

More Y2K — And Then Some...

October 15, 1998

Bernard suavely unfastened the strap of his Cartier tank watch and dangled it in a persuasive imitation of a hypnotist.

“Time,” he intoned. “Time ... is passing...”

I am not the type to sleep in most people’s presence, particularly Bernard’s.

“Yes,” I replied in my cleverest offhand manner. “Time appears to be passing.” At this point in fact, time was passing at approximately \$314 per hour, Bernard’s consulting rate.

“Time,” he repeated (still intoning). “Time ... is passing.” The classic gold rectangle continued to swing on its iguana leather band.

“As opposed to what?” Yes, I was still awake.

“My dear friend, time is passing and it’s not just the Year 2000 you computer types need to worry about.”

True enough, I thought. In fact, I was actually more concerned about the return of ruffled chiffon shirts. I, like many people in this business, don’t particularly look good in a ruffled chiffon shirt, and if Bernard was now wearing them, it wouldn’t be long before some semblance of this design would start to creep into standard business wear. I shuddered involuntarily.

Bernard shuddered too, but this was part of the drama. “Everyone’s thinking about the ... ‘Y2K’ ... as those in the know like to call it. But I’ve been a little naughty and sniffed around my old service bureau acquaintances, and my, my, my. What a wholly unpleasant series of dates you people have to contend with. They start in less than four months. You may solve Y2K, but have you thought of *these?*”

And Bernard unfurled a memo, contemplated it briefly, and flipped it toward me, the gold monogrammed Crane’s parchment skidding across the desk before spinning to a stop before me.

“Gratis, my friend. Gratis...” and he was gone.

The more I read, the more it looked like a late draft of a “Full Employment Act for UNIX and COBOL Programmers,” soon to be considered at your local statehouse. More or less verbatim, his memo entitled “Dates to Watch Out For” read as follows.

January 1, 1999 — The Look-Ahead Conundrum: No, you don’t have to wait until 1/1/2000 for lightning to strike your computer. More routines than you’d imagine, especially in the reporting and history logging areas, use a “look-ahead-count-back” sequence to block off months or accounting periods. The computer will look ahead to the beginning of the next year and count backward to establish time. On January 1, 1999, it will start looking for ... that’s right, 1/1/2000 and ...oops: it’s not going to want to count backwards from zero and assume that this year is negative. Of course, this’ll be fixed

when the system becomes Year 2000 compliant, but if it's not fixed by the beginning of next year, there will be big problems.

August 21, 1999 — The GPS Rollover: Global Positioning Satellites — 24 of them to be exact — hang around above the atmosphere enabling the guy next to you on the airplane to pull out a little box and tell you that you're fifteen arc-minutes south of the Wyoming border.¹ These satellites were launched in 1980, and they all count weeks, synchronized to their launch time. They have a counter for the weeks that goes up to 9,999, and — oh my! — that counter will be at 9,999 at midnight on August 21, 1999. Then, odometer style, it will roll over to week 0000. If you're in an airplane that night, the guy next to you with that gadget is going to be wearing a very confused expression.

September 9, 1999 — End-of-File: Just three weeks later, another disaster. Journalists write “-30-“ at the end of a story. Bouncers use “86” as the end of your stay at the local tavern. For years, computer programmers have used “9999” as an end-of-file symbol. Just hope that it's not your birthday.

October 1, 1999 — The Federal Year: Three weeks more, and ... no, not again. This time, it's the fiscal year start of the federal calendar. On 10/1/99, it's Fiscal 2000. That means an early Y2K for everything that goes on in the federal government. Watch for your Medicare check.

January 4, 2000 — Back to Work: OK, so far so good. Three days into the year 2000 and the world hasn't come to an end. That's Saturday the 1st, Sunday the 2nd, Monday the 3rd (a holiday, you know, since New Year's fell on Saturday. Now it's Tuesday the 4th and every business PC on every network on the planet will get switched on after the long break. This is not going to be pretty.

Made it this far? Don't think you're out of the woods yet, sonny. It's just a long series of challenges, designed to keep consultants in business:

February 29, 2000 — Leap Day: What's the fuss. Just another leap year, right? Peel the onion: every fourth year is a leap year, so 2000 is a leap year. No, not quite so fast. If you do that, there are too many leap years. So, we skip a leap year every 100 years on the century mark. Most programmers know that, so fine. But go to the next layer: if you skip a leap year every 100 years, there aren't quite enough leap years, so every 400 years you need to stick one in where you'd normally skip it on the 100 year line, where, of course, you'd usually put it every fourth year. Netting it out, 2000 is a leap year after all. Plenty of room for mistakes, since most programmers knew about the 100-year rule but not the 400-year rule.

September 8, 2001 — The End of Unix as We Know It: Unix handles times and dates differently from other operating systems, and probably won't be so bothered by 1/1/2000. Fine, but on 9/8/01, Unix will code that date as 999,999,999. This, sorry to say, is a standard end-of-application symbol used in Unix applications. (Thud.)

The Year 2025 Telephone Bottleneck: That's when people think we'll run out of all the ten-digit telephone numbers there are. That means that eleven-digit numbers will be required, and every computer application that stores standard-format telephone numbers will have to be revamped. How many applications store telephone numbers?

January 19, 2038: If Unix manages to make it over the past 37 years, it has one more surprise in its innards. Unix has an odometer too, counting seconds since January 1, 1970. Picture this ... it is seven seconds past 3:14 a.m. on January 19. In one second, it will be January 1, 1970. Buy a wide tie.

The Year 2050: Social Security numbers aren't stored in many applications, only the little ones like payroll, taxes, Social Security, banking, you know — that kind. Big legacy apps, running

¹ It will not help you find spray starch at Wal-Mart.

on mainframes. About 2050, we're going to run out of Social Security numbers in the current 3-2-4 format, suddenly obsoleting the data formats of the biggest programs there are.

But that's 50 years away. Of course, we'll be prepared by then. Plenty of time, just like everybody's ready for the year 2000, with 441 days to go.

To Your Success,

Tony

Tony van Seventer
Director: Supermarket Systems