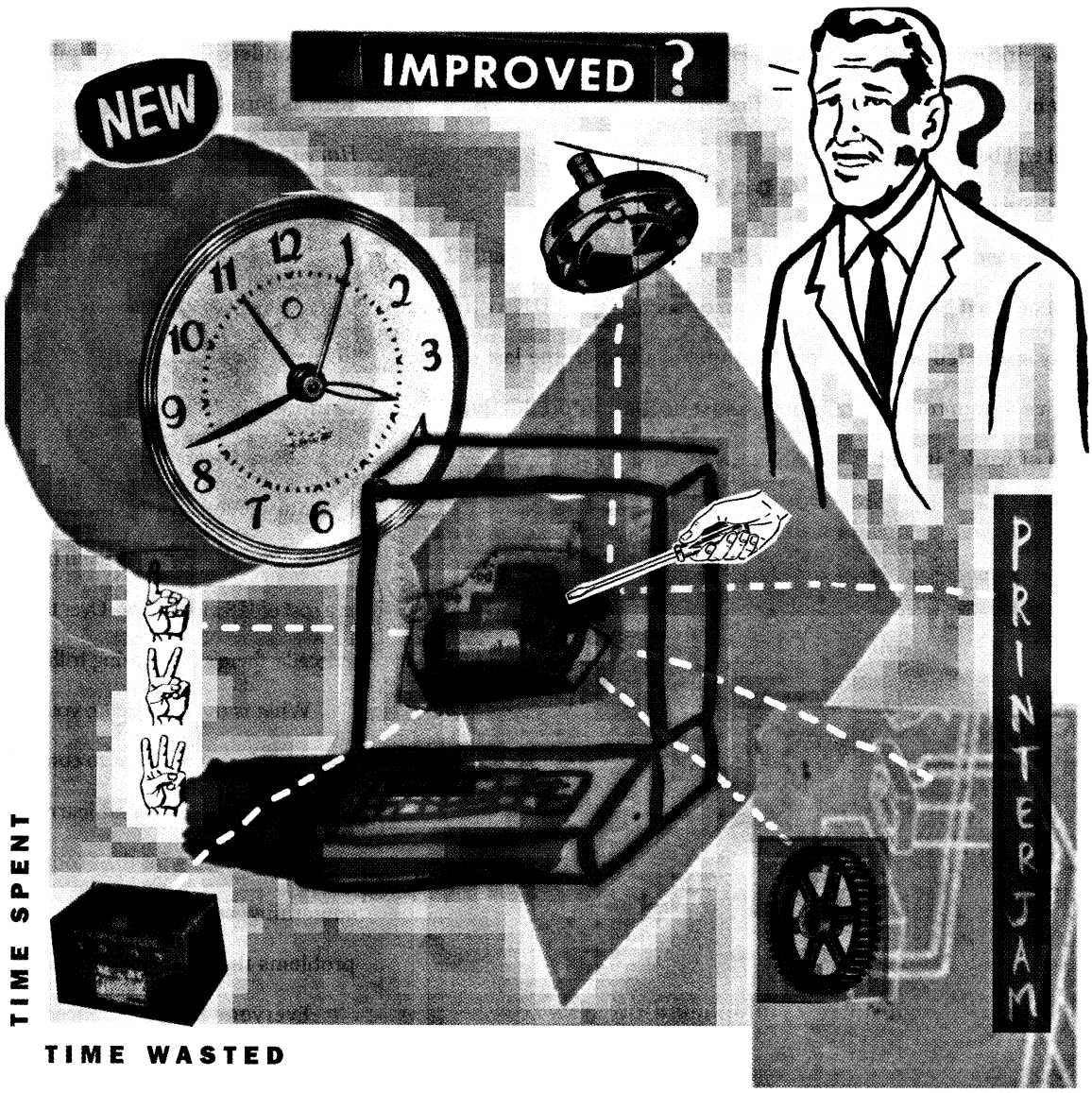
the futz factor



Has this happened to you lately? You try to print something, and it doesn't print. You figure out the problem (you think) and finally manage to get it to print, except there are funny characters all over the page! You investigate further ...

The upshot is, you spend half an hour fooling around, trying to get a two-page document to print. In doing so, you are contributing to what the computer industry thinks is a very serious problem: the productivity paradox.

YESTERDAY

Almost as soon as computer technology was invented, news reports began to bristle with adjectives of promise and potential. "If electronic devices are efficiently used," noted the *Financial Post* in August, 1954, "the saving in personnel will be matched by increased efficiency." Such prose was typical. Two years later, another *FP* article, entitled "Office Automation Need Not Cost Millions," was liberally sprinkled with the phrases of the office automation revolution. "Reduction of work," it said. "Improvement in efficiency." "Relief of tedium." "Elimination of error." "Descending office costs." "New effectiveness."

Thus was born the mantra of the computer era: computers would revolutionize the office, and ease our frustrations.

TODAY

But by the 1990s, the tune had changed. "American companies spent U.S. $1 trillion on computer systems in the last decade with almost no gain in productivity," said *Newsweek* in 1995. Reports began to circulate that even though huge sums of money had been invested, there was a productivity improvement of but 0.7 per cent. Where was the efficiency, they wondered? Respected publications such as *Business Week, Forbes* and the *Harvard Business Review* began seeking complicated answers for a simple problem.

They could have saved a lot of time by reading a 1993 report from Software Business Technology (SBT) of Sausalito, California, which found its staff spent 5.1 hours each week "futzing" with computers. By extrapolation, North American business was futzing away about 5 billion hours a year, at a cost of U.S.$100 billion. Over the course of a decade, there's the missing trillion dollars.

What is the futz factor, you say? It is the wasted time inherent to computer use — the time people spend learning about computers, waiting for their computer to do something, solving the little, mundane problems that occur day-to-day.

Everyone has experienced the futz factor. It is most common when you have to install and master new software. A typical situation: you have just spent a lot of time learning a particular computer program, you finally get things working smoothly, but then — tempted by the bells and whistles in the ads — you rush out to get the new, "upgraded" version. Once you figure out



how to install the new version (which sometimes takes the better part of a day), you discover to your horror that the new program can't read your old files. You fritter away even more time trying to solve that problem, only to discover days later that the manual that came with the upgrade forgot to tell you about an important step you were supposed to do during installation!

The futz factor has led to a unique variation on Murphy's Law specifically for computers: everything takes longer than you think.

To calculate how much longer, apply Westheimer's Rule. This theorem states that to estimate the time it takes to do a task with a computer, you first estimate the time you think it should take, then multiply by two and change the unit of measure to the next highest unit. Thus, if you think something will take an hour to do on a computer, it will really take two days!

TOMORROW

Open any marketing brochure and you'll discover that the computer industry is still promising "efficiency" and "productivity."

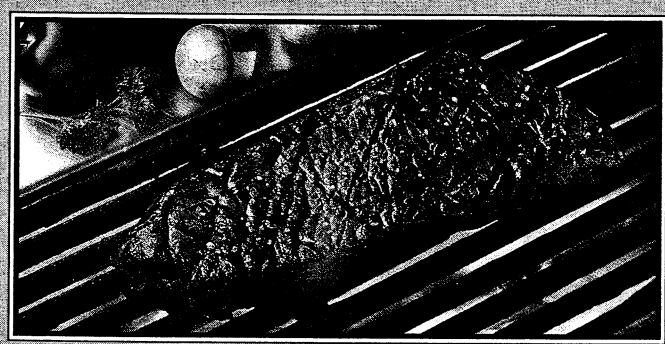
Yet the fact of the matter is that each new software release contains hundreds or thousands of features that we will never use — leading some to call such upgrades "bloatware" or "fatware." Consider one popular new "office productivity suite": it would fill some 150 diskettes! No wonder they ship these things on CD-ROM! Install such an upgrade, and you are bound to futz away plenty more time, simply trying to get the darn thing to work.

Is there a way out? Perhaps. A new trend is emerging on the Internet, one that we might call the minimalist rule of software design. In a sort of on-line competition, computer experts are attempting to design the smallest possible computer programs that can do one simple, basic task. It's sort of like that famous game show: "I can program that code in just 37 bytes, Alex."

Smaller is better, goes the thinking. If the trend catches on, then the futz factor, and hence the productivity paradox, may yet be solved. ■

Jim Carroll, C.A., examines our wired world through speaking engagements, a weekly *Globe and Mail* column and a new book entitled *Y2K Planning for Canadians*. Reach him at jcarroll@jimcarroll.com.

Please refrain from drooling on the passenger seated beside you.



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