

I wrote this for *Datamation Magazine*, the world's leading publication for computers and information systems, in 1987. It was my first job and first published article.

REACHING  
**30**  
YEARS

# A Day in Your Life

BY ERIC BRAND

What would happen if every computer, every microprocessor, went on the blink for a day? That's the question asked of IS chiefs in manufacturing, retail, scientific research, government, and financial services. Their answers have been incorporated into a whimsical story that illustrates how pervasive computers are in both business and our daily lives. Phones would go dead, stocks could not be traded, and oh, those Lotto riots!

"What a wild idea," I said to the senior editor. She'd just suggested I do a story about what would happen if every computer—every microprocessor, every mainframe—suddenly stopped working. She wanted to know what effect it would have on our readers and their companies and how the world would fare without the little marvels. And she wanted me to write as though it had actually happened.

"You realize that limits me to the New York area," I said, my visions of long trips charged on the company credit card fading away.

"Why?" she asked.

"Because trains and airplanes wouldn't be running and no car built in the last 10 years would work. Any interviews would have to take place within walking distance." She let loose one of those shrieks of laughter we've come to love her for and sent me on my way.

A number of computing professionals I called on panicked at the suggestion that their computers might seize up. In banking, on the stock exchange, at the local store, and elsewhere, we interact with a technology so efficient and so pervasive that we now take it for granted, they said. A loss of that technology was unthinkable. But five computing pros—in the areas of retail, government, scientific research, financial services, and manufacturing—were intrigued by the idea, and graciously agreed to have their

musings placed in a fictionalized setting.

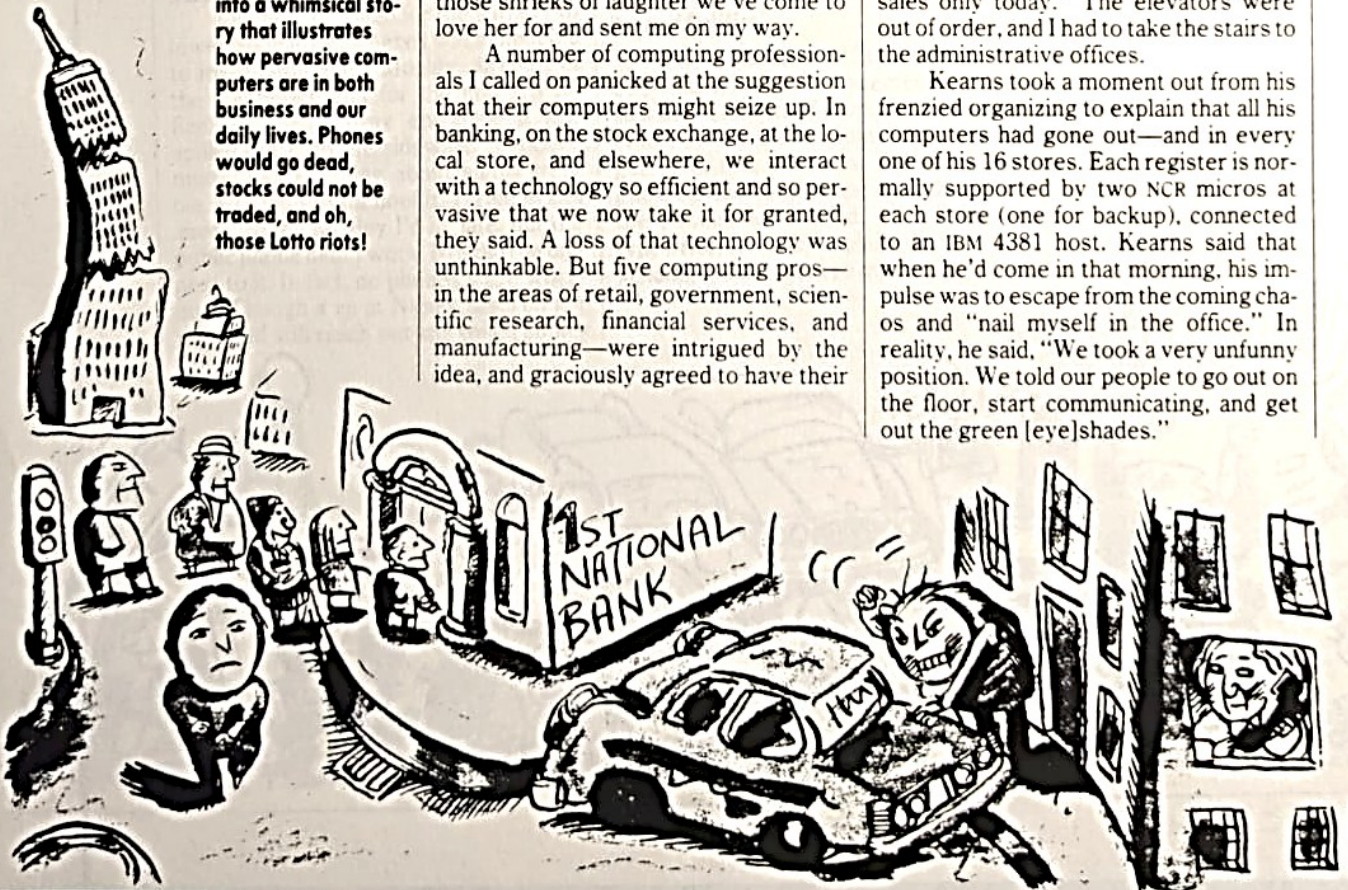
What follows, then, is a fanciful account of a day that never happened, a 24-hour worldwide downtime, what the tabloid *New York Post* would likely have called, "The Big Brain Drain, Day One."

## Retailing the Old-Fashioned Way

That morning, I was supposed to stop off at the Abraham & Straus near my apartment in Brooklyn to speak with Brian Kearns, vp of operations for the big New York department store chain. I was running late because my alarm clock hadn't gone off—in fact, it wasn't working at all.

The selling floor of A&S was bustling with customers as usual, but the lines at the cash registers seemed unusually long. I was surprised to see the salespeople writing out receipts by hand. On each register was a hastily drawn sign: "Cash sales only today." The elevators were out of order, and I had to take the stairs to the administrative offices.

Kearns took a moment out from his frenzied organizing to explain that all his computers had gone out—and in every one of his 16 stores. Each register is normally supported by two NCR micros at each store (one for backup), connected to an IBM 4381 host. Kearns said that when he'd come in that morning, his impulse was to escape from the coming chaos and "nail myself in the office." In reality, he said, "We took a very unfunny position. We told our people to go out on the floor, start communicating, and get out the green [eye]shades."



# Without Computers

The A&S data center is located in Brooklyn, which was fortunate for the day's sales. "So many people are dependent on the crt," said Kearns, "that the only thing they could do was assist the people on the floor who are facing the crunch." It seemed to be working, so far. But Kearns pointed out, "It probably would be absolutely impossible during the Christmas season."

I asked why he didn't seem upset by this calamity. He said that what he'd seen so far that morning had borne out a theory of his about computers. "People allow the machine to communicate for them. This [loss] has opened up a lot of person-to-person communication. . . . The machinery is so rushed, it does so much for you. But no matter how rushed we get," he concluded, "the human behind the machine is the cornerstone of any progress."

I thanked him for his time and observations and left, annoyed at my tape recorder and SLR camera for not working during the interview.

Outside, I headed for the subway to lower Manhattan, where I was scheduled to meet with Helen Mosley, director of the computing unit for the mayor's office. At the subway entrance, a line spilled out onto the sidewalk. Someone muttered something about signal trouble, so I figured I'd hoof it. I tried to call ahead, to tell Mosley I'd be late, but the public phone didn't work. Nor did the one next to it. In fact, no phones were working. (Though a vp at Nynex assured me we could still reach out and touch some-

one if all the computers were to go down, experts I spoke with said that the phone system's electronic switching system is now computer based and therefore vulnerable to a total loss of processors.)

Not being a morning person, I hadn't yet seen the connection between these inconveniences. So, along with what must have been hundreds of other people, I walked toward the Brooklyn Bridge. It seemed that the only cars on the road were big-finned monsters. Crossing the East River, I saw a tanker collide with a pier.

The bizarre occurrences of the day began to pique my curiosity, but none of my fellow travelers had a newspaper; those with Walkmans said they couldn't pick up any radio stations. With a mind influenced by too many science fiction stories, I suddenly conjured up a vision of a world without computers, a world where communications and transportation were thrown back decades, and where, for the day at least, they were stymied almost completely.

## Pcs and Politics

The scene around City Hall was chaotic—but it had always seemed that way, so it didn't faze me. I found Mosley in her office, giving instructions to a messenger. She told me what I already had guessed: the computers were down and the phones were dead. "I'm lining up typewriters," she explained. She was sending messengers to office equipment

rental agencies. "trying to corner the market before anyone else does."

The typewriters and temporary help would have to take the place of the office automation that Mosley had implemented at the mayor's office in the last few years—word processing, correspondence tracking, personnel and employment databases, and the Mayor's Action Center complaint division. Three IBM System/36s handle interoffice mail, backup, and file transfer, while 220 IBM XTs, ATs, and clones are either remote or tied into local area networks.

"We just hope everyone has a hard-copy of whatever they were working on," Mosley sighed. So far, the mayor's staff was being cooperative. "They're less fussy about phraseology, and that extends right up to the mayor," she said. "He's very kind with people on a lower level. Not so much with people on a higher level, but definitely those on a lower level."

## Scientific Computing Collapses

I wondered how Hizzoner would react to the developing news media blackout as I made my way to Greenwich Village for my next interview. I was due at the Courant Institute of Mathematical Sciences at New York University to



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meet with Herbert J. Bernstein, senior research scientist. On the third floor of Weaver Hall, Prof. Bernstein had his feet on his desk and a smile on his face. "Quite frankly," he said, "a 24-hour loss of computer access is not a disaster." He'd figured out what was going on and sent his students to the library. "It'll do them a lot of good. It'll improve their scholarship," he said.

The institute uses Digital Equipment Corp. VAX minicomputers, Sun workstations, Convex minisupercomputers, and IBM 4381 and 4361 minis for its research into Eigen values and Eigen vectors and numerical linear algebra. For the Department of Energy, the institute conducts research into parallel computa-

tion, network design, and modeling of reactor plumes. Bernstein said that for the plume modeling, the computer loss was a problem. "Most of it is [computer] modeling," he said. "One shouldn't wait. But," he shrugged his shoulders, "there is very little one can do."

and started uptown for my next appointment, with a senior information executive at Citicorp. Later, I found out from a Boeing Co. spokesman that almost all commercial airplanes can fly without computers (as evidenced by the day's incredibly few crashes), but that no airport would dispatch one that wasn't already off the ground. Tracking systems, of course, were out. Railroads were running, but at a much slower rate, as switching went manual and communications were impaired.

### The Citi Sometimes Sleeps

All this walking had made me hungry. With only a subway token and some change on me, I stopped at a cash machine and put my card in the slot. Of course, nothing. I would have laughed if it hadn't been so annoying.

I was still 30 blocks from the Citicorp building on East 53rd Street, but the walk was not boring. I narrowly missed

being squashed by a satellite that had fallen when it ceased receiving telemetry to adjust its orbit.

I trudged up about 30 flights of stairs. Inside, the offices were hot and stuffy—the heating, ventilation, and air conditioning system was on the fritz. The executive, who requested anonymity, greeted me with a wry smile. I asked him how his day was going.

"I couldn't make my morning shake in my blender," he said. "My BSR remote control system didn't work, so I had to switch the plugs on my lights. . . . The office door didn't work. My pc is gone." So what did he do? "I whipped out my favorite pulp magazine," he laughed.

And Citicorp? "We have contingency plans with very strict standards," he said. "We opened up the branches—did a manual fallback. We have last night's batch run on microfilm." The bank's NCR Towers and IBM minis running TPF were out. The Motorola 68020s at the heart of Citibank's automatic teller machine system weren't functioning. "People will go see real-life human beings. Manual banking services will go on. We're just stacking up the transactions." But, he points out, "We have a lot of middle managers with nothing to do."

Electronic funds transfer would be done by airborne courier, he said—if he could find the planes. "We'll lose float," he observed, "but only a few hundred bucks a day on a few million dollars."

Citicorp's investment banking arm, which relies on the telephone, was stymied. The institutional banking was likewise at a loss. "I'm sure the bicycle and sneaker business has increased," said the executive.

The company's brokering activities—which rely on a network of Stratus, Tandem, Motorola, and IBM minicomputers and Unix-based systems, and which use the Quotron system—were almost completely curtailed. "Volumes have slowed way down," he reported. "The small-order execution systems that match buys and sells don't work. The tickers don't work. There's no programmed trading." I asked him if he knew what was going on at the stock exchange. "There's probably a panic down there. The traders are probably going bonkers."

He glanced at his watch, which I enviously observed was an old-fashioned analog model—my nifty new Japanese timepiece was frozen. "By now," he said, "I imagine a trader would be drumming his fingers wondering how he's supposed to place an order. The traders are



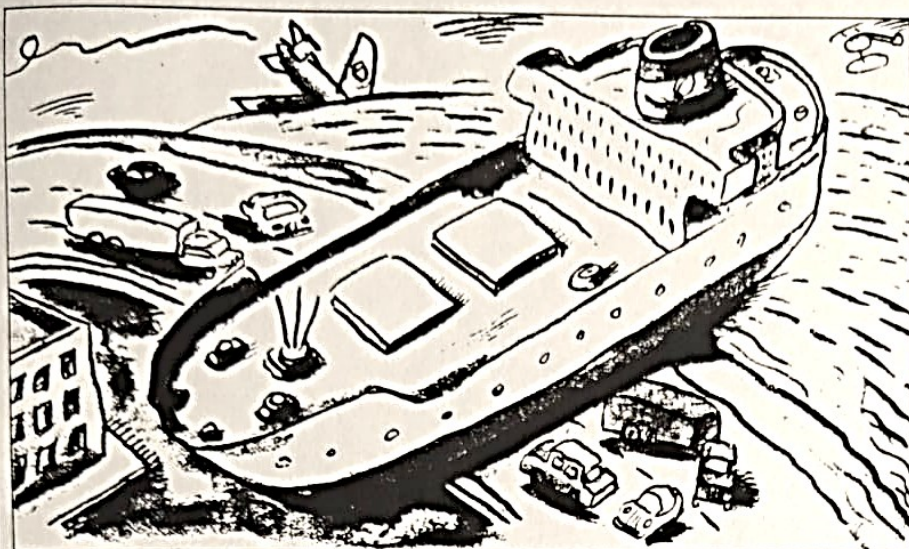
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probably trading among themselves or playing cards."

Suddenly, a man with a whistle around his neck and anxiety in his eyes stuck his head through the doorway to deliver a warning. It seemed that an intricate balancing system to keep the building from swaying was controlled by computer and, to prevent occupants from getting motion sickness, we had to evacuate the premises.

It was getting late, and I was grateful that it appeared there would be no blackout. A Con Edison spokeswoman later explained to me that although the utility did have four IBM 3081s, a 3083, and a 3090 Model 200 for switching, routing, and monitoring, it "all could be done manually."

As I walked along, I began to notice crowds gathering around cigar shops and stationery stores. I asked someone what was going on and he told me it was Super Wednesday, the last day on which entries could be submitted for the state's record \$50 million lottery jackpot. Lot-to's IBM 4341 was down, and as the realization rippled through the crowd that they would not get a crack at the money, they turned ugly. My father always taught me to run away from mob scenes, and over my shoulder I saw magazines flying, windows shattered, and a computer terminal smashed.

It was the first of the now-famous Lotto riots.

### CAD/CAM Loses Wham

I stopped running when I neared the home of a friend who owns an old Dodge Polara. I planned to borrow it to get to my next interview, with Vincent Vento, the vp for robotic systems at SSMC Inc. in Edison, N.J. The car was running fine, but

we had to unscrew the automatic garage door opener to get at it. Driving to New Jersey was an adventure: the traffic signals weren't working. Joyriders in old Mustangs and Firebirds sped along the highways, not mourning their radar detectors because there was no radar to detect. I pushed the Polara to its limit and made it to SSMC in time to catch Vento.

The company, a spin-off of the Singer Co. with annual sales of \$600 million, makes robot systems for the sewn products industry, as well as sewing machines, furniture, and other products. Computer aided design is supported by Computervision boxes and software; IBM PCs are used for integration, control, and diagnostics. General Motors uses SSMC's gantry robot system for sewing car seat upholstery.

Vento's biggest headache that day had been in the drafting department. "We found a few drafting boards to keep a few people going," he said. "But most of our drawings are on tape. It shut down our integration and testing activity, though we can still carry on assembly work and wiring."

Vento told me that when his engineers had discovered their calculators weren't working, they went looking for slide rules. "Of course, some of them are too young to have learned how to use one," he laughed.

For the most part, though, everyone looked busy. "We're catching up on reports and other things we were putting off," said Vento. "We didn't send anyone home. Twenty-four hours is not the end of the world." I said I hoped he was right, and drove back to Brooklyn on the shoulder of the highway.

That night, my fiancée Jill told me that things at the hospital where she

works were bewildering. Patient monitoring systems, operating-room surgical equipment tracking systems, nurse station and patient admissions systems—all blinked out. We tried to calculate how many people the Big Brain Drain had affected (most in the developed nations, a minority in the third world, we figured). We realized gratefully that for as long as the computers were out, missile guidance systems would not work and there was no threat of nuclear annihilation. We also realized that without sophisticated military defense systems, there was an outside risk of conventional war.

We looked forward to an evening of reading and perhaps some Scrabble, but we did not look forward to missing *The Honeymooners* on tv or remaining ignorant about the next day's weather.

What kept coming back to me as I thought about the day were identical comments made by Kearns and Vento on the loss of the telephones—that more work would get done without them. There was a common thread of almost perverse pleasure expressed by the computing professionals I had talked to at the prospect of losing their computers. It had less to do with resentment of their work than with their expert understanding of the limitations of their technology. All thought that the world depended on computers but had also needed a day without them to engender an appreciation of this powerful technology and a better understanding of its benefits and its hazards. ■

