, that problem, when it exists, is a question of whether the licensor committed fraud. UCITA has the same rules as Article 2 on this issue. The law of fraud is not changed by UCITA.

Id.

complex products that were nearly defect free.[71] Humphrey's comments at the drafting committee meetings were largely ignored.[72] Ultimately, his points were reiterated by the Director of the Software Engineering Institute, Stephen Cross, who wrote,

> The Article 2B draft assumes that software products are inherently defective and that the current quality practices in the industry will not improve. The history in other fields demonstrates that as a technology matures, the marketplace becomes more sensitive to quality issues. In fact, software quality is a growing concern to the user community, and software quality is an active current area of study. Considerable progress is being made . . . . The Article 2B proposal makes no technical sense. We feel that it would inhibit natural market forces, damage users, and ultimately limit the health and growth of this industry. While we appreciate the efforts that have been made to produce the UCC-2B draft, we must urge you to oppose its adoption.[73]

b. *Customers Pay for Support for Know Defects*

Several software companies now charge customers $3 to $5 or more per minute when they call for support. Some companies will waive the charge for a customer who calls about a legitimate (in the company's view) defect. Others will not. According to the 1998 Support Practices Survey,[74] 31% of responding companies stated that they provide no customer support for free.[75] Customers get angry when they realize that they've been paying for support for a defect that the company chose not to fix when it shipped the product. For example, in a recent class action suit, a customer alleged that Compaq released a product with known software defects (*Johnson v. Compaq*, 1997).[76] Johnson claimed to have spent $218 on support and that his problems were never resolved. Several other lawsuits have involved a combination of bad software and support.[77]

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71. Pat Ferguson et al., *supra* note 52; Watts S. Humphrey, *supra* note 52.

72. He was subjected to a nasty *ad hominem* attack in one meeting (Cincinnati, June 1, 1997) after he summarized the research data. Not surprisingly, that was the last UCITA drafting committee meeting he attended.

73. Letter from Cross, *supra* note 44.

74. Software Support Professionals Association, *supra* note 61.

75. I think the raw percentage (31% of reporting companies) should be discounted, although it is consistent with data from the Software Publishers Association, 1995 Technical Support Survey Report "Three-quarters of the respondents allow customers a free support 'grace period' in which to receive installation assistance and help to begin using the program." *Id*. at 9. Over the five years in which we researched our book, *Bad Software*, David Pels and I spoke to support managers whose companies charged for support. Some of them said that they would refund charges for a customer who had a legitimate complaint (and, perhaps, who asked for the refund), so that even though their public posture was fully paid support, they had discretion and exercised it as a matter of course. Additionally, several of these 31% charge an annual support fee and allow the fee-payer an unlimited number of calls. In this case, there is no relevant distinction between call types. Despite my sense that the 31% overestimates the problem, I *have* discussed the issue of known defects with support managers whose companies charge per call or per minute, and who have told me explicitly that they will charge the customer for all calls, or for all calls made by the customer after the first few days of use, whether the product is at fault or not.

76. There are no published opinions, but a lot of case materials are available at Dale Johnson's web site. *See* <users.aol.com/cclass450/index.htm>.

77. Cem Kaner, *Liability for Bad Software and Support*, PROCEEDINGS OF THE SOFTWARE SUPPORT

UCITA allows publishers to exclude incidental damages.[78] The cost (long distance and support fee) of a phone call to complain about a defect is an example of an incidental expense. Suppose that a customer buys a computer game for $50. She starts to install it, is presented with the license and clicks OK.[79] Thereafter, the program fails to install. The customer calls the publisher's help line, and is billed $5 per minute for support. After 20 minutes ($100 plus long distance expenses), the customer realizes (correctly) that this is a defect that the publisher knew about when it sold the product and that the publisher has no solution that will work on her machine. She therefore rejects the product[80] and asks for a refund. The publisher requires her to return the product (she incurs postal expenses) and sends her back a check for $50, choosing not to reimburse her for the $100 or the other incidental expenses. With the right pricing structure, the software publisher will make a net profit on this series of transactions. Under UCITA, this is acceptable.

U.C.C. Article 2 also allows publishers to exclude incidental damages.[81] The difference between Article 2 and UCITA is that in several states (perhaps half), the Article 2 seller must inform the customer before or at the time of sale of this limitation of remedies.[82] Additionally, Article 2 entitles the customer to a "minimum adequate remedy"[83] and this scenario does not appear to reflect such a remedy. UCITA

CONFERENCE EAST (Mar. 12, 1997) <www.badsoftware.com/support1.htm> [hereinafter Kaner, *Liability*].

78. Incidental damages are defined in UCITA section102(a) (34).

'Incidental damages' resulting from breach of contract: (A) means compensation for any commercially reasonable charges, expenses, or commissions reasonably incurred by an aggrieved party with respect to: (i) inspection, receipt, transmission, transportation, care, or custody of identified copies or information that is the subject of the breach; (ii) stopping delivery, shipment, or transmission; (iii) effecting cover or retransfer of copies or information after the breach; (iv) other efforts after the breach to minimize or avoid loss resulting from the breach; and (v) matters otherwise incident to the breach; and (B) does not include consequential damages or direct damages.

Id.

79. UCITA provides a "right of return" for customers who reject the license terms presented post-sale. The customer is entitled to reimbursement of incidental expenses on exercising her right of return. However, this right, defined in UCITA § 209(b) expires as soon as the customer clicks OK to continue installation.

80. The mass-market customer has the right to refuse the product at this point under UCITA section 704(b). "In a mass-market transaction that calls for only a single tender of a copy, a licensee may refuse the tender if the tender does not conform to the contract."

81. U.C.C. § 2-719.

82. *See* JONATHAN SHELDON & CAROLYN L. CARTER, CONSUMER WARRANTY LAW ch. 9 (supplemented annually) (provide a long list of cases).

83. U.C.C. § 2-719, cmt. 1.

Under this section parties are left free to shape their remedies to their particular requirements and reasonable agreements limiting or modifying remedies are to be given effect. [P] However, it is of the very essence of a sales contract that at least minimum adequate remedies be available. If the parties intend to conclude a contract for sale within this Article they must accept the legal consequence that there be at least a fair quantum of remedy for breach of the obligations or duties outlined in the contract. Thus any clause purporting to modify or limit the remedial provisions of this Article in an unconscionable manner is subject to deletion. . . Similarly, where an apparently fair and reasonable clause because of circumstances fails in its purpose or operates to deprive either party of the substantial value of the bargain, it must give way to the general remedy provisions of this Article.

allows the publisher to hide the remedy limitation until after the customer has paid for the product and started to use it, and it discards the notion of a minimum adequate remedy.[84]

Because several states would not accept the hidden remedy limitation under current law,[85] the costs associated with selling the software in its defective state are higher and less predictable than they will be under UCITA. To the extent[86] that the publisher uses a cost/benefit analysis to decide whether or not to sell a product with a known defect, UCITA reduces the costs associated with selling the defect, thereby changing the cost/benefit ratio, thereby making the publisher more likely to leave more defects unfixed in its products.

c. Consumer Protection Laws

The Magnuson-Moss Warranty Act[87] provides consumers with additional warranty rights, beyond the U.C.C. For example, under the Act, a seller who provides *any* written warranty with a consumer product or who sells you a service contract (such as extended technical support) for the product may not disclaim implied warranties.[88]

The Magnuson-Moss Act applies to all consumer goods. Consumer goods are those which are "normally used for personal, family, or household purposes."[89] This is a broad definition, and under current law, it almost certainly includes personal computers and most of the types of software that you'd buy in software stores.

Id.

84. UCITA § 803, cmt. 6. "An agreed remedy provision does not fail because the court believes that the remedy does not afford a 'minimum adequate remedy.'" Section 803(c) makes it trivially easy to eliminate the availability of consequential or incidental damages (just put the exclusion in its own paragraph), even if the agreed exclusive remedy fails of its own purpose.

85. *Arizona Retail Systems Inc. v. The Software Link*, 831 F. Supp. 759 (D. Ariz. 1993), and *Step-Saver Data Systems, Inc. v. Wyse Technology & The Software Link*, 939 F.2d 91 (3rd Cir. 1991), are examples of computer software cases in which this remedy limitation was rejected. Note that neither of them involved consumers. *See* Sheldon & Carter, *supra* note 82 (providing citations to Article 2 cases in general, not just software cases).

86. Such decision-making is standard procedure. I am not objecting to it in this memo. In what has become a standard reference text in the field, I describe and advocate the notion that some defects should be "deferred" (left to fix later). KANER, ET AL., *supra* note 46, at chs. 5, 6. Cost/benefit analysis as a basis for evaluating these defects is a natural and traditional approach. *See supra* notes 55 and 56. It would be tilting at windmills to argue that this should not be done. The more difficult question is what costs should be taken into account in the analysis. *See* Kaner, *Quality Costs, supra* note 55; KANER & PELS, *supra* note 7.

87. 15 U.S.C. § 2301.

88. *See id.* § 2308(a).

No supplier may disclaim or modify (except as provided in subsection (b) of this section) any implied warranty to a consumer with respect to such consumer product if (1) such supplier makes any written warranty to the consumer with respect to such consumer product or (2) at the time of sale, or within 90 days thereafter, such supplier enters into a service contract with the consumer which applies to such consumer product.

Id. (Subsection (b) allows only one type of modification—a shortened time limit).

89. *Id.* § 2301(1).

According to the Federal Trade Commission: [90]

The Act applies to written warranties on tangible personal property which is normally used for personal, family, or household purposes. This definition includes property which is intended to be attached to or installed in any real property without regard to whether it is so attached or installed. This means that a product is a 'consumer product' if the use of that type of product is not uncommon. The percentage of sales or the use to which a product is put by any individual buyer is not determinative. For example, products such as automobiles and typewriters which are used for both personal and commercial purposes come within the definition of consumer product. Where it is unclear whether a particular product is covered under the definition of consumer product, any ambiguity will be resolved in favor of coverage.

No published court rulings have settled the question of the applicability of the Magnuson-Moss Act to software, but it is generally believed that courts would rule that the Act applies to consumer software.[91] The Software Publishers Association's *Guide to Contracts*[92] considered the applicability of the Magnuson-Moss Act and concluded that "It is reasonable to assume that software purchased for home computer use would be covered by the Act." Two related lawsuits, *Stuessey v. Microsoft*[93] and *Microsoft v. Manning*[94] included a claim for violation of the Magnuson-Moss Act. In these cases, because of compression-related problems "about three in 1,000 [people] lost data after using MS-DOS 6.0" (*Manning*, p. 606). In these two suits, customers sued for consequential damages (*Stuessey*) or for a free upgrade to DOS 6.2 (*Manning*). Microsoft had disclaimed the implied warranty of merchantability[95] but the Magnuson-Moss Act voids the disclaimer and reinstates the implied warranties.[96] Apparently, the court accepted the applicability of the Magnuson-Moss claim because, despite Microsoft's disclaimer, the *Manning* court applied the disclaimed warranty, saying that "the software was not fit for the ordinary purpose for which software is used.[97]

UCITA pulls software out of the scope of sales-of-goods law by defining the transaction as a license.

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90. 16 C.F.R. § 700.1(a).

91. *See* L.J. KUTTEN, COMPUTER SOFTWARE: PROTECTION/LIABILITY/LAW/FORMS § 10.03[3] (Vols 1-4, Release 24, 1999) [hereinafter KUTTEN]. As Kutten put it while discussing the applicability of the Magnuson-Moss Act, "[s]ome software must be a consumer product. Otherwise society is caught in the dichotomy that (1) the hardware is a computer product, (2) the software is not a consumer product, yet (3) neither product can be used without the other." *Id.*

92. THOMAS J. SMEDINGHOFF, THE SOFTWARE PUBLISHERS ASSOCIATION GUIDE TO CONTRACTS AND THE LEGAL PROTECTION OF SOFTWARE 88 (1993).

93. Stuessey v. Microsoft Corp., 837 F. Supp. 690 (E.D. Pa., 1993)

94. Microsoft Corp. v. Manning 914 S.W. 2d 601 (Tex. Ct. App., 1995).

95. I have a copy of the MICROSOFT MS-DOS 6 USER'S GUIDE. DOS 6 that was sold in OEM versions, in upgrade versions, and possibly in other ways—I do not know what manual or license terms were supplied in all of these cases. But in *my* copy (Appendix E, p. 300), there is a disclaimer of implied warranties: "MICROSOFT DISCLAIMS ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY."

96. Microsoft had warranted that MS-DOS 6.0 would "perform substantially in accordance with the accompanying Product Manuals for a period of 90 days from the date of receipt." *Microsoft*, 837 F. Supp. at 690. In the event of a written warranty, the Magnuson-Moss Act reinstates implied warranties. *See supra* note 86.

97. *Microsoft v. Manning* at 609

Thus, you are buying an intangible, a license, not goods.[98] This pulls software outside of the scope of the Magnuson Moss Act[99] and of analogous state-level consumer protection laws such as California's Song-Beverly Act,[100] while allowing proponents of UCITA to claim that UCITA does not change consumer protection laws. (It merely takes software outside of their scope). For the first two years that critics pointed this out at drafting committee meetings, proponents said this misrepresented the effect of UCITA. Even at the Annual NCCUSL meeting in 1998, the impression seemed to be that Magnuson-Moss applied to consumer software.[101] These days, proponents say instead that the Magnuson-Moss Act was never

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98. A "senior corporate attorney for Microsoft Corporation" titled a recent article of his, "*The License is the Product: Comments on the Promise of U.C.C. Article 2B for Software Licensin*g." ROBERT W. GOMULKIEWICZ, PROCEEDINGS OF THE CONFERENCE ON THE IMPACT OF ARTICLE 2B, UC Berkeley, Apr. 23-25, 1998.

99. Similarly, software is taken outside of the scope of some state-level consumer protection laws, such as the Song-Beverly Act, CAL. CIV. CODE § 1790.

100. Such laws can be stricter than the Magnuson-Moss Act. For example, under California's Song-Beverly Consumer Warranty Act, "Any waiver by the buyer of consumer goods of the provisions of this chapter, except as expressly provided in this chapter, shall be deemed contrary to public policy and shall be unenforceable and void." *Id.* § 1790.1. The Act voids disclaimers that do not strictly compliance with its requirements. *Id.* § 1792.3. The buyer must be informed of a warranty disclaimer "prior to the sale" and in writing. *Id.* § 1792.4(a). If a sale is by mail order, the catalog must show the warranty disclaimer, for each item that is sold with a warranty disclaimer. *Id.* § 1794(b). These provisions are in direct conflict with UCITA's rules that allow post-sale presentation of disclaimers.

101. Here is an exchange between Professor Jean Braucher, Reporter Ray Nimmer, and Chairman Connie Ring, as reported in the July 25, 1998 NCCUSL Annual Meeting session transcript.

MS. JEAN BRAUCHER (ALI Representative): Then on the question of relation to state law, there are a number of decisions holding that software transactions are sales of goods. I understand that the purpose of 2B is to reject those decisions, at least insofar as they then apply Article 2—that Article 2B will apply to software transactions, not Article 2.

The other question which I don't [think] you have explicitly dealt with in this section and I think probably should be dealt with is, what does Article 2B do to the applicability of a host of other state statutes, particularly consumer protection statutes that apply to sales of goods to consumers? Are those no longer applicable to software transactions? They are now applicable. That would be a huge change, to take away the effect of those sorts of statutes.

I will give you one important example, retail installment sales acts. Right now, if a consumer buys a computer along with software, I think the assumption would be that all of that would be under the retail installment sales act. But once you have 2B, then there is a question, is the software part of that no longer governed by the retail installment sales act? And most states have those.

You also have some specialized state warranty laws of Beverly Song in California. Does that apply to these transactions? I don't think C really covers that issue. I think it needs to be addressed, and I think—the answer ought to be that those statutes continue to apply to these transactions as they do now.

CHAIRPERSON GREGORY: Reporter Nimmer.

MR. NIMMER: Obviously, within the U.C.C., the adoption of 2B would change the law in those states that apply Article 2 to various types of computer software. That's obviously an intended change. We have very carefully, I think, not attempted to change the meaning of definitions of the phrase or the word "goods" or "transactions and goods" that might exist under other law. We, frankly, don't even change the definition of the word "goods" in the U.C.C. We simply say software is covered under 2B and not under the provisions of 2.

intended to apply to software.[102]

d. A Contract can be Non-Cancelable, Even if Materially Breached

Under UCITA section 803(a)(1), "an agreement may provide for remedies in addition to or in substitution for those provided in this [Act] and may limit or alter the measure of damages recoverable under this [Act] or a party's other remedies under this [Act], such as by precluding a party's right to cancel for breach of contract."

e. The Vendor can Change Material Terms

Support promises and other material terms of a service contract can be changed without the customer's consent.

Under UCITA section 304(b):

If a contract provides that terms may be changed as to future performances by compliance with a described procedure, a change proposed in good faith pursuant to that procedure becomes part of the contract if the procedure: (1) reasonably notifies the other party of the change; and (2) in a mass-market transaction, permits the other party to terminate the contract as to future performance if the change alters a material term and the party in good faith determines that the modification is unacceptable.

Under UCITA section 304(c):

The parties by agreement may determine the standards for reasonable notice unless the agreed standards are manifestly unreasonable in light of the commercial circumstances.

There is no requirement that the contract provision authorizing changes be conspicuous or negotiable. Clauses like this show up in boilerplate[103] and few customers ever realize that they are there, let alone

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I guess my basic assumption had been that there being nothing in Article 2B that says that we are modifying the definition of goods anyplace else in the universe of state laws, that whatever those definitions, and I, frankly, do not know of the 50 states, how they apply—whatever they would have held in the absence of 2B is what they will continue to hold. That's, for example, very specifically true with the Magnuson Moss Act, which talks about—I am not sure if they're transactions—whatever the phrase is.

MS. BRAUCHER: Sales. And it's not a defined term, which I think then refers to state law.

MR. NIMMER: The question of whether the current transaction—yes, right.

MS. BRAUCHER: Might arguably, right.

COMMISSIONER CARLYLE C. RING, JR. (Virginia): I think the short answer is, we do not intend to change the application of those acts.

MS. BRAUCHER: What about explicitly saying that?

MR. NIMMER: We'll look at it in the comments."

102. Fred H. Miller, *Speaking Frankly About U.C.C. Article 2B*, U.C.C. Bulletin, Mar. 1999, at 1.

103. For example, the following is from the eFax Plus terms of service, which I obtained from <www.efax.com/ps_terms.html>:

4. MODIFICATIONS TO TERMS OF SERVICE AND PRIVACY POLICIES eFax.com may

dream that they might authorize *any* change, no matter how material.

For non-mass-market transactions, which will include many of the non-negotiable, standard form transactions entered into by tiny businesses, the customer is simply stuck with the new terms. Agreeing to a contract with a modification clause is tantamount to signing a blank check. The non-mass-market customer cannot terminate the contract rather than accept a material change.

Consumers at least have the (apparent) right to terminate the contract in the face of a material change. However, the consumer first has to discover the change. Under UCITA section 304(c), the seller can specify that posting the notice to its own website is sufficient notification.[104] This approach to notification is so easy and cheap for the vendor that it is bound to become widespread, but consider the effect. Those customers who want to know what contracts they are bound by will have to constantly waste time checking a long list of websites to see if any contract terms have changed.[105]

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automatically amend this ETS or its privacy policies at any time by (i) posting a revised eFax.com Terms of Service document or privacy policies document on the eFax.com World Wide Web site, and/or (ii) sending information regarding the ETS or privacy policies amendment to the email address Member provides to eFax.com. Member is responsible for regularly reviewing the eFax.com World Wide Web site to obtain timely notice of such amendments. Member's continued use of Member's membership account after such amended terms or policies have been posted or information regarding such amendment has been sent to Member shall be deemed acceptance by Member of the amended ETS or privacy policies. Otherwise, this ETS and the privacy policies may not be amended except in writing signed by both parties.

Id. Similarly, here's what we find at America Online, <www.aol.com/copyright.html>:

AOL.COM Terms and Conditions of Use. ACCEPTANCE OF TERMS THROUGH USE. By using this site, you signify your agreement to all terms, conditions, and notices contained or referenced herein (the "Terms of Use"). If you do not agree to these Terms of Use please do not use this site. We reserve the right, at our discretion, to update or revise these Terms of Use. Please check the Terms periodically for changes. Your continued use of this site following the posting of any changes to the Terms of Use constitutes acceptance of those changes.

Id.

104. Both eFax and AOL require this. *See supra*.

105. This is not just a consumer issue. The Motion Picture Association of America submitted a collection of memoranda to NCCUSL on July 17, 1998 (cover letter by Simon Barsky). Within this packet, in the document identified as 46355.01, the MPAA stated:

Approval of 'Posted' Modifications—Section 2B-304(b) allows contracting parties to modify their agreement with respect to future performances by any pre-established procedure including '[a] procedure that calls for posting changes in an accessible location of which the other party is aware.' The acceptance of posting as reasonable notice, however, may validate the surreptitious modification of key contract terms and place an unfair burden on contracting parties to monitor changes to their agreements.

Id.

The next memo in the series, *Trouble Spots for the Motion Picture Industry in Uniform Commercial Code Article 2B*, said:

Suppose 20th Century Fox negotiates and enters an agreement with Lexis/Nexis which grants Fox the right to conduct research on Lexis/Nexis on-line databases. The agreement specifies that the charges to Fox will be based on the number of searches Fox conducts, but also permits Lexis/Nexis to modify its applicable rates and fee structure by publishing new terms on the Lexis/Nexis website. Lexis/Nexis eventually decides not to charge Fox by the number of searches

Additionally, the consumer contract might specify a penalty for early termination,[106] making the right to cancel almost as illusory[107] as the concept of a "contract" appears to be under this rule.

The 24 Attorneys General who wrote NCCUSL in opposition to UCITA singled this provision out for detailed criticism.[108]

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performed, but by the amount of time spent on-line and posts this new billing regime on its website. The Reporter's Note [to Section 2B-304(b), which said that posting changes in an accessible location of which the other party is aware is acceptable] would hold that Lexis/Nexis has satisfied the notice requirement and that the modifications to the financial terms are therefore valid. [P] Of course, Fox employees who had grown accustomed to limiting the number of their searches but spending countless hours online pondering the retrieved information would be shocked to see Fox's monthly Lexis/Nexis bill increase a thousand-fold for the same use as that in the prior month. <u>Under the standard of reasonable notice suggested in the Reporter's Note, all the studio could do to protect itself from this surprise is reread the terms posted on the service's site every day in the hopes that it could identify any changes.</u> This system of agreement is both inequitable and inefficient.

Id. at 11.

106. For example, see the discussion of the CompuServe $400 rebate below. CompuServe's termination clause reads:

Membership termination prior to contract commitment term requires payment of a cancellation fee plus rebate repayment according to the following schedule: (1) $400 Rebate: $50 cancellation fee plus rebate repayment of $400 in Months 1-12, $300 in Months 13-24, and $200 in Months 25—36; (2) $100 Rebate: $25 cancellation fee plus $100 rebate repayment.

Id., available at <www.compuserve.com/gateway/promo/default.html>

107. The cultural wisdom "Get it in writing" is turned on its head. What you get in writing, buried in pages of legalese detail that look like a traditional contract, is a statement that the vendor has the right to change the contract any way it wants. Under this clause, none of the rest of the terms matter. It is worth wondering whether or how much this clause scales back, by statute, the doctrine of illusory contracts. Only time, and the courts, can tell.

108. Letter from Attorneys General, *supra* note 25.

In the area of contract modification, section 304 of UCITA allows vendors to unilaterally make enforceable modifications to contracts involving continuing performances, requiring only minimal notice as a condition for doing so. The sole remedy available to persons against whom such modifications would operate is cancellation, and even that remedy is limited to parties to mass market contracts. The value of that limited remedy is further diminished by the fact that is unavailable to parties to access contracts, such as contracts with as internet service providers and online information services, that will probably comprise the largest class of contracts subject to section 304.

There is great peril in section 304 for persons to whom modifications are proposed. Section 304(b) allows a contract to specify a modification procedure if the procedure reasonably notifies the other party of the change. The modest safeguard in section 304(c) that permits a court to reject standards of notice that are manifestly unreasonable would, if interpreted in accordance with the reporter's notes, permit procedures that are highly unlikely to result in any notice at all. The reporter's notes seem to approve a procedure whereby terms of service can be modified simply by posting the changes to a particular location or file. Such a procedure places the entire burden of discovering whether a modification has been proposed upon the offeree, rather than the offeror. It requires parties to whom such a modification may be proposed to continuously monitor the designated location to determine whether a modification has in fact been proposed.

From a practical point of view, it has been the experience of the Attorneys General that offerees

Here's an example of a potential section 304 problem. One widespread marketing practice in winter of 1999 / 2000 has been the offering of $400 rebates to buyers of computers, so long as they sign up for 3 years of service from a specific Internet service provider. CompuServe is one such provider, and it lays out the terms of the deal at www.compuserve.com/gateway/promo/default.html. Here is an excerpt from those terms:

The $400 . . . Rebates require (1) the purchase of any eligible computer; and (2) . . . a contract

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simply do not monitor online locations for contract modifications. Indeed, attempting modification in such a manner is so unlikely to actually inform offerees of a proposed modification that the Attorneys General have taken the position that any such modification procedure is illegal under current law. In a highly publicized recent case, America Online agreed to make just over $2.5 million dollars in refunds to consumers who may not have received a price change notification that was posted in the manner suggested in the reporter's note.

From a simple economic point of view, it makes much more sense to place the cost of discovering a modification upon the offeror rather than the offeree. This is particularly true for UCITA, because in almost every instance that will be subject to section 304, the parties will have the means to communicate electronically at very little cost to the sender of the transmission. The deficiencies of the recommended procedure become quite clear when projected into likely practices of the near future, in which a person, much as a person now may have multiple magazine subscriptions, may subscribe to numerous different sources of information and entertainment via contracts governed by UCITA. There really is no possible common sense justification for requiring such a person to monitor numerous services on a daily basis to learn of possible changes in terms.

The cancellation provision in section 304(b)(2) is hollow. The largest category of contracts to which section 304 applies are contracts with internet service providers and online information service providers who are not bound by section 304(b)(2) because contracts with such entities are access contracts excluded from the definition of mass market contract. Purchasers of such services may well be faced with a modification, proposed in good faith but which deprives them of the benefit of their bargain, that they have no choice but to accept.

There is additional danger here because of the nature of the billing relationships between the parties for the kinds of contracts to which section 304 applies. In many instances, particularly in agreements with internet service and information providers, the user of the service authorizes the service provider to automatically charge amounts due under the agreement to the user's credit card or checking account. In the case of a price increase implemented by posting online, it will likely be the case that the user will only discover the increase after it has been paid. The fact that payment has already been made substantially reduces the user's

bargaining power in seeking a refund of the amount of a surprise price increase.

The Attorneys General believe that reasonable notice should be defined to mean a method of notice that is calculated to give actual notice. If the reporter's notes are to give any example of a type of notice that meets this standard they should use as an example of such notice an electronic mail notification to an address designated by the recipient of the notice. In addition, the Attorneys General believe that there is no instance in which it is acceptable to enforce a modification of terms if the offeree is unwilling to accept them. In such instances, unless the ability to cancel is otherwise provided for, the party offering the modification should be required to perform as originally agreed. In the event that an offeree does not discover a proposed modification until after he or she has suffered financial loss as a result of the modification, as may be the case when a party with preauthorized bank account or credit card access proposes a price increase, the offeree should not only be able to cancel the contract, he or she should be able to recover any loss suffered on account of the unaccepted offer of modification.

commitment to a 3-year (36 months) subscription . . . to CompuServe 2000 Premier Internet service at $21.95 per month. Full prepayment of the contract amount . . . is possible during your first month of service. . . . Offer subject to . . . your acceptance of CompuServe's Terms of Service. Membership termination prior to contract commitment term requires payment of a cancellation fee plus rebate repayment.

I have repeatedly searched CompuServe's website for these Terms of Service and cannot find them. I have sent e-mails to CompuServe asking for a copy of the Terms of Service but have not received them. I downloaded a copy of the CompuServe 2000 software and started to install it, hoping to get to a display screen, but I stopped installation at the point that the software requested my credit card number. This request came several screens after the start of installation, but before any link to a screen showing the Terms of Service.

The CompuServe transaction is an access contract. Under UCITA section 102(a)(44)(b)(IV), this is not a mass-market transaction unless it is a consumer contract.

Suppose that the CompuServe Terms of Service allow for modification of terms at CompuServe's discretion.

- A consumer will be able to cancel the contract on discovering the modification clause or in the face of material changes to the terms, but will have to repay the rebate. The rebate may have been a material factor in the consumer's choice of computer or computer vendor, but the consumer has no right of return against the computer vendor if she objects to the access contract with CompuServe. Thus, the consumer who rejects the CompuServe Terms of Service pays what is tantamount to a $400 penalty.

- The non-consumer who pays for the service and then discovers this clause in the Terms of Service has no right to cancel the contract. UCITA section 112 (e)(B) states that "a right to a return is not required if: (B) in a case not involving a mass-market license, the parties at the time of contracting had reason to know that a record or term would be presented after performance, use, or access to the information began . . . ."

From here, section 304(b) kicks in and allows CompuServe to modify its terms. The non-consumer who is "reasonably" notified of the change (e.g. by a posting on CompuServe's website) is stuck with those terms, whatever they might be.

f. *Requiring the Customer to do Extensive Testing*

Under UCITA section 702(c):

A party that refuses a performance and fails to identify a particular defect that is ascertainable by reasonable inspection waives the right to rely on that defect to justify refusal only if: (1) the other party could have cured the defect if it were identified seasonally; or (2) between merchants, the other party after refusal made a request in a record for a full and final statement of all defects on which the refusing party relied.

Imagine starting to use a new computer program. Right away, the program fails. You report the failure and the vendor says, "we will cure that." You report another failure and the vendor says, "we decided that was a feature." You report another failure and another and another and finally you say that this is too much, you just want to get out of this deal because the program does not work.

At this point, the seller can demand from you a full and final statement of all of the defects in the

program. If you miss some (find them later), too bad. You can not rely on those as grounds for refusing the product. You can only rely on the ones you've reported.

Software testing is hard enough for software developers. There is no reason to expect customers to be any good at it (not even customers who are merchants because they are programmers. When they are customers, they still will not have access to the product's underlying source code or design history that are so invaluable for competent testing). Additionally, too many defects that were challenging to find look, in retrospect, like they should have been easy to find (ascertainable by reasonable inspection).

Additionally, many if not all of these defects should already be known to the software company. Except in highly customized software, these are not manufacturing defects that occur in only one or a few copies of the product.[109] They occur in every copy of the product and they should have (and very often will have) been found in the software company's own test lab. If the customer can find it "by reasonable inspection" then surely we can expect a group of experts in software development to be able to find it "by reasonable inspection." Why put the burden on the less experienced, less skilled party, who has no access to the underlying source code or to the specialists' tools that one can use with such code?

Even more unfair is the waiver created under UCITA section 702 in the event of defect that "the other party could have cured [. . .] if it were identified seasonably." In so many cases, the defect reported by the customer is already known to the software company. In such a case, why should it matter whether the customer reported it "seasonably"? The software company knows about it and they can choose to cure it or not.

Let me suggest some common sense here. Anything that is "ascertainable by reasonable inspection" ought to be found by the software developer or publisher. Anything that was not found by them should be considered–as a matter of law—not "ascertainable by reasonable inspection" by the customer. If the software developer/publisher could not find it, it is outrageous to penalize the customer for being unable to find it or articulately describe it early in the customer's use of the product. And if the developer/publisher did find it, it is even more outrageous to penalize the customer for failing to tell the supplier what it already knew.

g. A Publisher's Contract to Correct Defects does not Require it to Correct Defects

Under UCITA section 612(a):

If a person agrees to provide services regarding the correction of performance problems[110] in computer information, other than an agreement to cure its own existing breach of contract, the [. . .] person [. . .] does not undertake that its services will correct performance problems unless the agreement expressly so provides.

The customer is welcome to enter into a contract for support of the contract, but under UCITA, if the customer wants *real* support (the problems actually get resolved), the customer has to bargain for that

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109. Even in heavily customized products, many of the defects are in the base code, the core of a product that stays constant as the rest of the product is customized to suit other customers.

110. Note that I use "performance problems" interchangeably with "defects." The UCITA drafters chose not to define "defect" in the draft. And of course, in a contract that disclaims all warranties, what could possibly be a "defect"? Under that reasoning, all misbehaviors of the product are "performance problems." I normally use "defect" to mean behavior of the program that is undesirable and outside of the reasonable expectation of the parties. For a much more thorough analysis and definition, see Kaner, *What is a Serious Bug?*, *supra* note 51.

explicitly. Otherwise, UCITA says the customer does not get it.

2. *Reduced competitive impact for larger publishers*

When a company ships a bad product, it risks losing sales to competitors. UCITA helps publishers reduce that risk.

a. *Publishers can Ban Publication of Benchmarks and Negative Reviews*

UCITA Reporter Ray Nimmer complained of "distortions" in the debate on UCITA, identifying as a "misrepresentation" the claim that "that UCITA allows licensors to prevent licensees from commenting about the products." [111] He said that "This allegation makes nice copy and superficial impact, but is simply untrue. You can scroll through the UCITA draft and will not find any such provision."[112]

UCITA section 102(a) (19) defines "Contractual use term" as "an enforceable term that defines or limits the use, disclosure of, or access to licensed information or informational rights, including a term that defines the scope of a license."

Under UCITA section 102(a)(57), a scope term defines "(A) the licensed copies, information, or informational rights involved; (B) the use or access authorized, prohibited, or controlled; (C) the geographic area, market, or location; or (D) the duration of the license."

UCITA section 307 (b) states that "If a license expressly limits use of the information or informational rights, use in any other manner is a breach of contract."

Suppose that a license contains clauses like these:[113]

- "The customer shall not disclose the results of any benchmark test to any third party without the

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[111]. Ray Nimmer, *Correcting Some Myths About UCITA*, <www.2bguide.com/docs/rne.html>.

[112]. *Id.*

[113]. Such restrictions do arise in the mass market. I downloaded the following restrictions from www.mcafee.com, the website for VirusScan, a mass-market software product, on July 20, 1999:

Installing this software constitutes your acceptance of the terms and conditions of the license agreement. Please read the license agreement before installation. Other rules and regulations of installing this software are as follows:

1) The product can not be rented, loaned or leased - You are the sole owner of the product.

2) The customer shall not disclose the results of any benchmark test to any third party without Network Associates' prior written approval.

3) The customer will not publish reviews of the product without prior consent from Network Associates.

Id. As another example, the following language appears in the license for Delrina (Symantec) CommSuite 95 (as it appears in the CommSuite 95 GETTING STARTED GUIDE, 1st ed., Nov. 1995).

You acknowledge that the Package is confidential and proprietary to, and contains our trade secrets. Except as expressly authorized herein, you agree to hold the Package within your organization and shall not, without our specific written consent, or as authorized herein, utilize in any manner or publish, communicate or disclose to third parties any part of the Package.

Id. (copy on file with the author). After UCITA makes them presumptively enforceable, we will probably see more of these clauses.

Publisher's prior written approval" and

- "The customers will not publish reviews of the product without prior consent from Publisher."

Are these enforceable? On their face, they certainly *look* enforceable under sections 102(a)(19), 102(a)(57), and 307(b).

A clause similar to those above, enforced by Oracle, led to the article, *The Test That Wasn't*.[114] According to that article,

> We planned to do something that has not been done in recent history: a comparison of database performance on the exact same hardware. Because a database software license prohibits publishing benchmark test results without the vendor's written permission, negotiating for permission is always a challenge. . . . Oracle . . . formally declined to let us publish any benchmark test results.

As a result, PC Magazine did not publish benchmarks and customers were not able to use this information to make an informed comparison between the products.

This PC Magazine article involved a non-mass-market product. Nondisclosures are enforceable in that market today. But the plain language of UCITA authorizes use restrictions in all licenses, and that includes licenses in the mass-market.

A court *might* refuse to enforce such a restriction in a particular case. However, as a lawyer who advises writers, under UCITA I would be much more cautious in my advice to a journalist who wanted to review a mass-market product with this restriction than I would be today. I have discussed this clause with others who counsel journalists. They've told me that they feel the same way. UCITA's wording appears to make a mass-market nondisclosure clause enforceable, whereas we doubt strongly that an American court would enforce the clause in the absence of UCITA.

Ultimately, after several expensive court battles, I think that such clauses will be found to conflict with public policy. But until then, the plain language of UCITA will have a chilling effect on free criticism of mass-market products.

This issue was raised repeatedly over the years, in the drafting committee meetings and in public debate. Rather than resorting to complaining of "distortions" or "misrepresentation", the drafters could have simply clarified their intention in the draft. They certainly had many opportunities. The McManis and Perlman resolutions (passed respectively by the ALI and NCCUSL) were but two of the attempts to clarify the fair use issues.[115]

In the absence of a free flow of critical information from customers and magazine reviewers, how will customers decide what product to buy? Probably by reading advertisements. Who benefits from that? The largest publishers, with the largest advertising budgets.

b. Publishers can Limit Your Ability to Seek Third Party Support

In the case of *MAI Systems Corp. v. Peak Computer, Inc.*,[116] MAI restricted the use of its software (the operating system that came with the MAI computer and the system diagnostics) to "bone fide

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114.   *The Test That Wasn't,*, PC MAG., Aug. 1999, at 29.

115. *See infra* Part II.B.

116.   MAI Systems Corp. v. Peak Computer, Inc., 991 F.2d 511 (9th Cir. 1993)

employees" of its customers. These customers would sometimes contract with third-party support organizations to maintain their computers. The support techs would come to the customer site, turn on their MAI computer, thus booting the MAI operating system and then would run the MAI diagnostics that came with the MAI computer. The court ruled that they were making copies (from disk to RAM) of these products, and that this copying was not lawful because they were not bone fide employees of the MAI customers and therefore were not licensed to use the software.

The MAI case has been criticized and the ruling based on its specific facts was overturned by the Digital Millennium Copyright Act (DMCA)[117] which permits the owner or lessee of a computer to make a temporary copy of the software for maintenance of the computer ("the machine"[118]). However, UCITA extends the MAI holding to any "information" (such as software) that is not within the narrow scope of the DMCA's exception. UCITA's definition of contractual use terms (section 102(a)(19)) includes limits on "disclosure of, or access to licensed information" and (under section 102(a)(57)), limits on "the use or access authorized, prohibited, or controlled." The effect of this restriction is to let software publishers and computer manufacturers make it almost impossible for customers to use third party service organizations for *software* maintenance (such as the repairs that were needed to deal with Y2K defects).

A consumer issue arises out of this as well. A mass market license that restricts the use of a computer game to a consumer's bone fide family members could be used in the same way as the MAI license to bar the consumer's neighbor's children for coming over and playing the game on the consumer's computer. (Yes, of course we all know that the Business Software Alliance will not sue a consumer if the neighbor's children come over to play games on the computer. But a parent who is trying to teach his or her children to live within the law will be put in the position of either telling the children not to invite the neighbors to play or allowing the children to breach a contract that appears to be legally valid. Honest people's reasonable behavior will be chilled).

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117. 17 U.S.C. § 117(c).

Machine Maintenance or Repair. - Notwithstanding the provisions of section 106, it is not an infringement for the owner or lessee of a machine to make or authorize the making of a copy of a computer program if such copy is made solely by virtue of the activation of a machine that lawfully contains an authorized copy of the computer program, for purposes only of maintenance or repair of that machine, if

(1) such new copy is used in no other manner and is destroyed immediately after the maintenance or repair is completed; and

(2) with respect to any computer program or part thereof that is not necessary for that machine to be activated, such program or part thereof is not accessed or used other than to make such new copy by virtue of the activation of the machine.

Id.

118. 17 U.S.C. § 117(d).

Definitions. - For purposes of this section -

(1) the "maintenance" of a machine is the servicing of the machine in order to make it work in accordance with its original specifications and any changes to those specifications authorized for that machine; and

(2) the "repair" of a machine is the restoring of the machine to the state of working in accordance with its original specifications and any changes to those specifications authorized for that machine.

c. Publishers can Restrict Reverse Engineering Done To Develop Competitive Products.

Anything that makes it more expensive for newcomers to develop or market competitive products serves the interests of entrenched market leaders.

Reverse engineering restrictions have been upheld in situations involving negotiated contracts,[119] but not mass-market contracts. The case of *Sony v. Connectix*[120] is the latest in a line of cases rejecting the idea that reverse engineering of a product sold (or licensed) in the mass-market is copyright infringement.[121] The Digital Millennium Copyright Act[122] expressly permits reverse engineering for the purpose of creating interoperable products, but it is silent about reverse engineering done to learn unprotectable ideas embedded in software for the purpose of developing a competing product.

UCITA sections 102(a)(19) and 102(a)(57) allow the publisher to define or limit the use of licensed information (including software).[123] A ban on reverse engineering is just another use restriction. UCITA section 307(b) states that "If a license expressly limits use of the information or informational rights, use in any other manner is a breach of contract." On the face of the statute, any reverse engineering done in violation of a no-reverse-engineering use restriction is a breach of contract.

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119. *See* RAYMOND T. NIMMER, THE LAW OF COMPUTER TECHNOLOGY (Rev. Ed., including Supp. 3, 1999).

120. Sony Computer Entertainment, Inc. v. Connectix Corp., 2000 U.S. App. LEXIS 1744 (9th Cir. 2000)

121. For example, Sega Enterprises Ltd. v. Accolade, Inc., 977 F.2d 1510 (9th Cir. 1992); Vault Corp. v. Quaid Software Ltd., 847 F.2d 255 (5th Cir. 1988).

122. 17 U.S.C. § 1201(f).

Reverse Engineering. - (1) Notwithstanding the provisions of subsection (a)(1)(A), a person who has lawfully obtained the right to use a copy of a computer program may circumvent a technological measure that effectively controls access to a particular portion of that program for the sole purpose of identifying and analyzing those elements of the program that are necessary to achieve interoperability of an independently created computer program with other programs, and that have not previously been readily available to the person engaging in the circumvention, to the extent any such acts of identification and analysis do not constitute infringement under this title.

(2) Notwithstanding the provisions of subsections (a)(2) and (b), a person may develop and employ technological means to circumvent a technological measure, or to circumvent protection afforded by a technological measure, in order to enable the identification and analysis under paragraph (1), or for the purpose of enabling interoperability of an independently created computer program with other programs, if such means are necessary to achieve such interoperability, to the extent that doing so does not constitute infringement under this title.

(3) The information acquired through the acts permitted under paragraph (1), and the means permitted under paragraph (2), may be made available to others if the person referred to in paragraph (1) or (2), as the case may be, provides such information or means solely for the purpose of enabling interoperability of an independently created computer program with other programs, and to the extent that doing so does not constitute infringement under this title or violate applicable law other than this section.

(4) For purposes of this subsection, the term "interoperability" means the ability of computer programs to exchange information, and of such programs mutually to use the information which has been exchanged.

Id.

123. In its zeal to redefine the language, UCITA defines computer programs as information. *See* UCITA § 102(a)(35). "Information" means data, text, images, sounds, mask works, or computer programs, including collections and compilations of them." *Id.*

A mass-market publisher's restriction on reverse engineering will be upheld unless a court determines that it is preempted by federal law, or in violation of a fundamental public policy,[124] or unconscionable.[125] I think that it is likely that the courts will eventually find that license terms that ban reverse engineering in a mass market are still preempted by the fair use doctrine[126] but it will probably take years of litigation to establish this. Until then, the language of UCITA will have a chilling effect on law-abiding engineers.

This is another example of a fair use issue that was raised repeatedly over the years, in the drafting committee meetings and in public debate and that was addressed in the McManis and Perlman resolutions, passed respectively by the ALI and NCCUSL, and in various other suggestions.[127] The drafting committee chose not to clarify its position on reverse engineering in the black letter, and so we have to look to the black letter as it is to see what conclusions a court is likely to reach. Doing so can hardly be called a distortion.

d. Publishers can Hide Contract Terms

UCITA allows publishers to sell the product now and present the terms later.[128] The impact of this on competition is that customers never have a chance to hold two products side by side and compare terms—unless they buy copies of both products and (if they are mass-market customers) return one. The difficulty of obtaining the terms will limit the number of magazine articles that include and compare the information, and it will be very hard for any customer or journalist to know whether a given claim about a license is up to date (the manufacturer can change terms in its licenses tomorrow).

This issue was at the heart of the American Law Institute's resolution of May, 1998, stating that Article 2B "should be returned to the Drafting Committee for fundamental revision."[129] The Memorandum in Support by the authors of the motion (Jean Braucher and Peter Linzer) stated:

> The Draft reflects a persistent bias in favor of those who draft standard forms, most commonly licensors. It would validate practices that involve post-purchase presentation of terms in both business and consumer transactions (using 'shrinkwrap' and 'clickwrap'), undermining the development of competition in contingent terms, such as warranties and remedies. It also would allow imposition of terms outside the range of reasonable expectations and permit routine contractual restrictions on uses of information traditionally protected by federal intellectual property law. A fundamental change in approach is needed.

The revisions were not made, and the ALI withdrew from the Article 2B process in 1999.[130]

The customer's so-called "right of return"[131] does little to ameliorate the problem of hidden terms.

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124. UCITA § 105(b).

125. *Id.* § 111.

126. *Vault Corp. v. Quaid Software Ltd.,* 847 F.2d 255, explicitly rejected a software license's ban on reverse engineering in a mass-market license.

127. *See* infra Part II.B.

128. UCITA §§ 102(a)(56), 112, 208, 209.

129. A copy of the memorandum in support of this motion is available at <www.ali.org/ali/Braucher.htm>. An industry website, <www.2BGuide.com/ali.html#98m>, gives a good synopsis of the supporting memorandum. *See also supra* note 7.

130. *See supra* note 11.

As the American Bar Association's Section on Science and Technology Subcommittee on Proposed UCC Article 2B put it,[132]

> 1. Mass market licenses are fundamentally different in several significant respects from traditional contracts, including: a) The complete anonymity of the parties and lack of any ability on the part of the licensee to communicate with the licensor, let alone negotiate any terms; b) The fact that many provisions in a typical mass market license form no part of the "basis of the bargain," and are often not discoverable until after the bargain has been struck;

> 2. A statutory "right of return" does not give adequate protection to a licensee who has expended time and effort to shop for and purchase a product in reliance on promotional materials which conceal material aspects of the product and the terms governing its use.

> 3. Licensors frequently include provisions in mass market licenses to impose restrictions or limitations which they know would discourage sales if they were disclosed prior to purchase. . . .

> 4. . . . [N]one of the proposed "safe harbors" truly satisfies the basic definition of "conspicuous": "written, displayed or presented that a reasonable person against whom it is to operate ought to have noticed it."

> 5. The economics of the market place, including particularly the need to minimize transaction costs and encourage consumer confidence in "off the shelf" products, should drive NCCUSL not to structure the law in a manner which encourages these types of practices.

> In sum, we believe that a statute that permits a licensor to eliminate virtually all of its obligations and impose significant use restrictions without effective advance disclosure only encourages sharp practice and tends to reduce the customer confidence that is essential to the functioning of a mass market.

e. Publishers Can Eliminate the Used Software Market

Maybe every seller of new merchandise would like to eliminate competition from the used-products market. Wouldn't it be great (if you were Chrysler, one of the supporters of UCITA) if you could kill the market in used cars, forcing all buyers to buy new cars instead, or force every buyer of a used car that you originally manufactured to pay you a royalty? Fortunately for the rest of us, under the first sale doctrine and the doctrine of exhaustion, sellers can not do that. If you bought something, you can sell it without interference from the original manufacturer.

Unless it is software. Or a computer.

UCITA section 503(2) says that "a term prohibiting transfer of a party's contractual interest is enforceable, and a transfer made in violation of that term is a breach of contract and is ineffective to create contractual rights in the transferee against the nontransferring party." This can appear as an inconspicuous term in a contract presented to the consumer or the business customer after the sale.

Additionally, to the extent that UCITA applies to the software embedded in goods,[133] such as a

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131. *See* UCITA § 209(b); and discussion *infra* Part VI.B.

132. Letter from Subcommittee on Proposed U.C.C. Article 2B, ABA Section on Science and Technology to the Article 2B drafting committee (Jan. 21, 1998) <www.2bguide.com/docs/abast.html>

133. *See* UCITA § 103(b); and discussion of embedded software *infra* Parts I.C.3 and IV.C.

computer,[134] the seller can prohibit the resale of the goods by prohibiting the resale of the software embedded in them.[135]

f. UCITA's Default Rules Threaten Independent Software Developers

Under UCITA's default rules, the merchant[136] licensor provides an implied warranty of merchantability to the end user.[137] The consultant who selects, develops, or furnishes software to a customer provides an implied warranty that the software is fit for the customer's purposes.[138] This covers the development of all custom software. For breach of contract, under the default rules, the customer is entitled to direct, incidental, and consequential damages.[139] Representatives of large software publishers and consulting firms repeatedly stated in the UCITA meetings that no software licensor could afford to offer these warranties or remedies.

It is procedurally easy for licensors to disclaim the implied warranties[140] and limit or exclude remedies.[141] In a mass-market contract, the licensor merely buries the terms in a contract that the customer does not get to see until after paying for the product.

However, independent service providers and custom software developers do not get to use standard form, impossible to modify, post-sale contracts. Contracts for $10,000 to $50,000 in services are often very short. Warranty disclaimers and remedy exclusions are surprising and unwelcome in these face-to-face deals. So the terms that apply are the default rules that no larger publisher or contracting firm would agree to.

UCITA's proponents claim to have written UCITA to protect the interests of small licensors. As an attorney whose primary legal clients are independent software development service providers and freelance writers, I think that UCITA puts my clients under serious risk. Their services were not

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134. Under UCITA section 102(a) (9), a "Computer" is "an electronic device that accepts information in digital or similar form and manipulates it for a result based on a sequence of instructions." This includes cellular telephones, handheld organizers, electronic fuel injectors, blood sugar monitors and a variety of medical and dental equipment, and a wide range of other devices.

135. As we see in Part I.C.3 below, even the fuel injectors of a car can be treated as standalone software, governed by UCITA. If enough of the car's components can be licensed separately, and their transfer restricted, then maybe the car manufacturers *can* take over the used car market, by restricting resale of the used cars' components.

136. Under UCITA section 102(a) (45), merchant means:

a person: (A) that deals in information or informational rights of the kind involved in the transaction; (B) that by the person's occupation holds itself out as having knowledge or skill peculiar to the relevant aspect of the business practices or information involved in the transaction; or (C) to which the knowledge or skill peculiar to the practices or information involved in the transaction may be attributed by the person's employment of an agent or broker or other intermediary that by its occupation holds itself out as having the knowledge or skill.

Id. Any software developer or consultant would be a merchant under this definition.

137. *Id.* § 403.

138. *Id.* § 405(a).

139. *Id.* § 809.

140. *Id.* § 406.

141. *Id.* § 803.

governed by Article 2 and they therefore did not warrant merchantability or fitness for a customer's purpose. Instead, their duty is probably to provide workmanlike efforts. The Independent Computer Consultants Association,[142] the National Writers Union,[143] and the Free Software Foundation[144] are all advocates for independent developers of software or information, and they oppose UCITA as a threat to independents. To the best of my knowledge, no group that advocates for independents has spoken in favor of UCITA.

3. *Limited accountability for issues involving public safety*

Software is used to control life-critical products and to make life-critical decisions. It controls cars and assembly lines, is used to design all types of machines, houses, bridges, and other structures. It is used to diagnose diseases, interpret X-Rays, look up patient history records, help insurers decide whether to approve a given treatment for a given patient for a suspected disease, and so on.

This section lists three examples of public safety and security issues that arise with UCITA.

a. *Self-Help Creates Serious Security Risks*

UCITA's sections 815 and 816 allow the vendor to shut down its software on cancellation of the software license.

Self-help for software is a complex issue. The UCITA drafting committee tried a staggering number of alternative approaches to self-help, looking for a proper balance between the rights of the vendor, the customer, and the innocent third parties who might be affected by a shutdown of the software.

UCITA section 816 provides important restrictions on the use of self-help. It is not accurate to say that a vendor can unilaterally shut down a customer's system without reasonable notice and reasonable opportunity to respond.

Unfortunately, the risk comes simply from the existence of the back door that the vendor creates in its program. The "back door" (security leak) is the function that allows the vendor to shut down the software with a single message.

- Sometimes, a defects in the vendor's software will produce a shutdown by accident. (UCITA regards software defects as inevitable, so surely we can expect some defects in the parts of the software that govern self-help). The customer can recover consequential damages for wrongful use of electronic self-help, but a shutdown triggered by a defect would appear to be accidental, not wrongful.

- Sometimes, a third party will discover how to shut systems down this way. (For example, the third party might by a former employee of the software publisher). Such a person might shut systems down for the fun of it or he might engage in extortion, either of the vendor or the customer. *You might say, yes, there are criminals who do these things, but they are beyond our control. But in this case, the criminal is exploiting a security hole that is authorized by section 816. If self-help were banned, this risk would not exist.*

When I mentioned the hacker problem to a proponent of UCITA at the NCCUSL meeting, he said

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142. Roberts, *supra* note 42.

143. National Writers Union, *U.C.C. 2B and UCITA Threatens Writers*, <www.nwu.org>.

144. Stallman, *supra* note 43; Free Software Foundation, *supra* note 43.

that if anyone tried this, they'd have to face the FBI, so what's the problem? If this is how you're thinking, please consider this analogy. Suppose that I sold you a new refrigerator, but the contract required you to leave your kitchen door unlocked, at all hours of the day and night, in case I want to repossess the refrigerator. That open door does not just let me in. A burglar might come in too, and rob you. Sure, you can call the police after getting robbed, but wouldn't you rather lock your door?

What kind of legislator would say that the public should have to rely on the FBI instead of being allowed to peacefully lock their own doors?

What kind of contempt for the safety of the public is reflected in a bill that allows companies to prevent their customers from peacefully locking their own doors?

Even if the contract contains a clause that forbids the vendor from exercising self-help, that does not mean that the vendor will strip its self-help code out of the computer program. That could cause side effects, making the program fail in other ways. Instead, the vendor will agree to never send a shutdown message. That still leaves open the possibility of the software might be taken down by accident or by a criminal.

UCITA lays out a structure for lawfully exercising software self-help. This isn't done much today, but it will be done a lot more once a law specifically authorizes vendors to put these back doors in their products. I do not think that this is a desirable side effect of this statute.

Self-help was portrayed in the UCITA meetings as something essential to protect the interests of small licensors. However, the only group attending the UCITA meetings that represents only small licensors, the Independent Computer Consultants Association, urged NCCUSL to ban self-help. Instead, ICCA recommended that a party wishing to terminate use of its software should be allowed to proceed by injunction and, if successful, recover attorney's fees. The availability of attorney's fees goes a long way toward making it possible for a small licensor to be able to afford to obtain the injunction.[145] This eliminates the security risk, but it was never taken seriously by the UCITA drafting committee.

b. *Forcing Products Liability Suits into Arbitration*

In the case of *Hill v. Gateway 2000,*[146] a consumer alleged consumer fraud, breach of warranty, and violation of the Racketeer Influenced and Corrupt Organization Act. The District Court certified the case as a class action.[147] The appellate court redirected the suit into arbitration, honoring an arbitration clause that had not been presented to the customer until after the sale. The same reasoning would support enforcement of an arbitration clause when a software defect (covered by UCITA) caused injury, property damage, or death.

The appellate opinion did not lay out the basis of the underlying complaint. According to the District Court's summary:[148]

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145. Letter from Sharon Marsh Roberts & Cem Kaner to NCCUSL and ALI (Dec. 21, 1998) <www.badsoftware.com/selfhelp.htm>; Sharon Marsh Roberts & Cem Kaner, *Self-Help Under UCITA* (Jul., 23, 1999) <www.badsoftware.com/shelp.htm>. The Society for Information Management (large customers) originated this proposal. From their point of view, the gain in security far outweighs the cost of attorney fee reimbursements.

146. Hill v. Gateway 2000, Inc., 105 F.3d 1147 (7th Cir. 1997).

147. Hill v. Gateway 2000, Inc., 1996 U.S. Dist. LEXIS 16581 (N.D. Ill. Nov. 7, 1996).

148. *Id.* at *3.

Gateway offered the 10th Anniversary system through an advertisement in PC World Magazine and other media directed at computer buyers. The Hills learned of the special through the advertising. In addition, Gateway supplied information on the 10th Anniversary system to computer magazines.

The 10th Anniversary system included Altec Lansing Surround Sound Speakers with Subwoofer, a 6X EIDE CD-ROM Drive, and a Matrox MGA 'Millennium' 2MB Graphics Accelerator. The Hills experienced numerous problems with their system. Their 6X EIDE CD-ROM Drive did not perform as advertised. Gateway had advertised a 'new blazing 6X CD-ROM Drive . . . the fastest EIDE CD-ROM anywhere.' The Hills' CD-ROM performed like a 4X drive and would jam while in various programs. This performance problem was allegedly due to sub-par materials used by Gateway. Moreover, a faster drive was supposedly available when Gateway made its claim.

Gateway advertised that the Altec Lansing Speakers were the first speakers to create theater-type surround sound. The speakers came in surround sound packaging, but the Hills claim that the speakers did not have surround sound. In addition, the speakers produced static or hiss. Gateway allegedly told the Hills that Gateway did not offer the surround sound speakers and that there had been a misprint in Gateway's advertising. Gateway offered the Hills $50 cash back and Altec Lansing 400 speakers, which were not surround sound, or a full refund.

Gateway also advertised a Matrox MGA Millennium 2MB WRAM Graphics Accelerator as part of the 10th Anniversary system. In an effort to cut costs, Gateway allegedly substituted an inferior accelerator without informing its customers. In all, the Hills would have had to pay an additional $1,000 to obtain the system that they ordered.

Additionally, according to Hill:[149]

- Inside the shipping containers "was a four-page document entitled 'Standard Terms and Conditions.' There was no prior notice of such a document in the advertisement, on the outside of the box, or on the order confirmation that Gateway faxed to plaintiffs."[150]

- The standard terms and conditions included an arbitration clause:

  Any dispute or controversy arising out of or relating to the Agreement or its interpretation shall be settled exclusively and finally by arbitration. The arbitration shall be conducted in accordance with the Rules of Conciliation and Arbitration of the International Chamber of Commerce. The arbitration shall be conducted in Chicago, Illinois, U.S.A. before a sole arbitrator.[151]

- The Standard Terms and Conditions" purported to become effective thirty days after receipt of the computer system without any further action by purchasers; rejection would require that the consumer, at the consumer's expense, repackage the computer system and return it to Gateway. The "Standard Terms and Conditions" do not contemplate a signed agreement to be so bound by the purchaser. The Hills did not acknowledge or sign an agreement to the

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149. Hill v. Gateway 2000, Inc., *Petition for cert.* (filed May 5, 1997, copy on file with the author). The petition was denied, 66 U.S.L.W. 3254 (U.S. Oct. 6, 1997) (No. 96-1760).

150. *Id.* at 4.

151. *Id.*

'Standard Terms and Conditions.'[152]

- "The rules of the International Chamber of Commerce also require each side to pay an arbitration fee in advance of approximately $2,000—half the list price of the Tenth Anniversary System."[153]

- Gateway began including the 'Standard Terms and Conditions' in shipping containers for the first time in July of 1995. Gateway began taking orders for the Tenth Anniversary System on the last business day of June, 1995, and did not begin shipping the Tenth Anniversary System until August of 1995.[154]

We have no way of knowing whether Hill's claims were true or false, but based on the reports in the press and on the Net, there appears to be evidence in support of his claims. According to these, Gateway shipped 10,000 of the 10th Anniversary Systems.[155] Dissatisfied customers formed *The 10th Anniversary Club*, to share information and work collectively with Gateway.[156] They complained about hissing speakers that were less valuable than they expected.[157] They complained about faulty CD-ROM drives (too slow, lock up, or "faulty")[158] and about a "stripped-down" video card.[159] Sengstack (writing for PC World) said the "Matrox MGA Millenium graphics card described in Gateway's ads (which appeared in PC World and elsewhere) was actually different from the board sold in stores. Unlike the retail version, Gateway's card could not be upgraded with hardware . . . and it used a slower RAMDAC chip." Sengstack reported that a Matrox spokesperson said these cards were built to Gateway's specifications. He also claimed that a faster Teac 6X drive was available when Gateway rolled out the 10th Anniversary System.

The *Hill* court (7th Circuit) noted that "Hill kept the computer for more than 30 days before complaining about its components and performance."[160] The court then decided that "Terms inside Gateway's box stand or fall together. If they constitute the parties' contract because the Hills had an

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152. *Id.* at 5.

153. *Id.*

154. *Id.*

155. Jeff Sengstack, *Anniversary PC Owners Fight Gateway—And Win*, PC WORLD, June, 1996, <www.pcworld.com/hardware/desktop_pcs/articles/jun96/1406p050.html>).

156. The 10th Anniversary Club, *What is the 10th Anniversary Club?* <www.angelfire.com/sd/10thclub/te01000.html>. Ed Foster reported that the 10th Anniversary Club had "300 vocal members." *BACs Hearken Back to Product-Specific User Groups of Days Gone By*, INFOWORLD, May 26, 1997, *available at* <www.pcworld.com, Gripe Line column>.

157. *See* Sengstack, *supra* note 155; The 10th Anniversary Club, *supra* note 156; Ed Foster, *supra* note 156.

158. *See* Sengstack, *supra* note 155; The 10th Anniversary Club, *supra* note 155; Ed Foster, *supra* note 155; Robert X. Cringely, *Where has loyalty gone? Users grow weary of vendors' cheating ways*, INFOWORLD , Mar. 4, 1996 <www.infoworld.com>, Notes From The Field column (on file with author).

159. Sengstack, *supra* note 155; The 10th Anniversary Club, *supra* note 155; Ed Foster, *supra* note 155.

160. Hill v. Gateway 2000, Inc., 105 F.3d 1147, 1148 (7th Cir. 1997). Here's a reality check—if you had bought a computer with these problems, how long would it have taken you to figure out that the video card was an OEM version or that the 6X CD-ROM drive was slower than its competitors, or that a pair of speakers sold in surround sound packaging did not have surround sound capability? Is it reasonable to condition basic customer's rights on early discovery of defects that will be difficult for a reasonable consumer to recognize?

opportunity to return the computer after reading them, then all must be enforced."[161] Following its reasoning in *ProCD*, the court ruled that the contract was binding on the customer, upholding an arbitration clause that was subsequently rejected as unconscionable by two courts.[162]

We will never know whether Gateway 2000 intended or committed consumer fraud, because there will never be a public trial. Whether or not Gateway crossed the line, I am disturbed by the holding of the case because it lays out a road map that can be followed by less ethical companies who want to engage in sharp practices without fear of a public trial.

Hill's complaint included a RICO cause of action, alleging mail and wire fraud. He filed a class action lawsuit. With 10,000 customers allegedly involved, there seems to be a public interest in having public proceedings, open to the press, so that the other customers would hear about it and perhaps participate in (or opt out of) the suit. The Seventh Circuit responded to this by saying:

> The Hills' remaining arguments, including a contention that the arbitration clause is unenforceable as part of a scheme to defraud, do not require more than a citation to Prima Paint Corp. v. Flood & Conklin Mfg. Co., 388 U.S. 395 (1967). Whatever may be said pro and con about the cost and efficacy of arbitration (which the Hills disparage) is for Congress and the contracting parties to consider. Claims based on RICO are no less arbitrable than those founded on the contract or the law of torts. Shearson/American Express, Inc. v. McMahon, 482 U.S. 220, 238-42 (1987).[163]

As the court itself says, the same reasoning covers claims in tort.

The UCC Article 2 drafting committee has not adopted the reasoning or the holding of *Hill v. Gateway 2000.*[164] However, UCITA has embraced *Gateway's* approach to contracting.[165]

Imagine that the Pinto litigation[166] had been forced into arbitration. Do you think the plaintiffs would have received punitive damage awards? Do you think that the press would have been able to cover the arbitration hearings? Do you think that the same auto-safety consumer protection laws would have been introduced? What result should we expect for software that causes personal injuries, property damage, or deaths?

c. *UCITA Can be Used to Limit Liability for Embedded Software*

I will consider the extent to which UCITA can be applied to embedded software in a later section. But here is an example. Consider the following advertisement for an after-market fuel injector computer.

> Our Turbo City Corvette '82 - '84 Crossfire Upgrade Kit gives you: a 90's computer to make the Crossfire Fuel Injection react more quickly and more accurately. The package includes the 90's Crossfire upgrade computer with Eprom, crimping pliers, connectors and instructions to change-

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161. *Id.*

162. Brower v. Gateway 2000, 246 A.D.2d 246 (N.Y. App. Div. 1998); Filias v. Gateway 2000, 1998 U.S. Dist. LEXIS 20358 (N.D. Ill. Jan. 15, 1998).

163. *Hill*, 105 F.3d at 1150.

164. *See supra* note 19.

165. UCITA §§ 102(a)(56), 112, 208, 209.

166. THE FORD PINTO CASE: A STUDY IN APPLIED ETHICS, BUSINESS, AND TECHNOLOGY (Douglas Birsch & John H. Fielder, eds., 1994)

out the '82-'84 ECM. This will improve low and midrange performance, and fuel and spark delivery. The ECM will have our custom stock Crossfire chip. Once your upgrade computer is installed, we can provide special programming for replacement chips that will compensate for almost any type of performance modification or added power accessory. Any number of custom performance or special requirement chips will be made for your request, for only $129.00 +S&H per chip.[167]

As far as I can tell this either is already a UCITA transaction or can be easily brought within UCITA under section 103(b).[168]

Defective fuel injection software has caused at least one death. In the case of *General Motors Corp. v. Johnston,*[169] a PROM (programmable read only memory chip) controlled the fuel injector in a pickup truck. The truck stalled because of a defect in the PROM and in the ensuing accident, Johnston's 7-year old grandchild was killed. The Alabama Supreme Court justified an award of $7.5 million in punitive damages against GM by noting that GM "saved approximately $42,000,000 by not having a recall or otherwise notifying its purchasers of the problem related to the PROM."[170]

Under UCITA section 803(d), "Exclusion or limitation of consequential damages for personal injury in a consumer contract for a computer program that is subject to this [Act] and is contained in consumer goods is prima facie unconscionable, but exclusion or limitation of damages for a commercial loss is not unconscionable." This restricts incidentals and consequentials but does not forbid an agreement to forego punitive damages, which would have saved GM $7.5 million in *Johnston*. Additionally, if the truck had been used for business purposes, then a post-sale warranty disclaimer and liability limitation might well be enforceable under UCITA.

Apart from the limitation of remedies, UCITA provides manufacturers with other defensive opportunities, such as the choice of law,[171] choice of forum,[172] and compulsory arbitration (because this is essentially a choice of forum).[173]

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167. Turbo City Performance Headquarters, *Hey There Corvette Crossfire Owners!* <www.turbocity.com/CorvetteCrossfileECMUpgrade.htm>.

168. As a purer software example, read the archives of the e-mail list dedicated to do-it-yourself fuel injection, including examples of developing aftermarket fuel injector software, archived at <www.lindertech.com/autolink.htm>. Any of this software that is licensed or sold would be covered under UCITA.

169. General Motors Corp. v. Johnston, 592 So.2d 1054; For additional details, see MARK MINASI, THE SOFTWARE CONSPIRACY (2000).

170. 592 So.2d at 1061.

171. UCITA § 109.

172. *Id.* § 110.

173. *Id.* § 102(a)(23). It states that "'Court' includes an arbitration or other dispute-resolution forum if the parties have agreed to use of that forum or its use is required by law." *Id.* Under this definition, arbitration is obviously just another forum. However, the Comments to section 110 (the choice of forum clause) state that "This section deals with contractual choice of an exclusive judicial forum. It deals only with choice of a judicial forum. Arbitration and other non-judicial forum choices are governed by other law." *Id.* Note that the statutory language of UCITA binds the courts but the comments to UCITA are not part of the statute and may be ignored by the courts.

4. *Limited Legal Accountability for Defective Products*

If the damages caused by bad software (or a defective computer) are economic, UCITA gives the seller / licensor several ways to limit its liability.

a. *The Implied Warranty of Merchantability is Essentially Gone*

Under Article 2-316 of the U.C.C., a seller can exclude the implied warranty of merchantability by conspicuously disclaiming it. The core notion of conspicuousness is that it is presented in a way "that a reasonable person against whom it is to operate ought to have noticed it."[174] It is absurd to describe a clause in a shrink-wrapped contract as conspicuous because (except for people with X-ray vision), it is inside the box and not available for viewing by the customer.

Over the past century, until the last year or two,[175] courts have consistently refused to enforce post-sale disclaimers of the implied warranty of merchantability.[176] Under UCITA,[177] such disclaimers are fully enforceable in a click-through or shrink-wrapped license even if they are completely unavailable to the customer before or at the time of the sale.

Under the Magnuson-Moss Act, a disclaimer of the implied warranty of merchantability is ineffective if the seller gives *any* written warranty.[178] As a result, almost all consumer goods come with an implied warranty of merchantability. However, as noted above,[179] UCITA will pull consumer software out of the scope of the Magnuson Moss Act.

b. *The Rules Governing Express Warranties are Relaxed*

Software products are complex. Customers often buy them in reliance on demonstrations made by salespeople at stores and trade shows.

The U.C.C. recognizes that customers rely and demonstrations. Under Article 2-313(1) (c) "Any sample or model which is made part of the basis of the bargain creates an express warranty that the whole

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174. U.C.C. § 1-201(10), UCITA § 102(a)(14).

175. Peerless Wall & Window Coverings, Inc. v. Synchronics, Inc., 2000 U.S. Dist. LEXIS 1952 (W.D. Penn. Feb. 25, 2000). This case appears to validate shrink-wrapped warranty disclaimers, but the court stops just short of this, noting at *21 that "I need not rely on the validity of the shrink-wrap license agreement, however, because Fran Lando signed the software registration form on which was a recitation that she had read and agreed to the license terms." *See* Rinaldi v. Iomega Corp., 1999 Del. Super. LEXIS 563 (Del. Super. Ct. Sep. 3, 1999) is on point and held that a shrink-wrapped warranty disclaimer is conspicuous and enforceable. In M.A. Mortenson Co., Inc. v. Timberline Software Corp., 970 P.2d 803 (Wash. Ct. App. 1999) (this case is under review by the Washington Supreme Court), the court upheld a shrink-wrapped remedy limitation but it is clear from the opinion that the court would have (and implicitly, probably did) upheld the implied warranty disclaimer as well.

176. For citations and a long discussion, see KANER & PELS, *supra* note 7, at ch. 7 (especially footnotes 40 to 44 and the surrounding text). We did an extensive search and found that across industries, post-sale or shrink-wrapped warranty disclaimers were highly disfavored and were consistently rejected for large and small customers alike.

177. UCITA §§ 208, 209.

178. *See* 15 U.S.C. § 2308(a); and *supra* note 86.

179. *See supra* Part I.A.3 (discussing "Consumer Protection Laws").

of the goods shall conform to the sample or model."

UCITA gives vendors two ways to give demonstrations that would create warranties under Article 2 but that do not create warranties under UCITA.

First, under UCITA section 402(a)(3):

Any sample, model, or demonstration of a *final* product which is made part of the basis of the bargain creates an express warranty that the performance of the information will *reasonably* conform to the performance of the sample, model, or demonstration, *taking into account differences* that would appear to a reasonable person in the position of the licensee between the sample, model, or demonstration and the information as it will be used (emphasis added).

If the vendor uses a preliminary "demo" version instead of a final version, then no warranty is created even if the customer thinks she is looking at the final version. Note that this is not fraud if the vendor does not intend to mislead the customer. Also, UCITA substitutes the simple requirement of conformance with "reasonable" conformance. A bright line test becomes an issue of fact for the jury. Under current law, a customer can know with certainty that there was a warranty and it was breached, but under UCITA, the customer cannot. UCITA provides an additional defense for the vendor to take to the jury, the "differences" that should be noticed by a "reasonable" customer.

Second, under UCITA section 402(b), "an express warranty is not created by: (2) a display or description of a portion of the information to illustrate the aesthetics, appeal, suitability to taste, or the like of informational content."

People buy products on the basis of their user interface. If a vendor demonstrates a product or publishes pictures of the product's screens, but delivers a different version that is less appealing, less visually pleasing, harder to use, etc., the customer has no claim for breach of warranty. Such a situation might or might not be fraudulent, depending on whether the publisher intended to mislead people. Independently of the fraud question, under Article 2 this would be a breach of contract. Under UCITA, it is not.

c. No Customer's Right to a "Minimum Adequate Remedy"

UCITA section 803 allows vendors to exclude incidental and consequential damages and even to preclude "a party's right to cancel for breach of contract." Sharp practices like this are more feasible under UCITA because you have no right to a minimum adequate remedy.[180]

d. The Perfect Tender Right is Repealed

Article 2 provides a perfect tender rule to buyers of goods.[181] It does not matter whether the goods are simple or complex, or whether the buyers are consumers, small businesses or big businesses. The customer is entitled to the deal.

The Comments to UCITA section 601 note that Article 2 and 2A "stand alone in contract law in not using the material breach concept, but do so but only in one situation: a single delivery of goods not part

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180. *See supra* note 81.

181. Article 2 2-601 states that "if the goods or the tender of delivery fail in any respect to conform to the contract, the buyer may (a) reject the whole; or (b) accept the whole; or (c) accept any commercial unit or units and reject the rest."

of an installment contract." UCITA retains the perfect tender rule for mass-market transactions[182] but with no justification stated in the Comments, UCITA kills the rule for all other transactions, including those involving a single delivery of a finished product.[183]

As we will see in Section VI below, "mass-market" is a narrow concept that excludes a wide range of small business transactions including many one-person, home-based transactions.

e. UCITA Redefines "Material Breach" in a Seller-Protective Way

With the repeal of the perfect tender rule, to reject the product under UCITA, the business must prove a material breach of contract.[184] The elimination of perfect tender undermines the credibility of a customer's threat to cancel the contract unless obvious defects are fixed. It reduces the bargaining power of the customer.

Additionally, after the initial inspection period has passed, the mass-market customer can cancel the contract only if the breach (the defect) is material.[185]

For most defects, therefore, the consumer or business customer will have to show materiality in order to prove entitlement to a refund.

In Comment 4 to UCITA section 601, UCITA's proponents justify the rejection of the perfect tender rule by quoting White & Summers'[186] statement that "Of the reported Code cases on rejection, none that we have found actually grants rejection on what could fairly be called an insubstantial nonconformity, despite language in some cases allowing such rejection." In its footnote 7, the treatise cites discussions involving "insubstantial, minor, or non-material nonconformity."

Note the rhetorical sleight of hand that comes when we lump "insubstantial" with "minor" with "non-material." If these words mean the same thing then the only breaches that are non-material must be minor and insubstantial.

This is, perhaps, not terribly inaccurate under the current definition of material breach, as given in the RESTATEMENT (SECOND) OF CONTRACTS:

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;

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182. *See* UCITA § 704(b). "In a mass-market transaction that calls for only a single tender of a copy, a licensee may refuse the tender if the tender does not conform to the contract."

183. *Id.* § 601(b)(2), an "aggrieved party may cancel the contract only if the breach is a material breach of the whole contract or the agreement so provides."

184. Even then, under UCITA section 803, the contract can specify that the customer simply has no right to cancel.

185. UCITA § 609.

186. 1 JAMES J. WHITE & ROBERT S. SUMMERS, UNIFORM COMMERCIAL CODE § 8 – 3 (4th Ed., 1995).

(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.[187]

UCITA, however, creates a new, more seller-friendly definition of "material breach." Here is the definition under UCITA section 701 (b):

A breach of contract is material if:

(1) the contract so provides;

(2)   the breach is a substantial failure to perform a term that is an essential element of the agreement; or

(3) the circumstances, including the language of the agreement, the reasonable expectations of the parties, the standards and practices of the business, trade, or industry, and the character of the breach, indicate that:

(A) the breach caused or is likely to cause substantial harm to the aggrieved party; or

(B) the breach substantially deprived or is likely substantially to deprive the aggrieved party of a significant benefit it reasonably expected under the contract.

A Hypothetical on Material Breach

To see the difference between the two material breach standards, imagine that you are an attorney representing a customer of a packaged software product with a non-negotiable click-through license. (This might but need not be a mass-market product). Suppose further that the software had a defect that your client considers serious. The vendor does not yet have a fix for this defect and has made no promise as to when (if) it will be fixed. Your client wants a refund for the software. The vendor (who published the software) has refused to give the refund. You have discovered that the defect was known to the vendor at the time of sale. It was not documented or revealed to the customer.

Under UCITA and under the Restatement, your customer is entitled to a refund if she can prove a material breach of contract.

- Under UCITA section 701(b)(1), the breach is material if the contract says it is. The contract was written by the vendor, and so for the vendor, the UCITA standard for material breach *by the customer* is whatever the vendor's contract says it is. However, there's probably nothing in the vendor-written contract that will be useful for the customer.

- Under UCITA section 701(b)(2), the breach is material if it is a substantial failure to perform a term that is an essential element of the vendor-drafted agreement. It is unlikely that the vendor would write a contract that contains, as an essential term, a requirement that the product do something that it cannot do. This will not help your client either.

- That leaves UCITA section 701(b)(3), which allows your client to recover for substantial harm or for being substantially deprived of a significant benefit. How much harm is enough to be called

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187.   RESTATEMENT (SECOND) OF CONTRACTS § 241.

"substantial"? How significant does the benefit have to be before it is "significant" and how badly must the program misbehave before that benefit is "substantially" gone? These are questions of fact that will often leave the vendor with room to argue that a problem is not significant or substantial enough.

The Restatement analysis will be much more favorable to your client. Under the Restatement, your client's case will be evaluated under five factors:

(a) *the extent to which your client is deprived of the benefit*. This is like the UCITA standard except that if the other factors are favorable to the client, a breach can be material with a less substantial deprivation of a less significant benefit.

(b) *the extent to which your client can be adequately compensated*. If the vendor will not pay incidental or consequential damages and will not quickly fix the defect, a customer might reasonably and legitimately expect a refund (so that she can go buy something that works) rather than a partial refund.

(c) *the extent to which the party failing to perform will suffer forfeiture*. A vendor who sells many copies does not suffer a forfeiture when one customer cancels the contract for one copy.

(d) *the likelihood of cure*. The vendor isn't making any promises.

(e) *The extent to which the behavior of the non-performing party comports with standards of good faith and fair dealing*. You can reasonably argue that the vendor's delivery of known, undisclosed defects fails to reflect good faith and fair dealing.

Lack of compensation, lack of cure, no risk of forfeiture, and sharp practices by the seller are a common combination in the industry. It speaks strongly to the bias of UCITA that these are taken out of the equation.[188]

f. Stealthy Waiver of Liability

UCITA section 702(a) states:

A claim or right arising out of a breach of contract may be discharged in whole or part without consideration by a waiver in a record to which the party making the waiver agrees after breach, such as by manifesting assent, or which the party making the waiver authenticates and delivers to the other party.

All the publisher has to do, in order to slip a waiver by an aggrieved customer, is to send a bug-fix upgrade to the customer that has a click-wrap installation with a waiver buried in the fine print. When the customer clicks OK to install the upgrade (which may or may not fix any of the key problems), the

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188. The issue of material software defects is very complex. I think that a problem might be material or not depending on the relationship between vendor and customer. Sometimes, the customer will be more sophisticated and play a larger role in the design of a custom system than the vendor. At the other extreme, the customer has no sophistication and no say in the design at all. She is completely dependent on the claims and instructions of the vendor. The legal standards should take these differences into account. I discussed these issues in detail, and wrote up an engineer's approach to materiality for the Article 2B drafting committee in January, 1997. *See* Kaner, *supra* note 51.

customer's right to redress vanishes.

g. Publishers can Escape Incidental Expenses Caused by Undisclosed Known Defects

To recap, UCITA allows publishers to exclude incidental damages.[189] The costs of reporting the defect, including long distance and the support fee charged by the software publisher are examples of incidental expenses. In 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.[190] They are typically not revealed to the customer, thus depriving the attentive customer of the opportunity to mitigate incidental expenses or consequential losses. UCITA has discarded the Article 2 notion of a minimum adequate remedy.[191] Mass market customers will simply not be entitled to recover their expenses and losses under these circumstances.

h. In the Event of Failure of an Agreed Exclusive Remedy, the Customer can no Longer Collect Incidental or Consequential Damages

Article 2 section 2-719(2) states "[w]here circumstances cause an exclusive or limited remedy to fail its essential purpose, remedy may be had as provided in this Act."

It is Comment 1 to this section that states:

It is of the very essence of a sales contract that at least minimum adequate remedies be available. If the parties intend to conclude a contract for sale within this Article, they must accept the legal consequence that there be at least a fair quantum of remedy for breach of the obligations or duties outlined in the contract.

White and Summers[192] note that this section has been widely used to justify an award of damages, but argue that businesses should be allowed to make a deal in which there is an agreed exclusive remedy and if it fails, it fails. But do not suggest this rule should apply to consumers. For consumers, at least, the courts have awarded otherwise-excluded damages in the event of failure of an agreed remedy.

UCITA fixes this problem (for sellers) by explicitly preserving the remedy limitation in the face of a failure of an agreed remedy (even if the agreed remedy is ruled *unconscionable*),[193] so long as the

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189. Incidental damages are defined in UCITA § 102(a) (34).

Incidental damages" resulting from breach of contract: (A) means compensation for any commercially reasonable charges, expenses, or commissions reasonably incurred by an aggrieved party with respect to: (i) inspection, receipt, transmission, transportation, care, or custody of identified copies or information that is the subject of the breach; (ii) stopping delivery, shipment, or transmission; (iii) effecting cover or retransfer of copies or information after the breach; (iv) other efforts after the breach to minimize or avoid loss resulting from the breach; and (v) matters otherwise incident to the breach; and (B) does not include consequential damages or direct damages.

Id.

190. KANER & PELS, *supra* note 7, at 23.

191. UCITA § 803(c), § 803 cmt. 6.

192. WHITE & SUMMERS, *supra* note 186, at §§ 12-10.

193. UCITA § 803 (c) "Failure or unconscionability of an agreed exclusive or limited remedy makes a term disclaiming or limiting consequential or incidental damages unenforceable unless the agreement

limitation was written in a separate paragraph or otherwise made independent of the agreement remedy.

i. No Publisher Duty to take Reasonable Measures to Release Products Without Viruses

The virus issue is instructive because of the relative costs to vendor and customer. Publishers do not intentionally put viruses on their disks. However, a virus might infect a publisher's computer systems and so end up on the disks shipped by the publisher or on files on the publisher's website. In this case, from the publisher, the virus goes to every customer of the infected product. Who should bear the risk of this? UCITA puts all of the risk of such viruses onto customers, even though it is easy, cheap, and usually effective for publishers to inspect their products for viruses.

Even though publishers can reduce the risk of viruses on their products, it would be unfair to expect publishers to guarantee that their products are free of viruses:

- According to the reviews that I see on the web (PC World and CNET cover this from time to time), no virus checkers catch 100% of the known viruses.[194]

- Virus creators sometimes design their virus to be undetectable by the current version of a specific virus checker.[195]

- Many publishers (I suspect that this is the large majority) use at least two and often three recently updated virus checkers, at least in the Windows and Windows 95 markets. In my experience, this is an effective method for discovering almost all viruses. [196]

- Some publishers follow sloppy release procedures, shipping blank disks (sometimes), disks with the wrong files (sometimes), or virus-infested disks (sometimes). Cobb[197] reported that "close to 10 companies released shrink-wrapped software infected with the Michelangelo virus simply because they hadn't bothered to update their AV [anti-virus] software."

To protect themselves against virus-infested software, customers have to get virus protection

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expressly makes the disclaimer or limitation independent of the agreed remedy."

194. For a recent example of a virus that got by all virus checkers, see Matthew Nelson, *New Version of ExploreZip defies Anti-Virus Systems*, INFOWORLD ELECTRIC (Nov 30, 1999) <www.infoworld.com/cgi-bin/displayStory.pl?991130.icminizip.htm> ("ExploreZip, the worm that devastated systems in June, is now back in a compressed version that is slipping through anti-virus security systems. The worm infected several major companies on Tuesday. [P] Dubbed MiniZip by some security vendors—a reference to how the worm has been compressed—the latest outbreak uses exactly the same technology as ExploreZip, the only difference being that it has been compressed in a format that masks it from security systems which scan incoming messages for attacks. While many anti-virus applications now scan compressed files (and all scan for ExploreZip) the creator of MiniZip utilized a lesser-known shareware compression system called Neolite to render it invisible to anti-virus security systems.")

195. *See* STEPHEN COBB, THE NCSA GUIDE TO PC AND LAN SECURITY App. K (1996) (discussing virus checkers).

196. I have been directly or indirectly involved in about 300 product releases. Not one of these products went out with a virus. Virus prevention involves some tedious work, but not all that much, and (for the publisher using, rather than developing, the virus checkers) it is not rocket science. There is no guarantee that you can prevent or find all viruses, but a decent configuration management and release procedure can make a big difference.

197. COBB, *supra* note 195, at 693.

software.[198] They have to keep it up to date, and they have to use it regularly. Running the virus checker takes time and these programs can conflict with the installation or running of other programs, causing a troubleshooting expense (time or money). The installation instructions for many programs instruct customers to turn off their virus checker, so a commercial disk that is virus infected can infect the reasonably diligent customer's computer. Now the customer has to disinfect her disk, potentially losing files or data[199] along with a lot of time. Multiply this cost per customer by the many, many customers for a mass-market software product and the cost to customers is huge compared to the cost to publishers of reasonably attempting to keep their disks clean.

In 1996, drafts of UCITA (Article 2B) provided that the software publisher could disclaim liability for viruses. The drafting committee decided that this was inappropriate[200]and dropped it in its November, 1996 meeting but publishers' representatives were invited to submit a replacement.[201]

Throughout 1997, the UCITA drafting committee considered several proposals on virus liability.[202]

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198. Symantec twice wrote the UCITA drafting committee protesting against the requirement that publishers take reasonable care to release their products without viruses. Letter from Gordon Eubanks, President of Symantec to Carlyle Ring (Apr. 7, 1997) <www.2bguide.com/docs/virus2lt.html>; Letter from Intuit, Autodesk & Symantec to the Article 2B Drafting Committee (Feb.19, 1997) <www.2bguide.com/docs/ias.html>. While it failed to mention this in either letter, Symantec publishes one of the leading anti-virus products. Perhaps Symantec would benefit from a law that puts onto customers the responsibility for checking whether products they buy have viruses. In such a situation, every computer user, even customers who download nothing and who reject attachments that come with their e-mail will have an incentive to buy a virus checker and an update contract.

199. Maybe this could be construed as a tort, because of the damage to the customer's property (the disk files). However, *Rockport Pharmacy, Inc. v. Digital Simplistics, Inc.,* 53 F.3d 195 (8th Cir., 1995), made the licensees look to their contract for recovery in a case involving destruction of data.

200. *See The Reporter's Notes on Section 2B-313 in the 1997 Annual NCCUSL meeting draft of UCITA* <www.law.upenn.edu/bll/ulc/ucc2/ucc2b797.htm> (list the drafting committee decisions on viruses, including this one: "Consensus that across the board general disclaimer is not appropriate").

201. I included contemporaneous notes from this meeting in Cem Kaner, *Proposed Article 2B: Problems from the Customer's View: Part 2: List of Key Issues*, U.C.C. BULLETIN, Feb., 1997, at 1 [hereinafter Kaner, *Proposed Article 2B*].

202. You can see the variations in the drafts housed at <www.law.upenn.edu/bll/ulc/ulc.htm>. The draft prepared for the 1997 Annual NCCUSL meeting, <www.law.upenn.edu/bll/ulc/ ucc2/ucc2b797.htm> contained the following summary:

1. Voted to delete former subsection (e) giving language of disclaimer 10-0.

2. Consensus that across the board general disclaimer is not appropriate.

3. Motion to delete former subsection (b)(2) allowing obligation to be satisfied by language and circumstances giving reason to know of risk, rejected: 5-6.

4. Voted to use "mass market" rather than consumer in this section. Vote: 11-0 (Feb. 1997).

5. Rejected a motion to delete the section. Vote: 4-6 (April, 1997)

6. Rejected a motion to adopt a duty of reasonable care with a statutory safe harbor provision. Vote: 4-6 (April, 1997)

7. Rejected a motion to adopt a disclaimable warranty specific to viruses in what had been alternative (b). Vote: 4-7 (April, 1997)

8. Rejected a motion to adopt in the mass market a duty of care that cannot be disclaimed in a standard form. Vote: 4-6 (April, 1997).

These ranged from silence, which would treat viruses as a merchantability issue, or a simple disclaimer of liability for viruses, through a nondisclaimable warranty that reasonable care was taken to prevent or eliminate viruses or even that there are no viruses whatsoever.

I proposed a compromise that took into account the impossibility of finding all viruses, and the unfairness (raised repeatedly by publishers' lobbyists) of holding noncommercial distributors of information liable for viruses. The proposal made only merchant publishers liable and only when a virus that they shipped was there because they failed to exercise reasonable care to detect it before shipping the product. Additionally, publishers would be exempt from a duty of care to check for viruses if (a) they gave the file to the recipient for free; (b) they had genuine consent from the recipient to send an untested file that the recipient would test; (c) the file received its virus during transmission, not from the publisher; or (d) the licensor was merely passively redistributing the software and did not know of the virus. The drafting committee voted down the proposal in its meeting of April 11-13, 1997. In the September, 1997 the UCITA drafting committee deleted its treatment of viruses. Thereafter, as requested by the software publishers,[203] liability for viruses is disclaimed under the disclaimer of the implied warranty of merchantability.

Thus, under UCITA, the publisher has no accountability for viruses to the customer as long as the license includes a boilerplate warranty disclaimer and the publisher has made no express claims of freedom from viruses, even if the publisher took no steps to check for viruses or chose not to stop distribution of a disk after discovering that it had a virus. And, of course, even if the publisher somehow fails to disclaim liability for a known virus, the remedy exclusions take away reimbursement for incidental expenses and consequential losses caused by the virus.

j. Publisher Can Select the Law of any State or Country

Article 1 of the U.C.C. specifies that the choice of law to govern a contract should be that of a state or nation that bears a reasonable relationship to the transaction.[204] UCITA section 109 (a) applies a rule that is more flexible (for the seller):

> The parties in their agreement may choose the applicable law. However, the choice is not enforceable in a consumer contract to the extent it would vary a rule that may not be varied by agreement under the law of the jurisdiction whose law would apply under subsections (b) and (c) in the absence of the agreement.

The choice of law clause need not be conspicuous, need not be negotiable, need not select the law of a state or country that bears any relationship to the transaction.

If a customer lives in California, the company is in California, but the law selected is that of Florida

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Id.

203. *See* Letter from Eubanks, *supra* note 198; Letter from Intuit, Autodesk & Symantec, *supra* note 198. The same theme was echoed by publishers' representatives in the drafting committee meetings.

204. U.C.C. Article 1 § 105.

Except as provided hereinafter in this section, when a transaction bears a reasonable relation to this state and also to another state or nation, the parties may agree that the law either of this state or of such other state or nation shall govern their rights or duties. Failing such agreement this Act applies to transactions bearing an appropriate relation to this state.

Id.

(or Ireland), the vendor's lawyers probably understand the law of the distant state or country (otherwise they would not have chosen that one), but the customer's lawyers will have to do extra research. If the case is litigated in California, the lawyers will have to file extra papers with the judge to educate her on the law of that distant place. All of this costs money. By raising the cost of litigation to the customer, the seller makes many fully justified lawsuits uneconomical, and thus can escape them.

k. Publisher can Choose the Forum

UCITA section 110(a) states that "[t]he parties in their agreement may choose an exclusive judicial forum unless the choice is unreasonable and unjust." The choice must be both, unreasonable *and* unjust.[205] As the Comment to this section notes, under UCITA, "a contractual choice of forum based on a valid commercial purpose is not invalid simply because it adversely effects one party, even in cases where bargaining power is unequal."

UCITA's rule will virtually eliminate access to small claims courts and small customers will be effectively barred from bringing many types of lawsuits. In the February, 1998, meeting, the UCITA drafting committee focused directly on the issue of consumer rights.[206] It voted on a motion of David Rice's.[207] Essentially the same motion was introduced by Commissioner Fry in the November, 1998 drafting committee meeting.[208]

The motion provided that when the following conditions are all met, the customer could sue the publisher in small claims court in his home state:

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205. This "unreasonable and unjust" language might sound like a protection, but it comes from a line of cases starting (in the consumer context) with *Carnival Cruise Lines v. Shute,* 499 U.S. 585 (1991). Some of the background facts mentioned here are taken from the 9th Circuit Court of Appeal's overruled opinion, *Shute v. Carnival Cruise Lines*, 897 F.2d 377, 9th Cir. 1990. This case illustrates the hardship that forum selection clauses can work on consumers. Eulala Shute lived in the State of Washington. In Washington, she bought tickets for a cruise from Los Angeles, California to Puerto Vallarta, Mexico. She was injured on the ship. On the back of the ticket, in fine print, was a forum selection clause that required Shute to file any lawsuit in the State of Florida. This is convenient for Carnival Cruise Lines, which is based in Florida, but Shute would have to fly herself and all her witnesses from the West Coast to Florida. The 9th Circuit decision noted that this case "would be so gravely difficult and inconvenient that the plaintiffs would for all practical purposes be deprived of their day in court." It ruled that Shute could sue in Washington. But the United States Supreme Court held that forum selection clauses are enforceable under the federal law of the sea (Admiralty law) and ruled in favor of Carnival Cruise Lines. This decision established that forum selection clauses were not unconstitutional, but it does not directly bind the States. Since then, several state courts have found that forum selection clauses were not both "unreasonable and unjust," even though they would probably deprive the customer plaintiff of his or her day in court. For reviews of the literature, see *infra* note 203.

The motion provided that when the following conditions are all met, the customer could sue the publisher in small claims court in his home state.

206. *See* KANER & PELS *supra* note 8 at 327 – 328 (reporting on this meeting).

207. The motion was based on compromise proposals from Cem Kaner and Todd Paglia, *A List of Concerns About Proposed Article 2B*, U.C.C. BULLETIN, June, 1998, at 1 , *available at* <www.bad software.com/alidec.htm>, and from the IEEE, Letter from Reinert, *supra* note 67.

208. Cem Kaner, *Article 2B–Report from the November 13-15, 1998 Meeting, Part 1,* U.C.C. BULLETIN, Jan. 1999, at 1; *Part 2,* Feb. 1999, at 1, *available at* <www.badsoftware.com/ uccnov98.htm> [hereinafter Kaner, *Article 2B*].

- The total amount in dispute must be small enough for Small Claims Court. This effectively eliminates class action suits.

- The purchaser must be a consumer (under UCITA's very narrow definition of the word "consumer"). Both original proposals specified "mass market customers" here, but Professor Rice changed this to consumer, perhaps in order to make the issue and the discussion crystal clear.

- The customer would have to be able to sue the publisher (obtain personal jurisdiction) in his home state if the license agreement was silent on the matter.

This was intended as a compromise. It protected individuals (only), who had a claim that would be too small to fly across the country (or the world) to sue for. But it protected businesses strongly by leaving the choice of forum clauses intact in the cases that publishers most fear: lawsuits by all businesses and all class action suits.

In both meetings, some members of the drafting committee said that they understood that if consumers have to fly across the country to bring a suit for $100, they really have no power to sue. The drafting committee then voted down the motion.

This approach has certainly been criticized[209] and has not been universally followed[210] but my point in this section is not to argue whether the current trend supports (i) unlimited freedom (for the seller) of contract, or (ii) freedom within a reasonable relationship constraint, or (iii) freedom within narrower constraints (such as fair notice of the alleged "agreement.") Instead, my point is to highlight the pattern.

In the mass-market case, UCITA makes it trivially easy[211] to disclaim implied warranties and limits the circumstances under which express warranties are given. This limits the extent to which customers can rely on representations or performance standards to establish a breach of contract. In the event of variation of legal standards across jurisdictions, UCITA makes it trivially easy for the seller to select the most favorable state's (or country's) law. In the event that a breach can still be established, UCITA makes it trivially easy for the seller to exclude remedies, even repayment for losses caused by known but undisclosed defects. And in the unlikely case that the customer can establish a breach and a right to a remedy, UCITA's forum selection clause makes it trivially easy for the seller to dictate that the case will be heard in a distant and expensive forum.[212]

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209. William J. Woodward, Jr. *Symposium: consumer protection and the Uniform Commercial Code: 'Sale' of law and forum and the widening gulf between 'consumer' and 'nonconsumer' contracts in the U.C.C.*, 75 WASH. U. L. Q. 243 (1997); Jean Braucher, *The Afterlife of Contract*, 90 NW. U. L. REV. 49, 65-68 (1995); Lee Goldman, *My Way and the Highway: The Law and Economics of Choice of Forum Clauses in Consumer Form Contracts*, 86 NW. U. L. REV. 700 (1992); Edward A. Purcell, Jr., *Geography as a Litigation Weapon: Consumers, Forum-Selection Clauses, and the Rehnquist Court*, 40 UCLA L. REV. 423 (1992)

210. For example, in *TRWL Financial Establishment v. Select International, Inc*, 527 N.W.2d 573 (1995 Minn. Ct. App), the court ruled that a forum selection clause, added in a memorandum confirming a sale, is a material alteration that does not become part of the contract under U.C.C. Article 2.

211. By trivially easy, I mean that the seller can hide the terms inside the box, keep them unavailable until after the customer has paid for the product, taken it away, and started to use it.

212. The court in that far away country might or might not be willing to try such a case, but a prudent seller will do its research when drafting its standard form and select a jurisdiction that will accept such suits.

III. UCITA INTERFERES WITH BASIC RULES GOVERNING INTELLECTUAL PROPERTY

The American Intellectual Property Law Association[213] and the Committee on Copyright and Literary Property of the Association of the Bar of the City of New York[214] both concluded that UCITA will interfere with federal intellectual property policy, allowing publishers to circumvent the fair use and first sale doctrines. As the New York bar put it: [215]

1. UCITA includes some provisions that conflict directly with provisions of the Copyright Act and that may therefore be preempted.

2. UCITA interferes with federal policy that there be a uniform national copyright law and will create confusion about the legal rules applicable to copyright licensing; and

3. UCITA validates market-wide restrictions on copying and other uses that copyright law permits.

In addition:

UCITA potentially affects the fair use of a wide variety of copyrighted works. 'Computer information,' UCITA's subject matter, includes fiction, history, poetry, databases, and any other text 'obtained from or through the use of a computer, or that is in digital or equivalent form capable of being processed by a computer.' For example, text on a CD-ROM could be shrink-wrapped and sold subject to a license such as this:

> 'Purchaser may not copy any portion of the contents without Publisher's written permission except for Purchaser's sole and exclusive personal use. Purchaser may not sell, lease, lend or otherwise transfer possession of this CD without Publisher's written permission.'

The first sentence of this license effectively circumvents copyright's fair use doctrine and its requirement of substantial similarity to prove infringement. The second sentence circumvents copyright's first sale doctrine.[216]

The New York analysis is thorough and long and worth reading. The letter from the American Intellectual Property Law Association[217] raises similar issues more briefly. Reading these materials, it is easy to understand why the country's leading intellectual property law associations turned against UCITA. [218]

In its 1997 Annual Meeting, the American Law Institute passed the McManis Motion.[219]

A mass market contract may not restrict user rights in a manner inconsistent with Federal copyright law.

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213. Letter from Boulware, *supra* note 30.

214. Committee on Copyright and Literary Property of the Association of the Bar of the City of New York, *supra* note 31.

215. *Id.* at 3-4.

216. *Id.* at 18-19.

217. Letter from Boulware, *supra* note 30.

218. *See also* Letter from 50 Professors of Intellectual Property Law, *supra* note 29.

219. McManis, *supra* note 4; Kunze, *supra* note 4.

As Professor McManis explained it:[220]

The gist of my motion was to provide that mass market licenses could not be used to 'contract around' provisions of federal law that either limit the subject matter of copyright protection (section 102) or place limitations on a federal copyright holder's exclusive rights, and thus in effect creating various 'user's rights' (sections 107-112, 117). I believe that the use of this unilateral form of contract to contract around these provisions would in effect deprive the entire public of certain federally created user's rights, thus conflicting with the paramount policies of federal copyright and/or patent law.

At subsequent drafting committee meetings, the motion and the motion maker were criticized.[221] In response, the drafting committee adopted section 105(a), which states that "[a] provision of this [Act] which is preempted by federal law is unenforceable to the extent of the preemption."

This grants nothing to anyone. It is merely a statement of present fact. It is what the word "preempted" means and it is the law of the land whether or not this language appears in UCITA.[222] However, this section allows the proponents to say that they have addressed the conflict with federal law while adding nothing that limits the UCITA-based ability of licensors to contract around the intellectual property provisions of federal law.

At its 1998 meeting, NCCUSL adopted the Perlman Amendment:

If a court as a matter of law finds the contract or any term of the contract to have been unconscionable or contrary to public policies relating to innovation, competition, and free expression at the time it was made, the court may refuse to enforce the contract or it may enforce the remainder of the contract without the impermissible term as to avoid any unconscionable or otherwise impermissible result.

The UCITA drafting committee emasculated Perlman's amendment as follows, in section 105(b):

If a term of a contract violates a fundamental public policy, the court may refuse to enforce the contract, enforce the remainder of the contract without the impermissible term, or limit the application of the impermissible term so as to avoid a result contrary to public policy, in each case to the extent that the interest in enforcement is clearly outweighed by a public policy against enforcement of the term.

Note the absence of the words "innovation, competition, and free expression" in UCITA. Note that UCITA requires the court to determine whether the public policy at issue is "fundamental." Maybe the laws protecting innovation, competition and free expression will be adjudged fundamental and maybe not. Probably this will vary state to state, judge to judge, and so take a long time and a lot of litigation to determine. Until then, restrictions that will eventually be determined to violate these policies will

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220. Kunze, *supra* note 4.

221. Based on my observations at meetings in which the discussions took place, I think it would be fair to say that Professor McManis was publicly ridiculed.

222. *See* Supremacy Clause, U.S. CONST. art. VI, § 2.

This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, 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.

Id.

interfere with competition and chill speech. Additionally, note that UCITA requires a balancing judgment ("to the extent that") with a thumb on the scale ("is clearly outweighed by") in favor of the contract.

In this section, I will cover only a subset of the important intellectual property issues.

1. UCITA Essentially Wipes Out the Fair Use Doctrine

Fair use is codified in the Copyright Act.[223] "[T]he fair use of a copyrighted work, including such use by reproduction in copies . . . for purposes such as criticism, comment, news reporting, teaching . . . scholarship, or research is not an infringement of copyright." Software licenses include a wide range of use restrictions that appear to ban fair use of the software. On its face, UCITA makes these restrictions enforceable.[224]

Use restrictions are often upheld in commercial contracts.[225] However, allowing restrictions that bar fair uses in mass-market contracts can eliminate the fair use doctrine. The problem is that a non-negotiable restriction in a mass-market license is inescapable. Every user is bound by the restriction. If competing products have the same restriction (many software licenses bar reverse engineering, for example), then all users of all products in this segment of the market might face the same restriction. These market-wide restrictions, if enforced, render the fair use doctrine irrelevant.[226]

As the Committee on Copyright and Literary Property of the New York City Bar put it:[227]

Under UCITA, all the above contractual use restrictions would be prima facie valid. UCITA increases the likelihood that providers of information will seek to impose market-wide use restrictions such as these through shrinkwrap or click licenses and that the restrictions will be upheld and enforced by state court judges.

These potentially far-reaching effects are particularly troubling because the provisions on which they are based do not restate established law. The Fifth Circuit has invalidated a shrinkwrap

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223. 17 U.S.C. § 107.

224. UCITA sections 102(a)(19) and 102(a)(57) allow the publisher to define or limit the use of licensed information (including software). UCITA 307 (b) says that a use beyond the scope or restrictions is a breach of contract.

225. For citations and discussion, see NIMMER, *supra* note 119, §§ 7.24 - 7.26.

226. *See, e.g.,* Robert P. Merges, *Intellectual Property and the Costs of Commercial Exchange: A Review Essay,* 93 MICH. L. REV. 1570, 1613 (1995) ("Standard form software licensing contracts, by virtue of their very uniformity and the immutability—in other words, non-negotiability—of their provisions, have the same generality of scope as the state legislation that is often the target of federal preemption. Furthermore, these contracts have the same effect as offending state legislation: wholesale subversion of an important federal policy."); Mark A. Lemley, *Beyond Preemption: The Law and Policy of Intellectual Property Licensing,* 87 CAL. L. REV. 11, 125-126 (1999) ("Permitting the parties to alter intellectual property law with a standard-form, unsigned 'shrinkwrap license,' in which even the fiction of 'agreement' is stretched to the vanishing point, exalts the (standard) form of contract law over the substance of intellectual property." And at 148, "U.C.C. 2B promises to usher in an era of 'private legislation,' in which parties who are in a position to write contracts can jointly impose uniform terms that no one can escape."); Julie E. Cohen, *Copyright and the Jurisprudence of Self-Help,* 13 BERKELEY TECH. L.J. 1089, 1092 (1998). UCITA "is not merely a neutral background for private bilateral agreements but a public act of social ordering that is flatly inconsistent with copyright and First Amendment principles." *Id.*

227. Committee on Copyright and Literary Property of the Association of the Bar of the City of New York, *supra* note 31, at 20 (footnotes omitted).

license provision which conflicted with copyright law, as well as state legislation purporting to validate such contract provisions. The Second Circuit has indicated in dictum that even a privately negotiated contractual provision that conflicted with copyright law might be subject to federal preemption. Other courts have invalidated publishers' or sellers' use restrictions that were inconsistent with copyright law."

One could argue that concerns about UICTA are unfounded because inappropriate restrictions would be ruled unenforceable under UCITA sections 105(a) or 105(b):

- UCITA section 105 (a) "A provision of this [Act] which is preempted by federal law is unenforceable to the extent of the preemption."

However, according to the Reporter for UCITA, Ray Nimmer,[228] ["t]here have been no cases in which [Copyright Act] section 301 preemption was used successfully to challenge and invalidate a term of a contract that was enforceable as a matter of general state contract law."

I do not claim to be an intellectual property expert. If Ray Nimmer's claim is accurate, then a clause banning reverse engineering of a mass-market product will probably not be invalidated under section 105(a). According to UCITA section 105 (b):

If a term of a contract violates a fundamental public policy, the court may refuse to enforce the contract, enforce the remainder of the contract without the impermissible term, or limit the application of the impermissible term so as to avoid a result contrary to public policy, in each case to the extent that the interest in enforcement is clearly outweighed by a public policy against enforcement of the term.

UCITA section 105(b) operates on a case-by-case basis. The court must trade off several factors and different courts will weight the factors differently. After UCITA passes, it will be years before law-abiding engineers will know which fair uses they can continue to make under UCITA.

a. We Lose Ability to Read or Write Benchmark Studies of Competitive Products

The McAfee Viruscan license[229] includes the term

"The customer shall not disclose the results of any benchmark test to any third party without Network Associates' prior written approval."

In Part I.B.1 above, I pointed out the impact on competition when competitive information is not available to the marketplace. Here, I raise a different issue, the impact of this restriction on product development.

A "benchmark" is a "test used to measure hardware or software performance. . . . Benchmarks for software determine the efficiency, accuracy, or speed of a program in performing a particular task . . . so the resulting scores can be compared to see which programs perform well and in what areas."[230]

Benchmarking is a standard practice in software engineering. There's no searching for hidden

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228. Ray Nimmer, *Breaking Barriers: The Relation Between Contract And Intellectual Property Law,* CONFERENCE ON THE IMPACT OF ARTICLE 2B, Berkeley (Apr. 23-25, 1998) <www.2bguide.com/docs/rncontract-new.html>.

229. This was downloaded from <www.mcafee.com>, the website for VirusScan, on July 20, 1999.

230. MICROSOFT PRESS, COMPUTER DICTIONARY (4th ed., 1999)

secrets here, no reverse engineering, nothing sneaky. You create a set of test data, use a machine configured in a standard way, and then run several programs to see how they fare. If your program is substantially slower, less accurate, or awkward compared to the competition, you, you change it. This is at the heart of competitive product design and development.

Benchmarks are often published.[231] This saves everyone time and expense, making it possible for small development groups to compare results across a wide range of products.

The more expensive we make it for engineering teams to benchmark their products against the competition, the more we threaten our ability to make rapid progress and compete effectively in a worldwide market.

It is hard not to be skeptical of the social benefit of enforcing bans on publishing benchmark results in commercial software licenses.[232] Extending the ability to ban publication of benchmarks to mass-market software seems like a giant step in the wrong direction.

b. We Lose Our Right to Publish Criticisms of Products

The McAfee Viruscan license[233] includes the term

"The customer will not publish reviews of the product without prior consent from Network Associates."

In Part I.B.1, I pointed out the impact on competition when competitive information is not available to the marketplace. Here, my first concern is with the impact on the free speech rights of people who want to criticize a publisher of a bad product. My second concern involves the education of software developers. As we see what types of problems cause complaints in the marketplace, we learn lessons and make better products. By allowing vendors to ban public criticism of their products, we weaken our ability to understand customer reactions to different design and development alternatives and thus threaten our ability to compete effectively in a worldwide market.

c. We Lose Our Right to Reverse Engineer Products

Reverse engineering is a normal practice in software development. We do it to make products work together, to troubleshoot defects in products, to investigate false claims, and for several other reasonable purposes.[234] Some authors, such as Gomulkiewicz & Williamson,[235] think that mass-market bans on reverse engineering should be lawful. (Gomulkiewicz is one of Microsoft's lawyers). Others predict that

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231. *See,* e.g., Benchmarkresources.com <www.benchmarkresources.com>; JIM GRAY & RICK CATTELL, THE BENCHMARK HANDBOOK ONLINE <www.benchmarkresources.com/ handbook/index.html>; RICHARD GRACE, THE BENCHMARK BOOK (1996). Benchmarking is also a frequent topic in leading technical magazines, such as *Dr. Dobbs Journal*, <www.ddj.com>.

232. *See The Test That Wasn't*, PC MAG. (Aug. 1999) at 29 (discussing Oracle's refusal to allow publication of benchmarks of its product).

233. This was downloaded from <www.mcafee.com>, the website for VirusScan, on July 20, 1999.

234. For examples and additional discussion, see Andrew Johnson-Laird, *Software Reverse Engineering in the Real World,* 19 U. DAYTON L.R. 843 (1994) and Cem Kaner, *Article 2B and Reverse Engineering*, <www.badsoftware.com/reversea.htm> [hereinafter Kaner, *Reverse Engineering*].

235. Robert W. Gomulkiewicz, & Mary L. Williamson. *A Brief Defense of Mass Market Software License Agreements*, 22 RUTGERS COMPUTER & TECH. L. J. 335 (1996) <www.2bguide.com/docs/bdsw.html.>

such clauses will be tossed out because they are anticompetitive.[236]

Clauses barring reverse engineering are often enforceable in negotiated contracts but they have not been held enforceable in mass-market contracts.[237] The *Connectix* court explained its reasoning as follows:

> Copyrighted software ordinarily contains both copyrighted and unprotected or functional elements. . . . Reverse engineering encompasses several methods of gaining access to the functional elements of a software program. . . . The object code of a program may be copyrighted as expression, *17 U.S.C. § 102*(a), *but it also contains ideas and performs functions that are not entitled to copyright protection. See 17 U.S.C. § 102*(b). Object code cannot, however, be read by humans. The unprotected ideas and functions of the code therefore are frequently undiscoverable in the absence of investigation and translation that may require copying the copyrighted material. We conclude that, under the facts of this case and our precedent, Connectix's intermediate copying and use of Sony's copyrighted BIOS was a fair use for the purpose of gaining access to the unprotected elements of Sony's software.

Under UCITA, a ban on reverse engineering is a contractual use restriction. On its face, such a restriction appears to be enforceable under UCITA sections 102(a)(19), 102(a)(57) and 307(b).

I raised the anticompetitive issues with a ban on reverse engineering in Part I.B.3 above. Here, I note some additional normal uses of reverse engineering that are not specifically protected by the Digital Millennium Copyright Act but that appear to be fair uses under current law.[238]

- Personal education. (For example, I first learned about the design of operating systems by disassembling the Apple II AppleDOS).

- Understand and work around (or fix) limitations and defects in tools. (For example, I have discovered fundamental errors in random number generation algorithms by reverse engineering the code underlying the random number function).

- Understand and work around (or fix) defects in third-party software. (Think of all the work that had to be done for Year 2000 fixes).

- To learn the principles that guided another product's design.[239]

- Determine whether another company had stolen and reused a company's source code. [240]

- Determine whether a product is capable of living up to its advertised claims.[241]

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236. R. H. Lande & S.M. Sobin, *Reverse Engineering of Computer Software: The Antitrust Issues.*, 9 HARV. J.L. & TECH, 237 (1996). *See also* Dennis S. Karjala, *Federal Preemption of Shrinkwrap and On-Line Licenses*, 22 U. DAYTON L.R. 512 (1997); David Rice, *Public Goods, Private Contract and Public Policy: Federal Preemption of Software License Prohibitions Against Reverse Engineering*, 53 U. PITTSBURG L.R. 543 (1992).

237. *See, e.g.,* Sony Computer Entertainment, Inc. v. Connectix Corp., 2000 U.S. App. LEXIS 1744 (9th Cir. 2000); Sega Enterprises Ltd. v. Accolade, Inc., 977 F.2d 1510 (9th Cir. 1992); and Vault Corp. v. Quaid Software Ltd., 847 F.2d 255 (5th Cir. 1988).

238. For more details on the examples, see Kaner, *Reverse Engineering*, *supra* note 234.

239. *See Sony,* 2000 U.S. App. LEXIS 1744.

240. *See* Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240 (3d Cir. 1983).

241. KANER & PELS, *supra* note 7, at 237 (discussing Syncronys SoftRAM95).

These are important abilities to lose. Keep in mind the Constitutional basis for copyright: Article 1 section 8 gives Congress the power "To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Rights to their respective Writings and Discoveries." The restriction of reverse engineering seems to hinder, more than promote, the progress of science and the useful arts.

d. We Lose Rights to Make Limited Copies of Materials for Instruction

A limitation on the number of copies made and the purposes for which those copies can be used is just another use restriction.

e. We Lose Freedom to Decide What Purpose We Use the Software For

UCITA section 102(a) (19) defines "Contractual use term" as "an enforceable term that defines or limits the use, disclosure of, or access to licensed information or informational rights, including a term that defines the scope of a license."

Under UCITA section 102(a)(57), a scope term defines "(A) the licensed copies, information, or informational rights involved; (B) the use or access authorized, prohibited, or controlled; (C) the geographic area, market, or location; or (D) the duration of the license."

In the Academic license for WordPerfect 8, the license specifies that the user is not to create "scandalous" or "immoral" matter with the program.[242] Other licenses that I have seen over the years have barred the customer from using the product to create a competing product, or a product that would compete with any product in the licensor's line; and barred the customer from modifying or customizing the product in a way that satirized or would otherwise be embarrassing or insulting to the licensor.

What other limits can be imposed? Nothing in UCITA limits the limitations that a vendor can place on the use of their software or of the information (such as court cases) downloaded from the vendor's website or database. Unless a court declares that the restriction is unconscionable or in fundamental conflict with public policy, breaching that restriction is a breach of contract under UCITA section 307.

2. UCITA essentially wipes out the first sale doctrine.

Section 109(a) of the Copyright Act[243] lays out the statutory basis of the first sale doctrine: "[n]otwithstanding the provisions of section 106(3), the owner of a particular copy or phonorecord lawfully made under this title, or any person authorized by such owner, is entitled, without the authority of the copyright owner, to sell or otherwise dispose of the possession of that copy or phonorecord."

The statute reflects a longstanding policy favoring alienation of property. So, for example, in the 1917 case of *Straus v. Victor Talking Machine Co.,*[244] the Court rejected a standard form "license,"

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242. William J. Woodward, Jr., *Motion [to the American Law Institute] to Delete section 2B-108 from Draft U.C.C. Article 2B* (May 6, 1998) <207.103.196.3/ali/woodward2.htm>.

243. 17 U.S.C. § 109(a)

244. 243 U.S. 490, 501. For more along these lines, shepardize Jewelers' Mercantile Agency v. Jewelers' Pub. Co., 155 N.Y. 241 (1898) (rejected the fiction of a lease offered to all comers that restricted transfer of the book and use of information in it); *Bobbs-Merrill Co. v. Straus*, 210 U.S. 339 (1908) (rejected a restrictive notice on a book that prohibited the buyer from reselling the book for less than a minimum price). Under the first sale doctrine, publisher lost its property interest in an individual

saying:

> Courts would be perversely blind if they failed to look through such an attempt as this "License Notice" thus plainly is to sell property for a full price, and yet to place restraints upon its further alienation, such as have been hateful to the law from Lord Coke's day to ours, because obnoxious to the public interest.

The Copyright Act grants first sale rights to the *owner* of a copy, not necessarily to a rightful possessor. The licensee possessor of a licensed copy is not necessarily the owner of that copy. It is this distinction that underlies UCITA's power to wipe out transferability of mass market software and other mass-marketed information products (such as electronic books) without being preempted by the Copyright Act.

As the Software Publishers Association's *Guide to Contracts and the Legal Protection of Software* puts it,[245]

> When you license, rather than sell, your software, you retain title to each copy of the software delivered to the customers . . . and merely grant the customer the right to use the software. Because you retain ownership, you control the scope of the rights granted to the user. Specifically, you can either (i) grant to the customer rights greater than those the Copyright Act allows, or, alternatively, (ii) restrict the customer's use of the software to something less than what the copyright law allows. However, your ability to take away from the customer rights otherwise granted by the Copyright Act depends upon the characterization of the transaction as a license rather than a sale. To the extent the transaction is considered a sale, you may not be able to restrict rights granted to the customer by the Copyright Act.

Consider transactions that look just like sales, that consumers and other customers reasonably think of as sales. When a consumer buys a copy of Microsoft Word and a copy of a book about the program, the software transaction would be a license while the book transaction is a sale, even if the two items were side by side, the customer bought them both from the same cashier, and the software license was not available to the customer until after she paid for the product and took it away. Under UCITA section 102(a)(40) a transaction can be a license even if the licensee is given title to the transferred copy.[246]

Under UCITA section 503(2), "a term prohibiting transfer of a party's interest is enforceable, and a transfer made in violation of that term is a breach of contract and is ineffective." There are exceptions to this general rule, but the rule applies to mass market software.

There is no requirement in UCITA that a transfer restriction be revealed to the customer at time of sale. A restriction that is presented only after the sale is enforceable. Most publishers probably will include such restrictions in their products—after all, what is the down side for them?

It was fascinating listening to the NCCUSL debate on this section, because Commissioners justified

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copy of a book once it sold that copy. The restrictive notice could not transform a sale into a license. *See also* RCA Mfg. Co. v. Whiteman, 114 F.2d 86 (2d Cir. 1940) (Licensing language on record albums could not convert a mass-market sale into a license). For patent law, look at the doctrine of exhaustion, starting with *Motion Picture Patents Co. v. Universal Film Manufacturing Co.*, 243 U.S. 502 (1917).

245. SMEDINGHOFF, *supra* note 92, at 73.

246. Under UCITA § 102(a) (40) a license "expressly limits the access or uses authorized or expressly grants fewer than all rights in the information, *whether or not the transferee has title to a licensed copy.* The term includes an access contract, a lease of a computer program, and a consignment of a copy." (italics added)

it by talking in terms of prohibiting acts that would be copyright violations. I agree with them that it would be A Bad Thing if someone bought a computer program, made a copy on his computer, and then sold the original while keeping the copy. But we do not need UCITA to deal with this. The Copyright Act forbids it already.

UCITA does not only apply to software. UCITA applies to "computer information" which is defined in section 102(a)(10) to mean "information in electronic form which is obtained from or through the use of a computer or which is in a form capable of being processed by a computer. The term includes a copy of the information and any documentation or packaging associated with the copy." (Coverage is both broader and narrower than this definition because of the rules governing mixed transactions, opt in, opt out, and exclusions written to placate the sound recording and motion picture industries. See section 103).

Information that is stored in electronic form is within the scope of UCITA. To the extent that libraries want to shift their collection from paper copies of books to electronic copies, they face UCITA and all the transfer restrictions and use restrictions that come with it. This has serious implications for libraries, which is part of the reason that they so strenuously oppose UCITA.[247]

Following the outline at the start of this article, here are some of the consequences:

- We lose our right to transfer copies when we are done with a product.[248]

- We lose our ability to limit costs by buying used software.[249]

- We lose our right to borrow or lend copies or to share a copy. As a consequence, libraries cannot lend electronic materials to patrons. For example, a consumer who buys a copy of an encyclopedia on CD cannot donate the used CD to her local library, and the library cannot lend the CD to a patron.

- We lose our ability to look up materials in a public library, because we can and often will be barred by use restrictions that limit who can use electronic information or how many can use it.

- We lose our ability to buy a library card and do research in a university library, unless we are students or faculty there. Libraries are already dealing with licensing of electronic materials, with use and circulation restrictions.[250]

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247. *See, e.g.,* Carrie Russell, Office for Information Technology Policy, *The Uniform Computer Information Transactions Act (UCITA) and Libraries*, <www.ala.org/washoff/ucitaoitp.pdf> ("Elimination of first sale: Because information products are licensed and leased from vendors, rather than purchased and owned by libraries, copyright law's "first sale doctrine" does not apply. This means that libraries can no longer assume that they can legally loan software or cd-roms to library users. License provisions could eliminate the right of libraries to lend products, donate library materials, or resell unwanted materials in the annual library book sale."); Letter from Duane E. Webster, Association of Research Libraries, Roger H. Parent, American Association of Law Libraries, David Bender, Special Libraries Association, Carol Henderson, American Library Association, & Carla Funk, Medical Library Association, to Gene N. Lebrun, President of NCCUSL (Jul 12, 1999) <www.arl. org/info/letters/lebrun7.12.html>.

248. *See also* Part I.B.5 *supra* on used software.

249. *See also* Part I.B.5 *supra* on used software.

250. Peter Lyman spoke at the UC Berkeley Center for Law & Technology symposium on The Impact of Article 2B, publishing *The Article 2B Debate and the Sociology of the Information Age*, 13 BERKELEY TECH. L.J. 1063, 1083 (1998). In his published remarks, in a section titled *The death of the research library*, he stated that:

3. UCITA Allows Surprising Terms

UCITA will allow publishers to enforce surprise terms, such as those that unexpectedly transfer all rights to our work products to vendors of our tools.

During the UCITA drafting process, lawyers representing large corporate customers said repeatedly that UCITA would force them to change their business practices. Their concern is that software contracts contain remarkably aggressive terms. They do not think that they would be bound by the worst of these terms in mass-market contracts under current law, but these terms certainly seem enforceable under UCITA, no matter who pays for them or who installs them on their company's computer system. Therefore, these corporate counsel said, they think that they will have to get involved in a review of every software acquisition and installation made by their companies.

Here is an example of the problem. Go to Intel's website.[251] If the page is the same as it was on March 23, 2000, it will have an advertisement for the Intel Photo Album II applet. It says,

> "Use the Photo Album II applet to add high-tech image transitions to your Web pages. Origami, Unseen Wind and Brush are just a few of the effects that will surprise and delight your viewers."

The product category appeals to consumers, to relatively junior designers of websites, and to other people who would not normally have much power to bind a corporation to significant contracts. This product is free. No one has to sign a cheque or a purchase order to get it. It can be obtained and used at a company with no review by anyone involved with the management of that company.

Intel's page provides two sets of samples of use of the product:

- the Lincoln High School Student Activity Center and

- TransWorld Travel

Neither organization (Lincoln High School or TransWorld Travel) would be classed as a consumer

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The public research library has governed the information flow for innovation and research for the past century, and, together with the Land Grant University, has served as the core of American information policy in the age of industrialization. But this strategy is now becoming endangered by the enclosure of the public domain. Today the digital library is still a hybrid of gift and market exchange, as libraries digitize works that are out of copyright or produced for the public domain. But many current publications, particularly scientific journals, are regulated by contractual terms that do not permit sales to libraries, but instead only license the use of their 'information content.' Indeed, the term 'information content' was designed by the publishing industry to signify that they have become merchant bankers in intellectual property; the business of publishing now concerns ownership of information flows, the licensing of the use of information. Publishers' contracts generally forbid the use of digital documents in the traditional library gift economy, such as circulation outside of the institutional license or inter-library loan. Research information flows in the digital library of the future will likely be governed on a per capita or fee for service basis.

Id. Additional remarks at the conference pointed out further restrictions, such as a limit on the use of materials to faculty and students.

One problem posed to university libraries is that they make money by selling library passes to local businesses, lawyers, and other researchers. With the new restrictions, the libraries serve these patrons less and less well. The local businesses have less access to research materials (less ability to compete with larger businesses than can afford to build their own library collections) and therefore less incentive to join and support (with grants to help expand collections, as well as with memberships) the libraries.

251. Intel <www.intel.com/home/funstuff/webapplets/album2/album2.htm >.

under UCITA.

Buried in the license agreement [252] starting 577 words into a 1232 word document, is the following text:

> Licensee agrees that all works of authorship, inventions, improvements, developments making use of the Applet or any portion of the Applet, solely or in collaboration with others, as well as all patents, copyrights, trade secrets, trademarks and other intellectual property rights therein and thereto (collectively, "Developments"), are the sole property of Intel. Licensee agrees to assign (or cause to be assigned) and does hereby assign fully to Intel all such Developments.

The next section puts licensees under a duty of disclosure to Intel:

> Licensee agrees to assist Intel, or its designee, at Intel's expense, in every proper way to secure Intel's rights in the Developments, including the disclosure to Intel of all pertinent information and data with respect thereto.

Suppose that you are the corporate counsel in a company that has a public web site and an internal site that includes a password-protected section that presents new technical ideas and specifications for your advanced product's group review. The ideas presented are valuable trade secrets.

Now suppose that one of your company's technical staff downloaded the Intel Photo Album II applet, did not read or understand all of the legal terms, and used it on the public web site and on the internal site, to create the New Ideas presentation. If Intel's license clause is enforceable, Intel now owns part of your public site, and it owns your secret presentation. Further, you must disclose your creation to Intel and help them secure their rights in your (well, what used to be your) intellectual property.

In early versions of Article 2B, a clause like this might have been knocked out. In an early version of section 2B-308, Article 2B, said:

> A term does not become part of the contract if the term creates an obligation or imposes a limitation which: (1) the party proposing the form should know would cause an ordinary and reasonable person acquiring this type of information and receiving the form to refuse the license if that party knew that the license contained the particular term.[253]

Unfortunately, even this weak exclusion of surprising, material terms is not part of UCITA. Had you reviewed the license, you would probably have rejected this term immediately and told the staff member not to use Photo Album II for any purpose inside your company. But you did not review the terms. So if they used the product, how can you protect your company's work products and secrets from Intel?

You might try arguing that the term is unconscionable under UCITA section 111, but courts are rarely receptive to a business' plea for relief from a contract term on grounds of unconscionability.[254] You might try arguing that this term should not be enforced because something about it violates a fundamental public policy,[255] but I am not sure which policy you would cite.

Clearly, if you are corporate counsel then, in the land of UCITA, before allowing your company to use any piece of software, clip art, downloaded information, or anything else that can be construed as

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252. *See* Intel <www.intel.com/home/funstuff/webapplets/album2/agreement.htm>.

253. Referring to the December 12, 1996 draft.

254. WHITE & SUMMERS, supra note 186.

255. UCITA § 105(b).

computer information, you must review each and every associated license, even for products that cost nothing or only a few dollars. Otherwise, the intellectual property of your company is at risk.

4. *UCITA Drops Traditional Distinctions Between Patent, Copyright and Trademark*

UCITA section 102(a)(38) says that "'Informational rights' include all rights in information created under laws governing patents, copyrights, mask works, trade secrets, trademarks, publicity rights, or any other law that gives a person, independently of contract, a right to control or preclude another person's use of or access to the information on the basis of the rights holder's interest in the information."

The laws governing these different rights are very different. For example, copyright protects original expression, not ideas. Patents protect ideas. Copyright attaches to a work on creation. A work can be copyrighted whether it is published or not. Patent is awarded only after a complex process involving proof that the idea is useful and original. The patented application is public. In contrast, trade secret protection vanishes as soon as the secret becomes public. There are many other differences. UCITA ignores the differences and treats them as if they were the same. They can all be licensed in the same way, with the same disclaimers and the same use restrictions. Except to the extent that a judge rules a license contract invalid because of a conflict with federal intellectual property laws, the licensing law creates a private regime of intellectual property law, written by the contract author.[256]

Distinctions between these rights will probably eventually be reestablished, but how much litigation will it take, across how many courts, and over how many years, to determine which license terms are preempted or against public policy? What will this cost? And in the interim, how much of a chilling effect will UCITA-based restrictions have on what are really fair uses of copyrighted, patented, trademarked, or allegedly secret materials? What will be the effect on law-abiding engineers or engineers who know that the cannot afford to finance a defense if they are sued for ignoring an invalid use restriction that is written into the license?

IV. UCITA'S ELECTRONIC COMMUNICATIONS RULES CREATE RISKS AND WASTE

UCITA's rules for sending and receipt of electronic communications create new risks and impose substantial and wasteful transaction costs associated with e-mail.

UCITA section 102(a) (53) defines "receive" as taking receipt and section 102(a)(52) (II) defines "Receipt" to mean:

> in the case of an electronic notice, coming into existence in an information processing system or at an address in that system in a form capable of being processed by or perceived from a system of that type by a recipient, if the recipient uses, or otherwise has designated or holds out, that place or system for receipt of notices of the kind to be given and the sender does not know that the notice cannot be accessed from that place.

Under section 215(a) "Receipt of an electronic message is effective when received even if no individual is aware of its receipt."

This definition creates serious problems.

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256. For a further discussion on this and additional citations, 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 (1999).

- The definition of receipt is seriously ambiguous.

- Receipt occurs even if the intended recipient never receives it. Someone who orders a copy of a computer program or other online information can be made to pay for it and to pay full price for a replacement copy, if the copy sent was lost or garbled in transmission.

- Notification (receipt by the customer, as a matter of law) can be mere publication on the licensor's website or delivery to an account that the allegedly intended recipient never uses and may not even realize exists.

- Notification occurs even if the recipient cannot read the message.

- Notification occurs even if the recipient never receives the message.

- Notification occurs at time of delivery to the intended recipient's internet service provider even if the intended recipient rarely checks e-mail.

- Notification occurs even if the message is delivered to an account that was closed by the intended recipient.

- Notification occurs even if the message is formatted or routed in a way that makes it a target for destruction by a reasonably configured spam filter (such as anti-pornography filter).

Some readers will not have thought much about the path that a message takes when it is sent electronically from one computer to another. Here is the tracing of the path of an electronic mail message that was sent by John Young to the Cyberia-L mailing list, and from there to me.

1. `X-Sender: jya@pop.pipeline.com`

The message originated at an account associated with John Young

2. `Received: from jy01 (user-2inig6t.dialup.mindspring.com [165.121.64.221]) by maynard.mail.mindspring.net (8.9.3/8.8.5) with SMTP id QAA25768 for <CYBERIA-L@LISTSERV.AOL.COM>; Sun, 19 Mar 2000 16:42:46 -0500 (EST)`

From there, it went through a couple of parts of the mindspring.com system, en route to America Online, which hosts the Cyberia-l mailing list.

3. `Received: from maynard.mail.mindspring.net (maynard.mail.mindspring.net [207.69.200.243]) by listserv.aol.com (8.8.8/8.8.8) with ESMTP id QAA01444 for <CYBERIA-L@LISTSERV.AOL.COM>; Sun, 19 Mar 2000 16:42:47 -0500 (EST)`

The mindspring.com system got it to America Online.

4. `Received: from LISTSERV.AOL.COM by LISTSERV.AOL.COM (LISTSERV TCP/IP release 1.8d) with spool id 13337329 for CYBERIA-L@LISTSERV.AOL.COM; Sun, 19 Mar 2000 16:42:48 -0500`

America Online sends the message to somewhere else in America Online

5. `Received: from LISTSERV.AOL.COM by lmailaol2.aol.com (LSMTP for`

```
Windows NT v1.1b) with SMTP id <4.00044CA8@lmailaol2.aol.com>;
19 Mar 2000 16:42:50 -0500
```

America Online sends the message to somewhere else in America Online

6. ```
Received: from lmailaol2.aol.com (lmailaol2.aol.com
[152.163.225.39])by proxy1.ba.best.com (8.9.3/8.9.2/best.in)
with ESMTP id NAA16116 for <kaner@KANER.COM>; Sun, 19 Mar 2000
13:43:22 -0800 (PST)
```

*America Online sends the message to the service provider, best.com, that hosts kaner.com.*

7. ```
Received: from proxy1.ba.best.com (root@proxy1.ba.best.com
[206.184.139.12]) by shell5.ba.best.com (8.9.3/8.9.2/best.sh)
with ESMTP id NAA00775 for
<cemkaner+XRCPT.6b616e6572404b414e45522e434f4d@shell5.ba.best.
com>; Sun, 19 Mar 2000 13:45:01 -0800 (PST)
```

Best.com sends it to an account that I can access by dialing in.

Not shown on this header file is my path to best.com to retrieve my message. Let's add in the steps:

8. Sitting in my hotel-room (I am on the road a lot), I dial a local access number to reach Earthlink.net. Often, I reach a dialsprint.net server, but sometimes it is psi.net or uu.net. This is normally invisible to me.

9. If I am actively working for a rather large client of mine, then I will have reconfigured my computer to access their servers. In that case, messages will route through myaddress.clientcompany.com *(name changed to preserve confidentiality).*

10. Logged onto Earthlink and maybe also clientcompany.com, my mail program sends a message to shell5.ba.best.com, logs me on, and retrieves my mail, which comes back through clientcompany and then Earthlink and then dialsprint.net or uu.net to my hotel's telephone system to the phone on my desk to my computer.

11. At my local computer, my mail program, Eudora, scans every message. I often receive 300 messages in a day. Eudora examines the routing, the return address, and some other aspects of the message. Eudora deletes all messages from certain individuals (this is called "bozo filtering") and most messages advertising pornography, get rich quick schemes, candidates for sheriff of Frogsquat, Minnesota, the joys of conversion to some sect of Christianity, and other such sordid stuff, which I collectively call spam (this is called "spam filtering"). It takes me about 30 seconds to recognize and delete a spam message by hand. [257] I receive up to 100 spams a day, so if I had to manually sort this junk, I would waste almost an hour a day at it. In contrast, the sender simply uses a bulk e-mail package and dumps thousands or millions of these messages onto the Internet for almost nothing. Not surprisingly, the rate of spamming is increasing, making my spam filter more and more invaluable. Unfortunately, sometimes my spam filter deletes perfectly legitimate mail that looks like junk mail.

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[257]. It actually takes a bit longer because, when I notice them, I forward messages that appear to be promoting unlawful schemes to the Federal Trade Commission or the Securities Exchange Commission.

12. I then attempt to read the remaining incoming messages. Most of them are fine. Every now and again, I get something that looks like this:

```
DUFtZXJpY2FuIEFzc29jaWF0aW9uIGZvciB0aGUgQWR2YW5jZW1lbnQgb2YgU2Np
ZW5jQ1BbWVyaWNhbiBBc3NvY2lhdGlvbiBvZiBFbmdpbmVlcmluZyBTb2NpZXRp
ZXMNQW1lcmljYW4gQXNzb2NpYXRpb24gb2YgUGh5c2ljyBUZ
```

1. *Ambiguity*

Look at the elements of the definition of receipt. What will courts make of this:

coming into existence in an information processing system or at an address in the system in a form capable of being processed by or perceived from a system of that type by a recipient, if the recipient uses, if the recipient uses, or otherwise has designated or holds out, that place or system for receipt of notices of the kind to be given and the sender does not know that the notice cannot be accessed from that place.

- *"coming into existence"* raises metaphysical questions that exceed the scope of this paper.

- "*in an information processing system or at an address in the system*" could mean too many things. In the tracing through of the message from John Young to Cyberia-L to me, did the message come into existence at AOL in step 3 or 4 or 5 or all of the above? Did it reach me (kaner.com) when it hit proxy1.ba.best.com in step 6 or shell5.ba.best.com in step 7 or when it reached my client's server (step 10) or Earthlink (step 10) or the hotel's phone system (step 10—if you do not think that this is an opportunity for transmission foul-ups, you need to stay in more or more varied hotels) or my computer (step 10) or when it survives my bozo filter (step 11) and my spam filter (step 11)? From the discussion in the UCITA meetings and based on the language of UCITA, I believe that according to UCITA, AOL receipt occurs at step 3 and kaner.com receipt occurs at step 6.

- *"in a form capable of being processed by or perceived"*–What does this mean? The fragment DUFtZXJpY2FuIEFzc29jaWF0aW9uIGZvciB0aGUgQWR2YW5jZW1lbnQgb2YgU2NpZW5jZQ1BbWVyaWNhbiBBc3NvY2lhdGlvbiBvZiBFbmdpbmVlcmluZyBTb2NpZXRpZXMNQW1lcmljYW4gQXNzb2NpYXRpb24gb2YgUGh5c2ljyBUZ, is from a real message that I received last week. I can process it. And I can perceive it. I even made a copy of it and pasted it into this paper so you can perceive it too. Want to perceive it again? DUFtZXJ. *See?* You might even be able to pronounce it: DUFtZXJ? DUFtZXJ! DUFtZXJ! DUFtZXJ! DUFtZXJ! DUFtZXJpY2FuIEFzc29jaWF0aW9uIGZvciB!! Maybe processing and perceiving are not the issue, if you can not understand the message.

- *"from a system of that type"* — What type is this? The type(s) used by AOL? Best? Earthlink? My Dell / Micron / Toshiba / Amiga / Macintosh computer du jour? When I said my e-mail address is kaner@kaner.com, did this specify or even imply some kind of computer or system?

- *"by a recipient"* – UCITA does not define "recipient" and there are many recipients in the chain from sender to (if it ever reaches me) me.[258] Let's pretend for the rest of this section that the "recipient" means me.

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258. Bob Johnson and I traced out additional details of the e-mail path in Notes on E-Mail Receipt. *See* (Jan. 10, 1998) <www.badsoftware.com/email.htm.>.

- *"if the recipient uses, or otherwise has designated or holds out, that place or system for receipt of notices of the kind to be given"*–What constitutes designating or holding out? Does my e-mail address on my business card count? What if I am listed in an online e-mail address book? What if the vendor's form designates its web page as the place for receipt of notices?[259] What if the fine print in the vendor's form refers to an e-mail address that it will create for me (kanerxxx23@hotyoohoomail.com). When I clicked OK in order to download my software, did I agree to regularly check the vendor's web page or hotyoohoomail? How many of these web pages and special e-mail addresses am I going to have to manage?

- *"and the sender does not know that the notice cannot be accessed from that place"*—What place? What does accessed mean? What constitutes knowledge on the part of the sender? If the sender sends a message to me that bounces because of a transmission problem, does the sender know? What if the bounce (rejection message) fails to reach the sender? What if it reaches the sender's computer but is wiped out by the sender's bozo filter? (After all, the standard *for the sender* is *knowledge*, not receipt). What if the bounce reaches the sender's clerical staff but the "sender" was an executive who never reads his own e-mail and never reads or interprets bounce messages? What if the sender is a lawyer who does not know how to interpret bounce messages?

For the rest of this section, the following hypothetical facts will be used:

Suppose that your Internet Service Provider (ISP) is YOURISP.COM and your e-mail address is yourname@YOURISP.COM. And suppose that you engaged in an electronic transaction (such as downloading software from a web site) and that the associated non-negotiable contract specified in the fine print that all deliveries and legal notices could be sent to you by e-mail to yourname@YOURISP.COM. By clicking OK to that license, you have designated your internet service provider (in this case, YOURISP.COM) as the place or system for receipt of such notices.

2. *Receipt Occurs Even If the Recipient Never Receives the Message*

Suppose that the vendor sends a copy of the software or document that you ordered to yourname@YOURISP.COM. The fact that the message (containing your ordered material) reached YOURISP.COM does not mean that it will reach you. There can be a problem at YOURISP's server (they lose your messages[260]) or a transmission problem (the message gets corrupted or lost en route from YOURISP to your machine) or the message might be corrupted at your computer (maybe by a virus or by a bug in your mail program).

If the message reaches YOURISP.COM, but does not reach your computer, I read UCITA to mean that you have received the message. Note the difference between this situation and the mailbox rule. Under the mailbox rule, we create a presumption that a letter has been received with a certain time after it is sent. But that presumption is generally refutable. In this case, even though the message has never

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259. *See, e.g,* the eFax and AOL terms of service, *supra* note 101.

260. I am not aware of any Internet Service Provider who provides a warranty that they will not lose mail or that they will deliver the mail in a timely manner, nor of any that do not disclaim incidental or consequential damages. As between them and the customer, the risk that they will lose messages is entirely on their customer. UCITA carries this a step further and says that, as between the sender of the message and the ISP's customer, the risk of a lost message falls entirely on the ISP's customer.

reached any screen that lines up with your eyeball, UCITA says that as a matter of law, you have received it.

In the world of hardcopy letters and physical packages, senders use certified mail, registered mail, and couriers who obtain signatures on delivery in order to prove actual delivery in good condition. UCITA's version of the mailbox rule makes these proofs unnecessary, so long as proof of delivery to the ISP is possible.

A problem that UCITA creates for businesses arises out of the difficulty of finding skilled network and system administrators in the current job market. Under UCITA, mail sent to employee@Corporation.com has been received when it reaches Corporation's server, but if Corporation is having trouble breaking in a new system administrator, a lot of mail might never reach any of Corporation's employees. Lost e-mail is not like lost letters that go to the wrong person but can be rerouted back. Losing a day of e-mail is like sending all of your company's mail to the shredder. It's gone. And if you just lose a percentage of it, you might not even realize that you have a lost-mail problem until your company is held accountable for notices that no one ever actually had the opportunity to read.

3. *Failure of* Actual *Receipt Allows Vendor to Double Charge*

UCITA section 614 (a) carries the receipt rule to its vendor-favorable extreme: "Except as otherwise provided in this section, the risk of loss as to a copy that is to be delivered to a licensee, including a copy delivered by electronic means, passes to the licensee upon its receipt of the copy."

Thus, if the message (containing the software or document that you ordered) is corrupted after UCITA-receipt but under circumstances that make it impossible for you to see it or use it, the burden of the loss falls on you. There is a serious imbalance here. Suppose that you paid $500 for this software. It might cost the software company $5 in processing expense to resend it to you, but if you want that program, the vendor can charge you the full $500 to retransmit.

Where, as here, there is absolutely no cost of goods to the vendor, should the law not allow the customer to simply reimburse the vendor for its additional handling expense, rather than giving the vendor a windfall?

4. *Vendor Can Publish Notices on its Website or to Vendor-Created Accounts*

The plain language of the definition of receipt allows the vendor to put a notice anywhere that is designated by the customer. The designation can be a file on the vendor's website or the fine print in the vendor's form can designate an e-mail address that the vendor will create for you (yourname@hotyoohoomail.com).

The 24 Attorneys General[261] singled this out as an opportunity for abuse and the Motion Picture Association explained how this would plague large customers.[262]

5. *Notification Occurs Even If the Recipient Cannot Read the Message*

As long as the sender does not know that the alleged recipient can not read it, the message is deemed

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261. Letter from Attorneys General, *supra* note 26; discussion *supra* notes 103 - 106.

262. Motion Picture Association of America, *supra* note 105.

received.

6. Notification Occurs Even If the Recipient Never Receives the Message

As an extreme example of abuse, imagine that you have no modem, no e-mail account and no access to the web. You buy a copy of a computer program and the license specifies that all notices and modifications will be posted at the vendor's website. Under UCITA, your receipt of these notices occurs when messages are posted by the vendor at that site, even though you cannot access or read the messages.

7. Notification Occurs Even If the Message Goes to A Closed Account

I have had at least 14 different e-mail addresses since 1983, when I opened my first account. Eventually I chose to acquire a domain name, kaner.com, in order to have lifelong consistency. Many other people still use ISP names or business names in their address (yourname@YOURISP.COM) even though they may leave that ISP or that business at any time. Mail sent to my old addresses sometimes bounces and sometimes is received by the ISP but neither forwarded to me nor bounced (rejected with a rejection e-mail to the sender). As I read UCITA's definition of receipt, if the vendor sends a notice to an old e-mail address of mine, I have received it as a matter of law unless the vendor has actual knowledge that the message will not or did not reach me.

8. *Time of Delivery*

Receipt of a message to yourname@YOURISP.COM occurs when the message hits the ISP. But what if you rarely use electronic mail or if you rarely use this account? You might not see this message for months. If there are legal consequences of the date of delivery (such as a 10-day notice), you will suffer those consequences.

- The problem is that people are still learning how to use the Internet.

- There are many free e-mail account providers and some people sign up with several of them without realizing that they might find it a challenge to check their mail at (or even remember how or where to check their mail at) all those accounts.

There is no cultural expectation of prompt handling of e-mail. Yes, some lawyers say there should be such an expectation, but I sometimes wonder about their zeal. It is often suggested that recent converts to a religion are among the most zealous. Several of the attorneys who are most adamant that humans must be held to high standards of e-mail processing accountability have been relying on e-mail for a relatively short time and are not necessarily the most technologically sophisticated beings in the profession. Many people in the United States have never used electronic mail. When they get a new computer, they do not get large print notices that they have a legal duty to check their e-mail. The expectation that one will promptly read hard copy mail developed over a long period of time. Why should we expect people to immediately assume that they have the same duty for e-mail?

Commercial law should follow common practice. UCITA adopts a regulatory approach, telling all present and future computer users that they must henceforth treat e-mail more seriously than many (I suspect most) do today. At some time in the future, perhaps the culture of e-mail will match that of postal mail. But until then, I think that commercial law should strive to ensure that the time of receipt (as defined by law) bear a reasonable relationship to the time that the intended recipient actually reads the message.

Some of UCITA's proponents have protested that such a rule would make it easy for customers to evade receipt of critical notices. Yes, they might be able to evade electronic notification, but that still leaves postal notification as a fallback. In those cases in which the vendor has no postal address for the customer, UCITA can allow the vendor to obtain constructive notice by sending notice(s) to the place(s) (including e-mail addresses) calculated in good faith to be the most likely to actually notify the customer.

9. *You* Can not *Filter Your E-Mail*

Filtering is a big problem. According to a recent article in the Boston Globe,[263] a huge proportion of circulating e-mail is spam, unsolicited junk mail. According to the article, 15-30% of the e-mail received by America Online is spam. The article quotes estimates that pornographers are the source of 30.2 percent of the spam on the Internet, followed by get-rich-quick and work-at-home schemes (29.6 percent of spam). People who receive a lot of electronic mail often use filters, programs that detect spam and erase it before they ever have a chance to notice it.

Suppose that you use a filter that wipes out any message that originates from the domain, SpamSender.com. Someday, someone might send you a legal notice via SpamSender.com. If your filter wipes out messages from that source, you will never see the legal notice. But under UCITA, that notice will have full legal effect because it reached your system, even though it stood no chance of reaching your eyeball.

Under UCITA, anyone who engages in electronic commerce (such as electronic banking) will probably end up with e-mail notification clauses in their contracts. If they filter the junk out of their electronic mail, they risk being held accountable for having received messages that their computer completely hid from them (as it was supposed to do). A risk-averse person will not and should not use spam filters because of the risks of filtering that are imposed on them by UCITA. Under UCITA, these people will have to hand filter every offensive piece of pornography that is dumped to their system.

UCITA's rule creates challenges for the corporation as well. Corporations receive a lot of spam. Today, in many companies, much of this spam is filtered (identified and deleted) as it comes into the system. The corporate computers identify the spam as having a distinguishing title or as originating from an internet service provider that routinely hosts spammers. As they filter, some legitimate mail is inevitably lost. So, imagine yourself as corporate counsel. Do you tell your company they can continue to automatically filter mail? Or, because of the UCITA-imposed risks on filtering, do you say that they have to stop filtering and actually inspect / read every message? How much of your company's time are you willing to waste on this? How much of their time are they willing to let you waste?

How much waste should we impose on individuals and companies, just to make it a little easier for a company to send a legally enforceable electronic notice rather than telling them that if the electronic notice is not read by the intended recipient, the sender will have to rely on a traditional vehicle, like a letter?

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263. Simson Garfinkel, *Declaring war on spam: Internet service providers and consumers battle electronic junk mail problem*, BOSTON GLOBE (Dec. 9, 1999), *available at* <www.boston.com/globe/search>.

V. UCITA INTERFERES WITH TRADITIONAL, REASONABLE ENGINEERING PRACTICES

1. *UCITA Allows Publishers to Ban Reverse Engineering*

See Parts I.B.3 and II.A.3 for discussion.

2. *User Interface of Software as "Published Information Content"*

First, look at the relevant sections of UCITA:

UCITA section 102(a) (51) "Published informational content" means "informational content prepared for or made available to recipients generally, or to a class of recipients, in substantially the same form. The term does not include informational content that is: (A) customized for a particular recipient by one or more individuals acting as or on behalf of the licensor, using judgment or expertise; or (B) provided in a special relationship of reliance between the provider and the recipient."

UCITA section 102(a) (37) "Informational content" means "information that is intended to be communicated to or perceived by an individual in the ordinary use of the information, or the equivalent of that information."

UCITA section 102(a) (35) "Information" means "data, text, images, sounds, mask works, or computer programs, including collections and compilations of them."

The "user interface" of a computer program is the portion with which a user interacts.[264] Published informational content includes computer programs, data, text, sounds, images, etc. that are intended to be communicated to or perceived by the users of a computer program, i.e. it includes the program's user interface.

User interface design and development is a key focus of at least two professional societies.[265] It is the focus of research conferences,[266] research journals,[267] and technical treatises.[268] My first doctorate is in

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264. MICROSOFT PRESS, COMPUTER DICTIONARY (4th ed., 1999)

265. Association for Computing Machinery's Special Interest Group on Human Computer Interaction (SIGCHI), the Human Factors & Ergonomics Society (HFES, especially its Computer Systems Technical Group), and the European Institute of Cognitive Science & Engineering.

266. *E.g.,* The ACM SIGCHI conference <www.acm.org/ows-bin/is/owa/event.show?event_id_in=10001367>; Human-Computer Interaction in South Africa <www.acm.org/ows-bin/is/owa/event.show?event_id_in=10005009>; ACM Conference on Hypertext and Hypermedia <www.acm.org/ows-bin/is/owa/event.show?event_id_in=10003421>; Workshop on Human-Computer Conversation <www.acm.org/ows-bin/is/owa/event.show?event_id_in=10003843>; Designing Interactive Systems <www.acm.org/ows-bin/is/owa/event.show?event_id_in=10001369>; International Conference on Collaborative Virtual Environments <www.ai.sri.com/cve2000>; International Conference on Human-Computer Interaction in Aeronautics <www.acm.org/ows-bin/is/owa/event.show?event_id_in=10003408>; Conference on Computer Supported Cooperative Work <www.acm.org/ows-bin/is/owa/event.show?event_id_in=10003416>; Human Factors & Ergonomics Society <iea2000.hfes.org>; HUMAN FACTORS PERSPECTIVES ON HUMAN-COMPUTER INTERACTION: SELECTIONS FROM PROCEEDINGS OF HUMAN FACTORS AND ERGONOMICS SOCIETY ANNUAL MEETINGS, 1983-1994, (Gary Perlman, Georgia K. Green, and Michael S. Wogalter, eds., 1995), *available at* <www.hfes.org/Publications/HCIReadings.html>.

human experimental psychology and much of my early work in computing was in user interface design and evaluation.

Speaking on the basis of 17 years of Silicon Valley based work in the development of commercial software, I can say from experience that it is an often subtle or hotly debated question whether a specific weakness in the user interface of a computer program should be considered a software defect. Problems in the user interface can be significant. A poor user interface can deprive the customer of the value of the product.[269] And user interface design deficiencies can lead to injury or death. Neil Storey states in his book, *Safety-Critical Computer Systems*, "Often a verdict of human error is welcomed by the developers of the equipment concerned as confirmation that they were not to blame for the incident. In many cases operators make mistakes because of a poorly designed human computer interface."[270]

UCITA immunizes publishers from contract-based liability for consequences of defects in the user interface, no matter how serious.[271]

If the user interface of a product as delivered does not match the demonstrated version of that product, no problem. Not even if the slick user interface in the demonstrated version was part of the customer's decision to buy the product:

UCITA section 402(b) "However, an express warranty is not created by: (2) a display or description of a portion of the information to illustrate the aesthetics, appeal, suitability to taste, subjective quality, or the like of informational content."

Statements of fact by the publisher about the user interface are only warranties if some *other* body of law than UCITA says that they are. (What other body of law *would* create such a warranty?):

An express warranty or similar express contractual obligation, if any, exists with respect to published informational content covered by this [Act] to the same extent that it would exist if the

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267. *See, e.g.,* ACM's Transactions in Computer Human Interaction.

268. *E.g.,* Deborah J. Mayhew, The Usability Engineering Lifecycle: A Practitioner's Handbook to User Interface Design (1999); Handbook of Human-Computer Interaction (Martin G. Helander, et al., eds., 2nd Ed. Revised, 1997); Readings in Human-Computer Interaction: Toward the Year 2000 (Ronald M. Baecker, Saul Greenberg, William Buxton, & Jonathan Grudin, eds., 1998); JoAnn T. Hackos, Janice C. Redish, User and Task Analysis for Interface Design (1998); Ben Shneiderman, Designing the User Interface: Strategies for Effective Human-Computer Interaction (1997); Robert W. Bailey, Human Performance Engineering (3rd Ed., 1996); Microsoft Corporation, The Windows Interface Guidelines for Software Design (1995); Jakob Nielsen, & Robert L. Mack, Usability Inspection Methods (1994); Jeffrey Rubin, Handbook of Usability Testing (1994); Cost-Justifying Usability, (Randolph G. Bias & Deborah J. Mayhew, eds., 1994); Apple Computer Inc., MacIntosh Human Interface Guidelines (1993); Readings in Human Computer Interaction (Ronald M. Baecker & William Buxton, eds., 1987); Richard H. Spencer, Computer Usability Testing and Evaluation (1985); Erik Hollnagel, Human Reliability Analysis Context and Control (1993); Ben Shneiderman, Software Psychology (1980).

269. *See, e.g.,* Louisiana AFL-CIO v. Lanier Business Products, 797 F.2d 1364 (5th Cir. 1986); Family Drug Store of New Iberia, Inc. v. Gulf States Computer Services, Inc., 563 So.2d 1324 (Louisiana Court of Appeal, 1982).

270. Neil Storey, Safety-Critical Computer Systems 103 (1996). *See also* the analysis of the Therac-25 failures in Nancy G. Leveson, Safeware: System Safety and Computers (1995).

271. UCITA does not eliminate products liability for personal injury, though it might help the defendant to move the case into a private forum (arbitration) or a distant one. *See* Parts I.C.2 and I.D.11 *supra*.

published informational content had been published in a form that placed it outside this [Act]. However, if the warranty or similar express contractual obligation is breached, the remedies of the aggrieved party are those under this [Act] and the agreement.[272]

Defects in the user interface do not breach an implied warranty of merchantability, even if they make the product unusable, and therefore not reasonably fit for normal use.

No warranty is created under this section [implied warranty of merchantability] with respect to informational content, but an implied warranty may arise under section 404.[273]

Defects in the user interface do not breach an implied warranty of reasonable care to be accurate in information presented:

UCITA section 404(a):

Unless the warranty is disclaimed or modified, a merchant that, in a special relationship of reliance with a licensee, collects, compiles, processes, provides, or transmits informational content warrants to that licensee that there is no inaccuracy in the informational content caused by the merchant's failure to perform with reasonable care. (b) A warranty does not arise under subsection (a) with respect to: (1) published informational content.

Defects in the user interface do not breach an implied warranty of fitness for use.

Unless the warranty is disclaimed or modified, if a licensor at the time of contracting has reason to know any particular purpose for which the computer information is required and that the licensee is relying on the licensor's skill or judgment to select, develop, or furnish suitable information, the following rules apply: (1) Except as otherwise provided in paragraph (2), there is an implied warranty that the information is fit for that purpose. . . . (b) There is no warranty under subsection (a) with regard to: (2) published informational content.[274]

Third party beneficiaries have no warranty rights with respect to defects in the user interface that somehow do breach a warranty that was made to the original customer.

Except for published informational content, a warranty to a licensee extends to persons for whose benefit the licensor intends to supply the information or informational rights and which rightfully use the information in a transaction or application of a kind in which the licensor intends the information to be used.[275]

If a user interface defect somehow does entitle the customer to recover damages, the customer cannot recover consequential damages.

A party may not recover: (1) consequential damages for losses resulting from the content of published informational content unless the agreement expressly so provides.[276]

UCITA thus takes a firm stand in an unresolved engineering debate, declaring that defects in the user interface are not defects.[277]

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272. UCITA § 402(c).
273. *Id.* § 403(c).
274. *Id.* § 405(a).
275. *Id.* § 409(a).
276. *Id.* § 807(b).
277. Similar and additional points were made by Michele C. Kane, *When is a Computer Program not a Computer Program? The Perplexing World Created by U.C.C.-2B*

Note that under the language of UCITA, a user interface defect cannot be considered a defect even if the reason the user interface fails is that programming errors cause the program to work differently from the specification and from the intent of the programmer. This is an extreme position, going beyond any position that I have heard in engineering discussions of user interface errors.

I do not see any rational basis, beyond protection of companies that make unusable software, for this position in UCITA. The inclusion of the software user interface in the definition of "published informational content" was questioned several times during UCITA drafting committee meetings. I do not recall hearing even a plausible rationalization.

The division between the part of the program that is user interface and the part that is not will play a significant role in the engineering discussions of the future. Legal issues play a role in engineering design.[278] When we evaluate a program to determine whether it is fit for release to customers, for example, user interface defects will be of relatively low priority because the customer can not assert a breach of warranty, demand a refund, or collect damages because of them. UCITA has the potential to set back an important part of the software engineering field by 20 years.

3. Distinction between embedded and non-embedded software

UCITA deals with embedded software in its scope provisions:

If a transaction includes computer information and goods, this [Act] applies to the part of the transaction involving computer information, informational rights in it, and creation or modification of it. However, if a copy of a computer program is contained in and sold or leased as part of goods, this [Act] applies to the copy and the computer program only if: (A) the goods are a computer or computer peripheral; or (B) giving the buyer or lessee of the goods access to or use of the program is ordinarily a material purpose of transactions in goods of the type sold or leased.[279]

The parties may agree that this [Act], including contract-formation rules, governs the transaction . . . if a material part of the subject matter to which the agreement applies is computer information or informational rights in it that are within the scope of this [Act], or is subject matter within this [Act] under section 103(b) . . . However, any agreement to do so is subject to the following rules: (4) A copy of a computer program contained in and sold or leased as part of goods and which is excluded from this [Act] by section 103(b)(1) cannot provide the basis for an agreement under this section that this [Act] governs the transaction.[280]

"Computer" means an electronic device that accepts information in digital or similar form and

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<www.2bguide.com/docs/berkane.html> and by Barbara Simons, President of the Association for Computing Machinery, in a letter to NCCUSL (Jul. 12, 1999) <www.acm.org/usacm/copyright/usacm-ucita.html>.

278. Companies do take legal issues into account as part of product design. *See, e.g.,* HOWARD ABBOT & MARK TYLER, SAFER BY DESIGN: A GUIDE TO THE MANAGEMENT AND LAW OF DESIGNING FOR PRODUCT SAFETY (2nd ed., 1997); PRODUCT LIABILITY AND INNOVATION (Janet R. Hunziker & Trevor O. Jones, eds., 1994); THE LIABILITY MAZE: THE IMPACT OF LIABILITY LAW ON SAFETY AND INNOVATION (Robert E. Litan & Peter William Huber, eds., 1992); LINDA K. ENGHAGEN, FUNDAMENTALS OF PRODUCT LIABILITY LAW FOR ENGINEERS (1992); REBECCA J. MORTON, ENGINEERING LAW, DESIGN LIABILITY, AND PROFESSIONAL ETHICS (1983).

279. UCITA § 103(b) (1).
280. *Id.* § 104.

manipulates it for a result based on a sequence of instructions.[281]

"Electronic" means relating to technology having electrical, digital, magnetic, wireless, optical, electromagnetic, or similar capabilities.[282]

First note that if a copy of a program is contained in and sold or leased as part of a computer or computer peripheral (such as a printer or speakers or a scanner or a television that is connected to a computer), then the program is within the scope of UCITA under section 103(b) and the vendor can bring the whole transaction, including the computer, under UCITA under section 104. The UCITA contract formation rules govern, so the customer need not be informed of this choice of law until after the product is paid for and delivered.[283]

Second, note that the definition of "computer" is very broad. It includes many types of telephones, handheld organizers, digital cameras and DVD players, electronic fuel injectors, many photocopiers, various children's toys, blood sugar monitors, a variety of professional medical and dental equipment, and a wide range of other devices.

Third, even products that we might think of as classical embedded software can be brought under UCITA. For example, the aftermarket fuel injector software and computer described in Part I.C.3 above would fit within UCITA. These are not contained in and sold as part of a car. They are sold on their own, and so they qualify under section 103(b)(1)(A) (software sold with a computer) and/or section 103(b)(1)(B) (one material purpose of the transaction is to give the buyer use of the fuel injector control software).

If the aftermarket fuel injector computer and software can be brought under UCITA, then car manufacturers should be able to bring their original equipment fuel injector computers and software within UCITA too. The easiest way for them to do so would be to offer several different fuel injector options, sell the fuel injector under a separate contract from the car as a whole, and have the dealer install the selected chip and software at the dealership.

Next, consider the interaction between UCITA's transfer rules and embedded software. Suppose that you bought a computer and the contract selected UCITA as the governing law for the full transaction. Then under UCITA, the computer maker could block you not just from transferring the software but also from selling, giving away, or lending the used computer.[284]

Suppose that you bought a car with optional, separately licensed, computer chips with software to control your fuel injectors, your brakes, your suspension, and a few other functions. When you later decide to sell the car, you might not be able to sell the chips with it. This would probably have a severe impact on the resale value of the car because the buyer would have to buy all new chips, potentially driving the cost to the buyer (not what the buyer gives you) very high.

Additionally, the chance that the buyer will be able to buy copies of those chips may be nil. Consumer electronics evaporates from the marketplace a lot more quickly than the half-life of a car.

Stephen Cross, the Director of the Software Engineering Institute, points out that you can embed just

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281. *Id.* § 102(a)(9).

282. *Id.* § 102(a) (26).

283. Under UCITA section 104(3), "In a mass-market transaction, any term under this section which changes the extent to which this [Act] governs the transaction must be conspicuous." However, a term that is not available to the customer until after the product was paid for and delivered is still conspicuous so long as it is in capital letters when the customer finally has the opportunity to look at it. *Id.* § 102(a)(14)(A).

284. *Id.* § 503(2). "A term prohibiting transfer of a party's contractual interest is enforceable"

about any software in goods if you choose to, or you can put the software on a disk and sell it separately. This is an implementation detail, not a fundamental difference:

> Modern engineering increasingly embodies complex logic in software. This is true of large military systems, modern automobiles, and even children's toys. Based on cost and reliability issues, engineers decide whether to employ the product's logic in circuits, permanent memory, or a removable device like a diskette. In any case, the logic is produced with software methods and its user behavior is identical. The 2B proposal, however, would treat the resulting products quite differently. The courts should not become enmeshed in engineering implementation decisions. [P] The Article 2B proposal makes no technical sense. [285]

The embedded/nonembedded distinction is so important in UCITA because the rules of Article 2 and UCITA are so different. American companies will take into account the legal consequences when they design hardware/software packages. To the extent that their designs reflect UCITA rather than engineering tradeoffs, the American products will be less competitive than products designed for the international market. The solution is to bring Article 2 and UCITA into line, not to work harder[286] to try to develop an impossible distinction.

4. *Havoc Within the Intellectual Property Field*

Part II.D above points out the UCITA drops the distinctions between patent, copyright and trademark. The work products of software engineers are intellectual property. Until UCITA is resolved, our basic rights and practices under the intellectual property laws are open to question.

VI. UCITA INTERFERES WITH THE PRACTICES OF INDEPENDENT SOFTWARE ENGINEERS AND SMALL CONSULTING FIRMS.

According to Connie Ring, the chairman of the UCITA drafting committee:

UCITA is based on five fundamental principles: . . .

Small companies play a large role in computer information transactions. Most software and database companies are small, averaging fewer than 12 employees, but they often develop computer information products of significant commercial value to large companies. Thus, the traditional model of a large manufacturer or seller dealing with small buyers frequently is inverted in computer information transactions. Contract law must be modified to reflect these nontraditional relationships. [287]

Attendance (by software publishers) at the drafting committee meetings was largely by representatives of large companies such as Microsoft, Apple, IBM, Adobe, Oracle, and the primary trade

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285. Letter from Stephen Cross, Software Engineering Institute, to the NCCUSL Commissioners (Jun. 1, 1999) <www.badsoftware.com/sei.htm> ("The SEI was formed in 1984 by the U.S. Department of Defense to further the state of software practice in the United States. We work with all branches of U.S. government, industry, and academia and are now generally recognized as the international leader in software technology and practice.")

286. The UCITA drafting committee attempted repeatedly to find a workable definition of embedded software. The one provided in UCITA reflects a long evolution.

287. Carlyle C. Ring, et al., *Uniform law for computer info transactions is offered*, NATIONAL LAW JOURNAL, Aug. 30, 1999, at B07.

associations (which represent either large publishers only or both large and small publishers).

While there are many small software publishers, the industry is quite concentrated. For example, Soft•letter (a newsletter focusing on software publishers' marketing and operations) publishes an annual report comparing performance among 100 of the top American personal computing software publishers.[288] According to Soft•letter, "During 1997, Microsoft generated a hefty $3.7 billion of the industry's total $4.8 billion in annual sales growth."[289] The top 10 companies of the Soft•letter 100 had about 83% of the Top 100's total volume. The next 10 contributed an additional 7% of the total. The bottom 80% of the companies in the Top 100 contributed only 9% of the total sales.[290] The ratios were about the same (84% and 7%), in the 1999 Soft•letter 100.

The interests of the large and mid-sized publishers are not the same as the interests of the tiny publishers, the custom software developers, the independent consultants, the resellers, and the engineering service contracting firms (such as test labs or staffing companies).

This paper considers the impact of UCITA on software engineering, including its impact on software engineers. I focus in this section on the impact of some UCITA provisions on the very small firms and the independent consultants. Some of the issues are redundant with points made above. I include them briefly to make their point in this context.

1. *UCITA Limits Our Ability to Control Costs by Buying Used Software and Used Computers*

The restrictions on transfer of software and computers are discussed in Part II.B. The discussion of embedded software for the basis for no-transfer clauses for computers is in Part IV.C.

2. *UCITA Limits Our Ability to Create and Disband Consulting Partnerships*

As a consequence of UCITA's transfer restrictions,[291] UCITA drives up the cost for two consulting firms to merge or later split. It allows software and computer makers to either refuse to allow transfer of the product from one business entity to another or to charge a transfer tax.[292] The tax will be due even if

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288. *The 1999 Soft•Letter 100*, SOFT•LETTER: TRENDS & STRATEGIES IN SOFTWARE PUBLISHING (Apr. 30, 1999). The Soft•letter 100 ranks "the top 100 personal computer software companies in the U.S., based on calendar year revenues." *Id.* "To be ranked, a company must be an independent, U.S.-based company (subsidiaries do not qualify) that generates at least 50% of its revenues from personal computer software development or publishing." *Id.*

289. *The 1998 Soft•Letter 100*, SOFT•LETTER: TRENDS & STRATEGIES IN SOFTWARE PUBLISHING (Apr. 21, 1998) at 1.

290. *Id.* at 4.

291. *See infra* Parts II.B and IV.C.

292. Some people might prefer to call it a transfer "fee" rather than a transfer "tax" when a licensor charges you for transferring your copy of its product to someone else. But it is hard to tell the difference between a fee and a tax when the product is of a kind that is essential to a business, the same restrictions apply to all competing products in this market niche, the licenses are all nonnegotiable, the terms do not have to be revealed to the customer until after the sale and in a business case, objection to the terms is not grounds for cancellation of the contract, the license fee/tax can be raised at will, such a raise is not grounds for rejecting the contract, and failure to pay the fee is grounds for police raids and prosecution (here, for commercial copyright violation).

the same software sits on the same computer, to be used by the same person. If the business entity (one of the firms) owns the computer, the transfer restriction kicks in as soon as the owning business transfers its assets to the newly formed entity.

3. *UCITA Creates New Default Rules that Govern Our Services, Such as an Implied Warranty of Merchantability*

Independents have limited bargaining power in small contracts. Many of these are handshake deals or contracts that run less than a page, naming the service, the deadlines and the price. The clients who sign such agreements are often unwilling to review long contracts and flatly unwilling to agree to exculpatory language in the contract. And there just isn't much money available for attorney fees in a contract for $10,000 - 25,000 of engineering services. The default rules will govern most aspects of most independent consultants' contracts.

Consultants and the small service firms provide services, not goods. Examples of services might include business or task analysis in preparation for developing software, developing or reviewing specifications, writing some parts of a program or manual, testing some or all aspects of a product, installing a product at a customer site, training, and troubleshooting. These service contracts are not governed by the U.C.C.[293]

Service contracts do not come with an implied warranty of merchantability. There might be no warranties whatsoever other than the express warranties in the contract[294] Or the court might imply a warranty of reasonable care and workmanlike conduct by the service provider.[295]

UCITA attaches implied warranties of merchantability[296] and fitness for the customer's purposes[297]

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293. *See, e.g.,* KUTTEN, *supra* note 91, §§ 7.03(1)(g), 8A.02(1)(b); NIMMER, *supra* note 119, § 9.02.

294*. See, e.g.,* Micro-Managers Inc. v. Gregory and Coleman, 434 N.W.2d 97 (Wis. Ct. App. 1988); discussion in KUTTEN*, supra* note 91, § 703(1)(g).

[Usually], unless a warranty of result is explicit in the contract, it will not be implied in any but the most straightforward cases of limited discretion or judgment on the part of the services provider. In the ordinary case, the services provider merely commits to exercise reasonable care and workmanlike effort in performing its contractual obligations.

NIMMER, *supra* note 119, § 904(1).

295. NIMMER, *supra* note 119, § 904(2).

296. UCITA § 403 will apply to the developer of a computer program, even if the program is created by custom programming.

297. UCITA § 405.

(a) Unless the warranty is disclaimed or modified, if a licensor at the time of contracting has reason to know any particular purpose for which the computer information is required and that the licensee is relying on the licensor's skill or judgment to select, develop, or furnish suitable information, the following rules apply:

(1) Except as otherwise provided in paragraph (2), there is an implied warranty that the information is fit for that purpose. (2) 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 under paragraph (1) 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.

(b) There is no warranty under subsection (a) with regard to: (1) the aesthetics, appeal, suitability to taste, or subjective quality of informational content; or (2) published informational content, but

to these contracts. UCITA makes these trivially easy to disclaim in a shrink-wrapped contract. The customer does not even get to see the disclaimers until after paying for the product. But the independent consultant is not in a position to slide terms past the customer this way. The consulting client sees and signs the contract and is justifiably wary of terms that assign no accountability to the consultant.

Additionally, a consultant who obtains software for the customer and installs it on the customer's computer will probably be considered a dealer with respect to that customer. Under UCITA section 613 (b)(3), "the dealer is not bound by the terms, and does not receive the benefits, of an agreement between the publisher and the end user unless the dealer and end user adopt those terms as part of the agreement." The consultant thus offers warranties of merchantability and fitness of the installed software, unless there is a separate contract between consultant and customer and a separate disclaimer. Even if the software publisher disclaims all warranties, the consultant will be held to the implied warranties unless he also disclaims them.

By adding these warranties to the consulting contract, UCITA increases the accountability risk of the independent consultant.

UCITA also clarifies the rule that consultants are liable for incidental and consequential damages associated with their breach of contract. We discussed the liability limitation problem repeatedly during the UCITA drafting meetings. Protests against shrink-wrapped remedy limitations were met with statements that every software business has to limit liability. Therefore, UCITA makes it trivially easy to limit remedies in the shrink-wrapped contract and in larger transactions between businesses, both parties generally understand that the vendor cannot afford to risk unlimited liability to the customer. As *Ocampo* puts it:

> Maintaining contractual limits on liability is essential to the viability of any business. This is especially true in the software consulting business, where the nature of the work and the presence of consulting personnel on the customer's premises can expose both parties to potentially large liability. Limiting that liability risk may well be the most valuable service that a party's attorney or negotiator can provide.[298]

Unfortunately, small software consulting contracts are typically negotiated with managers, not lawyers. They do not expect liability limitation clauses in their contracts, and they will often refuse to sign such contracts. The typical, brief contract for a $10,000 consulting engagement describes the work and the pay and the time frame, but leaves warranties and remedies to be handled by default rules and those default rules expose the independent software consultants to risk of unlimited liability. This

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there may be a warranty with regard to the licensor's selection among published informational content from different providers if the selection is made by an individual acting as or on behalf of the licensor.

(c) If an agreement requires a licensor to provide or select a system consisting of computer programs and goods, and the licensor has reason to know that the licensee is relying on the skill or judgment of the licensor to select the components of the system, there is an implied warranty that the components provided or selected will function together as a system.

Id. Note that unless it appears that the licensor will be paid regardless of result, UCITA establishes a presumption that the licensor is offering a warranty as to result. This flies in the face of current practice, under which there is no implied warranty of result for custom services. *See* NIMMER, *supra* note 119, § 904(1).

298. RAYMOND L. OCAMPO, JR., ET. AL, NEGOTIATING AND DRAFTING SOFTWARE CONSULTING AGREEMENTS 100 (1996) [hereinafter OCAMPO]. .

problem was raised repeatedly during the UCITA drafting committee meetings. It was one of the motivators behind the repeated proposals to change the default rule, making consequential damages associated with defects available only if the licensor knew but did not disclose a defect.[299] This proposal was unacceptable to the UCITA drafting committee and nothing was done to provide relief to the independent consultant.

Unlimited liability has always been a risk in service contracts, but under UCITA it is a worse risk for consultants than before, because the consultant's work product will often be evaluated against implied warranties of merchantability or fitness for use that are not implied into in consulting contracts today.

4. *UCITA Limits the Ability of Companies to Retain Independent Service Providers to Maintain Their Software*

This is discussed in Part I.B.2 above.

5*. An Engineer who Fulfills a Written Contract for Submission of Ideas Often Need Not Be Paid*

UCITA writes a new implied term into contracts for submission of ideas that says that a software engineer or content creator who fulfills a written submission contract still does not have to be paid for her work. This section of UCITA was rejected by NCCUSL in its July 1999 meeting, but the drafting committee has put it back. Under UCITA section 216,

> (a) The following rules apply to a submission of an idea or information for the creation, development, or enhancement of computer information which is not made pursuant to an existing agreement requiring the submission: (1) A contract is not formed and is not implied from the mere receipt of an unsolicited submission. (2) Engaging in a business, trade, or industry that by custom or practice regularly acquires ideas is not in itself an express or implied solicitation of the information.(3) If the recipient seasonably notifies the person making the submission that the recipient maintains a procedure to receive and review submissions, a contract is formed only if: (A) the submission is made and a contract accepted pursuant to that procedure; or (B) the recipient expressly agrees to terms concerning the submission.

> (b) An agreement to disclose an idea creates a contract enforceable against the receiving party only if the idea as disclosed is confidential, concrete, and novel to the business, trade, or industry or the party receiving the disclosure otherwise expressly agreed.

Even if the contract states that the consultant will be paid for disclosing her idea, unless the contract explicitly says otherwise, the licensee (typically a publisher) can refuse to pay if the idea is not confidential, concrete or novel enough. UCITA lays out no standards for concreteness or novelty.

There are many situations in which a consultant will come up with a good, practical approach to solving someone's problem that is creative but that is not novel. It is merely a good idea that took some skilled thinking to work through. A proposal to design that code, or write that book, or create that technical support database, etc., is a submission of an idea or information for the creation, development or enhancement of computer information. Under UCITA, even if it is a good proposal, and the prospective client offered to pay for the proposal, the payment for this work is optional.

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299. *See* discussion *supra* Part I.A.1.

6. *UCITA Invalidates Authors' Transfer Restrictions*

Except as otherwise provided in paragraph (3) and section 508(a)(1)(B) , a term prohibiting transfer of a party's contractual interest is enforceable, and a transfer made in violation of that term is a breach of contract and is ineffective to create contractual rights in the transferee against the nontransferring party, except to the extent that: (A) the contract is a license for incorporation or use of the licensed information or informational rights with information or informational rights from other sources in a combined work for public distribution or public performance and the transfer is of the completed, combined work.[300]

Suppose that a software developer licenses his software (a small utility program) to be bundled with a Brand X mass-market software product composed of a suite of programs, but with the specific license restriction that Brand X may not transfer this license to Microsoft. Suppose further that Microsoft buys all rights to the Brand X product line and starts publishing the suite under its own label. Under UCITA section 503(2), the developer cannot prevent this, despite the clause in his license agreement that specifically forbidden this transfer. The same issue applies for contributors to newspapers (if their contract includes online rights, which are governed by UCITA) and any other material published electronically.

This is the only section of UCITA that blocks a transfer restriction. Note that it blocks a restriction imposed on a publisher by an author, not a restriction imposed by a publisher on a customer.

7. *The Technically Precise rules for Self-Help Create a Trap for Independents*

UCITA imposes precise notice requirements for the exercise of self-help.[301] The independent will

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300. UCITA § 503 (2).

301. *Id.* § 816.

(a) In this section, "electronic self-help" means the use of electronic means to exercise a licensor's rights under section 815(b). (b) On cancellation of a license, electronic self-help is not permitted, except as provided in this section. (c) A licensee shall separately manifest assent to a term authorizing use of electronic self-help. The term must: (1) provide for notice of exercise as provided in subsection (d); (2) state the name of the person designated by the licensee to which notice of exercise must be given and the manner in which notice must be given and place to which notice must be sent to that person; and (3) provide a simple procedure for the licensee to change the designated person or place. (d) Before resorting to electronic self-help authorized by a term of the license, the licensor shall give notice in a record to the person designated by the licensee stating: (1) that the licensor intends to resort to electronic self-help as a remedy on or after 15 days following receipt by the licensee of the notice; (2) the nature of the claimed breach that entitles the licensor to resort to self-help; and (3) the name, title, and address, including direct telephone number, facsimile number, or e-mail address, to which the licensee may communicate concerning the claimed breach. (e) A licensee may recover direct and incidental damages caused by wrongful use of electronic self-help. The licensee may also recover consequential damages for wrongful use of electronic self-help, whether or not those damages are excluded by the terms of the license, if: (1) within the period specified in subsection (d)(1), the licensee gives notice to the licensor's designated person describing in good faith the general nature and magnitude of damages; (2) the licensor has reason to know the damages of the type described in subsection (f) may result from the wrongful use of electronic self-help; or (3) the licensor does not provide the notice required in subsection (d). (f) Even if the licensor complies with subsections (c) and (d), electronic self-help may not be used if the licensor has reason to know that its use will result in substantial

probably know that she has the right to exercise self-help, but unless she retains specialized counsel, she will not know exactly how to exercise UCITA section 816 and is at great risk of making a technical error that subjects her to enormous liability.

Ignorance of an existing law may be no excuse, but it is inappropriate to draft a new law that will predictably create confusion and liability.

8. *UCITA'S Drafting will Drive Up Businesses' Legal Expenses*

Reporting the ALI's exit from the UCITA process, an article in the American Law Institute Reporter states "The Council of the [American Law] Institute continued to have significant reservations about both some of its [Article 2B's] key substantive provisions and its overall clarity and coherence."[302]

Clarity and coherence is a big problem. UCITA is drafted with many ambiguities and issues that will have to be litigated. The result will be a lot of business for lawyers. No firm should have to pay for this lack of clarity, but there is disproportionate harm to small businesses because larger ones can more easily afford the legal research and litigation expenses associated with an unstable area of law.

Here are just a few of the questions that consultants will be asking their lawyers under UCITA:

- What *is* UCITA's scope? How much embedded software will it cover? Which goods (such as computers) can a party bring under UCITA's cover?

- What intellectual property rights are covered, in what ways, under UCITA? For example, can a licensor of a software patent require the licensee to contract for a 50 year license term (with renewal payments every year)? Even though this far exceeds the term of the patent?

- Will consumer protection laws that apply to goods (such as Magnuson-Moss) be applied to consumer software or not? What about goods that are licensed? Can UCITA pull them out of Magnuson-Moss coverage too?

- What public policies will be considered sufficiently "fundamental" as to override a contract term?

- Which restrictions on fair use of mass-market software and information will be enforced by the courts? Can we reverse engineer or not? Under what circumstances? In what state? Can we publish benchmarks? Write critical articles?

- Which restrictions on transfer of mass-market software will be enforced by the courts?

- What are the standards for creation of a warranty by demonstration? Note that a jury will have to decide whether, in a particular case, a warranty was or was not created.

- What constitutes "basis of the bargain" for creation of warranties under UCITA?

- If the vendor disclaims all warranties, what performance standards can the customer hold the vendor to? Will a disclaimer of all warranties actually work in a shrink-wrapped consumer contract?

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injury or harm to the public health or safety or grave harm to the public interest substantially affecting third persons not involved in the dispute.

Id.

302. American Law Institute, *Article 2B Is Withdrawn from U.C.C. and Will Be Promulgated by NCCUSL as Separate Act,* ALI REPORTER, <ali.org/ali/r2103%5Fart2b.htm>

- How can we cost-effectively negotiate warranty disclaimers and remedy limitations into small service contracts?

- What standards will actually apply to payment for submission of ideas?

- The technical precision of the self-help rules means that any time anyone thinks about self-help, all parties would be wise to consult counsel for guidance on procedure.

- How can one create a transfer restriction that actually does guarantee that rights to publish a given software component cannot end up in Redmond? (Or do not end up there without substantial additional payment?)

- What does material breach actually mean under UCITA? In the courts, what differences will we find between the UCITA standard and the Restatement standard?

- What does "receipt" of an electronic message really mean, and how does one prove receipt?

- Exactly how does self-help work? (Or, more likely, how do I get out of trouble now that I used self-help in good faith but not in conformance with the UCITA regulations?)

The point (or at least, the publicly stated point) of UCITA was to create a uniform standard, thereby reducing confusion, uncertainty, and legal expense. The issues listed above could have been dealt with by the drafting committee in a different way, to promote clarity and uniformity. Instead, fundamental aspects of every "computer information" transaction are uncertain.

In several of these cases, the issue of uncertainty was raised time and time again during the drafting committee meetings. The fair use issues, especially reverse engineering and nondisclosure, were so heavily discussed that they led to the McManis motion[303] that was passed by the ALI and the Perlman amendment[304] that was passed by NCCUSL. If these motions were too broad, the drafting committee could still have disarmed the critics (and made a clearer law) by stating that no use restrictions, or none of the following listed restrictions, could be applied to a mass-market product that would be invalid if that product had been sold rather than licensed. Instead, the issues were left open, and made the subject of somewhat tepid discussion in Official Comments that will not be voted on by any legislature, and thus will not become law (except sometimes through judicial adoption) in any state.

VII. UCITA GENERALLY WORKS TO THE DISADVANTAGE OF SMALL BUSINESSES

1. *Many Non-Negotiable Small Business Transactions are Non-Mass-Market*

According to Lorin Brennan & Glenn Barber,

[c]urrent law distinguishes between consumer and business use, treating small businesses the same as corporate behemoths. UCITA adopts a new 'mass market' concept, extending consumer-like protections to small business for the first time. [305]

A related characterization, which was made repeatedly on the floor at the NCCUSL annual meeting

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303. *See* introduction *supra* Part II.

304. *See supra* Part II.A.

305. Lorin Brennan & Glenn Barber, *Why Software Professionals Should Support The Uniform Computer Information Transactions Act (And What Will Happen If They Do not)"* <www.2bguide.com/docs/proucita4.doc>.

at which UCITA was approved, is that non-mass-market transactions are negotiated transactions involving big business customers.[306] Some small business contracts are indeed mass market, but many small business transactions will not be classed as mass market.

There is no distinction in UCITA between small businesses and corporate behemoths. In the UCITA meetings, we have often discussed the fact that large customers will be able to take advantage of mass-market rules, such as they are, and that small businesses will often be excluded from those rules.

UCITA excludes several types of packaged software (no customization) from the definition of "mass-market" (UCITA section 102(a)(44)):[307]

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306. *See, e.g.,* Carlyle Ring, *Transcript of the Seventh Session, Uniform Computer Information Transactions Act*, Monday Afternoon, July 26, 1999.

> I have negotiated a lot of software contracts. I have never found it very difficult in a business transaction to negotiate the terms. In software licenses that are not mass market, I can tell you that we negotiate them all the time. And if we are going to in this act begin to say big business has to be protected in negotiating a contract, we are seriously impacting the marketplace.

Id. Here is another example in which the non-mass-market transaction was referred to generally as "a big transaction" that involves "parties that are really negotiating." Discussing what is now section 104(3) "In a mass-market transaction, any term under this section which changes the extent to which this [Act] governs the transaction must be conspicuous," there was the following exchange in the *Transcript of the Seventh Session, Uniform Computer Information Transactions Act*, Monday Afternoon, July 26, 1999:

> COMMISSIONER DAVID S. WALKER (Iowa): Looking at the new subsection (e)(3), I would Like to ask why the committee limited the requirement that the term providing that the act does or does not govern must be conspicuous. In the 2-406, on disclaimers, I believe you made the disclaimer requirements generally have to be conspicuous without regard to mass market licenses. Why the limitation here?

> COMMISSIONER CARLYE C. RING, JR. (Virginia): The limitation is one that varies generally. Disclaimers in Article 2 are conspicuous for all disclaimers, but there are many other provisions that are conspicuous in Article 2 only with respect to the consumer. That gets me to the reason why we think it inappropriate in a big transaction. The parties that are really negotiating the agreement do not need the protection of conspicuousness.

Id.

307. UCITA § 102(a) (44). "Mass-market transaction" means:

> a transaction that is: (A) a consumer contract; or (B) any other transaction with an end-user licensee if: (i) the transaction is for information or informational rights directed to the general public as a whole, including consumers, under substantially the same terms for the same information; (ii) the licensee acquires the information or informational rights in a retail transaction under terms and in a quantity consistent with an ordinary transaction in a retail market; and (iii) the transaction is not: (I) a contract for redistribution or for public performance or public display of a copyrighted work; (II) a transaction in which the information is customized or otherwise specially prepared by the licensor for the licensee, other than minor customization using a capability of the information intended for that purpose; (III) a site license; or (IV) an access contract.

Id.

UCITA § 102(a) (16). "Consumer contract" means "a contract between a merchant licensor and a consumer." *Id.*

UCITA § 102(a) (15). "Consumer" means:

> an individual who is a licensee of information or informational rights that the individual at the time of contracting intended to be used primarily for personal, family, or household purposes. The term

- Business or professional software (even a tiny, one-person, home-based business) is mass-market only if it is "directed to the general public as a whole including consumers." Many small business programs, such as any kind of vertical package (such as software to run a dentist's office) will not qualify.

- The software must be sold in a "retail transaction under terms and in a quantity consistent with an ordinary transaction in a retail market." A sale involving more than one copy of the product might not qualify and I am not sure whether the Net is a qualifying "retail market." (Previous drafts of UCITA were roundly criticized for explicitly disqualifying sales on the Net. Recent drafts drop this and are simply ambiguous).

- If there is a volume discount, the sale does not qualify because the terms have to be "substantially the same" as a consumer (one-copy) sale.

- A site license disqualifies the sale from being "mass-market."

Also excluded are access contracts and so (arguably) information obtained pursuant to an access contract (such as data downloaded from a website. But what about noncustomized software downloaded from the website?)

Many small business (and large business) purchases of off-the-shelf, packaged software will not be "mass-market."

Here are some examples of transactions that will probably be classed as non-mass-market under UCITA:

1. A teacher who uses AOL at home primarily to surf the Net for ideas and examples to use in class is not a consumer under UCITA. Nor is she a mass-market customer, because a non-consumer access contract is not a mass-market contract. Similarly for the graduate student who surfs the Net on his home computer to obtain research data for his papers.

2. If a small business buys five copies of a word processor, this is probably not "a quantity consistent with an ordinary transaction in a retail market?"

3. A billing program designed for small dentists' offices might be sold under a non-negotiable license, for a few thousand dollars. This is not a mass-market product because the transaction is not "directed to the general public as a whole, including consumers." Similarly for most other vertical applications.

4. Licenses for specialized software development tools are probably not mass-market because these tools are not used by consumers. Individual programmers buy them for use at home, but they use them primarily for professional or commercial purposes. Examples of such tools might be compilers, automated test tools, debuggers, or component libraries, basic tools for serious programmers.

5. Lexis and Westlaw contracts are not mass-market, even though the contracts are non-negotiable and the customers are often individual lawyers, tiny law firms, or journalists, because they are used for professional purposes and they are access contracts. Similarly for contracts

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does not include an individual who is a licensee primarily for professional or commercial purposes, including agriculture, business management, and investment management other than management of the individual's personal or family investments.

Id.

providing individual software engineers access to scientific databases, such as the ACM's or IEEE's online journal collections. Access to the software development support databases such as the Microsoft Developers Network is also not mass-market.

2. Mass-Market "Protections" are Generally Take-Aways from Non-Mass-Market Customers

Let's look at Brennan & Barber's[308] claim again: "UCITA adopts a new 'mass market' concept, extending consumer-like protections to small business for the first time."

The law governing sales of packaged software today is UCC Article 2.[309] Article 2 has no special provisions for consumers. Under Article 2, customers are either merchants (specialists in transactions involving "goods of the kind") or non-merchants. Huge businesses who are not software experts are non-merchants in software contracts.

As to the new consumer-like protections, there are almost none. Early drafts of UCITA extended many rights to mass-market customers. But those were whittled away over the years. What's left is primarily a series of special rules that preserve for mass-market customers rights that currently are available to all customers. Here is a complete list, in the order that they appear in UCITA, of the mass-market "protections":

- Under UCITA section 104 (1), under "an agreement that this [Act] governs a transaction" . . . "in a mass-market transaction, the agreement does not alter the applicability of a law applicable to a copy of information in printed form." *Evidently, then, in a non-mass-market transaction, UCITA can be extended to cover printed information, such as books.* This can have a significant impact on libraries because they will often not be mass-market customers. They are not consumers, so if they buy in quantities or at discount prices that are not typical of consumers or if they buy books that are not directed to the general public as a whole, especially consumers, then they are not mass-market customers.[310]

- Under UCITA section 104(2), under "an agreement that this [Act] does not govern a transaction" . . . "(B) in a mass-market transaction, does not alter the applicability under [this Act] of the doctrine of unconscionability or fundamental public policy or the obligation of good faith." *Evidently, then, in a non-mass-market transaction, UCITA allows the licensor to contract around unconscionability, public policy, and good faith.*

- Under UCITA section 104 (3), "In a mass-market transaction, any term under this section which changes the extent to which this [Act] governs the transaction must be conspicuous." *But terms can be conspicuous even though they are not available or visible to the customer until after the*

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308. Brennan & Barber, *supra* note 285.

309. When I say that someone "sells" software, I am speaking inclusively. The seller might be selling you a copy of the product or he might be selling you a license to use the product. There is a sale in either case, and as long as there is a finished product or a product that needs relatively little customization, Article 2 (law of sales of goods) has been handling transactions of both kinds for 30 years. KUTTEN, *supra* note 92, § 8A.02(1)(a) and NIMMER, *supra* note 119, § 6.02(1).

310. Small technology companies have a huge stake in the pubic library system. The big kids can afford to create their own massive libraries, but the rest of us rely on libraries, especially university libraries, to find scientific and engineering research literature. For further discussion, see *supra* notes 240 and 243.

customer has paid for the product and started to use it.[311] This is not much protection.

- Under UCITA section 109(a), a choice of law term "is not enforceable in a consumer contract to the extent it would vary a rule that may not be varied by agreement under the law of the jurisdiction whose law would apply under subsections (b) and (c) in the absence of the agreement." *Note that there is no such protection for a mass-market customer who is not a consumer. For non-consumers, UCITA allows licensors to contract around laws that are mandatory in the customer's jurisdiction.*

- Under UCITA section 112(e)(3), a mass-market customer has a right to a refund if the seller does not make the terms available until after the sale and the customer does not agree to them. "However, a right to a return is not required if: . . . (B) the primary performance is other than delivery or acceptance of a copy, the agreement is not a mass-market transaction, and the parties at the time of contracting had reason to know that a record or term would be presented after performance, use, or access to the information began." *Under these circumstances, the non-mass-market customer has no right to reject the terms and return the product.* Contrast this with Article 2 of the U.C.C. Under Article 2's section 2-207,[312] the customer can reject material post-sale changes and keep the product anyway. And the leading case that enforced post-sale terms, *Hill v. Gateway 2000,* specifically cited the right of return granted in the Gateway contract as the basis for enforceability of the contract.[313] *The much-vaunted "right of return" is not only not new.*

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311. This is the essence of UCITA's definition of mass-market licensing—the terms can be held back until after the sale. *See* UCITA § 102(a)(14) (providing the definition of conspicuous); and §§ 208 and 209 (discussing the adoption of terms).

312. U.C.C. § 2-207(2). "[A]dditional terms are to be construed as proposals for addition to the contract. Between merchants such terms become part of the contract unless: (b) they materially alter it."

313. The court in *Hill v. Gateway 2000,* 105 F.3d 1147 (7th Cir. 1997), stated that decision was contingent on the customer's right of return. *See id.* "*ProCD, Inc. v. Zeidenberg,* 86 F.3d 1447 (7th Cir. 1996), holds that terms inside a box of software bind consumers who use the software after an opportunity to read the terms and to reject them by returning the product." *Id.* at 1148.

> Perhaps the Hills would have had a better argument if they were first alerted to the bundling of hardware and legal-ware after opening the box and wanted to return the computer in order to avoid disagreeable terms, but were dissuaded by the expense of shipping. What the remedy would be in such a case—could it exceed the shipping charges?

Id. at 1150. *See also* THE SOFTWARE PUBLISHERS ASSOCIATION, GUIDE TO CONTRACTS AND THE LEGAL PROTECTION OF SOFTWARE (1993). The guide treated this right as a given, if you (the publisher) wanted your shrink-wrapped license to be honored in court. As the guide stated:

> PC software License Agreements that are found in off-the-shelf prepackaged commercial products are generally *not* signed contracts. . . . Customers who acquire PC software do not agree to the terms of such licenses by the traditional vehicle of a signature. Instead, PC software publishers usually seek to bind customers to the terms of their license agreements via the customer's conduct, such as by the act of opening the package or using the software. The theory is that this conduct is the legal equivalent of signing the contract. . . . To help ensure that the customer's act (*e.g.* of opening the package or using the software) is a voluntary act of acceptance, it is necessary to give the customer the option of rejecting the contract.

Id. at 60.

> Returning the software for a refund seems to be generally accepted as the proper response to customers who refuse to agree to the terms of the License Agreement. To insure that this is a viable option, however, you should contractually obligate any dealers or distributors through whom

> *It is narrowed so that many businesses will no longer will be able to take advantage of it.*

- Under UCITA section 112(f), the licensor can eliminate the right of return for repeat customers, whether they are consumer, mass-market, or other, by setting out licensor immunizing standards for future transactions between the customer and vendor.[314] Section 113(a)(3)(C) [315] might appear to slight limit this. Under section 113, the requirements for manifesting assent and opportunity for review in section 112 may not be varied by agreement *except to the extent provided in section 112*. Thus, despite section 113, because of section 112(f), the shrink-wrapped contract that comes with that transaction can wipe out your rights as to all future transactions.

- Under UCITA section 113(a) (1) "Obligations of good faith, diligence, reasonableness, and care imposed by this [Act] may not be disclaimed by agreement, but the parties by agreement may determine the standards by which the performance of the obligation is to be measured if the standards are not manifestly unreasonable." *This applies to all customers, including mass-market customers. In a post-sale, shrink-wrapped contract, what standards do you think vendors will write for themselves? "Manifestly unreasonable" is not much in the way of protection against abuse.*

- Under UCITA section 209(a) a term in a mass-market is void if it is unconscionable, preempted by federal law or a court rules that it violates a fundamental public policy.[316] As with UCITA section 104(2)'s explicit reference to mass-market terms, *UCITA apparently allows parties in non-mass-market contracts to include terms that are unconscionable, preempted by federal law, or in violation of public policy*. Of course a court might strike such terms on other grounds than UCITA, but the UCITA-based protections (such as they are) against these abuses are assured only to the mass-market customer.

- Under UCITA section 209(a)(2), a term in a shrink-wrapped form (mass-market) contract is excluded from the contract if it "conflicts with a term to which the parties to the license have

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you market your software to make appropriate refunds in accordance with the terms of your PC license agreement.

Id. at 70.

314. UCITA § 112(f). "The effect of provisions of this section may be modified by an agreement setting out standards applicable to future transactions between the parties." *Id.*

315. *Id.* § 113 (a).

The effect of any provision of this [Act], including an allocation of risk or imposition of a burden, may be varied by agreement of the parties. However, the following rules apply:. . . (3) Limitations on enforceability of, or agreement to, a contract, term, or right expressly stated in the sections listed in the following subparagraphs may not be varied by agreement except to the extent provided in each section: . . . (C) the requirements for manifesting assent and opportunity for review in section 112.

Id.

316. *Id.* § 209.

(a) A party adopts the terms of a mass-market license for purposes of section 208 only if the party agrees to the license, such as by manifesting assent, before or during the party's initial performance or use of or access to the information. A term is not part of the license if: (1) the term is unconscionable or is unenforceable under section 105(a) or (b); or (2) subject to section 301, the term conflicts with a term to which the parties to the license have expressly agreed.

Id.

expressly agreed." To put this in context, suppose that a customer specifically negotiates a contract with a software publisher. On installing the software, he encounters a click-wrap license. He must click "OK" to install the software. He does. Under current law, the negotiated agreement prevails over the click-wrap.[317] *UCITA says that the negotiated agreement prevails if the contract is mass-market but under UCITA section 208, the standard form contract's non-negotiated term will prevail, despite the contrary negotiated term, in non-mass-market cases.*[318] By the way, there is a trap here for small businesses who try to negotiate terms of a mass-market software contractt. The problem is that mass-market contracts, by UCITA's definition,[319] are not negotiated contracts. So if we have a contract with negotiated terms, it is arguably[320] not a mass-market contract (and thus not subject to the UCITA section 209(a)(2) protection) and therefore, if the negotiated term conflicts with anything in the shrink-wrapped license, the negotiated term goes away.

- UCITA section 209(b) spells out the mass-market customer's right of return.[321] If the customer

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317. Morgan Laboratories v. Micro Data Base Systems, Inc., 41 U.S.P.Q.2d 1850 (N.D. Ca. 1997, Chief Judge Thelton Henderson).

318. This issue was raised repeatedly in the UCITA drafting committee meetings, especially in a 1996 discussion prompted by an explicit query by Gordon Pence of Caterpillar. Under UCITA section 208(1) , "[a] party adopts the terms of a record, including a standard form, as the terms of the contract if the party agrees to the record, such as by manifesting assent." *Id.* And under section 208(3), "[i]f a party adopts the terms of a record, the terms become part of the contract without regard to the party's knowledge or understanding of individual terms in the record, except for a term that is unenforceable because it fails to satisfy another requirement of this [Act]." *Id.* The only other requirement in the Act that specifically mentions pre-negotiated terms is section 209(b)(2) and section 209, which is specifically restricted to mass-market contracts. If the non-mass-market customer clicks OK to the shrink-wrapped contract, that customer is bound by the terms.

319. UCITA § 102(a) (43). "'Mass-market license' means a standard form used in a mass-market transaction." *Id.*

320. Whether or not this is a winning argument, UCITA provides it as an argument for the defense in a small business mass-market case, providing the purveyor of defective goods with yet another vehicle for driving up the plaintiff's litigation costs. Readers of a draft have noted my partisan tone in this footnote. I am leaving the tone as is because I think this section is a stunning illustration of the blatant bias of UCITA. In a conflict between the vendor and the customer, UCITA protects the vendor even though this means erasing the plain language of a negotiated agreement in favor of the shrink-wrapped, non-negotiated, later-presented, standard form. High-sounding phrases like "freedom of contract" and "preserving the agreement of the parties" seem phony when applied to a law that tosses out the negotiated agreement in favor of the vendor's form.

321. UCITA § 209(b).

If a mass-market license or a copy of the license is not available in a manner permitting an opportunity to review by the licensee before the licensee becomes obligated to pay and the licensee does not agree, such as by manifesting assent, to the license after having an opportunity to review, the licensee is entitled to a return under section 112 and, in addition, to: (1) reimbursement of any reasonable expenses incurred in complying with the licensor's instructions for returning or destroying the computer information or, in the absence of instructions, expenses incurred for return postage or similar reasonable expense in returning the computer information; and (2) compensation for any reasonable and foreseeable costs of restoring the licensee's information processing system to reverse changes in the system caused by the installation, if: (A) the installation occurs because information must be installed to enable review of the license; and (B) the installation alters the system or information in it but does not restore the system or

cannot review the terms of the contract before paying, she can reject the terms and return the product, collecting the out of pocket costs (but not the value of her time) of returning the product and restoring her system to its previous state. *However, this right of return expires as soon as the customer clicks OK to continue installing the software after the license is presented.* Imagine that the customer clicks OK to continue, but that a defect in the software installation program makes it impossible to complete the loading of the product. Even though the customer was never able to use the product, her right of return is gone. The perfect tender rule might still give the customer an immediate right to return the software, but the contract's exclusion of incidental and consequential damages (including exclusion of reimbursement for the return postage or refund of any charges for technical support calls to the vendor) will govern.

- Under UCITA section 211, if the vendor does post its license on its web site, a customer who acquires software or information from that site has no right of return.[322]

- Under UCITA section 304(b), the vendor can unilaterally change the terms of the contract, as long as the vendor grants itself this power in the original shrink-wrapped contract. The *mass-market* issue here comes up in UCITA section 304(b) (the mass-market customer may terminate the contract as to future performance if the change alters a material term) and 304(c) (any standards for notifying the customer of changes in terms that the vendor writes into the shrink-wrapped contract will be enforced unless they are manifestly unreasonable). This is bad enough, for the mass-market customer. But for non-mass-market contracts (such as access contracts), the customer can not even terminate the contract if the new terms are material and unacceptable. See Part I.A.5 above for extensive discussion of section 304.

- Under UCITA section 503(4), a "term that prohibits transfer of a contractual interest under a mass-market license by the licensee must be conspicuous." For all other licenses, a no-transfer clause need not even be conspicuous.

- Under UCITA section 704(b), "[i]n a mass-market transaction that calls for only a single tender of a copy, a licensee may refuse the tender if the tender does not conform to the contract." This is the

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information after removal of the installed information because the licensee rejected the license.
Id.; *see also* note 293 above.

322. *See Id.* § 211.

PRETRANSACTION DISCLOSURES IN INTERNET-TYPE TRANSACTIONS. This section applies to a licensor that makes its computer information available to a licensee by electronic means from its Internet or similar electronic site. In such a case, the licensor affords an opportunity to review the terms of a standard form license which opportunity satisfies section 112(e) with respect to a licensee that acquires the information from that site, if the licensor: (1) makes the standard terms of the license readily available for review by the licensee before the information is delivered or the licensee becomes obligated to pay, whichever occurs first, by: (A) displaying prominently and in close proximity to a description of the computer information, or to instructions or steps for acquiring it, the standard terms or a reference to an electronic location from which they can be readily obtained; or (B) disclosing the availability of the standard terms in a prominent place on the site from which the computer information is offered and promptly furnishing a copy of the standard terms on request before the transfer of the computer information; and (2) does not take affirmative acts to prevent printing or storage of the standard terms for archival or review purposes by the licensee.

Id.

perfect tender rule, which all buyers of goods enjoy under Article 2.[323] The rule is still in force for mass-market customers but is lost to the rest.

These changes are a problem for large customers because they change the baseline, the starting point for negotiations. This is why the Society for Information Management (which represents large software and hardware customers) oppose UCITA. But the people who are especially hurt by these changes are small businesses because they lack the bargaining power to get back the rights they are losing under UCITA.

In their defense of UCITA posted at the NCCUSL website, the Chair and the Reporter of the UCITA drafting committee[324] state that "UCITA keeps all consumer protections from existing Article 2 and extends them to many new transactions" and that "A consumer is better off under UCITA than under existing Article 2 law for the sale of goods or current law for sale of services."

A wide range of consumer advocates and others have reached a different view, and the opposing interpretation is well represented by the following statement, signed by the Attorneys General of 24 states:

> In our view, the prefatory note and reporter's comments incorrectly present the proposed statute as balanced and as leaving "in place basic consumer protection laws" and "adding new consumer and licensee protections that extend current law." It may be that the drafters of this statute believe the policy choices it embodies are necessary or desirable for the development of e-commerce. However, in instances in which provisions are described as new consumer protections, such as the contract formation and modification provisions discussed below, consumers actually have fewer rights than they do under present law. If NCCUSL promulgates UCITA, it should revise the explanatory materials accompanying the statute to scrupulously identify the instances in which the policy choices embodied in the statute either extend or resolve controversies in current law and to clearly explain whether such extension or resolution favors sellers/licensors or buyers/licensees.[325]

As badly served as they are under UCITA, consumers can take one consolation. Small business customers are treated much worse.

VIII. CONCLUSION

As an observer of the UCITA process, I was most saddened by the extent to which the voices of working engineers and engineering scholars were ignored or dismissed in the various meetings. Lawyers may understand a lot about the law, and a lot about how to play with argument, and a lot about how to learn quickly enough about a field to be able to engage in argument, but we (lawyers) sometimes forget that behind all of the rhetoric, the goodfellowship with lobbyists, the consulting contracts and the campaign contributions, there are industries that generate the wealth of the country and whose health is affected by the laws that lawyers create.

UCITA will serve some interests well, but it will be harmful to the interests of small business customers, independent software developers and consultants, freelance information content providers, and probably to small software publishers. It will interfere with the flow of information in the free market, with reasonable and prevalent engineering practices, and thus with the training of software engineers in

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323. *See* discussion *infra* Parts I.D.4 and I.D.5.

324. Ring & Nimmer, *supra* note 14, § 4 (discussing Consumer Issues).

325. Letter from Attorneys General, *supra* note 25.

the United States.

On its own, UCITA will wreak plenty enough havoc. But serious danger comes also from the other side. When you drag a pendulum as far in one direction as the UCITA committee has gone, the pendulum's return swing does not stop in the center. UCITA will encourage prosecutors and consumer advocates who have no particular love for the software industry to propose a wide range of laws and regulations to curb the abuses that UCITA invites. The top priorities of these advocates will be curbing those abuses, and coping with the social consequences of them, rather than with national uniformity of the laws and regulations, management of the burdensomeness of the regulations, or protection of the ability of the software and information industries to generate great wealth for their owners, their workers, and the country at large.

Years down the road, when a software industry that is possibly weaker, and definitely much more bureaucratic and much less fun, complains about excessive regulation, how likely will its executives, its lawyers and its lobbyists be to admit that the excessive regulation was self-inflicted?

The software industry stands at a crossroads. UCITA is pushing us down the wrong path.