

BY LELAND G. FREEMAN

How to Avoid Staff Infection When Fighting the Millennium Bug

There's no foolproof solution to Year 2000 staffing issues. However, the lessons learned are not just applicable to the Year 2000 problem. With shortages of qualified personnel and growing project backlogs, the human resource practices put in place for Year 2000 will serve as "best practices" for IS organizations during the new millennium.

IS this a great time to be in IS, or what? Between companies converting to client/server, the popularity of Enterprise Resource Planning, a plethora of object-oriented architectures and, of course, Internet applications that thrive on Java and HTML, demand for experienced technical employees would be colossal even without the Year 2000. But the Year 2000 has made the market for IS professionals, especially project managers and programmers, hypercompetitive. With a project deadline that can't slip, corporations must resort to any means available to make certain their IS staff is sufficient to handle their Y2K projects.

The Information Technology Association of America estimates that 340,000 IS positions in the United States alone are currently unfilled. These jobs won't be filled with the next round of June college graduates, and it is doubtful that there are many qualified programmers scouring the classifieds, waiting for the phone to ring. Quite simply, there's a raging demand for IS professionals and a supply that is insufficient. Economists are telling us that these conditions lead to aberrations. They're right.

Given the inelastic demand for qualified personnel to meet the Year 2000 deadline and the scarcity of supply, it doesn't take much imagination to conclude that:

1. many IS professionals are going to be compensated quite well between now and the Year 2000
2. competition for qualified staff is fierce
3. some organizations are not going to have sufficient staff to be even close to Year 2000 compliance by January 1, 2000

So what's an employer's best strategy for addressing the problem? It depends on the company's needs, but here are some of the issues that virtually every company will need to consider:

THE PROJECT MANAGER

The place to start is with the Year 2000 project manager. If a highly qualified, experienced project manager is not already on board, well, good luck. You may want to send out your resume now while the demand is high, because your company is not going to make the Year 2000 deadline.

To address the Year 2000, the project manager must have the ability to think and plan beyond the narrow scope of the typical IS project. An enterprise-wide perspective is essential. The project manager will need to have a grasp of everything from the company elevators to the code running the computers for the company's dental floss subsidiary in Tanzania. An in-depth knowledge of such matters is not necessary, but a sufficient understanding is; and the project manager must make certain that such issues don't fall off the radar screen.

In addition to having broad technical expertise, the project manager will need to have the skills to define the project, budget, prioritize and communicate. Personal multi-tasking skills are a must.

Why should someone with such talents step into a position where failure could be a career breaker? To make the position attractive, it should be viewed as a stepping stone by top management, and the compensation and benefits should be attractive enough to ensure that the project manager stays put until the project is completed.

POOLING SOURCES

Companies are unlikely to be able to hire enough people to address the problem fully, since there are not enough people available, and, thanks to re-engineering, few companies have the necessary staff to address the Year 2000 strictly with internal personnel.

The Gartner Group estimates that an average midsize company has 8,000 legacy programs with a total of 12 million lines of code. Every line of source code must be found and inventoried. Those with date-related references must be identified, then remediated and tested. Whether you measure it by lines of code per day or finished programs per week, the project is daunting. Any slippage in meeting the deadline can have a disastrous impact.

As the clock ticks closer to the deadline, the more companies will need to pool their resources, combining internal staff, contract help, external or offshore help, and Year 2000 vendors. It is, in fact, a good thing to rely on a variety of resources. Just as a diversified stock portfolio reduces risk, the pooling of a variety of resources will reduce risk by spreading the organization's exposure. With many resources to draw from, a company is less likely to be severely affected if, for example, a key person accepts an offer from another company or succumbs to Y2K battle fatigue.

AUTOMATE WHEREVER POSSIBLE

Clearly, whatever can be automated in the Year 2000 compliance process should be because it will reduce the company's reliance on people, freeing up staff to work on other aspects of the project.

In the article "Year 2000 Solutions for Recovering Lost Source Code," (*Technical Support*, September 1997) I compared the time needed to recover missing source code with the time needed to manually write 150,000 lines of code. Assuming the code is written in COBOL, the missing code represents 1,400 function points, based on statistics developed by Capers Jones of Software Productivity Research in Burlington, Mass. We calculated that it would require 28,000 hours of effort to recover the code, at a cost of \$1,252,500.

The 28,000 hours cited represent 14 years of work. Even if seven programmers were doing the rewriting, they would not make the Year 2000 deadline – and keep in mind that recovering the source code is just the first step in the process. Using an automated

recovery process instead, the code could be recovered within a few months at a fraction of the cost.

**The Year 2000 has made
the market for IS professionals,
especially project managers
and programmers, hypercompetitive.
With a project deadline that can't slip,
corporations must resort to any
means available to make certain
their IS staff is sufficient
to handle their Y2K projects.**

USE OF INTERNAL STAFF

Internal staff should play a key role since the organization's IS employees best understand the company's information systems. However, keep in mind that the Year 2000 is becoming a huge drain on resources.

Clearly, it is important to have an internal project manager and to test remediated systems internally to ensure full functionality. How much additional work is done internally should depend on company resources.

In deciding who should be working on the Year 2000, choose carefully. Someone who is programming in Visual Basic is not going to be too happy about remediating COBOL, and they're probably not qualified for the job, anyway. As with the project manager, it is important to be able to reward all members of the Year 2000 project team, and not just with compensation. Consider that members of the team are virtually putting their careers on hold while they help save the company from certain disaster.

According to Jack Dolmat-Connell of The Wilson Group of Concord, Mass., which specializes in high-tech compensation, it is important for IT organizations to offer both short-term and long-term rewards to Y2K staff. In some cases, for example, programmers may be given an opportunity to spend a majority of their time on the Year 2000 project, but balanced with time spent on a coveted project. In addition, promises should be made — and kept — to provide

career opportunities to Y2K staff after the project is completed (assuming, of course, that the project is completed on time and without disaster).

Financial bonuses are also important, but a reward that won't be received for nearly two years means little today. A big bonus should be awaiting anyone who lasts through the Year 2000, but incremental incentive bonuses when certain milestones are achieved are also important. Other benefits, such as an expenses-paid vacation beginning on January 2, 2000, may also be appropriate. But keep in mind, if dramatic changes are made to IS compensation packages, the details should be worked out with the Human Resources department. Putting your IS staff in "golden handcuffs" today with inflated salaries and bonuses could lead to a large number of early (and expensive) retirements in a couple of years.

One paradox of Year 2000 staffing is that employers will need to offer very attractive compensation to their Year 2000 staff to prevent other companies from hiring away these employees. Yet, if compensation is too high, IS staff that are not working on the Year 2000 project are likely to become resentful and may seek employment elsewhere. One solution may be to offer bonus pay to individuals who are willing to work on Y2K on their own time. This may help address at the same time both Y2K and any potential staff resentment.

HIRING

The hiring process presents another paradox of Year 2000 staffing. Employers who are reckless in their Year 2000 staffing are likely to end up in big trouble come January 1, 2000. Yet employers today can't afford to be choosy, since the supply of qualified people is far smaller than the number of positions that need to be filled.

Dolmat-Connell suggests that employers resist the temptation to hire just anyone who claims to have the skills needed to be part of the Year 2000 team. Not only does he recommend the usual due diligence of background and reference checks, but he believes it is essential that technical people be involved in the hiring process. It is important to have a technical person involved to make certain the people you hire have the capabilities they claim to have. Before making a hiring decision, ask yourself, would you trust your mission-critical software in this person's hands?

Here's yet another paradox to consider: Would you hire someone today who is willing to bail out on his current employer's Year 2000 project? And, if so, what will keep him or her from bailing out on you?

Unfortunately, again, many companies need to supplement their staffing in whatever manner they can, including the hiring of outside help. As with other staff, it is important that recruited employees be offered short-term and long-term incentive bonuses to ensure that they put every effort into completing the Year 2000 project on time.

One question on the mind of any new hire is likely to be, What will happen after the Year 2000 project is completed? If you can promise Year 2000 staff other work after the project is completed — including training, if necessary — you will be more likely to retain your staff. Given that many current IS projects are on hold pending completion of Year 2000 projects, there is likely to be plenty of work to go around for years to come, so it might be in everyone's interest to discuss post-Year 2000 career paths today.

RECRUITING RETIREES

One way to avoid the issue of what to do with Year 2000 staff after the Year 2000 is to pry retired IS workers out of retirement. Many companies are searching through their database of former employees and bringing anyone out of retirement who can keystroke a line of code.

Some retirees are likely to look forward to the opportunity to be active while at the same time earn a salary that may significantly exceed their pre-retirement income. But don't expect someone who could be golfing on Hilton Head to relish the idea of moving back to Cleveland to bail out their former employer. In some cases, companies are setting up work centers in retirement areas to make it more conducive for their retirees to come back to work.

Retired workers can be cost-effective and can play an important role, but they also present a special set of concerns. It is important, for example, to understand the implications of re-employment on the retirees' pensions and their taxes. In addition, some retraining is likely to be necessary.

Again, it is as important to screen retirees as it is to screen other employees. Are they

qualified? What is their current knowledge base? Are they able to work the hours you want them to work? You may also need to address special health concerns among retirees and make reasonable accommodations as required by the Americans with Disabilities Act.

**Employers who are reckless
in their Year 2000 staffing
are likely to end up in big trouble
come January 1, 2000.
Yet employers today can't afford
to be choosy, since the supply
of qualified people is far smaller
than the number of positions
that need to be filled.**

YEAR 2000 FACTORIES

Another source of labor is the Year 2000 factory. Many companies have established factories for the often dreary remediation work that needs to be completed for Year 2000 compliance.

These factories, both domestic and offshore, have to be looked at and scrutinized individually. Some have earned the reputation for handling large amounts of code remediation in an efficient manner, delivering defect-free code back to the customer. Others seem to be little more than bullpens of programmers, attempting to grind out results, never quite meeting deadlines, and always delivering a less than desirable product. While the factory approach can certainly leverage an organization's personnel resources, opting for this type of vendor solution has to be carefully considered.


Also, many companies are leery about who they share their software assets with, and it is obviously difficult to keep track of a vendor halfway around the world. However, the clock is ticking, and there are few options left to consider.

As with hiring, due diligence is important. Get references and check them. Give the company a small project to work on and see how it goes. Carefully test any code that has

been worked on. You may find that your code is fixed just fine. On the other hand, you may find yourself in a time-consuming loop where you send code to be fixed, test the allegedly fixed code, find it doesn't work properly, send it back, test it again, find it still doesn't work properly, send it back, test it again, and on and on while the Year 2000 clock continues to tick.

RETENTION

Once you have a team assembled, do whatever you can to keep it in place. Contract with critical personnel through January 1, 2000 or beyond, but also do whatever you can to keep your team committed. Key individuals need to have a stake in completing the Year 2000 project properly and on time. Make certain they will be handsomely rewarded for succeeding.

Reviewing these options, it may seem apparent that there is no easy — or inexpensive — solution to your Year 2000 staffing issues. There's also no foolproof solution. However, the lessons learned are not just applicable to the Year 2000 problem. With shortages of qualified personnel and project backlogs that continue to grow (remember, we have the euro problem to conquer first), the human resource practices put in place for Year 2000 will serve as "best practices" for IS organizations during the new millennium. 



Leland G. Freeman is vice president of Marketing for The Source Recovery Company, LLC. In addition to his responsibilities for SRC, he is a frequent lecturer and author on the Year 2000 computer crisis. He can be reached at lfreeman@mci2000.com.

©1998 Technical Enterprises, Inc. For reprints of this document contact sales@naspa.net.