The Future:
Law of Software Quality

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NEWS FLASH

The American Law Institute has withdrawn its support for UCC Article 2B. 2B has been renamed the Uniform Computer Information Transactions Act (UCITA) and will no longer be part of the UCC. I’ve revised these slides to reflect the change. For new slides, and some not-yet-published new papers on this, send me an email at

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New Statutes Are New Products

During development, a new statute has the same problems as any other new product:

• Different stakeholders have different, often conflicting interests
• Stakeholders might be favored, disfavored, or simply silent and unnoticed (for now)
New Statutes Are New Products

Core requirements for any commercial law:

• The purpose of commercial law is to facilitate commerce.
  – Parties to a transaction must be able to understand and trust the transaction.
  – Uniformity facilitates commerce.
  – Stability facilitates commerce.
Key Legislative Proposals and Cases

**Uniform Commercial Code: Article 2B**

1. **Uniform Computer Information Transactions Act (UCITA)**
   - Rewrites all laws governing software contracts. Virtually eliminates accountability of vendors to customers, especially in COTS products.
   - (Protects computer vendors too.)
Key Legislative Proposals and Cases

2. Software Lemon Laws

• Nothing official yet, but I’ve seen drafts. UCC 2B UCITA pulls the pendulum one way. These pull it the other way.

Wild swings between these agendas will drive the industry into chaos.
Key Legislative Proposals and Cases

Y2K Liability Shield Laws

• On January 1, 2000, the skies will open and rain lawyers. We will be visited with a plague of lawsuits, taking over the entire judicial system for years to come.

• This is what happened in the Y1K crisis, and the result was the Dark Ages. ;-)  

• To avoid this, we (allegedly) need Y2K shield laws (or at least Y2K Umbrellas.)
Key Legislative Proposals and Cases

Important Recent Cases

• *Timberline Software*: Known defects didn’t trigger liability.
• *Gateway 2000*: Applied reasoning of Article 2B. Claims of massive consumer fraud can be buried in arbitration
• *Boyd*: The shrink-wrap reasoning (of 2B and Gateway) applies to mobile homes.
• *Creative Labs*: Claims of compatibility may be fully enforceable against the vendor.
Bad Software: Mis-set Customer Expectations

The Canadian government (Industry Canada, Competition Bureau) recently completed a study of the claims made on the packaging of consumer software. Here is the bottom line:

“Over 2000 claims were evaluated during this survey. Overall, some 163 or 8.1% of all claims evaluated were potentially false or misleading. While this may appear to be a small percentage based on the number of claims evaluated, these incorrect claims represent 65% of all the software titles tested.”

Irrational Myths About Customer Dissatisfaction

Myth: Software **must be** defective.

- *Humphrey’s data on ultra-low defect rates*
- *Yes, but so many defects in the field are KNOWN defects. Shouldn’t the rules provide for accountability for KNOWN defects?*

Myth: most calls for help reflect customer ignorance or customer fault.

- *Kaner / Pels data (desktop publishing application): 50% of calls could have been prevented with cheap fixes.*
Irrational Myths About Customer Dissatisfaction

• **Myth:** no one uses documentation.
  – *Dataquest* -- 85% of people in trouble solve their own problem
  – *Kaner’s data (financial application)* -- 88% of callers said they checked the docs first and could identify the weakness in the doc that led them to give up and call for help.
Irrational Myths About Customer Dissatisfaction

• **Myth**: investments in support don’t improve sales.
  – *Jeff Tarter, SoftLetter, on MS’s $500 million investment in support*: “Despite lots of wishful thinking to the contrary, spending money to upgrade a company’s service reputation remains a lousy investment.”
Bad Software and Bad Support

- For data, see my book *Bad Software* or www.badsoftware.com/stats.htm

- For examples of lawsuits deriving from bad support, see my paper, “Liability for Bad Software and Support” at www.badsoftware.com.
The Law Today: Uniform Commercial Code

• Uniform Commercial Code (UCC) is the law in 50 states.

• Article 2 governs contracts for sale of goods in USA in 49 states.
  – Sale of packaged software is a sale of goods.
  – Sale of custom software is a sale of services, not directly covered by the UCC.

• UCC is supplemented by laws governing fraud, deceptive trade practices, unfair competition, public safety, and consumer protection.
The Law Today: Copyright Act

- Copyright Act is federal law. Supersedes state laws that try to govern copying and distribution of original works.
- Copyright Act provides a balance of rights to creators / publishers and buyers.
  - First sale doctrine
    - Buyer of a copy may lend, resell, destroy, or mark up her copy. The seller’s rights to that particular copy are exhausted when the sale takes place.
  - Fair use rights: limited copying allowed for
    - reviews, parody, classroom use
    - reverse engineering
The Law Today: Copyright

First sale and some fair use rights depend on ownership of a copy. Article 2B defines a sale of a copy of a program as a license, but read the book of Ray Nimmer, Article 2B’s senior author.

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

UCC Article 2B: Background

• UCC is jointly maintained and updated by the National Conference of Commissioners on Uniform State Laws (NCCUSL) and by the American Law Institute (ALI).

• NCCUSL is a legal drafting organization funded by the 50 US states that writes all “Uniform” laws. It has about a 50% success rate in passage of bills introduced into state legislatures. (If the same bill is introduced into 50 legislatures, on average, 25 would pass it.)

• The American Law Institute is a non-profit body of 3000 senior lawyers (judges, professors, senior partners in BIG law firms).

• UCC and ALI appoint a joint Drafting Committee to prepare recommended revisions.
UCC Article 2B: Background

- Will govern all contracts for the development, sale, licensing, maintenance and support of software and almost all contracts involving “digital” information (will gradually encompass most books, movies, etc.).
- Current draft is over 200 pages
- 12 years in the works so far.
- Current draft significantly criticized at ALI, which passed motions calling for fundamental revision. ALI will not approve 2B in 1999.
- Despite the fact that ALI will not approve 2B and a UCC change cannot be made without ALI’s approval, I believe that there is a good chance that legislators will receive 2B in 1999.
Summary of Objections to 2B: Mass-Market

- No accountability for known defects.
- Makes warranty disclaimers too easy
- Eliminates applicability of key consumer protection laws
- Limits express warranties
- Limits your uses of the software
- Limits transfer (such as resale or gift of used software)
Summary of Objections to 2B: Mass-Market

- Lets the publisher choose state/country’s law and forum
- No duty to protect your privacy
- Unreasonable electronic commerce rules
  - handling of message “receipt”, online fraud, and online error
- No pre-sale or time-of-sale disclosure of the contract terms
Summary of Objections to 2B: Larger Business

• Eliminates the perfect tender rule (cancellation for obvious defects that are found right away)
• Makes it harder to cancel a contract for “material breach”
• Lets publisher say you can never cancel the contract
• Transfer rules inflate costs of mergers and acquisitions
• Makes it risky to try an evaluation copy (publisher immunized from liability for defects that you could have found during evaluation)
• Allows self-help (shutdown of your software without a court order)
Objections to 2B: Independent Developers / Authors

- Lets publishers ban reverse engineering
- Gives big customers stricter warranties from small vendors
- Subjects consultants to mixed or uncertain law
- Reduces publishers’ duty to actively market a work
- Makes it easier to refuse payment for competently written, contracted-for articles
- Makes it easier to refuse payment for ideas submitted under contract
- Lets publishers breach their writers’ transfer restrictions
Ban On Reverse Engineering

What’s the problem? Well, here’s why my colleagues and I have reverse engineered.

- Personal education.
- Understand and work around (or fix) limitations and defects in tools that I was using.
- Understand and work around (or fix) defects in third-party products.
- Make my product compatible with (able to work with) another product.
- Make my product compatible with (able to share data with) another product.
- To learn the principles that guided a competitor's design.
- Determine whether another company had stolen and reused some of my company's source code.
- Determine whether a product is capable of living up to its advertised claims.
Perlman Amendment (NCCUSL)

“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.”

**Corresponding 2B change**

“If a contract term violates a fundamental public policy, the court may refuse to enforce [it]. . . to the extent that the interest in enforcement is clearly outweighed by a public policy against enforcement of that term.”
Growing Opposition to Article 2B

Here are some of the organizations that have recently asked that 2B be tabled or cancelled or that have raised fundamental criticisms of Article 2B:

- Magazine Publishers of America (www.2BGuide.com/docs/v9-98.pdf)
- Motion Picture Association of America (www.2BGuide.com/docs/v9-98.pdf and www.2BGuide.com/docs/mpaa1198.html)
- National Association of Broadcasters (www.2BGuide.com/docs/v9-98.pdf)
- National Cable Television Association (www.2BGuide.com/docs/v9-98.pdf)
- National Consumer League (www.cptech.org/ucc/sign-on.html)
- National Writers Union (www.nwu.org/pic/ucc1009a.htm)
- Newspaper Association of America (www.2BGuide.com/docs/v9-98.pdf)
- Recording Industry Association of America (www.2BGuide.com/docs/v9-98.pdf and www.2BGuide.com/docs/riaa1098.html)
- Sacramento Area Quality Association (unpublished)
- Society for Information Management (www.arl.org/info/letters/libltr.html and www.arl.org/info/letters/Wright_ALI_letter.html)
- United States Public Interest Research Group (www.cptech.org/ucc/sign-on.html)
- Fifty intellectual property law professors (www.2BGuide.com/docs/1198ml.html)
- American Library Association (www.arl.org/info/letters/libltr.html and www.arl.org/info/letters/Wright_ALI_letter.html)
- American Society of Media Photographers (www.nwu.org/pic/uccasmp.htm)
- Association for Computing Machinery (www.acm.org/usacm/copyright/usacm-ucc2b-1098.html)
- Consumer Federation of America (www.cptech.org/ucc/sign-on.html)
- Consumer Project on Technology (Ralph Nader) (www.cptech.org/ucc/sign-on.html)
- Consumers Union (www.2BGuide.com/docs/cu1098.html)
- Independent Computer Consultants Association (unpublished)
- Institute for Electrical & Electronics Engineers (IEEE) submitted specific criticisms of 2B (www.ieee.org/usab/FORUM/POLICY/98feb23.html) which have not been resolved in the ways requested. The IEEE suggested in its most recent letter (www.ieee.org/usab/FORUM/POLICY/98oct09.html) that if these issues were not satisfactorily resolved, it too would recommend tabling.
Software Lemon Laws

By overreaching, the industry is costing itself goodwill and credibility. We are risking a backlash:

• 2B has been expensive
• More press coverage of 2B than any other part of UCC
• Microsoft trial

Y2K provides one of several opportunities for dissatisfied customers (and consumer advocates) to demand greater accountability of software vendors.

• Not all demands will take into account the difficulties of developing software in this industry.

I have seen several proposals. None of these are (yet) draft legislation. I am REPORTING these, NOT ENDORSING them.
Software Lemon Laws

Cluster 1: Licensing model

• *Theme*: software should be developed by professionals and craftspeople who are licensed by the state.

• Analogy is to the building of a house. Individuals should be held liable (as are architects and plumbers). Vendors can be held liable for defects caused by their employees / contractors.

• Predicted as fallout from Y2K by Dick Bender.

• Concerns:
  – Licensed professionals are subject to malpractice suits.
  – Malpractice involves failure to exercise the skill, knowledge and diligence of a reasonably prudent, skilled professional.
  – Do we KNOW what the reasonable standards of the industry are? Could this create a malpractice lottery?.

Software Lemon Laws

Cluster 2: Consumer protection model

• Theme: contract terms must be disclosed and some unfair terms are forbidden.
• Special rules for known defects.
• Special incentives to disclose defects.
• Strict application of deceptive trade practices statutes.
• All vendor claims become warranties.
• Free support for actual defects (known or unknown).
• Defects give rise to entitlement to refund or free upgrades.
• Limited reimbursement for consequences of defects.
Software Lemon Laws

Cluster 3: Punitive model

- **Theme:** It’s their fault. They should pay for the consequences.
  - On proof that publisher / reseller knew or should have known that a given defect existed, or on proof that a defect was caused by a development practice was unreasonably unsound----> Publisher / vendor accountable to customer for refund plus some portion of other losses.
  
  - On proof of a false or deceptive claim (product falsely claimed to provide benefits, meet a standard, be compatible with something else, have other characteristics or attributes) then easy-to-bring class action for reimbursement or partial refund or slightly harder class action for triple damages. Lawsuits always OK in local courts.
Other Y2K Fallout

- Extensive study of software liability by legal profession.
- Many cases fail because they involve only a breach of contract (and the contract comes with no warranties, etc.)
- Y2K and other recent suits are teaching lawyers:
  - New ways to demand assurances, statements that can later be used as evidence of fraud or deceptive practices
  - New ways to apply deceptive practice laws to contractual statements, packaging, etc.
  - New ways to prove that vendors’ software-related claims were fraudulent.
- Very few current cases along these lines are getting anywhere, but people are in training. *Where there is serious injustice, some way, eventually, people will figure out how to fight it.*
Web Sites

Article 2B
  • www.law.upenn.edu/bll/ulc/ulc.htm

Kaner:
  • www.badsoftware.com

Kunze:
  • www.2bguide.com

NCCUSL
  • www.nccusl.org
Our Input is Valuable

We are credible sources of information

• We want the industry to succeed and we have inside knowledge of it.
• Most people who evaluate proposed software laws are lawyers who are unsophisticated about software.
• Much of their education about software comes from software publishers’ lobbyists.

Our input, as individuals and as professional societies, is listened to.

• The American Law Institute’s withdrawal from the Article 2B was significantly influenced by input from ACM, IEEE, ICCA, sw-test-discuss, Watts Humphrey, Brian Lawrence, Bob Johnson, James Bach, Doug...
What Can You Do?

• Get organizations that you belong to to write letters to NCCUSL / ALI asking for termination of 2B. These letters from the industry are impressive.

• Attend NCCUSL meeting in late July, in Denver. Details, see www.nccusl.org.

• Write your state’s NCCUSL members (e-mail me for addresses. kaner@kaner.com)

• Write your local legislators and protest 2B

• Write op-eds, or get press involved.

• Help me plan for an opposition campaign. I need advice, help.