

Status Report:

*New Laws that will Govern Software
Quality*

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Summary

- New laws will govern your professional situation.
- Laws evolve to fit societal balances between different risk management approaches. Dogmatic views of the balances are simply naïve.
- Laws affect competition. We are not in a free market.
- There are good reasons to get involved (you can actually do some good).

New Laws Will Govern You

- **Uniform Commercial Code Article 2B**
 - will govern all contracts for the development, sale, licensing and maintenance of software and software-like digital information/objects
 - will govern all contracts for licensing of information
- **Professionalization of Software, Software QA**
 - no current bills, but will it revive in 2000?
- **Uniform Electronic Transactions Act**
 - electronic commerce legislation that facilitates consumer rip-offs will set back the field. Sadly, it will also affect commerce management technology.

Design Requirements for Commercial Laws

The purpose of commercial law is to facilitate commerce.

Design Requirements for Commercial Laws

Stability facilitates commerce.

Laws are Subject to Dynamic Balances

Erroneous Classifications Will Happen.

A decision rule that is less complex than the situation being classified will make mistakes. Sometimes buyers will lose when they should win. Sometimes sellers will lose.

Both sides will have great stories of unfairness to print in the newspapers.

Laws are Subject to Dynamic Balances

Seller's vs. Customer's Risk Management

- Should sellers have to eat returns of good products?
- Should buyers have to tolerate defects?
- Who should pay for user error? Why?
- “Rules of just conduct cannot be dictated.” ???
 - We live in a regulatory culture in which minimum standards of just conduct are routinely dictated.
 - Caveat emptor is one societal view.
 - Caveat vendor is an equally traditional view in Western social history.

Laws are Subject to Dynamic Balances

Technological vs. Commercial Risk Management

- Fault-based liability: *It's your defect. You pay for it.*
 - But how do we define “defect”?
 - Failure to meet specification?
 - Failure to satisfy reasonable customer expectations?
 - At what point do we create a lottery that randomly takes companies out of business? (Can *you* make zero defect software? No? How do you stay in business?)

Laws are Subject to Dynamic Balances

Technological vs. Commercial Risk Management

- Technological management: *You should have done it better.*
 - Product is defective and cost to repair (redesign) is much less than total cost of the defect to society. (This is our external failure cost, foisted on us by the seller.)
 - encourages improvements, but these can drive up cost.
 - In the extreme, we risk ending up with a system that imposes huge direct and indirect taxes on us all in order to develop products that will protect fools from their own recklessness.

Laws are Subject to Dynamic Balances

Technological vs. Commercial Risk Management

- Commercial management: *Allocate risk by contract.*
 - makes perfect sense in deals between people or businesses who actually have the power to negotiate.
 - But what about non-negotiable situations in which one side has no bargaining power and the other side has no competition?
 - is a system that ensures that the more powerful person or corporation in the contract is protected if the quality is bad but that is otherwise indifferent to quality.

Laws Affect Competition

- The President of the Software Publishers Association recently testified to the Federal Trade Commission that competition in the software publishing industry was threatened, and that publishers were being harmed by being handed “take it or leave it” licenses by more powerful publishers.
- Yet that same association publishes a standard form, take-it-or-leave-it license for publisher use with end customers. (Software Publishers Association, *Model PC Software License Agreement (and Explanatory Comments)*, 1993.) We should recognize that what is unfair for the gander is also unfair for the goose.

Article 2B and Competition

- **Post-sale shrink-wrapped terms are enforced.**
The customer can't do comparison shopping on the warranty and other quality-related promises because competitors hide them until after the sale.
- **Prohibit publishing detailed criticisms of the software.** This is often dressed up as a confidentiality restriction. Here is the most blatant: "The customer will not publish reviews of the product without prior written consent from McAfee."
- **Restrictions on the nature or purposes of use of the product are generally approved.**

Article 2B and Competition

- **Specific restrictions against competition.** For example, you can't use compiler X to create your own compiler.
- ***Prohibition against reverse engineering.***
- ***Prohibition against decompiling the software.***
- ***Prohibition (via the ban of reverse engineering) against developing products that are interoperable with this one.***

You Can Do Some Good

- You can help clear up technological myths and mistakes:
 - the virus debate
 - embedded software
 - security of encryption keys
 - predictable user errors (electronic commerce)
- You can help people understand the assumptions you carry into your contracts:
 - professionalization
 - intellectual property rights

How to Get Involved

- Attend the meetings. Next 2B meeting is in Memphis, Peabody Hotel, November 21-23. Next UETA meeting is in Dallas, January 9-11.
- Write your state legislator.
- Encourage professional societies to get involved in this legislation. 2B is one of several quality-related bills. Attend professional society meetings (IEEE has a political affairs committee, so does ACM.)
- Organize (or help me organize) some polls of the community.

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