

THE MILLENNIUM BUG: WILL IT BITE?
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I. INTRODUCTION

Litigation stemming from the millennium bug could be the largest in history, larger than tobacco, asbestos and breast implant litigation. Are you ready?

The problem is simple: the use of two digits instead of four to represent the year in date fields. How can such a simple problem have the predicted catastrophic and widespread impact on a society as sophisticated as ours? Pause and consider the things around you that depend on computer technology: telephone systems, automobiles, elevators, security systems, office equipment, planes, trains, ships, etc. How would the loss of telephone communication for a month affect your law practice? We have become so dependent on computer technology, and its use is so pervasive, that a failure of only a small percentage of systems could have devastating effects.

II. NATURE OF THE PROBLEM

A. How Could This Happen?

Unlike today, computer memory was incredibly expensive in the 1960s and 1970s. To conserve valuable memory space, two digits instead of four were used to represent the year. For example, "72" was used instead of "1972." Because the computer and the computer program were not expected to still be in use at the turn of the century, abbreviating the date was an efficient programming technique. This technique caught on and continued to be used for decades. Thus, the Y2K problem was born.

B. Why Can't It Be Fixed?

The solution is obvious -- change the year date fields to four digits. Although obvious, the solution is not as simple as it would seem. Correcting the problem is very time-consuming, meticulous work. Computer code must be reviewed line by line in search of date fields. Much of the programming is COBOL, a language that is no longer taught or used. Therefore, there is a limited supply of personnel with the know-how to make the necessary changes. Large companies that are not substantially advanced in the remediation process now simply will not become Y2K compliant before the end of the year. This is due to the limited supply of capable personnel plus the staggering amount of time necessary to make the corrections.

A bank, for example, may have 100,000,000 lines of code in its computer programming. A general rule of thumb is that correction and testing will take one person-month per thousand lines of code at a cost of approximately \$1.15 per line. The cost to make the bank's system Y2K compliant would be \$115,000,000 and would take 10,000 person-months. Even though this problem has been recognized since at least 1989 -- that's when social security began working on the problem -- it is estimated that now as much as 50% of the products on the market are not Y2K compliant.

In addition to computer programming code, microcontrollers (embedded chips) are also date-sensitive. Embedded chips are everywhere -- medical devices, traffic signals, microwaves and so forth. Completing an inventory of all embedded chips to determine which ones are Y2K compliant and which ones are not before December 31, 1999, is impossible.

C. What Are The Potential Effects?

Computer programs calculate a person's age, for example, by taking the person's date of birth and subtracting it from the current date. On January 1, 1999, a computer program would correctly calculate the age of a person born on January 1, 1960, as being 39 years old ($99 - 60 = 39$). However, on January 1, 2000, a computer program which uses a two-digit date field to represent the year would calculate the age of that person as being -60 ($00 - 60 = -60$). In some computer systems this would result in improper calculations, while in other systems it would result in program failure or a crash of the computer system. Already, credit card scanners have shut down entire systems when presented with a credit card with a year 2000 expiration date.

There are billions, if not trillions, of embedded chips in use today. The failure of even a small percentage of these embedded chips would have far-reaching consequences.

III. LITIGATION

It is estimated that \$300,000,000 to \$600,000,000 will be spent in efforts to correct the Y2K problem. It is also estimated that for every dollar spent in correction efforts there will be ten dollars spent in litigation costs and damages. Given the potential cascading effect of Y2K litigation, such estimates may not be out of line. Consider the following: Company A shuts down temporarily as a result of Y2K problems. Company A is, therefore, unable to meet its contractual obligations. Company B relies on Company A's product to meet its contractual obligations to Company C. When Company B fails to deliver, Company C sues Company B for breach of contract. Then, Company B sues Company A. Company A determines that it was someone else's fault that caused them to shut down; perhaps it was the fault of Company A's suppliers, utility companies, landlord, manufacturer of its equipment, or the information technology consulting firm they had hired.

Therefore, Company A sues one or more of these. At the same time, Company A's stockholders sue because the officers and directors failed to correct the problem in advance. And on it goes.

A. Causes of Action

Millennium bug litigation will involve tort and contract theories that cover the gamut. Here, the most prevalent legal theories will be discussed.

1. Breach of Contract

Well-established law provides that a buyer may recover incidental and consequential damages as a result of the seller's breach of contract. §7-2-715, Ala. Code 1975; see *Mannington Wood Floors, Inc. v. Port Epes Transport, Inc.* 669 So. 2d 817 (Ala. 1995).

Take the following example: Company A entered into a contract with Company B promising to deliver 5,000 widgets on or before January 31, 2000. Due to Y2K problems at its plant, Company A is unable to deliver the promised widgets. Company B then sues Company A for breach of contract to recover the purchase price of those 5,000 widgets, the additional cost incurred in obtaining 5,000 widgets from a different source, plus consequential damages.

a. Breach of Express Warranties

An express warranty is 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.” See §7-2-313(1)(a), Ala. Code 1975. The crux of an express warranty claim is that the goods did not conform to the warranty. *Ex parte Miller*, 693 So. 2d 1372 (Ala. 1997).

Now, many vendors are stating that their product is “year 2000 compliant.” However, there is no uniformly accepted definition of “year 2000 compliant.” Therefore, a breach of express

warranty claim may result in the court deciding between competing definitions proffered by the plaintiff and defendant. Vendors may also warrant that the product is “free of any defects.” A breach of express warranty claim could be made by arguing that the product is defective in that it is incapable of properly handling dates beyond January 1, 2000.

To make an express warranty claim under the UCC, notice must be given in order to provide the seller with an opportunity to cure the defect. §7-2-607(3)(a), Ala. Code 1975 (“buyer must within a reasonable time after he discovers or should have discovered any breach notify the seller of breach or be barred from any remedy”). One Y2K lawsuit has been dismissed on this basis.

b. Breach of Implied Warranty

There are two implied warranties that may apply in Y2K litigation: the implied warranty of merchantability and the implied warranty of fitness for a particular purpose. First, unless disclaimed, a sale of goods contains an implied warranty that the goods are merchantable, that is, the goods are fit for the ordinary purposes for which such goods are used. §7-2-314, Code of Ala. 1975. Clearly, an argument could be made that goods that are not Y2K compliant are not fit for the ordinary purpose for which they were sold. If a product fails or fails to function properly in the year 2000, then it is not fit for ordinary purposes. However, the implied warranty of merchantability is easily disclaimed. All that is required is that the disclaimer be conspicuous and use the word “merchantability,” or similar language like “as is” or “with all faults.” §7-2-316, Code of Ala. 1975.

Second, an action could be brought for a breach of the implied warranty of fitness for a particular purpose. In order for this implied warranty to apply the seller must have “reason to know any particular purpose for which the goods are required and that the buyer is relying on the seller’s skill or judgment to select or furnish suitable goods.” §7-2-315, Code of Ala. 1975. Perhaps, in many

instances, the argument could be made that the seller knew that the product was to be used beyond the year 2000, and the buyer relied on seller's expertise to select such a product.

Like the implied warranty of merchantability, the implied warranty of fitness for a particular purpose is easily disclaimed. All that is required for an effective disclaimer is that it be conspicuous. §7-2-316, Code of Ala. 1975.

2. Torts

a. Negligence / Wantonness

To state a cause of action for negligence a plaintiff must show the three essential elements of negligence. These are: (1) the existence of a duty on the part of a defendant to protect the plaintiff from injury; (2) breach of that duty; and (3) a causal connection between the breach and the plaintiff's injury. The computer industry has known of the Y2K problem since at least the 1980s. Therefore, designing a software program in recent years utilizing a two-digit date field clearly constitutes negligence. The resulting injury to a plaintiff could be devastating if the Y2K problem results in a system shutdown or gross miscalculations. However, the resulting damages, although substantial, will likely be purely economic. Thus, the economic loss rule presents a major hurdle in maintaining a negligence claim in Y2K litigation.

According to the economic loss rule, a cause of action does not arise under tort theories of negligence, wantonness, strict liability or the AEMLD where a product malfunctions or is defective and thereby causes damage to the product itself. *See, Ford Motor Company v. Rice*, 1998 WL 846879*7, citing *Wellcraft Marine v. Zarzour*, 577 So.2d 414 (Ala. 1990); *Dairyland Ins. Co. v. General Motors Corp.*, 549 So.2d 44 (Ala. 1989); and *Lloyd Wood Coal Co. v. Clark Equip. Co.*, 543 So.2d 671 (Ala. 1989).

b. Products Liability / AEMLD

To establish liability under the Alabama Extended Manufacturers Liability Doctrine (AEMLD), a plaintiff must prove:

(1) He suffered injury or damages to himself or his property by one who sells a product in a defective condition unreasonably dangerous to the plaintiff as the ultimate user or consumer, if

(a) the seller is engaged in the business of selling such a product, and

(b) it is expected to and does reach the user or consumer without substantial change in the condition in which it was sold.

(2) Showing these elements, the plaintiff has proved a prima facie case although

(a) the seller has exercised all possible care in the preparation and sale of his product, and

(b) the user or consumer has not bought the product from, or entered into any contractual relation with, the seller."

Howell, by and through Marsh v. Honda Motor Co., Ltd., 716 So.2d 713 (Ala.Civ.App. 998), quoting *Casrell v. Altec Industries, Inc.*, 335 So.2d 128, 132-33 (Ala. 1976).

A defendant may be held liable if it manufactures or sells an unreasonably dangerous product that reaches the consumer in a substantially unaltered condition and causes injury through its ordinary intended use. "A defective product is one that is unreasonably dangerous, i.e., one that is not fit for its intended purpose or that does not meet the reasonable expectations of the consumer." *Mueller Co. v. Tranbeam Corp.*, 693 So.2d 1380 (Ala.Civ.App. 1997), quoting *Beam v. Tramco, Inc.*, 655 So.2d 979, 981 (Ala. 1995). This could certainly apply to products that are not Y2K compliant as consumers do not expect a product to fail or malfunction merely because of a date change.

Again, the economic loss rule will prove to be a difficult barrier against recovering under AEMLD for many Y2K related injuries. However, many Y2K failures could well result in personal

injury. Failures of embedded chips in traffic signals, elevators and medical devices, to name but a few, could result in viable causes of action under AEMLD.

c. Fraud

Companies that intentionally misrepresent their level of Y2K compliance may be sued for fraud. To recover in a fraud action a plaintiff must prove (1) that the defendant made a false representation; (2) that the false representation concerned a material fact; (3) that the plaintiff relied on the false representation; and (4) that the plaintiff was damaged as a proximate result of the reliance. *Prestwood v. City of Andalusia*, 709 So.2d 1173 (Ala. 1997). Representations that a product is “Y2K compliant”, “free of defects,” or “this is what you need for the next century” could support fraud claims.

3. Shareholder Actions

a. Direct Suits

Directors and officers have a fiduciary duty to use their best efforts to protect the financial well-being of a corporation. While they do not have to insure success in a marketplace that is full of uncertainty and risks, directors and officers are obligated to exercise due diligence. Directors and officers are required to perform their functions: (1) in good faith, (2) in a manner they reasonably believe to be in the best interest of the corporation, and (3) with the care of ordinarily prudent persons in like positions and in similar circumstances. §10-2B-8.30, Ala. Code 1975.

When corporations suffer major losses as a result of Y2K problems, shareholders will look to the directors and officers for accountability. As the Y2K problem has been known since the mid to late 1980s, directors and officers will have difficulty justifying a failure to take remedial measures.

One defense by which directors and officers can be expected to try to avoid liability is the business judgment rule. The Alabama Supreme Court has defined this rule as follows:

If in the course of management, directors arrive at a decision within the corporation's powers . . . for which there is a reasonable basis and they act in good faith, as a result of their independent discretion and judgment, and uninfluenced by any consideration other than what they honestly believe to be the best interest of the corporation, a court will not interfere with internal management and substitute its judgment for that of the directors to enjoin or set aside the transaction or to surcharge the directors for any resulting loss.

Michaud v. Morris, 603 So.2d 886 (Ala. 1992), quoting *Roberts v. Alabama Power Company*, 404 So.2d 629, 631 (Ala. 1981), quoting *H. Henn, Law of Corporations*, §242 (2nd Ed. 1970).

In order to comply with this business judgment rule, directors and officers would need to develop and implement a Year 2000 remediation plan that covers all bases. A failure to take any steps of remediation would not be justified.

b. Derivative actions

A shareholder derivative action is a lawsuit brought by a shareholder on behalf of the corporation itself seeking to recover corporate losses suffered as a result of the directors and officers failing to act properly. The failure to adopt and implement a Y2K remediation plan could easily give rise to such derivative actions.

One requirement for bringing a derivative action that a demand be made to the directors identifying the wrongdoers, describing the nature of the wrong and the harm to the corporation, and requesting remedial relief. *See Stallworth v. AmSouth Bank of Alabama*, 709 So. 2d 458 (Ala. 1997). However, this director-demand requirement may be excused if such a demand would be futile. *Id.*

V. Conclusion

The millennium bug will bite. The question is, will we let it bite us or will we be prepared for it? Businesses and consumers will suffer substantial harm as a result of this computer glitch that

has been known to exist for years, yet remains uncorrected by many. We need to be ready to come to the aid of our clients.