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Correcting Year 2000 (Y2K) False Assumptions

by Lance B. Eliot, Feature Editor, Elliot & Associates

The Year 2000 is almost here. Hotels and flights are being booked for New Year's Eve of 1999. Champagne is on order. Grand celebrations are being prepared.

Unfortunately, looming ominously over such joyous plans is the Year 2000 computer problem (commonly referred to as the "Y2K" problem). Simply stated, many computer systems have been programmed to use 2 digits for representation of the year and will therefore be unable to accurately calculate dates that stretch beyond the Year 2000. A computer that subtracts the year 1999 from the year 2000 will erroneously arrive at a value of minus 99 ("00" - "99") rather than the correct answer of a 1 year difference.

In the least severe of circumstances, the incorrect calculation will create minor annoyances such as showing a report with line items improperly sorted by date sequence. In more severe situations, the miscalculation could incorrectly determine mortgage payments or other numeric values of important consequence. In the most severe situations the miscalculation might cause a system to halt or "crash" and therefore interrupt some corresponding process (such as halting a real-time device).

As a consultant who offers assistance regarding detecting and fixing organizations Year 2000 problem, I have encountered a number of executives who are not aware of the full ramifications of the Year 2000 compliance issue. Some executives falsely believe that the problem is not worthy of management attention and should merely be delegated to computer specialists in their organization.

I quickly point out that the SEC believes the Year 2000 problem to be significant. Recent bulletins of the SEC clearly indicate that publicly traded organizations are now required to state the amount of Year 2000 exposure that they face if the Year 2000 problem could materially impact their firm. Major firms such as Federal Express,

Bank of America, and others are planning to spend hundreds of millions of dollars to fix their respective Year 2000 problems. They realize that the Year 2000 problem could tremendously disrupt their businesses and they must fix or mitigate the potential damages before the Year 2000 strikes.

Lawyers are already lining up to help sue companies that do not take adequate protection for the Year 2000. Firms that do not make shareholders aware of Year 2000 exposures are bound to get hit with shareholder lawsuits if the Year 2000 problem financially harms the firm and the stock drops due to such financial difficulties. Officers of firms are likely to be named individually in various lawsuits, and the standard insurance protection for officers may not cover the Year 2000 issue.

False Assumptions Needing Correction

I have accumulated a handful of common false assumptions about the Year 2000 problem and present them next. For each false assumption, I also offer the corresponding correct assumption that should be made in place of the false one.

Note that executives can no longer hide behind the smoke screen that "I didn't know" about the Year 2000 problem—the mass coverage of the Year 2000 issue has now obligated executives to gain an understanding of the Year 2000 problem. The key now becomes learning the right story about the Year 2000 problem and overcoming the hype and misinformation that sometimes gets circulated on this topic.

False Assumption:

Only mainframe and large host systems have the Year 2000 problem.

Truth:

Any computer-based system can have the Year 2000 problem, including mainframe-,

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midrange-, and microprocessor-based systems. Many firms initially look only at their large-scale systems and "back office" business applications. But, they must also look at all other computer-based systems throughout their organization.

For example, some facilities have elevators that are computer controlled. Modern elevators often require that a strict maintenance schedule be obeyed and if not, the computer system may elect to halt the elevator from functioning until the maintenance has been accomplished. With the Year 2000 problem, an elevator computer might incorrectly believe that the maintenance has lagged for 99 years and therefore instruct the elevator to stop functioning.

The point of the elevator story is to highlight the fact that companies must look beyond their large-scale computers and consider all types of computers and computer applications in their companies. What about computers that control your facilities? What about computers in the front office for doing point-of-sales applications?

It is important to create an inventory of all computer controlled systems and then review the list to determine which systems have potential date related issues.

FALSE ASSUMPTION:

Only older model systems (hardware and software) have Year 2000 problems.

TRUTH:

Systems that are being bought today are just as likely to have Year 2000 problems as do the older legacy systems that your company already possesses. Sadly, there is no across-the-board standard for dealing with the Year 2000 issue and every vendor that uses computers in their products can opt to provide a non-compliant system if they wish to do so. Buyer beware is the standard (right or wrong).

For example, the U.S. government agency NRC recently purchased 600 modern PCs (Pentium class machines). To their dismay, the NRC discovered that the real-time clock was not a Year 2000 compliant version (the compliant version cost 60 cents more). Fortunately, the contract that the NRC used to purchase the PCs stated that the PCs must be Year 2000 compliant and the vendor will now need to fix or replace the PCs, but the resulting confusion and

disruption during the fix and replace operation will not be pleasant.

The lesson to be learned is twofold: (1) Any and all computer-based systems (old and new) must be considered suspicious and questioned as to their Year 2000 compliance, and (2) any new acquisitions of computer-based systems must include contractual aspects of the Year 2000 issue.

FALSE ASSUMPTION:

You have until New Year's Eve of 1999 to find and fix the Year 2000 problem.

TRUTH:

Many systems will encounter the Year 2000 problem long before the end of 1999. As you inspect your Year 2000 exposures, it becomes important to identify the earliest date of potential failure due to Year 2000 issues. If a manufacturing system does 3 year forecasts, it might have Year 2000 problems right now that are being hit due to date calculations involving 1998, 1999, and the Year 2000.

Another reason that the Year 2000 problem may arise much sooner than December 31, 1999, is due to a common coding practice that uses the value of "99" for special significance in programs. Programmers often used the number 99 to indicate the end of a sequence. Thus, when your system rolls over from 1998 to 1999, the system may encounter date-related miscalculations after December 31, 1998!

FALSE ASSUMPTION:

You can confine your Year 2000 worries to your own internal systems.

TRUTH:

In a domino-like fashion, if one company fails to prevent its Year 2000 problems from occurring, it might impact another firm, which might impact a different one, and so on. For example, General Motors has contacted their suppliers and asked them to indicate how they are each dealing with their Year 2000 problem. Even if GM fixes its own Year 2000 problems, if a major parts suppliers fails due to Year 2000 and cannot deliver much needed parts, GM would be unable to get its products out the door.

Therefore, organizations must also look at outside entities that they depend upon or that depend upon them. How will your firm be impacted if supplier X has

Year 2000 problems? How will your firm be impacted if regulatory agency Z has Year 2000 problems? You do not want to get caught in a chain that causes your firm to fail due to a corresponding link that failed.

Conclusion

The Year 2000 problem is real. Firms not only need to be concerned with the Year 2000 per se, but they should also review their disaster recovery plans in anticipation of potential business disruptions that might occur in 1999 and 2000 due to Year 2000 noncompliance. Attention to the Year 2000 problem will heat up in 1998 and become red hot in 1999. Executives who make false assumptions about the Year 2000 may also be generating dangers for their organizations and for their own personal liability. Make sure that you get informed and get acting upon your Year 2000 problem. ■

If you have projects addressing the information technology area, and you would like to share this with readers of "Information Technology," please write to Dr. Lance B. Eliot, Eliot & Associates, P.O. Box 30041, Long Beach, CA 90853-0041, Email: LanceEliot@aol.com.