Year 2000, How Can I Sue Thee?
Oh, Let Me Count the Ways!

Cem Kaner
Copyright © Law Office of Cem Kaner
11th International Quality Week, May 27, 1998
Disclaimer

- I’m new to Y2K law and am not an expert in it. The preparation behind this talk reflects a first serious effort to sort out the Y2K issues, not a final summary of research.
- This paper is written to build a bridge from the legal discussions to the software testing community. As a member of both communities, I see some opportunities for crosstalk.
- For legal advice on Y2K, consult your attorney.
Time for a Feeding Frenzy?

- J.P. Morgan estimates $200 billion for remediation
- Gartner Group estimates $600 billion
- Astonishingly low level of remediation expenditure in 1997
- Maybe 50% of companies will not be ready (Gartner Group)
- Who should pay for all the costs and consequences?
- Do we all get a guided tour of Lawsuitland?
A Trillion Dollars for Lawyers?

- Commonly quoted estimate of litigation arising from Y2K tags the cost at $1 trillion. Compare:
  - Asbestos = $1 billion per year
  - Superfund = $1 billion per year
  - Tort litigation = $29-36 billion per year
  - Kitchen sink ++ = $300 billion per year
- Where are you going to FIND a trillion bucks worth of lawyers?
Why All the Lawsuits?

◆ A lawsuit arises out of a failure to live up to a responsibility (duty). Duties arise:
  • in contracts
  • in the laws of public safety (criminal and tort)
  • in the laws of fraud and deceptive practices
  • in the laws of fiduciary (caretaker) responsibility
◆ No breach of a duty => No grounds for a lawsuit.
Scope of the Legal Problem

- Typical legal analysis involves a few general questions:
  - Who are the potential parties (people in the lawsuit)?
  - What are their duties?
  - Which duties might be breached due to a Y2K failure?
  - What actions can aggrieved parties take as a result of a Y2K breach?
Scope of the Technical Problem

Errors based on date

- Age-related errors
- Can’t do future things errors (e.g. expiration dates on credit cards, long term mortgages, mag renewals)
- Premature expirations (service intervals, best-before dates)
- Length of intervals (century long phone calls)
Scope of the Technical Problem

Errors based on revisions

- 33% rule for bug fixes
- Principle of nonlocality
- Principle of nonproportionality
Scope of the Technical Problem

Example error based on revisions

- Fixed-length record database:
  - Name 60 chars location 1
  - Birthday 6 chars location 61
  - SSN 8 chars location 67
  - Other 100 chars location 75
  - Total record length 174 bytes.
  - Now, repair Birthday to 8 chars MM/DD/YYYY.
  - Look up SSN? What if location of SSN is hardcoded?
Scope

• The scope of this problem is enormous:
  • *Any relationship or duty that can be interfered with by a Y2K problem can become the subject of a lawsuit.*
A Business and its Relationships

Governments and Other Regulators

Suppliers of Goods, Data & Services

Business

Internal Stakeholders

 Receivers of Goods, Data & Services
A Business and its Relationships

Software suppliers & IP owners
Software services
Outsource vendors
Y2K remediation services
Data suppliers
Landlord, facilities mgmt
Health services
Insurers
Diagnostics and other tool suppliers
Hardware (computer) vendors
Hardware (non-computer) vendors
Legal and financial services
Utilities
Shippers, mail delivery

Governments
and Other Regulators

Business

Internal Stakeholders
A Business and its Relationships

Governments and Other Regulators

Business

Internal Stakeholders

Data receivers -
Customers (goods) -
Customers (software) -
Customers (services) -
Bills to customers -
Payments to suppliers -
Timed services to customers -
(e.g. warranty, expire dates)
Scheduled services (e.g. -
  checkups)
Merchandise shipped -
Third party users -
Strategic partners -
A Business and its Relationships

- Local, state, and federal tax authorities
- State and federal securities regulators
- Corporate (e.g. nonprofit) mgmt overseers
- Auditors
- Labour (and plant safety) regulators
- Advertising regulators
- Product safety regulators
- Courts / admin agencies (scheduled events)

Suppliers of Goods, Data & Services

Business

receivers of Goods, Data & Services
A Business and its Relationships

Suppliers of Goods, Data & Services

- Employees
- Shareholders
- Lenders
- Employment-related insurers
- Unions
- Officers & Directors

Receivers of Goods, Data & Services
A FEW Examples of Plausible Legal Actions

- Breach of warranty, implied warranty
- Malpractice or other economic negligence
- Fraudulent or negligent misrepresentation (e.g. negligent certification)
- Unfair or deceptive trade practices
- Negligence or strict liability for injury or property damage
- Shareholder suits (sue Board for misrepresentation or for breach of fiduciary duty)
Are We Deer in the Headlights?

What can a QA (quality assistance) group do to help a company reduce its risk of Y2K litigation?
We Have Special Skills

- Empirical investigators
- Application (end use) oriented
- Able to cope with insufficient information
- Used to dealing with tight schedules
- Used to bad data and strange code
- Good reporting skills
- In many publishing companies, IT has a weak testing staff focused on glass box, or no testing staff--our services might be broadly needed.
Securities Litigation

- The core issues involve assessment:
  - Business judgment rule
  - Reasonable disclosure of risk
- *We can and should provide technical assessment.*
Embedded Systems

- Rule of thumb in products liability:
  - If you can’t fix it, then you must warn about it.

- Many examples involve transition to a critical date, then disaster.
  - We can identify interesting dates and risks and test.
  - Even if it can’t fix, our company can warn.
Whacky Billing, etc.

- FDIC Cease and Desist Order focused on good process rather than on elimination of Y2K problems.
- Similarly, deceptive practices suits for bad billing will be better defended if there is evidence of a good faith effort to prevent errors.
Meltdown from Bad Data

- Several compliance definitions assume that incoming data will be good.
  - We’re testers. We know better than to assume this.

- Simulate bad input from data trading partners and trace the effects.
  - If you can’t prevent it, you can at least detect and reject it.
Test Effort Documentation

Some of you know me well enough to know how much I despise spending time documenting test efforts. My goal is to do the minimum necessary, to leave more time for testing and advocating.

Minimum is not zero.

In the face of a credible litigation risk, documentation is defensive evidence of value. We must develop appropriate materials.
Conclusion

◆ Lawsuits are like raising horses (badly):
  ● You can prevent problems by building a good barn.
  ● You can inspect the barn and fix problems.
  ● Or (*the lawsuit analogy*) you can do post-disaster damage control—when the horse gets out, wildly runs away and breaks its leg, you can sell the carcass after you shoot the horse.
◆ Let’s work on improving the barn and saving the horses.