Liability for Bad Software and Support

Support Services Conference

March 12, 1997

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(I've written a paper to accompany this talk. You can retrieve it from my web site, www.kaner.com.)

Overview

1. Reasonable customers will sue over bad software.
2. The lawsuits provide some common sense lessons.
3. It costs money to control the risks.
4. Concluding notes: The Uniform Commercial Code revision won't make these issues go away.

Is There a Litigation Crisis?

1994 Annual Report of the Judicial Council of California:

Superior Court Civil Filings:

1983-84	1992-93	***increase***
561,916	684,070	**122,154 (21.7%)**

(1983-84 is the first of the 10 years in this study. 1992-93 is the last of the 10 years.)

Is There a Litigation Crisis?

Look More Closely:

Superior Court Civil Filings:

1983-84	1992-93	***increase***
561,916	684,070	**122,154 (22%)**

Personal injury, death, property damage:

1983-84	1992-93	***increase***
96,731	88,346	**-8,385 (-9%)**

Other civil petitions (Child Support):

1983-84	1992-93	***increase***
121,968	267,980	**146,012 (120%)**

1. Reasonable Customers will Sue

Some Customers are Unhappy

Recent data indicates that customer satisfaction with support has bottomed out after a 10-year decline.

People who buy defective products and then can't get support feel cheated. Then, they go to (surprise!) lawyers.

Eight Interesting Lawsuits

- Intel Pentium
- Brummel v. Leading Edge & GE
- Step-Saver Data Systems
- Daughtrey v. Ashe
- Baldwin v. AIB
- Family Drug Store v. Gulf States Computer
- Ritchie Enterprises v. Honeywell Bull
- Clayton X-Ray v. PSC

Intel Pentium

Intel kept selling a defective processor after discovering its defect. After a professor discovered the bug, customers asked for refunds. Intel required them to convince it that they were at risk from this bug. Later, Intel announced a no-questions-asked return policy, but still made it hard to return the chip.

The class action lawsuits settled, with Intel providing free replacements, incidental and consequential damages, and lots and lots of attorneys fees.

- ***Handle defects gracefully and responsibly.***
- ***Get bad products off the market.***

2. Lessons from LawyerLand

Brummel v. Leading Edge & GE Computer Service

According to the plaintiffs in this recently filed suit, they bought Leading Edge computers that had service warranties, including phone support. Some bought extended warranties.

Customers were allegedly unable to get through, were placed on long holds, and were given misinformation. They sued for breach of warranty, breach of the service contracts, false advertising, etc.

- ***Answer the phone.***

Step-Saver Data Systems

This is one of several cases that has ruled that post-sale warranty disclaimers are ineffective.

There are few *software* cases on this issue, but the Uniform Commercial Code's rules seem very clear.

- ***Rather than relying on ineffective shrink-wrapped warranty disclaimers, make the software reasonably fit for its ordinary purposes.***

Daughtrey v. Ashe

An appraisal form, put in the box after the sale by the jeweller, was treated as a statement of fact about the sold product (diamond) by the seller and thus as a warranty that the diamond was of the quality stated.

User manuals (and help) are collections of statements of fact about products, much like the appraisal form, and they are probably non-disclaimable express warranties.

- ***Test your documentation.***

  (Anything you say can be held against you . . .)

Baldwin v. AIB

AIB bought a computer and software from Baldwin. According to AIB, the software didn't work. Baldwin made 28 service calls, and stated that most would have been unnecessary if AIB had read the manuals. Eventually AIB sued and won.

- ***We say RTFM (to ourselves) all the time and we blame customers for not reading documentation. Sometimes (maybe here, maybe not) the manual and help are worthless. Treating the customer badly for not reading bad documentation is just an invite to a lawsuit.***

Family Drug Store

The customer bought a program that was poorly designed and unacceptably hard to use. However, the seller had openly demonstrated the system to the customer and had not misrepresented anything. The seller refused to issue a refund, the customer sued and lost.

No law says that the customer is always right or that the customer has to be satisfied. The law requires that the seller deliver what was promised. If you sell it honestly and the customer doesn't like it, how you handle the customer is a marketing issue, not a legal issue.

2. Lessons from LawyerLand

Ritchie Enterprises v. Honeywell

Ritchie bought a mainframe and sued.

The court decided against Ritchie on every key issue **except** *post-sale fraud*. A customer can sue for fraud if support staff use deceit to convince her to keep trying to make a bad product work rather than demanding a refund,.

Even if the customer can't collect these damages in the underlying breach of contract suit, in a suit for post-sale fraud, the customer *can* collect punitive and consequential damages.

- ***Never mislead customers in post-sale transactions.***

Clayton X-Ray

Clayton bought a computer from PSC but refused to pay the balance. PSC staff inserted code to lock up Clayton's access to the software and data.

The court ruled that this was a valid claim for *conversion* and allowed Clayton to sue for punitive and consequential damages.

- ***Don't settle disputes with customers by blocking their access to their own systems and data.***

(Disabling software is sometimes legal, but the laws here are complex. Don't do it without legal advice.)

Call Avoidance

Lawsuits cost money.

The engineering and support practices that help prevent lawsuits also cost money.

Sometimes it's hard to convince executives to spend the money to do the right thing.

This section sketches a bridge between related efforts to improve customer satisfaction while driving down net costs: ***Call-Cost Reduction*** and ***Quality-Cost Reduction***.

Call Avoidance

The goal of a call avoidance strategy is to reduce the cost of support.

The four components of a call avoidance strategy:

- ***Prevention***
- ***Diversion***
- ***Minimization***
- ***Evasion***

Call Avoidance

Prevention

- **By making selected improvements in the product quality, you can reduce the number of calls.**
- **I'm puzzled by claims that only 5-20% of incoming calls are due to "genuine bugs" because the numbers look *much* larger from the engineering side (33-50%). Maybe the issue is definitional:**

  How many calls could you prevent by making an improvement to the product (e.g. by directly supporting a popular printer or by putting a decent index in the manual)?

Any aspect of software that causes customer calls is a candidate for improvements to reduce total costs.

Call Avoidance

Diversion

- Web-based support, VRU's, FAX-backs are examples of methods to divert people from live, real-time phone support to automated support.
- These work superbly for some people, and for some problems.
- These cost money to set up, to staff, and to keep current. They may yield strong net savings, but they require ongoing investment.

Call Avoidance

Minimization

The goal: minimize the time that a support rep. spends with a caller.

- may result from improved internal processes.
- may result from enhancements like troubleshooting wizards on disk or troubleshooting documentation in the book. The support rep. uses these to help the caller solve his own problem in his own time.
- Minimizing by hanging up mid-problem is not a solution to the customer's problem.

Call Avoidance

Evasion

Make it aggravating or expensive enough that most callers hang up and won't call back.

- Busy out trunks.
- Long hold times on toll calls.
- Charge for all calls, even for legitimate bug reports.
- Don't return calls.
- **Generally, provide slow, bad service.**

It cuts costs over the short term, but makes customers want to sue.

Cost of Quality

A key goal of quality engineering is to minimize the total cost of quality associated with a product.

The ***Cost of Quality*** includes cost of investments in good quality and cost of expenses (waste) arising from inadequate quality. The traditional cost categories are:

- Cost of ***prevention***
- Cost of ***appraisal***
- Cost of ***internal failures***
- Cost of ***external failures***

Cost of Quality

Prevention

- Cost of preventing software errors, documentation errors, and any other sources of customer dissatisfaction.

Appraisal

- Cost of all types of inspection and testing.

Internal failures

- **All** costs of coping with errors discovered during development.

External failures

- All costs of coping with errors discovered, typically by your customers, after the product is released.

Examples of Quality-Related Costs

Prevention	***Appraisal***
• Staff training • Requirements analysis • Early prototyping • Fault-tolerant design • Defensive programming • Usability analysis • Clear specification • Accurate documentation	• Design review • Code inspection • Glass box testing • Black box testing • Training testers • Beta testing • Test automation • Usability testing
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 • Preparation of support answer books • Refunds and replacement with updated product • Lost sales • PR work to soften drafts of harsh reviews • Lost customer goodwill

A New Law of Software Quality?

Article 2B is being proposed as an addition to the Uniform Commercial Code. It will focus on licenses, including licensing of software, and digital and non-digital content (books, magazines, etc.)

The drafting committee is being advised by dozens of eloquent publishers' lobbyists. Several drafts cut most buyer protections.

(I think this would be attempted suicide by the American software industry.)

The drafting committee is reappraising its position. Don't change your sales or support strategy on the assumption that Article 2B will change the world.