Year 2000 Conversions: A Report From the Trenches

BY JEROME MARGULIS

The '60s movie "Dr. Strangelove" was subtitled "How I Learned to Stop Worrying and Love the Bomb." While very few of us will learn to love Year 2000 conversions, with a little luck plus a lot of planning and hard work we should be able to survive.

As a consultant for Year 2000 projects, I've learned first-hand what steps are necessary to ensure a successful conversion. This column examines several of those phases.

A clear game plan needs to be developed: As with most projects, the most important phase is planning and design. Too often there is a push to begin working, but there's no clear game plan. This lack of planning for Y2K projects is causing a panic. Managers are being pressured to begin program conversions immediately. In addition to possibly overlooking vital components of the Y2K project, a disorganized, helter skelter approach will lead to confusion and ultimately compound the time it takes to complete the project.

Consultants should be integrated into the planning and implementation process: This phase is critically important. I have worked on a Y2000 project where the contracting company initially thought they could lock the consulting team in a room, feed them specs through a slot in the door, and one year later, a full-blown conversion would materialize. In addition to keeping the consultants in the dark (mushroom treatment), company personnel began working on pieces of the conversion. Although these groups worked on systems within their areas of responsibility, there was no central coordination. Often, programs were shared by several groups and appeared in more than one system within a group.

This immediately led to conflicts. The same program would be in demand by two groups, and one of the groups would have to suspend work until the first group finished. This meant that a large number of programs were tied up waiting for the problem program(s).

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The Y2K project team should consist of both client and consultant members, all with clearly defined roles: This sounds rather obvious, but too often, when time appears to be at a premium, good design concepts are bypassed in the mad rush to begin programming. The Y2K project manager must have clear lines of communication to top management and have all Y2K functions under his/her acknowledged authority.

One of the key reasons for top management's cooperation is the establishment of priority. Now that it is 1998, the time factor begins to loom large. The conversion work needs to have priority over all but emergency program fixes. For example, on my current project, we had to stall our conversion team because a group of programs within a system had been taken by another project group for enhancements. So, the conversion work on that system had to wait until those programs were changed and put back into production by the other group. When this happens, to avoid idle time, Y2K team members are given another system to work on. This means that several systems are being worked on at the same time, with none being completed. This can cause a management nightmare and lead to more conflicts, since more than one of these systems in process may use the same programs.

The systems and programs to be changed need to be clearly identified: There are many tools and methodologies in use to accomplish this. Regardless of the method selected, there is still no substitute for careful documentation, testing, and quality assurance. I witnessed a graphic example of this on my current project. We were installing a converted system of about 150 programs, and all of the programs used a database that had been converted. The system was put into production over a weekend, and on Monday all appeared well. However, on "Black Tuesday," we became aware of a serious problem. With deadly accuracy, Murphy's Law had pinpointed an error in the most critical program in the system. An update program had failed to convert. Because the unconverted program didn't

match the converted database, the updated fields on the database contained garbage. This caused several problems, the most severe being the destruction of a field that contained shipping points for trains leaving the manufacturing plant. For two days no product left this plant by rail! Obviously, this was a very expensive slip up.

So how was one program overlooked? This was, of course, what management wanted to know. The project leads of the consulting team were called into a conference room and the tar and feathers were readied. Fortunately, by then we had determined the cause of the problem. The scanning tools were not to blame. The source of the difficulty was that there were two versions of this overlooked program in two different production program libraries. The older, obsolete version, written 20 years ago, did not use the database in question, while the new version (the one actually in production) did. Unfortunately, the installation's documentation pointed the scanning tools to the old version. Since this older program did not contain references to the database, the scan did not target the program for conversion.

This led us to conclude that a clean conversion cannot rely entirely on automated tools. The client personnel who know the systems must carefully examine and test each system as it is being put back into production. This brings up the subject of testing.

Any estimate of project hours must include a realistic estimate of test time: I have found that two-thirds of the time allotted to convert a program will be spent on testing. Databases and other files must be prepared and synchronized. While this can be a time-consuming process, it is essential.

CAN THIS BE COMPLETED ON TIME?

One of the most common questions asked today is, "Can a Y2000 project be started in 1998 and completed before December 31, 1999?" Well, one comforting thought is that if all of the "end of the world" predictions come true, it won't matter. On the other hand, what if on January 1, 2000 we have to face judgment in this world instead of the next? Well, there should still be time if the usual rules of good planning and implementation are followed. Obviously, even at this late date, one of the most important steps is to prioritize the systems to be converted. The most critical applications must be addressed first. Programs that update databases and other files must be at the top of the list, whereas programs that simply produce reports or perform other non-update functions can be handled as time permits.

As always, good sound data processing practices will provide the best results. These are the kinds of things I have learned from experience and from studying for my CCP (Certified Computing Professional) designation. The value of having a professional standard cannot be overstated. This is one of the distinguishing characteristics of a profession. **ts**

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