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Editor's View

FoxPro and Y2K

Here's the real story behind FoxPro and the Year 2000 bug.

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You can barely open a publication these days without reading about the Year 2000 bug. It's in the news everywhere, and it has a lot of people running scared. All the commotion has a lot of business people wondering whether the applications they rely on will hold up when January 1, 2000 rolls around.

Even Microsoft is feeling the heat. The company is the defendant in a Y2K lawsuit recently filed—the specific issue is the entry of two-digit years in FoxPro 2.x and Visual FoxPro 3.0. The suit, Ruth H. Kaczmarek vs. Microsoft Corporation, was filed by a developer from Chicago, who's attempting to have it certified as a class-action suit. (The proposed class is everyone who ever bought FoxPro 2.5, FoxPro 2.6 or Visual FoxPro 3.0.)

You probably already know that FoxPro and Visual FoxPro are in great shape with respect to Y2K issues. But I'm concerned that the publicity surrounding this recent lawsuit may discourage some people from using FoxPro for new applications. To clarify matters, I'm doing two things. First, you'll find a copy of the actual lawsuit on this month's PRD, so you can read it and evaluate its merits for yourself. Second, here's a review of FoxPro's situation with respect to Year 2000 compliance.

The original designer of Xbase, Wayne Ratliff, was clearly forward-thinking. When he designed the original .DBF format about 20 years ago, he set it up to store all four digits of the year. Date fields in a .DBF are stored in YYYYMMDD format. Although there have been many changes to the structure of .DBFs in the two decades that followed, the original date format with the four-digit year still stands.

There are two areas where developers may run into Y2K issues. First, all FoxPro products prior to Visual FoxPro 5.0 assume they're working in the range 1900-1999 (not quite the 20th century), so any two-digit year encountered is interpreted as being in that range. When CENTURY is ON, users can enter either four-digit or two-digit years. (Allowing two-digit entry provides a shortcut for knowledgeable users.) Any two-digit years are interpreted as falling in 1900-1999, regardless of the system date.

The ROLLOVER clause of SET CENTURY, added in Visual FoxPro 5.0, allows developers to determine what range of 100 years their applications assume. In Visual FoxPro 6.0, in

addition to the ROLLOVER clause, the presumed century is determined by the system date rather than hard-coded to the 1900's.

VFP 5 and 6 also include other features that make it easier to write Y2K-compliant applications. Both support a non-ambiguous format ({^ YYYY-MM-DD}) for date constants. VFP 6 also introduced the SET STRICTDATE command that allows you to decide how much potential ambiguity the compiler should find in your code. In addition, the DATE() and DATETIME() functions were enhanced in VFP 6 to provide a non-ambiguous way to convert numbers and characters to dates.

FoxPro Advisor has presented two solutions recently for the 1900-1999 assumption. Christof Lange's article in the March 1998 issue and my September 1998 Editor's View both addressed the problem of entering dates using only two digits for the year. Each article presents a solution that doesn't require major rewrites of existing applications. Watch future issues for additional ideas on how to deal with older applications and how to make sure your new applications are compliant right off the bat.

The other Y2K issue is an item that is actually non-compliant in all versions before VFP 6. The LUPDATE() function, designed to tell you when a table was last updated, reads the header of the .DBF, which stores a two-digit year. In VFP 6, LUPDATE() reads the directory entry for the file instead. Avoiding LUPDATE() is not a problem, though, since other commands can provide the same information.

To summarize, FoxPro and Visual FoxPro correctly store all four digits of the year and always have. It is and always has been possible to develop fully Y2K-compliant applications in all FoxPro products. Most FoxPro applications built without considering Y2K compliance can be cured using solutions available today.

Here comes DevCon

This issue contains a special insert to tell you about Visual FoxPro Developer Conference 1999. This year's DevCon features a wide mix of sessions that should appeal to those brand new to Visual FoxPro as well as those on the technological bleeding-edge. The brochure has a list of speakers, topics, and all the information you need to make your plans to join us in Palm Springs in June. See you there!