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PowerMac magazine has a monthly circulation of 600,000. Of those,  $475,\!000$  are subscriptions.

The January 1997 issue hit the stands—and the Postal System—on November 3; for maximum newsstand shelf life, each issue was dated over a month ahead of its printed cover month, to the eternal bewilderment of some readers.

The magazine published a larger-than-usual number of copies of the January issue, however, because nearly 50,000 copies were given away at the Macintosh Superfair show in San Francisco.

By November 10, roughly 480,000 copies had been received in the mail (or pur-chased at newsstands) and read. Just under 60,000 people read the Tips'n'Tricks column in its entirety. Only eight thousand of those readers owned the shoot-em-up computer game called AirAttack, described in that column.

The blurb mentioned that AirAttack would display a fully-dressed Christmas tree when the Macintosh clock was set to December 25.

In the days following the magazine's publication, 1911 readers actually took the trouble to change the date, using the Macintosh Control Panel, to see the effect. Most of them were delighted by the little graphic surprise.

One of them was Tobias McLuhan, a Loews theatre manager in Solon, Ohio. He even called his nine-year-old daughter over to his computer screen to see the little Christmas tree.

The two of them played a round of AirAttack just for fun. Just as they finished the game, the phone rang; it was one of Toby's drinking buddies, proposing a get-together. His daughter climbed down from his knee and skipped back to her own room. Toby smiled as he continued the conversation. Absently, he quit the AirAttack game and shut down his computer.

Like 109 other PowerMac readers across the country, Toby had unwit-tingly made a tiny mistake.

He failed to reset his Macintosh clock to the current date.

"Danny, Jesus. What's your problem?"

For the second time, Charles' meaty arm shot out beneath the table and

clutched Danny's bouncing knee. Danny stopped jiggling and whispered "Sorry."

Charles flicked his leg with a forefinger. "What's the deal? You never had a second date before?" he whispered back.

Danny smiled in acknowledgment and tried to tune in to what Arnie was saying. Something about the product introduction on December 8. Something about press passes and hors d'oeuvres. But he was far too tense to concentrate... and his date with Michelle was hardly the reason.

He looked at the clock again. The meeting would be ending in fifteen minutes. He unconsciously fingered the hard square edge of the floppy disk in his shirt pocket. The other programmers, as well as the sales staff, were all listening to Arnie. Except Gam, who sat across from Danny, slouched in the chair, looking arrogant and bored. Every few minutes he'd stare directly at Danny.

As though he knew what Danny was about to do.

The minute hand on the wall clock jumped. It was time.

As slowly as he could, Danny wedged his fingers into his right jeans pocket to find the Kleenex. It wadded up, just under the pocket opening. He withdrew it carefully; the only one who might have been able to see it was Charles, and Danny wasn't worried about him.

He glanced down at the tissue; the red magic marker stains were all over it. Am I nuts? Is anyone gonna buy this? His palms were sweating, but it was now or never. Well, it worked in twelfth grade every time.

He brought the Kleenex up to his nose and blew.

"At that point, the trucks will meet us at the loading dock," Arnie was saying. "If you could all just help us carry the equipment back to the trucks before you disappear into the night—"

"Oh, jeez!" said Danny.

Arnie stopped. Gam frowned and stared.

"I'm sorry, Arnie. I just— It looks like I've got a nosebleed..." He stood, shifting the Kleenex in his hand just enough for them to see a flash of the bright red stain. Just a flash, then it was wadded against his nose again. "I'll be back in a couple minutes. Sorry." Tilting his head back as best he could, mouth hanging open, Danny walked from the room.

"Take your time, Danny," Arnie shouted after him. "Get some ice from Tina."

Danny was already halfway down the hall. "OK!" he shouted back.

He went into high gear, sprinting toward the R & D lab. No Academy Awards for that performance, bucko. He fumbled for the disk in his pocket as he ran into the lab and jumped into Gam's chair.

His heart was pounding; he felt the paranoiac desperation of sitting, much too obviously, in off-limits territory.

He slammed the floppy into the disk drive. Nice thinking, Gam—thanks for leaving your own disk drive slot uncovered.

A window appeared on the screen, displaying Danny's disk's contents. It had only two files on it: two little items he had carefully prepared just for Gam's hard drive. The first file was SURvIVor—what Arnie didn't know wouldn't hurt him, Danny figured.

The second file was a surprise.

Using the mouse, he moved the cursor to the files and slid them carefully onto the onscreen image of the hard drive, which Danny saw had been named Hussein.

Gam names his hard disk after a Persian Gulf dictator. Why doesn't that surprise me?

"Files remaining to copy: 2," said the message on the screen.

Hurry up, dammit. He looked at his watch—unnecessarily. Having rehearsed this routine at his own Mac, he knew perfectly well that the copying would take thirty-five seconds. He glanced at the open doorway of the lab: all quiet.

Quickly, he ejected the floppy disk. There were the two files on Gam's hard drive, represented by two small, neat rectangular icons on the screen. This was the hard part—to make them invisible. It wouldn't do to have Gam discovering his hard drive had been...visited.

Jerking the mouse across the desk, Danny whipped the cursor up to the Apple logo, pressed the mouse button to produce the drop-down menu, and guided the pointer down the alphabetical list of mini-programs. Alarm Clock... Calculator... Control Panel...

DiskFixer! He let go of the button, and the DiskFixer window popped up. Danny's mouth was dry, and his heart beat like a rabbit's—but there was only one more step. DiskFixer showed him a list of every file on the outer level of Gam's hard disk directory, including the two he'd just copied. He clicked carefully on the SURvIVor file, moused up to the Fixer menu, and selected the INVISIBLE option.

He repeated the process with the second file. The surprise. At last the deed was done.

Thank you, God.

He closed the DiskFixer window and took a look: sure enough, the icons for the two files he'd donated to Gam no longer appeared. Unless he knew what to look for, Gam would never find them. Danny shoved his floppy back into his shirt pocket—and, out of the corner of his eye, spotted something small and pink stuck to his cuff.

He plucked it off: a two-by-three-inch slip of warm-pink paper, a Post-It note that must have been lying on Gam's desk. Danny looked at it.

In blue ballpoint, it said "NICE code. Love the V-mem routines."

Nice code? Well, of course, but who-

There was a sound in the doorway.

"Danny! What are you doing?"

He leapt from his chair—caught. His breath stopped.

It was Michelle. She came toward him, angrily. "What are you doing to Gam's Mac?"

"Oh, Michelle..." he managed.

"What do you think you're doing? You tell us you have a nosebleed. I come in here to see how you're doing, I think I'm being nice, and you're screwing around with someone else's stuff?"

"No, no, Michelle, listen—"

"I don't think that's a great way to operate, Danny. I don't enjoy being around manipulative people." She started for the door. "And I think Gam should know what you've been doing."

"Michelle! Listen to me! I'm protecting us! It's what we talked about, remember? About viruses?"

She stopped in the doorway.

"Look, I've only got a minute before they come back in here. Last year I wrote an anti-virus program. It's a watchdog against viruses, OK? If you get one, it'll pop up a little message on the screen and offer to kill it for you. See? That's all. I just copied it onto Gam's drive—so now we don't have to worry. He can hook it up to modems all he wants, and our software is protected." He stopped, gulped a breath. "It's for our own good."

She looked at him, and her features softened. "That's all you did?"

"That's all."

She looked down for a moment.

"Well..." She smiled. "Then I guess we should get the hell out of here."

He didn't need further prodding.

"C'mon," he said as he shoved the chair back into place. He sprinted with her into the hallway.

"Let's really go get you some ice," she said. "To make it look good."

Danny thanked her as they ran to the corporate kitchen. There would be plenty of time to tell Michelle about the second file he planted on Gam's drive. Maybe at dinner.

He didn't give the Post-It note another thought.

live Witmark was getting fed up with S.C.A.N., the virus-checker he'd had watching over his hard drive for a month or two.

The program's modus operandi was at fault, really. Whenever something tried to modify any of his programs, S.C.A.N. would beep and display a message:

In the beginning, Clive always clicked the Denied button. For a week or two, he was convinced that he was in the midst of the biggest virus blizzard of all time, because the beep/message would appear several times a day.

But Clive, a computer consultant in Houston, was no newcomer to the Macintosh. He began to realize that all of this beeping wasn't caused by viruses at all. Instead, it dawned on him that S.C.A.N. was reacting whenever anything tried to modify a pro-gram's code—even when the program was trying to modify itself.

For instance, every time Clive ran a program for the first time, it would ask him to "personalize" his installed copy by typing in his name. Once branded in this way, the program stored his name in its own internal code—to discourage him from making illegal copies, he supposed. Trouble was, every time a program attempted such a procedure, S.C.A.N. would erupt, beeping and flash-ing... because, after all, the program was being modified. Eventually, Clive got in the habit of clicking Granted every time S.C.A.N. asked for permission to modify something on his hard drive.

Same thing with floppy disks. S.C.A.N.'s other heavily-hyped feature was that it would scan every floppy disk he inserted, checking for viruses. But it took about ten seconds to scan each floppy. And 99% of the disks Clive put into the drive were his own disks that he used every day. After a few weeks, he got tired of the way S.CA.N. wasted his time scanning the same few disks every time he put one into the floppy drive.

And so, when S.C.A.N. would ask him, upon the insertion of a floppy, "Scan floppy disk for viruses?", Clive got into the habit of clicking the Bypass button instead of the Scan button. Damn thing is too oversensitive, he thought. Cries wolf all the time.

And so it was that on a Tuesday afternoon, Clive tried a new program, for which he was a beta-tester. S.C.A.N. beeped once, as usual with new

programs; Clive automatically clicked the Granted button—yeah, do what you gotta do.

Over the course of the day, he would use several other programs. For some reason, S.C.A.N. beeped at random intervals, flashing "An attempt is being made to modify ..." messages, one after another.

Damn thing's freaking out, Clive thought. He clicked the Granted button a few times, then finally opened the Control Panel and turned S.C.A.N. off to save himself the bother. He made a mental note to check the manual, to find how to change the thing's sensitivity.

It never occurred to him that the sudden infection might be connected to the Christmas-Tree trick he'd read about in PowerMac magazine that morning.