Liability for Defective Documentation

Cem Kaner
Florida Institute of Technology
150 West University Blvd.
Melbourne, FL 32907
321-674-7137
kaner@kaner.com

ABSTRACT
Several companies are careless about the accuracy of their user manuals and online help, leading readers to believe that a product has characteristics that it lacks. Under American law, buyers of goods have a right to expect a manufacturer to stand behind its claims. False claims in documentation might subject the manufacturer to liability for breach of warranty, fraud, or deceptive trade practices. Warranty law has been evolving recently, with the development of the Uniform Computer Information Transactions Act and revisions to the Uniform Commercial Code.

Categories and Subject Descriptors
K.5m [**Legal Aspects of Computing**]: Miscellaneous, D.2.7 [**Software Engineering**]: Distribution, Maintenance and Enhancement – *documentation.*

General Terms
Documentation, Human Factors, Legal Aspects, Verification.

Keywords
Contract, warranty, deceptive practices, fraud, UCITA, UCC, user manual.

1. INTRODUCTION
In 1990, Bill Rose (President of the Software Support Professionals Association) wrote that "Error[s] in the product documentation…may be the single most critical area for software vendors to improve… Poor documentation is a surprisingly large problem that is guaranteed to generate calls" [22, p. 11].

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David Pels (an experienced technical support manager) and I developed the same impression as Rose during the five-year period (1993-1997) that we researched and wrote a book on software consumer protection [12]. We interviewed technical support staff and managers who knew Pels already or who we met online or at tech support conferences. They told us time and again that customers expect software products to conform to written claims, that product documentation and behavior fail to match too often, and that customers too often called support representatives liars for saying that the program works as designed; it is the manual that is in error. Tech support managers told us of staff who had resigned because it was so unpleasant to handle high volumes of calls like this.

One of the reasons that manuals and products mismatch is they are not carefully tested against each other. The Customer Care Institute [4, 5] provided evidence of this in 1993 and 1994 surveys—only half of the software publishers surveyed submitted their user documentation to the software testing or quality control group for verification. I thought that these numbers were low, so I checked them at the Software Testing, Analysis & Review (STAR) conference (Orlando, May 16, 1996). During a plenary session, I asked attendees (software testers) whether their groups tested their companies' user manuals. At least half the room stood up to signify that their companies did *not*. This data point is more discouraging than Customer Care's because of the biased sample. STAR is the leading industry (rather than academic) software testing conference. The cost of registration is significant (currently $1395), more than most people would pay without corporate support. Companies who don't care about quality wouldn't spent this much money (plus travel, plus time away) to send their testers to STAR. Of the companies who *would pay* for STAR, half were not testing their manuals.

The Customer Care data are almost a decade old. Unfortunately, they no longer publish comparable data. I haven't redone the STAR poll, but I have taught software testing courses to hundreds of testers, and discussed documentation testing at several (perhaps a dozen) software testing conferences and on software testing listservs. I have no reason to believe that the testing situation has improved.

It might seem self-evident that we should make user documentation accurate, but like all quality improvement processes, this takes time and money and so is subject to cost/benefit analysis.

Documentation testing is only a small part of the task of achieving accurate documentation, but it's a piece for which I have some cost estimates. Falk, Nguyen and I described our testing process in 1993 [11]. We tracked testing times on several mass-market software projects, and I tracked additional times at consulting clients. All of the raw data was

confidential, but there was an overall pattern. For mass-market products, it takes about 15 tester-minutes per page of the manual. (I don't have enough data to speak to costs for other markets.) A manual with many errors takes longer because of all the extra problem reporting time. Some testers do the task more quickly, but this often (almost always, in my experience) indicates they need more training in how to do a thorough review. A test group might test two or three drafts of a manual. It usually costs less to test a page for the second time, but I don't budget for less than 7.5 minutes per page. Adding a modest 20% for administrative time (meetings, etc.) and budgeting testers at an overhead-plus-benefits-included cost of $50 per hour, it costs about $6000 and three tester-weeks to test a 200 page manual that comes to the test group in good shape [8]. This is a significant expense and some project teams resist it.

Cost/benefit analyses for quality-related decisions are often complex [9]. One of the benefits of improving the accuracy of the user documentation is reduction of costs arising from lawsuits. I wrote about documentation-related liability in the mid-1990's [8, 10, 11]. Since then, commercial law has evolved significantly. For example, the Uniform Computer Information Transactions Act (UCITA) was drafted and adopted in two states (with ongoing efforts to pass it in additional states). The basic American Law of Sales, Article 2 of the Uniform Commercial Code (UCC 2), has completed a 14-year revision process and the amendments will probably be submitted to state legislatures in early 2004. Additionally, several courts have approved post-sale warranty disclaimers ([13], [21], and [23] are representative examples).

I attended most of the UCITA drafting committee meetings as a participating observer. I am a member of the American Law Institute (ALI), which co-authors the Uniform Commercial Code, and attended ALI national meetings and some UCC 2 Revision meetings as a member of the ALI's Members' Consultative Group for UCC 2. In total, I attended the equivalent of about 60 full days of meetings of lawyers that were dedicated to analysis of UCITA and UCC 2, plus several conferences and other debates. The discussions provided the participants with insights and perspective that aren't fully captured in the publications on UCITA and UCC 2.

2. SCOPE

This paper re-examines the commercial law implications of defective documentation.

My focus is on defects involving a publisher's misdescription of its own products. The primary areas of law are contracts and warranties, fraud, and deceptive practices.

A different thread of liability for defective documentation involves failure to adequately warn the user of risks associated with dangerous products. There is a rich literature on this. Paradis [20] and Cooper [3] are illustrative discussions within the technical writing literature. Wogalter, M.S., Young, S.L., and Laughery, K.R. [31] collects material from the human factors literature. O'Reilly [18] summarizes material from the products liability literature. Apart from mentioning that literature in this paragraph, I will not discuss it in this paper. The primary source of the law of warnings has been Section 402A of the Restatement Second of Torts [1], which was completely superceded by the Restatement of the Law Third, Torts: Products Liability [2], in 1998. For a brief overview, see the ALI's website, http://www.ali.org/ali/promo6081.htm. The Restatements are authoritative summarizes of the common law, relied on frequently by appellate judges. The Restatement of Products Liability reshaped the law of design defects (including defective or inadequate warnings) and is having substantial impact on judicial decisions in the United States. To adequately study the legal issues associated with warnings under the new law would require a focused analysis (maybe we'll do this at the *next* SIGDOC, after a little more of the dust settles).

Another fascinating thread involves factual errors about other things than the product being documented. For example, suppose that in a manual for an accounting program, erroneous statements are made about the normal practice of accounting. For a brief survey of this, see [10]. For more extensive discussions, do a search for documents that discuss the case of Winter v. G.P. Putnam [30].

3. WARRANTIES UNDER THE UNIFORM COMMERCIAL CODE

The Uniform Commercial Code (UCC) [25] was written by the American Law Institute (ALI) and the National Conference of Commissioners on Uniform State Laws (NCCUSL). Article 2 of the UCC governs sales of goods. Forty-nine states have adopted UCC Article 2 (Louisiana's sales law is similar, but not UCC), which replaced the Uniform Sales Act of 1906. ALI and NCCUSL maintain (author updates that clarify and extend) the UCC through a joint committee called the Permanent Editorial Board for the UCC. When it is time to begin drafting updates to an Article of the UCC, ALI and NCCUSL appoint members to a Drafting Committee for that Article. Since 1988, UCC Articles 3, 4, 5, 6, 8, and 9 have been revised. The Drafting Committee for Article 2 has been meeting for about 14 years and has finally issued a set of proposed amendments to Articles 2 (law of sales) and 2A (law of leases of goods) that have been approved by both NCCUSL and ALI [17, 26]. After some minor style-tweaking, the amendments will be introduced in state legislatures, probably starting in early 2004.

Most American courts apply Article 2 to disputes involving off-the-shelf software (and to many disputes involving custom software). Two states, Maryland and Virginia, adopted the Uniform Computer Information Transactions Act (UCITA) [27] but the rest are, for now, sticking with Article 2.

Section 313 of Article 2 defines the express warranty:

> "(1) Express warranties by the seller are created as follows:
>
> "(a) Any affirmation of fact or promise made by the seller to the buyer which relates to the goods and becomes part of the basis of the bargain creates an express warranty that the goods shall conform to the affirmation or promise.
>
> "(b) Any description of the goods which is made part of the basis of the bargain creates an express warranty that the goods shall conform to the description.
>
> "(c) Any sample or model which is made part of the basis of the bargain creates an express warranty that the whole of the goods shall conform to the sample or model.
>
> "(2) It is not necessary to the creation of an express warranty that the seller use formal words such as "warrant" or "guarantee" or that he have a

> specific intention to make a warranty, but an affirmation merely of the value of the goods or a statement purporting to be merely the seller's opinion or commendation of the goods does not create a warranty."

A software product's user manual is a description of the goods (the software). If the manual is part of the "basis of the bargain," then any statements of fact (things that can be proved true or false) about the product that are contained in the manual are express warranties, guarantees that the product will work as described. If the product does not conform to those statements, the vendor has breached the contract and the customer can demand compensation, such as a partial or full refund or a fixed product.

Many products come with warranty disclaimers, statements that the product comes with no warranties, express or implied. However, under Section 316, a disclaimer of an express warranty is "inoperative." In other words, if you make an express warranty, you are stuck with it.

There are two important legal issues.

First, in the case of packaged software, the product is often made by one company (the software publisher) but sold by another (a retailer). If the publisher writes the manual, but the retailer sells the software, who is the "seller" who makes the warranty? Can the customer hold the publisher accountable for warranties contained in the manual? We could spend the rest of the conference on this question—for further detail, do searches on the law of "privity" or for discussions of the "remote seller" or "remote purchaser." I'll offer this shortcut: when a customer buys (aka "licenses") a copy of a packaged software product, s/he enters into two contracts. In one contract, s/he gives the reseller some money and gets a box with a disk. In the other contract, s/he agrees to terms that govern her or his use of the software and gains the right to copy the software onto a computer and use it. That second contract, which s/he usually enters into by clicking "OK" or "I agree" while installing the software on her or his computer, is between the customer and the software publisher. Courts will probably consider that direct connection between the customer and the publisher a direct enough link to support the enforcement of a warranty made by the publisher. For example, customers were able to sue Microsoft over shortcomings of the disk compression software in DOS 6 [15, 24]. The UCC 2 Amendments are drafted to settle this issue with Section 313A "Obligation to Remote Purchaser Created by Record Packaged with or Accompanying Goods." (A "record" can be any type of document, on paper or stored electronically. This includes manuals and on-line help that come with the product.)

The second issue is less easy. The question is, what is this "basis of the bargain"?

This is an important question for us because the customer probably doesn't read the manual or the on-line help until after paying for the product and clicking I AGREE to install the product (and complete the licensing contract). Therefore the customer probably didn't rely on claims or descriptions made in the documentation when deciding to buy the software.

Under the Uniform Sales Act, a buyer had to be aware of a promise or description and rely on it as part of the purchase decision. If there was no reliance, there was no warranty. See [29] for discussion. The Uniform Commercial Code eliminated the requirement of reliance, substituting "basis of the bargain."

The UCC is drafted with a set of Official Comments, intended to give readers a clue about what the authors of the Code meant. Comment 3 to Section 313 explains the elimination of the reliance requirement by saying,

> "In actual practice affirmations of fact made by the seller about the goods during a bargain are regarded as part of the description of those goods; hence no particular reliance on such statements need be shown in order to weave them into the fabric of the agreement. Rather, any fact which is to take such affirmations, once made, out of the agreement requires clear affirmative proof."

Additionally, Comment 7 states that

> "The precise time when words of description or affirmation are made or samples are shown is not material. The sole question is whether the language or samples or models are fairly to be regarded as part of the contract. If language is used after the closing of the deal (as when the buyer when taking delivery asks and receives an additional assurance), the warranty becomes a modification."

So, does this mean that a manual (a collection of affirmations of fact about the goods) should be considered part of the description of the goods and binding on the seller even if the customer doesn't see it until later?

The answer is unclear. More precisely, there are some perfectly clear answers; they just contradict each other. Some courts have held onto some level of a reliance requirement (see the list of citations provided by White and Summers [29]) while others have abandoned it, saying that a seller is accountable for its descriptions of its products to its customers. The Supreme Court of Virginia is an example of the second type of court, and the case of Daughtrey v. Ashe provides [6] a good illustration of their reasoning.

In October, 1985, W.H. Daughtrey bought a diamond bracelet as a Christmas gift for his wife from Sidney Ashe, a jeweler. He paid $15,000. After Daughtrey agreed to buy the bracelet, Ashe filled out an appraisal form and put it in the box with the bracelet. The appraisal said that the diamonds were of v.v.s. quality (a high grade). Daughtrey didn't see the appraisal until later, probably not until the box was opened at Christmas.

In 1989, Daughtrey discovered that the diamonds were not of v.v.s. quality. Ashe offered a refund. Daughtrey refused, and demanded that the diamonds in the bracelet be replaced with diamonds that were of v.v.s. quality. Ashe refused. Daughtrey sued. He said that the statement that the diamonds were of v.v.s. quality was a description of the goods by the seller. ("Any description of the goods which is made part of the basis of the bargain creates an express warranty that the goods shall conform to the description.")

Therefore, Daughtrey said, Ashe created a warranty that the diamonds were of v.v.s. quality, and breached it by selling a bracelet whose diamonds were of a lower grade. Ashe argued that this claim couldn't have been a warranty because he never called it a warranty and Daughtrey didn't read the claim until long after the sale. How could this description be part of the "basis of the bargain"?

Ashe won -- in the trial court. But the Supreme Court of Virginia overruled the trial court. Quoting the Official Comments to the Uniform Commercial Code, the Court said:

> "The whole purpose of the law of warranty is to determine what it is that the seller has in essence agreed to sell."

and

> "The precise time when words of description or affirmation are made …is not material. The sole question is whether the language is fairly to be regarded as part of the contract."

The Court concluded that Ashe had agreed to sell v.v.s. quality diamonds, and therefore that he had breached the sales contract by selling inferior diamonds. (Martin v. American Medical Systems [14] is a more recent case, 1997, that reaffirms this reasoning.)

In Virginia and in several other courts (White and Summers [29] review several cases), a software manual would probably be treated the same way as the appraisal form—something provided by the seller, that describes the product, that the customer is not expected to look at until after the sale has been completed.

During the UCITA debates, there was a remarkable exchange between Ralph Nader's organization and the Software Publishers Association (now the Software and Information Industry Association). It started with a letter [16] from Nader to Bill Gates, protesting Gates' support of UCITA (then called Article 2B because the drafters expected to include it in the Uniform Commercial Code). Nader claimed that UCITA would let software companies "disclaim all warranties, denying even that the product conforms to claims made on its packaging or in its documentation."

Wasch replied [28] that

> "Your assertion that software companies can disclaim all warranties and deny that a product conforms to statement made on packaging or in the user manuals is just plain wrong. The current draft of Article 2B does not allow disclaimers of express warranties."

Not believing that Wasch had meant what he appeared to have said (that the President of the SPA considered user manuals to be warranties) Todd Paglia (a lawyer working for Ralph Nader) responded to Wasch [19]. Paglia explained the ambiguity of the "basis of the bargain" language, which was in UCITA [Article 2B] just as it was in Article 2, explained how publishers could use that to argue that their manuals were not express warranties, and then wrote,

> "At the next Article 2B Drafting Committee meeting, we will propose that Article 2B be revised to eliminate the "basis of the bargain" requirement, so all statements of fact made in the documentation and on the package will be treated as express warranties under the law. You state in your letter to Mr. Nader that the law already creates a warranty that the product conforms to the statements on the packaging and in the manuals. For this reason, I trust that you will join us in proposing that the Committee eliminate this opportunity for misunderstanding in the draft of 2B."

At the next Article 2B (UCITA) meeting, an attorney representing the SPA responded by stating that the SPA did not object to Paglia's proposal.

Sadly, despite the developing mood of compromise among representatives of buyers and sellers (at the same meeting, Bob Gomulkiewicz, representing Microsoft, and I submitted another warranty proposal), the UCITA drafting committee chose not to vote on Paglia's (or Gomulkiewicz's and my) proposals. Instead, they revised the official comments in the next draft of UCITA in a way that, to Paglia's and my eyes, emphasized the importance of knowledge and reliance in the concept of the "basis of the bargain." Here and elsewhere, UCITA seemed to evolve to positions that were more protective of sellers than even the sellers were bargaining for. One result of this bias was that the ALI withdrew from the project, killing it as a UCC addition. A second result was that, despite the high prestige of NCCUSL, and the influence of NCCUSL in the state legislatures, which fund NCCUSL to write uniform laws, and despite a strong lobbying campaign in favor of UCITA against a customer-side opposition with a miniscule lobbying budget, UCITA has been rejected in almost every state that has considered it.

The net result of this is confusion. Some sellers are saying, "Of course our manuals are warranties" while others say, "Please don't give people another basis for suing us; we face too many frivolous suits already." The Article 2 Drafting Committee looked at the evolution of the law and concluded that manuals are warranties. Under new Section 313A [26],

> "(2) If a seller in a record packaged with or accompanying the goods makes an affirmation of fact or promise that relates to the goods, provides a description that relates to the goods … and the seller reasonably expects the record to be, and the record is, furnished to the remote purchaser, the seller has an obligation to the remote purchaser that:
>
> "(a) the goods will conform to the affirmation of fact, promise or description unless a reasonable person in the position of the remote purchaser would not believe that the affirmation of fact, promise or description created an obligation;

A UCC "record" is any document, including the manual and online help. A "remote purchaser" includes any customer, not just one who bought the product directly from the manufacturer. Thus, this section means that a manufacturer who includes any form of documentation with a product makes an express warranty that the product conforms to the statements in the documentation. The new Section 313B provides comparable protection for communications to the public, which includes advertisements and would also include books that describe a product that are written or endorsed by the manufacturer and sold to the public.

In contrast, the UCITA Drafting Committee, including some of the members of the Article 2 Committee, wrote warranty language that will make it easier for sellers to argue that their manuals are not warranties.

Because of this conflict, I suspect, we will not have a national legal consensus on this issue, as it applies to software, for another decade. If you write manuals for a publisher of a commercial off-the-shelf software product, and those manuals misdescribe your product, then disgruntled customers will have some reason to sue you for breach of warranty. The main factor that determines whether they win or lose might well be which state they sue you in.

Given that some states already treat manuals as warranties and that (probably, with the revisions to Article 2) more will, it is

prudent for a software publisher to assume that user manuals will be treated as warranties, and to spend a little more on product research by the manual author, on technical editing, and on fact-checking by editors and testers, in order to spend a little less on lawyers. If you're going to spend the money anyway, you may as well spend it in a way that improves customer satisfaction.

4. DECEPTIVE PRACTICES

Breach of warranty litigation is not the only concern when dealing with error-laden manuals.

If a seller makes false statements, knowing them to be false, with the intent of inducing someone to buy a product, that seller is committing fraud. Your company might not realize, as it prints manuals you wrote (or burns them onto the product CDs), that there are errors. However, after enough phone calls from complaining customers, and after enough confusions in-house as people inside your company try to use the product, your company has learned (or should have learned) about many of the errors in the book. If your company continues to sell the product with these known false statements, no one should be surprised if lawyers for grumpy customers start accusing your company of fraud. Once that you know a statement is false, if you keep making that false statement in the stream of commerce, you are inviting litigation.

Most of the software-related fraud lawsuits that I've seen published as appellate court decisions have been unsuccessful. From that trend, one might conclude that fraud is a normally-unsuccessful basis for software litigation. This conclusion would be mistaken. As an expert witness, I've been involved in cases that alleged fraud. The experts (on both sides) would dig through corporate records, documentation drafts, bug tracking systems, memos, project plans and boxes of other miscellaneous stuff, asking the simple questions, "What did they know, and when did they know it? And "What did they say, and when did they say it?" If the customer's lawyer can show, as a result of digging through these documents, that someone was making statements that they knew were false, there is rarely much point in having a trial. The company that committed fraud, on seeing that the other side has clear evidence of the fraud, knows it will probably lose the case and will settle out of court.

Along with fraud, sellers of misdocumented products might be sued for deceptive practices. A statement is deceptive if it is likely to mislead a member of your market. You might not realize it is deceptive. It might not be quite untrue. But if it causes people to believe false things, it is deceptive. The Federal Trade Commission Act simply says [7]

> "Unfair methods of competition in or affecting commerce and unfair or deceptive acts or practices in or affecting commerce, are hereby declared unlawful."

Several state laws (usually called Unfair and Deceptive Practices Acts—search online for "UDAP Act" or "UDAP statutes" or Unfair Competition Acts) supplement the general ban by listing specific practices that are unfair or deceptive. For example, California's Civil Code Section 1770(a) bans, among other things,

> "Representing that goods or services have sponsorship, approval, characteristics, ingredients, uses, benefits, or quantities which they do not have."

Violators of a deceptive practices act can be sued (for money, by an individual) or prosecuted (charged with a crime, by the government). For examples of cases brought by the Federal Trade Commission, go to http://www.ftc.gov/ftc/formal.htm.

5. NON-MASS-MARKET PRODUCTS

Suppose a buyer and a seller negotiate for an expensive product that the customer will then customize. The seller asks, "How much care should I take in writing the user documentation?" The customer responds, "Just give us a first draft and the disk files. We'll have to revise it anyway so we don't want to spend much for your draft. Do the best you can."

If they wrote this into the contract, no one would interpret the user documentation as an express warranty. It would be clear that both buyer and seller agreed that the documentation would be a source of fallible, rough information, not a trustworthy description of the product.

Negotiations like this can't happen in the mass market—the customer has no negotiating power and it would be unreasonable to expect the mass-market customer to have the time, skill, knowledge, and desire to rewrite the documentation. In that market, customers in the American marketplace have grown up in a society that allows them to believe that most manufacturers' factual claims about their products will be truthful.

In the customized-product market, however, allocation of time and expense is just part of the deal. If you are working on a product that customers will negotiate for, or customize, then before you cite legal liability risk as a justification for increasing your budget, check your sales contracts. You might be insisting on providing more than the customer has chosen to pay for, and a sloppier job might involve no legal risk.

6. SUMMING UP

Software development groups, including documentation writers, are under tremendous pressure to reduce cost and release sooner. Developers of mass-market products and other products sold off-the-shelf will be under pressure, but their companies will be at legal risk if product descriptions are inaccurate. Defending the integrity of your technical communications work might be one of your company's best investments in reducing its litigation risk. If you feel that you are being asked to develop materials that might expose your company to a risk of liability, talk with your corporate counsel.

7. ACKNOWLEDGMENTS

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8. REFERENCES

[1] American Law Institute, Restatement of the Law 2d, Torts, West Publishing, Eagan, MN, 1965.

[2] American Law Institute, Restatement of the Law Torts, 3d, Products Liability, West Publishing, Eagan, MN, 1998

[3] Cooper, M. M. The postmodern space of operator's manuals. Technical Communication Quarterly, 5(4), 1996, 385-410.

[4] Customer Care Institute, Customer Care Survey 1993: Service & Support Practices in the Software Industry. Tarrytown, NY, 1993.

[5] Customer Care Institute, Customer Care Survey 1994: Service & Support Practices in the Software Industry. Tarrytown, NY, 1994.

[6] Daughtrey v. Ashe, 413 S.E.2d, p. 336 (Supreme Court of Virginia, 1992)

[7] FTC Act, 15 U.S.C. 45(a)(1)

[8] Kaner, C., Liability for Defective Documentation. Software QA, 2(3), 1995, 8 ff., http://www.kaner.com/pdfs/defects4.pdf.

[9] Kaner, C., Quality Cost Analysis: Benefits and Risks, Software QA, 3(1), 1996, p. 23 ff., http://www.kaner.com/qualcost.htm.

[10] Kaner, C., Liability for Defective Content, Software QA, 3(3), 1996, 56 ff., http://www.kaner.com/pdfs/content.pdf.

[11] Kaner, C., Falk, J., and Nguyen, H.Q., Testing Computer Software, Van Nostrand, New York, 1993 (reprinted by Wiley, New York, 1999).

[12] Kaner, C. and Pels, D., Bad Software: What to do when Software Fails, Wiley, New York, 1998.

[13] M.A. Mortenson Co., Inc. v. Timberline Software Corp., 970 P.2d 803 (Supreme Court of Washington, 2000).

[14] Martin v. American Medical Systems, Inc., 116 F.3d 102 (U.S. Court of Appeals, 4th Circuit, 1997).

[15] Microsoft v. Manning, 914 S.W.2d 602 (Texas Court of Appeals, 1995).

[16] Nader, R., Letter to Bill Gates, March 31, 1997, http://www.cptech.org/ucc/nader.html.

[17] National Conference on Uniform State Laws, UCC 2/2A now final, 2003, http://www.nccusl.org/nccusl/DesktopModules/NewsDisplay.aspx?ItemID=52.

[18] O'Reilly, J., Product Warnings, Defects And Hazards (2nd Ed.), Aspen Publishers, N.Y., 1999 (updated frequently).

[19] Paglia, T., Letter to Kenneth Wasch, President of the Software Publishers Association, May 8, 1997, http://www.cptech.org/ucc/reply.html.

[20] Paradis, J., Text and action: The operator's manual in context and in court. In C. Bazerman & J. G. Paradis (Eds.), Textual dynamics of the professions: Historical and contemporary studies of writing in professional communities. University of Wisconsin Press, Madison, WI, 1995, 256-278.

[21] Rhone-Poulenc Agro, S.A. v. DeKalb Genetics Corporation, 284 F.3d 1323 (U.S. Court of Appeals, Federal Circuit, 2002).

[22] Rose, B., Managing Software Support, The Software Support Professionals Association, San Diego, CA, 1990.

[23] Specht v. Netscape Communications Corporation, 306 F.3d 17 (U.S. Court of Appeals, 2nd Circuit, 2002).

[24] Stuessey v. Microsoft, 837 F.Supp. 690 (United States District Court, Eastern District of Pennsylvania, 1993).

[25] Uniform Commercial Code, http://www.law.cornell.edu/ucc/ucc.table.html.

[26] Uniform Commercial Code, Article 2, proposed amendments, http://www.law.upenn.edu/bll/ulc/ulc.htm#ucc2.

[27] Uniform Computer Information Transactions Act, http://www.law.upenn.edu/bll/ulc/ucita/2002final.htm.

[28] Wasch, K.J., Letter to Ralph Nader, April 7, 1997, http://www.2bguide.com/docs/spaltr.html.

[29] White, J.J. and Summers, R.S. Uniform Commercial Code (4th Ed.) Volume 1, West Publishing, St. Paul, MN, 1995 (updated annually).

[30] Wilhelm Winter and Cynthia Zheng v. G.P. Putnam's Sons, 938 F.2d 1033 (U.S. Court of Appeals, 9th Cir. 1991)

[31] Wogalter, M.S., Young, S.L., and Laughery, K.R. (Eds) Human Factors Perspectives on Warnings, Volume 2: Selections from Human Factors and Ergonomics Society Proceedings, 1994-2000, Human Factors and Ergonomics Society, Santa Monica, CA, 2001.